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

Feed the Future Uganda 2015

Zone of Influence Interim Assessment Report

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List of Acronyms

5DE	Five Domains of Empowerment
Ag	Agriculture
BFS	Bureau for Food Security
BMI	Body Mass Index
CI	Confidence Interval
CPI	Consumer Price Index
DEFF	Design Effect
DHS	Demographic and Health Survey
EA	Enumeration Area
EPRC	Economic Policy Research Centre
FANTA	Food and Nutrition Technical Assistance Project
FAO	Food and Agricultural Organization
FDR	False Discovery Rates
FTF FEEDBACK	Feed the Future FEEDBACK
FTFMS	Feed the Future Monitoring System
GDP	Gross Domestic Product
GPI	Gender Parity Index
HHS	Household Hunger Scale
IFPRI	International Food Policy Research Institute
LCU	Local Currency Unit
LSMS	Living Standards Measurement Survey
MAD	Minimum Acceptable Diet
MDD-W	Women's Minimum Dietary Diversity
MDG	Millennium Development Goals
NRVCC	Nutrient-Rich Value Chain Commodity
PPP	Purchasing Power Parity
PPS	Probability Proportional to Size
SD	Standard Deviation
SFG	Service for Generations
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNHS	Uganda National Household Survey
UNPS	Uganda National Panel Survey
USAID	United States Agency for International Development
USD	United States Dollar
USG	United States Government
WHO	World Health Organization
WDDS	Women's Dietary Diversity Score
WEAI	Women's Empowerment in Agriculture Index
ZOI	Zone of Influence

Executive Summary

Background

Feed the Future, led by the U.S. Agency for International Development (USAID), seeks to reduce poverty and undernutrition in 19 developing countries through its focus on accelerating growth of the agriculture sector, addressing root causes of undernutrition, and reducing gender inequality.

Feed the Future monitors its performance in part by periodic assessments of a number of standardized indicators. These indicators reflect data collected through population-based surveys in the geographic areas targeted by Feed the Future interventions, known as the Feed the Future Zones of Influence (ZOI). This document reports the results of the first interim assessment of Feed the Future's population-based indicators for what will be termed the "core" ZOI in Uganda.

The core ZOI in Uganda comprises 38 districts across eight regions. For the Uganda interim assessment, the "core" ZOI is distinguished from the "expanded" ZOI which includes the Karamoja region, and its seven districts. The Feed the Future FEEDBACK (FTF FEEDBACK) team interviewed a total of 778 households in the core ZOI. These households were spread across 42 clusters in the targeted districts.[1] Feed the Future began activities in Uganda in 2011. The baseline assessment was comprised of data from the 2012 Feed the Future Uganda baseline survey in the core ZOI, the 2009–2010 Uganda National Household Survey (UNHS), and the 2011 Uganda Demographic and Health Survey (DHS).

This first interim assessment will provide the U.S. Government (USG) interagency partners, USAID Bureau for Food Security (BFS), USAID Missions, host country governments, and development partners with information about short-term progress of the core ZOI indicators. The assessment is designed for use as a monitoring tool, and as such provides point estimates of the indicators with an acceptable level of statistical precision. However, the Feed the Future ZOI sample calculations are not designed to support conclusions of causality or program attribution, nor is the interim assessment designed to measure change from the baseline.

Interim Assessment Indicators

Thirteen Feed the Future indicators are included in this assessment: (1) Daily per capita expenditures (as a proxy for income) in USG-assisted areas; (2) Prevalence of Poverty;

[1] The sample was drawn from clusters that consist of one or more census enumeration areas (EAs). When an EA has less than 80 households, it is grouped with one or two adjacent EAs. The 42 clusters in the sample contain 60 EAs.

(3) Depth of Poverty; (4) Prevalence of households with moderate or severe hunger; (5) Women's Dietary Diversity; (6) Prevalence of children 6-23 months receiving a minimum acceptable diet (MAD); (7) Prevalence of exclusive breastfeeding among children under 6 months of age; (8) Prevalence of women of reproductive age who consume targeted nutrient-rich value chain commodities (NRVCC); (9) Prevalence of children 6-23 months who consume targeted NRVCC; (10) Prevalence of underweight women; (11) Prevalence of stunted children under 5 years of age; (12) Prevalence of wasted children under 5 years of age; and (13) Prevalence of underweight children under 5 years of age.

The first interim assessment does not report on the Feed the Future indicator Women's Empowerment in Agriculture Index (WEAI) score, but does report on 9 of the 10 indicators that comprise the WEAI. These are presented in the WEAI Section of this report (Section 5). Because adjustments were being made to the WEAI tool at the time of the first interim ZOI survey, a streamlined version of the WEAI module was used that only collected data for 9 of the 10 indicators. The full WEAI will be collected during the next interim survey in 2017.

The interim assessment also does not report on the two Feed the Future anemia indicators because changes plausibly associated with Feed the Future's efforts are unlikely given coverage and focus of nutrition programs at this time, and because they require more intrusive data collection, increase the cost of the survey, and increase the time and complexity of data collection and of obtaining in-country institutional review board approval.

Interim Assessment Data Sources

Data for the Feed the Future ZOI interim indicators presented in this assessment are drawn from two sources: the Uganda interim core ZOI survey (data collection from March to April 2015) and the UNHS (data collection from June 2012 to June 2013). The Uganda interim survey was conducted by FTF FEEDBACK in conjunction with its local data collection partner, Service for Generations (SFG). Analysis was done by FTF FEEDBACK, with assistance from the Economic Policy Research Center (EPRC) for the expenditure/poverty analysis.

Summary of Key Findings

Household Economic Status

While the Feed the Future indicator estimates table on pages xiii-xiv shows baseline and interim indicator values for the Uganda core ZOI, the focus of this report in on the interim indicator estimates. The Uganda core ZOI interim assessment shows that average daily per capita expenditures is $2.40 (2010 United States Dollar (USD)). The prevalence of poverty (defined as the percentage of people living below $1.25 2005 purchasing power parity (PPP) per day) is 32.1 percent. The depth of poverty (the mean percent shortfall relative to the $1.25 2005 PPP per day poverty line) is 9.2 percent.

While the interim ZOI surveys were not powered to capture change over time, non-overlapping confidence intervals (CIs) in the table below indicate significant differences between the baseline and interim indicator estimates. For all three poverty-related indicators – daily per capita expenditures, prevalence of poverty, and depth of poverty – CIs overlap, indicating that conclusions cannot be made regarding significant change over time. The exception is the "Female adult(s) only" disaggregate value for daily per capita expenditures, which, as shown by the non-overlapping CIs, exhibit a statistically significant increase between baseline and interim (from $2.13 at baseline to $2.57 at interim).

Women's Empowerment in Agriculture Index Indicators

The interim assessments present uncensored headcounts for 9 of the 10 WEAI indicators. Uncensored headcounts are the percent of women (regardless of their overall empowerment status) who achieve adequacy on each of the WEAI indicators. The Feed the Future indicator estimates table on pages xiii – xiv shows that the WEAI indicators with the highest achievement include control over the use of income (97.2 percent), input in productive decisions (95.1 percent), and ownership of assets (92.4 percent). Four of the nine WEAI indicators – ownership of assets, access to and decisions on credit, control over the use of income, and workload – have non-overlapping CIs, which indicate statistically significant increases in these estimates between the baseline and interim assessments.

Hunger and Dietary Intake

The Feed the Future indicator estimates table shows that the prevalence of households in the core ZOI with moderate or severe hunger is 28.2 percent; over one-fourth of all core ZOI households experience hunger. Women's dietary diversity, or the mean number of food groups (of nine possible groups) consumed by women of reproductive age (15-49), is 3.70 food groups. This is a statistically significant increase of 10.8 percent from the baseline estimate of 3.34 food groups. The prevalence of exclusive breastfeeding among children under 6 months is 58.2 percent; slightly more than half of infants in the Uganda core ZOI are exclusively breastfed. Among children 6-23 months, less than one-fourth (23.1 percent) receive a MAD. The respective baseline estimates are 60.0 percent and 16.7 percent for these indicators.

The NRVCC in the Uganda core ZOI is beans and bean products. Among women of reproductive age, 64.3 percent consume beans, and among children 6-23 months, 57.3 percent consume beans. As shown in the table below, in Uganda, which has only one NRVCC, the women's and children's "at least one" NRVCC indicator values are the same as the percentages consuming beans (64.3 and 57.3 percent, respectively).

Nutritional Status of Women and Children

The prevalence of women's underweight (defined as a Body Mass Index (BMI) below 18.5) is 10.1 percent. About 1 in 10 non-pregnant women of reproductive age in the core ZOI is underweight. Among children less than 5 years in the core ZOI, over one-quarter (29.2 percent) are stunted; these children have low height-for-age, indicating long term, chronic undernutrition. About 4.5 percent of children 0-59 months are wasted, or have low weight-for-height, and 11.0 percent are underweight, or have low weight-for-age. Wasting is an indicator of acute malnutrition, while underweight is an indicator of either acute or chronic undernutrition.

Agricultural Technologies and Management Practices

The Feed the Future program in Uganda focuses on maize, beans and coffee. Over 70 percent of households in the core ZOI cultivate maize and beans, whereas only about 32 percent of households cultivate coffee. Ninety-one percent of households cultivate a crop of any type, including crops other than maize, beans, or coffee.

Except for planting in rows, application of improved technologies by farmers in the core ZOI is low. Over three quarters of farmers planted maize in rows and over 40 percent planted beans in rows. However, less than one-sixth of farmers used animal traction for plowing and one percent or less used a tractor. Less than 3 percent of farmers applied the zero-tillage system herbicide and plant. No farmers applied improved irrigation technologies. While farmers applied improved soil and water management technologies at a higher rate, these technologies were applied by less than about a quarter of farmers.

The Uganda ZOI Interim Indicator Assessment Report is a product of the FTF FEEDBACK project, which is responsible for specific elements of performance monitoring and impact evaluation supporting the Feed the Future initiative. FTF FEEDBACK is implemented by Westat in partnership with TANGO International and the University of North Carolina's Carolina Population Center.

Baseline and interim estimates of indicator values in the core ZOI are shown in the Feed the Future Zone of Influence Indicator Estimates table on the following page.

Feed the Future zone of influence indicator estimates: Uganda

Feed the Future indicator	Baseline (2012)			Interim (2015)[1]		
	Estimate	95% CI[2]	n	Estimate	95% CI	n
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2010 USD)						
All households	2.29	2.16 – 2.43	2,372	2.40	2.28 – 2.53	2,522
Male and female adults	2.26	2.12 – 2.40	1,773	2.29	2.16 – 2.42	1,684
Female adult(s) only	2.13	1.94 – 2.33	410	2.57	2.35 – 2.79	584
Male adult(s) only	4.17	3.54 – 4.80	189	3.89	3.41 – 4.38	244
Prevalence of Poverty: Percent of people living on less than $1.25/day (2005 PPP)						
All households	32.9	29.4 – 36.3	2,372	32.1	29.1 – 35.2	2,522
Male and female adults	32.9	29.1 – 36.8	1,773	33.1	29.9 – 36.6	1,684
Female adult(s) only	35.4	28.7 – 42.1	410	30.8	25.9 – 36.1	584
Male adult(s) only	18.8	9.4 – 28.3	189	17.3	11.7 – 25.0	244
Depth of Poverty: Mean percent shortfall relative to the $1.25/day (2005 PPP) poverty line						
All households	9.4	8.0 – 10.8	2,372	9.2	8.0 – 10.3	2,522
Male and female adults	9.3	7.8 – 10.8	1,773	9.6	8.4 – 10.9	1,684
Female adult(s) only	11.1	8.4 – 13.9	410	8.4	6.6 – 10.2	584
Male adult(s) only	4.6	1.8 – 7.4	189	3.7	2.1 – 5.3	244
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators[3,4]						
Input in productive decisions	91.6	89.8 – 93.1	1,861	95.1	92.6 – 96.8	642
Ownership of assets	86.3	84.4 – 88.0	1,861	92.4	88.1 – 95.2	642
Purchase, sale, or transfer of assets	80.4	77.8 – 82.7	1,861	78.5	73.0 – 83.1	642
Access to and decisions on credit	42.5	38.9 – 46.2	1,861	53.0	47.7 – 58.3	642
Control over use of income	90.3	88.3 – 91.9	1,861	97.2	95.6 – 98.2	642
Group member	76.8	73.5 – 79.9	1,861	80.3	75.4 – 84.5	642
Speaking in public	84.2	82.0 – 86.1	1,861	85.8	79.7 – 90.3	642
Workload	38.2	35.4 – 41.0	1,861	48.7	44.2 – 53.2	642
Leisure	71.8	68.0 – 75.3	1,861	71.5	66.3 – 76.2	642
Autonomy in production	90.5	88.0 – 92.6	1,861	n/a	n/a	n/a
Prevalence of households with moderate or severe hunger						
All households	26.7	23.7 – 29.7	2,519	28.2	20.8 – 37.1	757
Male and female adults	26.4	23.1 – 29.8	1,785	26.5	19.1 – 35.3	577
Female adult(s) only	29.2	23.9 – 34.6	447	33.3	21.8 – 47.4	109
Male adult(s) only	24.6	18.5 – 30.7	279	34.6	21.0 – 51.2	69

n/a – Not available.

[1] Interim data collection for indicators other than poverty and expenditures occurred during the lean season, whereas the baseline data collection for these indicators occurred in the harvest season. As a result, baseline indicators will tend to show a more positive picture in terms of hunger and nutrition, while the interim indicators will tend to show a more negative picture.

[2] Confidence intervals (CIs) demonstrate the reliability of estimated values. While interim surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs do overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. For the following indicators, it cannot be concluded that there are significant differences in estimates over time: Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2010 USD), with the exception of the Female adult(s) only disaggregate values (which have non-overlapping CIs); Depth of Poverty: mean percent shortfall relative to the $1.25/day (2005 PPP) poverty line; the following five Women's Empowerment in Agriculture Index (WEAI) raw headcounts: input in productive decisions, purchase, sale or transfer of assets, group member, speaking in public, and leisure; Prevalence of households with moderate or severe hunger; Prevalence of exclusive breastfeeding among children under 6 months of age; Prevalence of children 6-23 months receiving a minimum acceptable diet; Prevalence of underweight women; Prevalence of stunted children under 5 years of age; Prevalence of wasted children under 5 years of age; and Prevalence of underweight children under 5 years of age.

[3] The full WEAI score cannot be calculated because interim data were collected from women only and the autonomy indicator was dropped. The second interim survey (2017) will collect the full set of data from women and men and will report on the full WEAI.

[4] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy (or inadequacy) in each indicator, while uncensored headcounts present the percent of women who achieve adequacy (or inadequacy) in each indicator regardless of empowerment status.

Feed the Future zone of influence indicator estimates: Uganda (continued)

Feed the Future indicator	Baseline (2012)			Interim (2015)[1]		
	Estimate	95% CI[2]	n	Estimate	95% CI	n
Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age						
All women age 15-49	3.34	2.22 – 3.46	2,311	3.70	3.56 – 3.85	747
Prevalence of exclusive breastfeeding among children under 6 months of age						
All children	60.0	53.9 – 66.2	300	58.2	46.2 – 69.4	69
Male children	67.8	60.2 – 75.3	150	60.9	41.6 – 77.3	39
Female children	52.5	42.7 – 62.3	150	54.8	37.6 – 70.9	30
Prevalence of children 6-23 months receiving a minimum acceptable diet						
All children	16.7	13.5 – 19.9	754	23.1	16.8 – 31.0	199
Male children	12.7	8.4 – 16.9	384	20.8	13.0 – 31.5	88
Female children	20.8	16.0 – 25.6	370	24.8	16.4 – 35.7	111
Prevalence of women of reproductive age who consume targeted nutrient-rich value chain commodities[5]						
Beans and bean products: All women age 15-49	n/a	n/a	n/a	64.3	58.4 – 69.8	747
Prevalence of children 6-23 months who consume at least one targeted nutrient-rich value chain commodity[5]						
All children	n/a	n/a	n/a	57.3	46.5 – 67.4	199
Male children	n/a	n/a	n/a	56.1	40.7 – 70.4	88
Female children	n/a	n/a	n/a	58.1	46.6 – 68.8	111
Prevalence of underweight women						
All non-pregnant women age 15-49	8.0	6.4 – 9.5	2,083	10.1	7.7 – 13.3	672
Prevalence of stunted children under 5 years of age						
All children	33.0	30.1 – 35.9	2,074	29.2	25.8 – 32.8	649
Male children	36.2	32.8 – 39.7	1,028	29.8	24.9 – 35.3	312
Female children	29.8	26.2 – 33.4	1,046	28.6	23.3 – 34.6	337
Prevalence of wasted children under 5 years of age						
All children	6.0	4.8 – 7.2	2,074	4.5	2.9 – 7.0	649
Male children	5.8	4.2 – 7.4	1,028	5.4	3.0 – 9.5	312
Female children	6.2	4.6 – 7.8	1,046	3.7	1.6 – 8.2	337
Prevalence of underweight children under 5 years of age						
All children	13.5	11.8 – 15.1	2,074	11.0	8.4 – 14.1	649
Male children	14.5	12.0 – 17.0	1,028	11.1	7.4 – 16.4	312
Female children	12.4	9.9 – 14.9	1,046	10.8	7.2 – 15.8	337

[5] The indicators for women's and children's consumption of targeted NRVCC were not collected during the baseline round of data collection.

Sources: Baseline: FTF FEEDBACK ZOI Baseline Survey, Uganda 2012; Uganda Demographic and Health Survey (DHS) 2011; Uganda National Household Survey (UNHS) 2009/2010. Interim: FTF FEEDBACK ZOI Interim Survey, Uganda 2015; Uganda National Household Survey (UNHS) 2012/2013.

1. Background

This section provides background information on Feed the Future in Uganda, including a description of the program and the (zone of influence) ZOI, demographic information on the core ZOI population, and a summary of the agriculture situation in the core ZOI.

1.1 Feed the Future Overview

Feed the Future Objectives and Strategies in Uganda

Uganda had one of the most rapidly developing economies in Africa in the 1990s and 2000s, maintaining an average of 7.8 percent growth. Growth declined to annual rates around 5 percent in the last decade. Uganda was able to meet the first Millennium Development Goal (MDG) of halving poverty and hunger early. By 2012/2013, poverty had dropped to 19.7 percent of the total population and 22.8 percent in rural areas. While recognizing these important gains, 43.3 percent of the population are classified as non-poor insecure, living between twice the income poverty line and the poverty line, and at risk of falling into poverty in the event of a shock (such as pests, price fluctuations, or climatic shock).[2] As of 2012, Uganda suffered from pervasive undernutrition, with 33 percent of children under age 5 stunted, and 14 percent of children severely stunted.[3]

The overall objective of Uganda's Feed the Future investment is to reduce poverty and undernutrition by increasing inclusive economic growth in the agriculture sector and improving nutritional status, especially of women and children. This objective will be achieved by working in targeted areas of the agriculture sector, improving nutrition and livelihoods for the vulnerable, and focusing on improved natural resource management to accelerate prosperity in Uganda.

The Uganda Feed the Future strategy builds on a foundation of prevention and nutrition treatment interventions, growth-oriented value chain activities, and integration of nutrition and agriculture interventions to improve the nutritional status and incomes of vulnerable populations. Through these interventions an estimated 709,000 vulnerable Ugandan women, children, and family members will receive targeted assistance to escape poverty and hunger. More than 1 million children will be reached over 5 years with services to improve their nutrition and prevent stunting and child mortality. The core investments in nutrition will focus on community- and facility-based prevention and treatment, targeted nutrition service delivery,

[2] Economic Development Policy and Research Department, Ministry of Finance, Planning and Economic Development. (2014).
[3] Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012).

and development/creation of an enabling environment for improved nutrition and capacity building.[4]

The overall purpose of the agricultural component is to increase smallholder farmers' incomes derived from selected crop value chains in 38 districts. The Feed the Future strategy is aligned with the Government of Uganda's Agricultural Sector Development Strategy and Investment Plan. This Plan identifies 10 priority value chains, including the three selected for Feed the Future. Maize, coffee, and bean value chains were prioritized in line with the Uganda government priorities, division of donor responsibilities, and potential for highest impact. Feed the Future investment focuses on value chains with the greatest market potential, the largest number of farmers, and the greatest income potential for farmers. Impact on nutrition and role of gender were also critical considerations in selecting value chains.

The key outputs for the agriculture component are:

- **Increased productivity** through the development, dissemination, promotion, and adoption of improved technologies including crop varieties, agricultural inputs, crop and soil management techniques (including on-farm techniques to increase resilience to climate change), and post-harvest handling practices.

- **Increased access to competitive markets** through the expansion of trade opportunities (domestic, regional, and international), improving quality of agricultural commodities, improving market information systems (access and utilization), and strengthening market linkages.

- **Strengthened support services** through the sustainable development of markets for value-chain support services such as input supplies, finance, advisory services (business development and extension), and production. Additional support services, such as plowing, chemical spraying, and improved storage, processing, and transport, will also be strengthened to increase efficiencies along the value chains.

- **Improved government agriculture-related policy environment** that improves the private sector investment climate, strengthens advocacy through commodity platforms, improves compliance with standards and regulations, strengthens produce certification procedures, and generally improves legislation, licensing, and policy implementation.

- **Improved public sector capacity** through (1) strengthening the availability and quality of agricultural statistics; (2) accelerating the implementation of the national agriculture strategic investment plan, thereby improving the institutional capacity of the commodity platforms; (3) improving agriculture-related technical skills; and (4) strengthening the capacity of the Ministry of Agriculture, Animal Industry, and Fisheries to plan and monitor policies.

[4] http://www.feedthefuture.gov/country/uganda. Retrieved July 17, 2015.

The Connecting Nutrition to Agriculture component will reach vulnerable households in 25 districts in the Southwest and North regions of Uganda. Under this component, the United States Agency for International Development (USAID) is implementing a flagship activity called Community Connector. The Community Connector activity aims to reduce vulnerability to crisis and improve household and community capacity to absorb income, environmental, or other shocks. It will work to integrate vulnerable households into the market economy and transition them from subsistence to production. Community Connector is strategically implemented in geographic areas that allow for an overlay with other activities promoting improved production, health, and nutrition to reinforce practice and behavior change.[5] Community Connector provides the opportunity to examine the interaction of nutrition, agriculture, and gender programming approaches, with particular focus on the role of women in the household decisionmaking process, including the use and distribution of resources.

1.2 Feed the Future ZOI Profile

The expanded ZOI includes the following 9 regions (and 45 districts):

1. Central 1(Districts – Masaka, Rakai);
2. Central 2 (Districts – Kiboga, Luwero, Mukono, Mubende);
3. East Central (Districts – Bugiri, Iganga, Jinja, Kamuli, Mayuge);
4. Mid-Eastern (Districts – Mbale, Sironko, Tororo, Kapchorwa);
5. North (Districts – Gulu, Lira, Kole, Oyam, Amuru, Alebtong, Pader, Agago, Dokolo, Nwoya);
6. Southwest (Districts – Bushenyi, Kabale, Kunungo, Kisoro, Ibanda, Isingiro, Kiruhura);
7. West Nile (Districts – Nebbi);
8. Western (Districts – Kamwenge, Kasese, Kibaale, Masindi, Kiryandongo); and
9. Karamoja (Districts – Kabong, Kotido, Abim, Moroto, Napak, Amudat, Nakapiripirit).

Figure 1.1 shows the ZOI areas in Uganda.

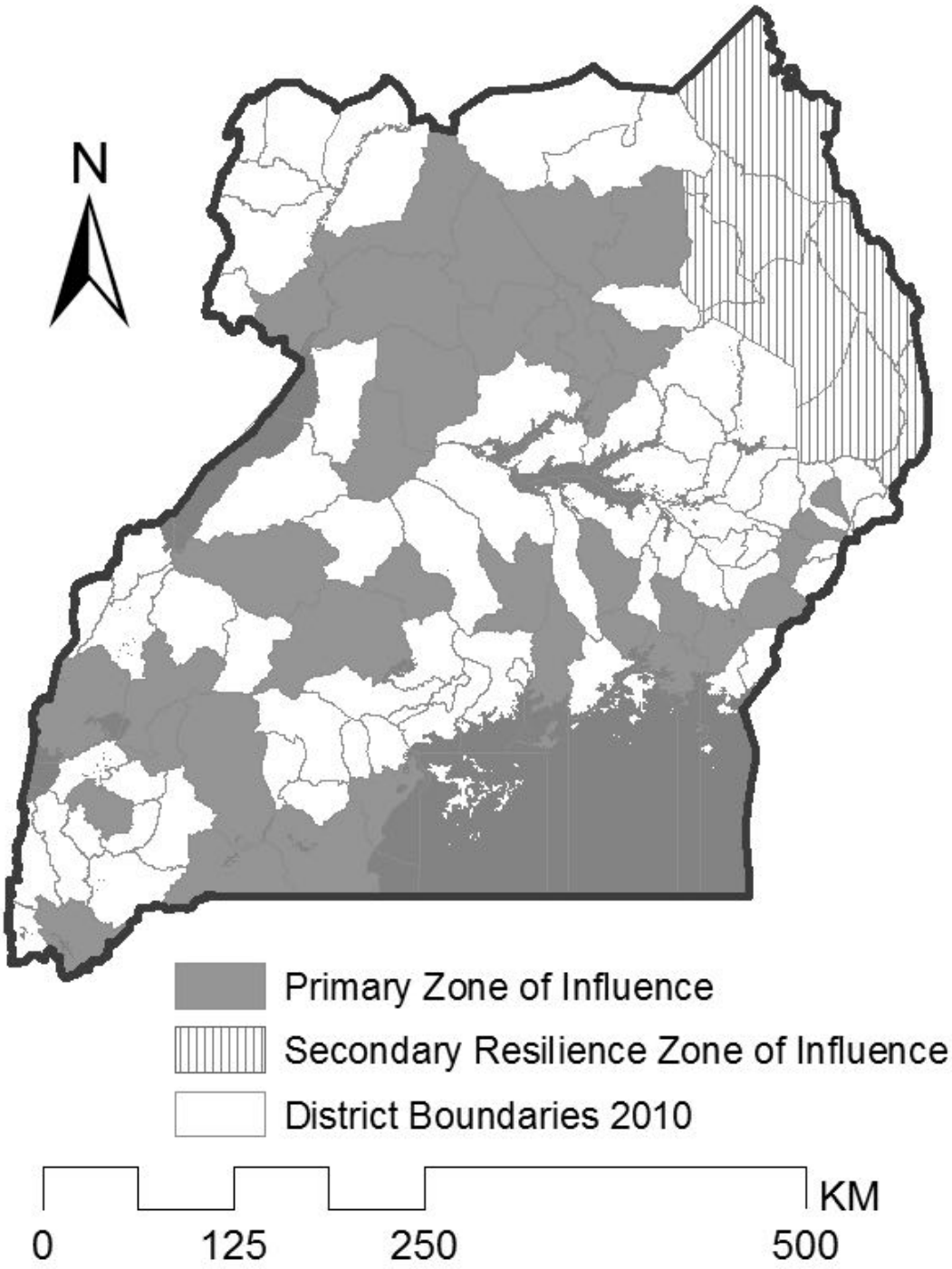
Both urban and rural areas are included in the ZOI (and therefore in the sample frame). The ZOI at interim has been expanded to include seven districts in the Karamoja region, though FTF FEEDBACK did not collect data in the Karamoja region. The "expanded ZOI" covers 45 districts, compared to the 38 districts in the "core ZOI" at baseline. The interim survey was designed to cover the same 38 districts (core ZOI) as were covered by the baseline survey.

[5] USAID. (2011).

Comparisons in this report, therefore, will be between the same districts at baseline and interim.

A map of the Feed the Future ZOI in Uganda is provided in Figure 1.1.

Figure 1.1. Map of Uganda: Feed the Future ZOI



1.2.1 Rationale for ZOI Selection

The ZOI comprises geographic areas that were prioritized according to three criteria: number of smallholder farms, number of people living in poverty, and number of underweight children. In addition, the potential for widespread production commercialization of at least one of the three focus value chains (coffee, maize, and beans) was considered. The Community Connector program is implemented in the Southwest and North regions of Uganda. These two regions were selected because they represent a combination of the highest poverty and worst stunting and wasting rates in the country. Specific districts were chosen to complement the U.S. President's Emergency Plan for AIDS Relief program for orphans and vulnerable children. The expanded ZOI encompasses the seven districts of Karamoja where Food for Peace (FFP) activities are implemented, in addition to the core ZOI districts. The core ZOI and the districts in Karamoja are strategically related on at least three levels: a shared vision, shared and complementary outcomes, and linkage (direct and indirect) between Feed the Future and FFP programs.

1.2.2 Demography of the Core ZOI

The core ZOI districts included 14.3 million people in 2014, representing roughly 41 percent of the entire population of Uganda. The core ZOI population has grown, on average, 3 percent each year between 2002 and 2014. Some districts in the northern and western parts of the country have seen locally higher growth rates over the same period; the populations of Kibaale (5.5 percent annual growth rate) and Nwoya (9.5 percent annual growth rate) have grown more than 5 percent annually between 2002 and 2014.

Tables 1.1 and 1.2 present individual and household population estimates, respectively, for the core ZOI for 2015. Estimates of the total population as well as sub-populations of the core ZOI are presented. The sub-population categories correspond to the various sub-populations for the Feed the Future indicators and disaggregates (e.g., children age 6-23 months, number of households). The core ZOI estimates for the total population of individuals as well as households are also disaggregated by gendered household type.[6]

The 2015 population estimates are based on the population counts taken during the 2014 National Population and Housing Census in Uganda by the Uganda Bureau of Statistics (UBOS). The 2014 district populations were projected to 2015 by using the reported 2002-2014 intercensal, district growth rates. The percentage of the population living in the urban areas of the core ZOI is assumed to be the same in 2015 as was observed in the 2014 census. The number of individuals and households in the different subgroups is estimated using the Uganda 2015 core ZOI Interim Survey. Specifically, the percentages of individuals or households in

[6] See Section 2.2.1 Standard Disaggregates for the definition of gendered household type.

certain groups were estimated and then applied to the total projected population of the core ZOI. Child survival curves were generated with data from the 2011 DHS for children younger than 59 months. These survival curves were used to create estimates of children 0-5 months, 6-23 months, and 6-59 months.

Table 1.1. Population of individuals, by category, in the core ZOI, Uganda, 2015

Category of individuals	Estimated population
Total population	14,645,860
Total population, by sub-population	
Women of reproductive age (15-49 years)	3,200,028
Children 0-59 months	2,465,082
Children 0-5 months	255,305
Children 6-23 months	745,592
Children 6-59 months	2,209,777
Youth 15-29 years	3,827,308
Total population, by area type	
Urban	2,225,682
Rural	12,420,178
Total population, by gendered household type	
Male and female adult(s)	12,744,089
Female adult(s) only	1,397,813
Male adult(s) only	479,700
Child(ren) only (no adults)	24,258
Women of reproductive age, by pregnancy status	
Pregnant	291,049
Non-pregnant	2,908,979
Children 0-59 months, by child sex	
Male	1,228,000
Female	1,237,082
Children 0-5 months, by child sex	
Male	127,147
Female	128,158
Children 6-23 months, by child sex	
Male	370,910
Female	374,682
Children 6-59 months, by child sex	
Male	1,100,853
Female	1,108,924
Youth 15-29 years, by sex	
Male	1,813,972
Female	2,013,336

Source: Population figures and intercensal growth rates recorded during the 2014 Uganda Census (UBOS 2014a) were used to project the population to 2015. The projected population was then disaggregated into the subgroups reported here using the population characteristics recorded in the FTF FEEDBACK ZOI Interim Survey, Uganda 2015 and the 2011 Uganda Demographic and Health Survey.

Table 1.2. Number of households, by category, in the core ZOI, Uganda, 2015

Category of households	Estimated population
Total number of households in core ZOI	3,110,144
Number of households, by gendered household type	
Male and female adult(s)	2,394,560
Female adult(s) only	444,603
Male adult(s) only	263,608
Child(ren) only, (no adults)	7,373

Source: Population figures and intercensal growth rates recorded during the 2014 Uganda Census (UBOS 2014a) were used to project the population to 2015. The projected population was then disaggregated into the subgroups reported here using the population characteristics recorded in the FTF FEEDBACK ZOI Interim Survey, Uganda 2015 and the 2011 Uganda Demographic and Health Survey.

1.2.3 Agriculture in the Core ZOI

Uganda is a landlocked country endowed with large freshwater resources and a high agricultural potential. Almost 66 percent of the labor force worked in agriculture in 2013.[7]

Agriculture is essential to Uganda's economic growth. The sector contributes more than 20 percent of Uganda's gross domestic product (GDP) and accounts for 48 percent of its exports,[8,9] with coffee alone accounting for 17 percent of Ugandan exports.[10] The performance of the agriculture sector, which makes limited use of improved inputs, irrigation, and mechanization, has been mixed. Uganda's agricultural sector grew three percent in 2011-2012.[11] Growth in the sector is primarily driven by increases in area planted rather than by increases in productivity.[12]

Table 1.3 provides data on crop yields and marketed volumes over the last decade for the most produced commodities in Uganda plus the three Feed the Future priority value chains of maize (which is also one of the most produced commodities), green coffee, and dry beans. The production of the three value chain crops has varied in the 10 years since 2003, with production of maize more than doubling, green coffee increasing by about 25 percent, and dry beans declining. Maize and coffee crop yields have increased from 2003 to 2013, while bean crop yields experienced a decrease during that time. Note that many of the production values for 2013 are Food and Agricultural Organization (FAO) estimates or unofficial figures, and should therefore be interpreted with caution.

[7] NPA/GOU. (2013).
[8] UBOS and MAAIF. (2010).
[9] http://data.worldbank.org/indicator/NV.AGR.TOTL.ZS. Retrieved December 21, 2015.
[10] http://atlas.media.mit.edu/en/profile/country/uga/. Retrieved July 22, 2015.
[11] MAAIF. (2012).
[12] USAID. (2011).

Table 1.3. Agricultural production and yields, national level

Crop	Production (MT)			Yield (kg/ha)		
	2003	2008	2013	2003	2008	2013
Plantains	9,700,000	9,371,000	8,926,308[1]	5,840	5,578	5,412
Cassava	5,450,000	5,072,000	5,228,000[2]	13,457	12,744	12,018
Sugar cane	2,150,000	2,750,000	3,350,000[1]	65,152	69,975	67,000
Sweet potatoes	2,610,000	2,707,000	2,587,000[2]	4,387	4,519	4,704
Maize	1,300,000	2,314,909	2,748,000	1,831	2,686	2,748
Coffee, green	150,871	211,726	190,000[1]	572	614	609
Beans, dry	525,000	440,000	461,000[2]	673	491	419

[1] These production values for 2013 are FAO estimates and should be interpreted with caution.

[2] These production values for 2013 are unofficial figures and should be interpreted with caution.

Source: FAO Stat Database. Retrieved online July 17, 2015.

While there are some large-scale commercial farmers, smallholder producers dominate Uganda's agriculture sector, with an average landholding size of 1.1 hectares.[13] Table 1.3 above shows data over time for both production (MT) and yield (kg/ha) for selected agricultural crops in Uganda.

With respect to value, the top 10 commodities in 2012 were plantains, cassava, meat (indigenous cattle), milk (whole fresh cow), maize, dry beans, sweet potatoes, green coffee, meat (indigenous pig), and fresh vegetables. The main exported cash crops in 2011 (by value) were green coffee, cotton, tea, raw sugar, tobacco, cocoa beans, and palm oil, while the main imports were palm oil, wheat, and refined sugar.[14]

Informal exports of maize from Uganda are estimated to be much higher than the grain that is traded through formal channels. In 2013 for example, informal trade accounted for more than three-quarters of the 820,000 tons of maize exported to the region from Uganda. Similar proportions apply in the case of the other key grain exports to the region (sorghum and millet), while the proportion is even higher in the case of bean exports. These data have been gathered from a number of unofficial sources[15] and should, therefore, be treated with some caution. Uganda has a dominant role in supplying staple foods to its regional neighbors (Kenya, South Sudan and Rwanda, in particular): it is truly the bread-basket of East Africa.

Although half the arable land in East Africa is concentrated in Uganda, and the country benefits from abundant rainfall and two growing seasons, the country faces challenges of crop disease and pests, declining soil fertility, poor infrastructure, lack of access to finance, poor-quality inputs, and inadequate post-harvest storage and processing. Agricultural yields per hectare are significantly below potential because the majority of Ugandan farmers do not use improved agricultural practices. Post-harvest losses are high, with estimates of maize losses as high as

[13] UBOS and MAAIF. (2010).
[14] http://faostat.fao.org/CountryProfiles/Country_Profile/Direct.aspx?lang=en&area=226. Retrieved July 22, 2015.
[15] USAID/Uganda. (2016).

25 percent. Crop yields are therefore low, and have not kept pace with rapid population growth. In addition, natural soil erosion is compounded by man-made factors, such as human and livestock population pressure on land and inappropriate farming techniques.[16] Most of the country (including the core ZOI) is bimodal with two rainy seasons. The unimodal Karamoja region (which is part of the expanded Feed the Future ZOI) has a lean season of March through June.[17]

Women are responsible for approximately 70 percent of overall agriculture GDP, and about 70 percent of smallholder farmers are women. It is estimated that women produce 90 percent of Uganda's total food output and 50 percent of the total cash crop output.[18]

Background information related to national nutrition status and household food security can be found in Section 6.1, Household Hunger, and Section 7, Nutritional Status of Women and Children.

1.3 Purpose of This Report

The purpose of this interim assessment is to provide the United States Government (USG), interagency partners, USAID Bureau for Food Security (BFS), USAID Missions, host country governments, and development partners with information about the current status of the ZOI indicators. The assessment is designed for use as a monitoring tool, and as such provides point estimates of the indicators with an acceptable level of statistical precision. However, Feed the Future ZOI sample calculations are not designed to support conclusions of causality or program attribution, nor is the interim assessment designed to measure change from the baseline with statistical precision.

[16] http://www.fao.org/countryprofiles/index/en/?iso3=UGA. Retrieved May 6, 2013.
[17] http://www.fao.org/giews/countrybrief/country.jsp?code=UGA. Retrieved July 22, 2015.
[18] USAID. (2011).

2. Methodologies for Obtaining Interim Values for Feed the Future Indicators

This section describes the methodology used to obtain the population-based Feed the Future indicators. It provides information on the data sources and describes measures and reporting conventions used throughout the report.

2.1 Data Sources

Table 2.1 presents the data sources and dates of data collection for the baseline and interim Feed the Future indicators.

Table 2.1. Data sources and dates of the baseline and interim Feed the Future indicators

Indicator	Baseline		Interim	
	Data source	Date collected	Data source	Date collected
Daily per capita expenditures (as a proxy for income) in USG-assisted areas	UNHS	May 2009/ April 2010	UNHS	June 2012/June 2013
Prevalence of Poverty: Percent of people living on less than $1.25/day	UNHS	May 2009/ April 2010	UNHS	June 2012/June 2013
Depth of Poverty: Mean percent shortfall relative to the $1.25/day poverty line	UNHS	May 2009/ April 2010	UNHS	June 2012/June 2013
Women's Empowerment in Agriculture Index indicators	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of households with moderate or severe hunger	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015
Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of exclusive breastfeeding among children under 6 months of age	DHS	June/ December 2011	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of children 6-23 months receiving a minimum acceptable diet	DHS	June/ December 2011	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of women of reproductive age who consume targeted nutrient-rich value chain commodities	n/a	n/a	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of children 6-23 months who consume targeted nutrient-rich value chain commodities	n/a	n/a	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of underweight women	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015

Table 2.1. Data sources and dates of the baseline and interim Feed the Future indicators (continued)

Indicator	Baseline		Interim	
	Data source	Date collected	Data source	Date collected
Prevalence of stunted children under 5 years of age	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of wasted children under 5 years of age	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015
Prevalence of underweight children under 5 years of age	FTF FEEDBACK ZOI Survey	December 2012	FTF FEEDBACK ZOI Survey	March/April 2015

n/a – Not available.

2.1.1 Primary Data: The Interim Survey in Uganda

This section describes the interim survey, including discussion of the sample design (including targeted sample size), questionnaire customization, fieldwork, response rates, and limitations of the survey.

Survey Sample Design

The FTF FEEDBACK interim survey in Uganda (core) ZOI comprises 38 districts distributed across eight regions: Central 1, Central 2, East Central, Mid-Eastern, North, Southwest, West Nile and Western. The regions were further combined into four strata in survey design: Central 1/2, East Central/Mid-Eastern, North, and Southwest/West Nile/Western.

Sample Size Calculation

The purpose of the interim indicator assessment is to provide estimates of the population-based indicators with an acceptable level of statistical accuracy. The interim survey sample sizes were calculated to provide point estimates of indicator values rather than calculating sample sizes to detect change in indicator values over time.

In sample size calculations, the margin of error determines the amount of precision the indicator estimates will have. For continuous variables such as expenditures, the margin of error was based on the mean indicator value times 0.10. The margin of error for proportions (poverty, stunting, and wasting) was calculated with 0.10.

Standard deviations (SDs) and design effects (DEFFs) for sample size calculation were estimated using baseline survey data. FTF FEEDBACK calculated sample sizes using projected interim indicator values based on the USAID/Uganda's 2015 targets in the Feed the Future Monitoring System (FTFMS). For indicators where the 2015 targets were not available, projected interim values were calculated based on a 10 percent change from baseline.

All sample sizes were further adjusted for nonresponse using the nonresponse rate from the baseline survey or a 10 percent nonresponse rate if the former was not provided or was greater than 10 percent. For all indicators, the sample sizes are for the populations associated with the indicator. The proportion of the population of interest (e.g., children under 5 years of age for underweight children and women of reproductive age for underweight women) in the total population and the average number of household members was estimated based on baseline survey data, and used to calculate the number of households needed for that indicator.[19]

Sample sizes were calculated for each of the key Feed the Future indicators (poverty, daily per capita expenditures, stunting, and underweight). Using estimates from the baseline survey of the average number of children 0-5 months per household, we also calculated sample size needed for capturing 70 children in this age range, in order to have sufficient sample to estimate the exclusive breastfeeding indicator.

Table 2.2 shows the estimated sample sizes for the relevant population-based indicators. The minimum sample size required to calculate the exclusive breastfeeding indicator also is included in the table. Because the number of households required to capture 70 infants age 0-5 months exceeds the largest number of households required for any of the four key indicators requiring primary data collection, the number of households selected for the sample was determined by the exclusive breastfeeding indicator. The largest sample size for the indicators for which FTF FEEDBACK collected data[20] is 772 and rounded to 800.

[19] See 2012 addendum to Magnani, Robert 1999. Sampling Guide. Washington, DC: FHI 360/FANTA http://www.fantaproject.org/sites/default/files/resources/Sampling-1999-Addendum-2012-ENG_0.pdf.

[20] FTF FEEDBACK did not collect data on household consumption required for the poverty and expenditure indicators and thus these indicators were not included in the determination of sample size for the Uganda interim ZOI survey. These indicators were calculated from secondary data (Uganda National Household Survey (UNHS)) and were included in this table to show the sample size that the UNHS must have in the ZOI to be considered an acceptable source of data for these indicators.

Table 2.2. Sample size estimate for the four key indicators and exclusive breastfeeding

Indicator	Baseline value	DEFF	Std. dev.	Estimated interim value	Sample size	Number of households needed
Prevalence of poverty	32.86	3.32		28.04	257	283
Prevalence of underweight children	13.45	1.28		11.80	<100	<100
Prevalence of stunted children	32.99	2.01		29.00	159	285
Per capita expenditures (as a proxy for incomes)	1.53	2.80	1.30	1.68	644	708
Household hunger	26.69	2.88		24.03	202	206
Women's dietary diversity	3.34	4.65	1.39	4.23	193	<100
Prevalence of exclusive breastfeeding of children <6 months	60.01	1.37		65.40	70	772

Sample Design

Sampling was based on a two-stage design, with stratification by region and urban/rural. In the first stage, enumeration areas (EAs) were selected from the 2014 national census sampling frame in 38 districts with probability proportional to size (PPS) sampling. EAs with total number of households less than 80 in the frame were combined with one or two adjacent EAs to form a larger cluster for selection. Forty-two clusters were selected with 60 EAs within these clusters. Twenty households within each selected cluster were selected randomly from a list of eligible households in the second stage.

Sample Weights

Data required for statistical weighting of survey data were collected throughout the sampling process. These data included, but were not limited to: (1) EA population sizes from the census; (2) population of the strata (i.e., region, urban/rural) from which EAs are drawn; (3) population of the selected EAs at the time of the household listing; and (4) response rates at the household and individual (women, men, and children) levels.

Computations based on the survey sample were weighted so that the results accurately reflect the proportions of the sampled elements within the overall sample frame of the population in the core ZOI. Details of how weights were computed are provided in Appendix 2.

Questionnaire Design

The questionnaire used for the interim survey in Uganda was based on the population-based survey instrument for Feed the Future ZOI indicators for the interim assessments. Module E was removed from the Uganda-specific questionnaire because secondary data were used for the corresponding indicators. An additional module on agriculture technology use was added to

address Uganda Feed the Future programming on that topic. Questions relating to targeted NRVCC (beans and bean products) were added to address Feed the Future programming in those commodities in Uganda.

FTF FEEDBACK provided training in customization, pretesting, and translation of the questionnaire to Service for Generations (SFG), the in-country data collection partner. FTF FEEDBACK modified the questionnaire based on customizations recommended by SFG and pretest findings, with Bureau for Food Security (BFS) review and approval of the revisions.

The questionnaire was translated into six local languages spoken by 10 percent or more of the population in the core ZOI. In Uganda, the questionnaire was translated into Luganda, Luo, Runyankole-Rukiga, Lusoga, Lugisu, and Runyoro (combined with Rutoro). The quality of the translation(s) was assured by using a team translation approach with back translation from the main translation. Translations were incorporated into the data entry program on the tablet computers that were used for data collection in the households.

Questionnaires were further refined based on observations during training, the pilot, and initial days of fieldwork.

Fieldwork

Preparation for fieldwork began with thorough training of the SFG specialists to conduct and supervise fieldwork. A senior FTF FEEDBACK trainer trained 13 SFG trainers.

The SFG trainers then trained 62 field staff for 14 days from late January through early February 2015. Training of field staff reflected the procedures detailed in the FTF FEEDBACK interviewing and field supervision manuals. An FTF FEEDBACK trainer supported the field training, including providing training on use of the tablets for data collection. Trainees' comprehension of the material imparted was assessed periodically throughout the training. Trainees also participated in role plays to practice important skills and responses to common fieldwork challenges.

At the conclusion of training, SFG senior management and trainees, joined by the FTF FEEDBACK trainer, conducted a pilot test of all procedures. At the conclusion of the pilot test, FTF FEEDBACK and SFG senior management reviewed findings from the pilot test and made final modifications to procedures, the questionnaires, and the data entry programs. Prior to the start of data collection, a 2-day refresher training was conducted by FTF FEEDBACK monitoring staff.

Fieldwork was conducted from March 6 to April 7, 2015. The field teams visited each selected cluster and household. Up to three visits were made to each household so all eligible members of the household could be interviewed. Senior quality assurance staff from SFG visited each field team on a regular basis to assure that procedures were being followed and to provide any

needed supplies. An FTF FEEDBACK field survey monitor was also present in Uganda to visit the teams in the field to provide quality control and to ensure that all SFG staff were following survey procedures.

Data for completed household interviews that had been reviewed and approved were uploaded to FTF FEEDBACK servers on a daily basis, where possible. When lack of Internet access precluded this, data were submitted prior to starting work in the next assigned cluster.

A data management team at FTF FEEDBACK worked with a Data Manager in SFG's headquarters to review data and case completion regularly. Findings from these reviews were provided to field teams where necessary to improve data quality.

Limitations of the Survey

The data entry program on the tablets for collection of dietary information was revised for the interim survey to include more extensive prompting than was used for the baseline. For this reason, changes in the Women's Dietary Diversity Score (WDDS) and minimum acceptable diet (MAD) indicators should be interpreted with caution.

As mentioned previously, the interim survey was not powered to show change in indicators from the baseline.

The sampling frame was compiled from a recently concluded population census by UBOS. In the 2014 frame, an EA is defined as locality, which may be comprised of a full village or part of village. There is no EA that includes more than one village. Many EAs have less than 40 houses. Those EAs with very few households are in mountainous areas, swampy areas, areas with large sugarcane plantations covering almost an entire village and very sparsely populated islands. To ensure data privacy and approximately equal size, FTF FEEDBACK had to combine EAs with less than 80 households with one or two adjacent ones to form a larger cluster. In some cases, one cluster could consist of EAs that cover large areas.

Although the current sampling frame has measure of size (number of households) from the 2014 census frame in line with current Uganda Bureau of Statistics (UBOS) practices, in many selected clusters, the numbers of households listed are very different from the number in the frame. This would cause increased variation in sampling weights.

Core ZOI Interim Survey Response Rates

Table 2.3 presents the response rates for the core ZOI interim survey for Uganda. The components and the response rates for the sampled households, women of reproductive age (15-49), primary adult female decisionmakers (for the Women's Empowerment in Agriculture module), as well as children under 5 years are presented. Response rates are presented by rural/urban residence as well as for the total sample.

Table 2.3. Results of the household and individual interviews for the core ZOI interim survey in Uganda, 2015

Response rates and components	Residence		Total
	Urban	Rural	
Households			
Households selected	160	682	842
Households occupied	144	649	793
Households interviewed	140	638	778
Household response rate[1]	97.2	98.3	98.1
Women of reproductive age (15-49 years)			
Number of eligible women	171	749	920
Number of eligible women interviewed	139	621	760
Eligible women response rate[2]	81.3	82.9	82.6
Primary adult female decisionmakers (age 18+ years)			
Number of eligible women	124	581	705
Number of eligible women interviewed	118	546	664
Primary adult female response rate[2]	95.2	94.0	94.2
Children under 5 years of age			
Number of eligible children	106	616	722
Number of caregivers of eligible children interviewed	103	588	691
Eligible children response rate[2]	97.2	95.5	95.7

[1] Household response rates are calculated based on the result codes of Module C, the household roster, and are defined as the number of households interviewed divided by the number of households occupied. Unoccupied households were excluded from the response rate calculations. The unoccupied households were those that were found to be vacant, not a dwelling unit, dwelling unit destroyed, or with an extended absence, or other result code.

[2] Individual response rates are calculated based on the result codes in the relevant individual modules, i.e., Modules G, H, and I. These rates are defined as the number of eligible individuals interviewed divided by the number of eligible individuals. Eligibility is determined in modules G, H, and I, respectively. (Note that for children under 5 years of age [Module I], the primary caregivers of the children served as the respondents, not the children directly.)

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

2.1.2 Secondary Data

This section discusses the use of secondary data sources for the calculation of interim indicators. As shown in **Table 2.4**, the 2012-2013 UNHS was used for the three indicators of Daily per capita expenditures, Prevalence of Poverty, and Depth of Poverty. (Note that 2009-2010 UNHS secondary data were also used for the Uganda baseline assessment.)

Table 2.4. Secondary data sources used for the core ZOI interim assessment in Uganda, 2015

Name of data source	Indicators	Fieldwork dates	Sample size in the core ZOI
Uganda National Household Survey (UNHS) 2012/2013	Daily per capita expenditures, Prevalence of Poverty, Depth of Poverty	June 2012-June 2013	2,522

2.1.3 Comparability of Data Sources Used for the Interim Assessment

This section discusses the comparability across data sources for the interim assessment.

Seasonality

A summary of the seasons when data were collected appears in **Table 2.5**. Data for the per capita expenditures and poverty indicators were from the UNHS and were collected from June 2012 to June 2013. This year-long survey included the lean season months of March through June. The interim survey was conducted from early March to early April 2015, which falls within the lean season. Thus the data for the per capita expenditures and poverty indicators came from the lean and non-lean seasons, while the data for the other indicators were collected during the lean season only. The majority of indicators capture status in a less favorable season than the per capita expenditure and poverty indicators.

Table 2.5. Seasonal issues affecting comparison of indicators across data sources

Indicator	Season of data collection for interim
Daily per capita expenditures	Whole year—lean and non-lean seasons
Prevalence of Poverty	Whole year—lean and non-lean seasons
Depth of Poverty	Whole year—lean and non-lean seasons
Women's Empowerment in Agriculture Index	Lean season
Prevalence of households with moderate or severe hunger	Lean season
Women's Dietary Diversity	Lean season
Prevalence of exclusive breastfeeding among children under 6 months of age	Lean season
Prevalence of children 6-23 months receiving a minimum acceptable diet	Lean season
Prevalence of underweight children under 5 years of age	Lean season
Prevalence of stunted children under 5 years of age	Lean season
Prevalence of wasted children under 5 years of age	Lean season
Prevalence of underweight women	Lean season

2.2 Measures and Reporting Conventions Used Throughout This Report

2.2.1 Standard Disaggregates

A standard set of disaggregate variables are used in tables throughout this report. This section lists each of the standard disaggregate variables and defines how the variable is calculated.

These variables are coded consistently; however, because data have been drawn from the interim survey and the UNHS, there may be minor cross-source variations in the data used to derive the standard disaggregates. These are noted in the variable descriptions below. The data

source used for each Feed the Future indicator is also the data source used to produce the disaggregate variables presented in the associated descriptive tables.

Age in Months

The age of children in months is collected in the child nutrition-focused module of the questionnaire, rather than in the household roster, so that the child's parent or primary caregiver can be prompted to provide the most accurate age possible. Children's age in months is presented by monthly age groups as appropriate for the children's dietary intake and anthropometry tables. For example, for the MAD table (Table 6.6), which presents the MAD indicator for children age 6-23 months, children's age in months is disaggregated into 6-month age groups as follows: 6-11 months, 12-17 months, and 18-23 months. For the children's anthropometry tables (Tables 7.2, 7.3, and 7.4), which present the prevalence of stunting, wasting, and underweight for all children under 5 years of age, children's age in months is disaggregated into 12-month age groups as follows: 0-11 months, 12-23 months, 24-35 months, 36-47 months, and 48-59 months.

Age in Years

Data on respondent's age in years is collected in the household roster. For women age 15-49 and children under age 6, more detailed age data are collected in subsequent questionnaire modules to confirm eligibility to respond to the module questions; these more detailed age data are used where available. Age is generally presented in the tables in 5- or 10-year age groups.

Child Sex

The sex of the child – male or female – is a standard disaggregate for the tables presenting children's indicators, e.g., children's anthropometry (Tables 7.2, 7.3, and 7.4).

Educational Attainment (Household)

Household educational attainment reflects the highest level of education attained by any member of the household, as reported in the household roster of the corresponding questionnaire. This variable is used in tables that present household-level data, and comprises four categories: no education (households where no member has received any formal education); less than primary (households with at least one member who has entered the formal schooling system, but with no member who has completed primary); primary (households with at least one member whose highest educational attainment is completed primary, but with no member who has completed secondary); and secondary or more (households with at least one member whose highest educational attainment is completed secondary education or more). Households are categorized in only one of the four categories.

Educational Attainment (Individual)

Educational attainment at the individual level reflects the highest level of education attained by individual household members, as reported in the household roster of the corresponding questionnaire. This variable comprises four categories: no education (those who have not received any formal education); less than primary (those who have entered the formal schooling system but whose educational attainment is less than completed primary); primary (those who have completed primary but have not completed secondary); and secondary or more (those who have completed secondary education or more).

Gendered Household Type

Feed the Future Monitoring and Evaluation Guidance Series *Volume 6: Feed the Future Measuring Gender Impact Guidance* notes that household-level indicators should be disaggregated by *gendered household types*, that is: (1) households where members include both male and female adults;[21] (2) households where members include male adult(s), but no female adults; (3) households where members include female adult(s), but no male adults; and (4) households with only members under age 18 (children), i.e., households with children only and no adult members. This approach to conceptualizing household type is distinct from the standard *head of household* approach, which is embedded with presumptions about household gender dynamics and may perpetuate existing social inequalities and prioritization of household responsibilities that may be detrimental to women (USAID 2014:1).[22]

This variable is calculated using data on age and sex collected in the household roster of the survey questionnaire.

Household Hunger

As described in greater detail in Section 6.1 of this report, the Household Hunger Scale (HHS) characterizes households according to three categories of hunger severity: little to no household hunger, moderate household hunger, and severe household hunger. For the purposes of serving as a disaggregate in selected tables, the HHS is converted to a dichotomous measure reflecting households that report little to no household hunger, and households that report moderate or severe household hunger.

[21] Adult is defined as age 18 or older.

[22] United States Agency for International Development (USAID). (2014). *Volume 6: Feed the Future measuring gender impact guidance, March*. Feed the Future M&E Guidance Series. Accessed 27 March 2015 at http://www.feedthefuture.gov/resource/volume-6-feed-future-measuring-gender-impact-guidance.

Household Size

For the ZOI surveys, household size is defined as the total number of people who: (1) are reported to be usual members of the household, and (2) have spent the night in the household within the past 6 months. This ordinal household size variable is recoded into a categorical variable as follows: small households (1-5 members), medium households (6-10 members), and large households (11 or more members). Note that other household survey programs may use a slightly different definition of household member from that used in the ZOI surveys.

2.2.2 Reporting Conventions

The Feed the Future ZOI interim assessment reports are primarily descriptive in nature. This section provides an overview of the conventions used in reporting these descriptive results.

- In the tables throughout this report, weighted point estimates and unweighted sample sizes (denoted by *n*) are presented.
- Most estimates are shown to one decimal place, with the specific exceptions of per capita expenditures and the women's dietary diversity indicators, which are shown to two decimal places. Unweighted sample sizes in all tables and the population estimates in Tables 1.1 and 1.2 are shown as whole numbers.
- Values in the tables are suppressed when the unweighted sample size is insufficient to calculate a reliable point estimate ($n<30$); this is denoted by the use of the symbol ^ in the designated row and an explanatory footnote.

Bivariate relationships are described using cross tabulation, and the strength and direction of the relationships are assessed through the use of statistical tests. Analyses are performed in Stata using *svy* commands to handle features of data collected through the use of complex survey designs, including sampling weights, cluster sampling, and stratification.

Statistical significance ($p<0.05$) is denoted with matched superscripted letters attached to the row (usually the disaggregate variable) and column (usually the outcome variable) headings. Explanatory footnotes following each table clarify the meaning of the significance test annotation, and statistically significant relationships are highlighted in the narrative throughout the report.

3. Core ZOI Interim Survey Population

This section describes the background characteristics of the core Zone of Influence (ZOI) population in Uganda using data from the interim survey.

3.1 Demographics

Table 3.1 presents demographic characteristics of the households in the core ZOI. Values are shown for all households, as well as by categories of gendered household type. This table presents the average household size, as well as the average number of female adults and children within the household. Household education, defined as the highest level of education of any member of the household, is also presented in this table.

Table 3.1. Household demographic characteristics

Characteristic	Total (all households)	By gendered household type[a]			
		Male and female adults	Female adult(s) only	Male adult(s) only	Child only
Mean household size[a]	5.4	6.2	3.6	2.1	^
Mean number of adult female household members[1,2,a]	1.2	1.3	1.3	0.0	^
Mean number of children (<2 years)[1,a]	0.3	0.4	0.1	0.0	^
Mean number of children (0-4 years)[1,a]	0.9	1.1	0.4	0.1	^
Mean number of children (5-17 years)[1,a]	2.2	2.5	1.9	0.7	^
Mean percentage of adults who are female[1,2]	52.8	49.8	100.0	0.0	^
Highest education level attained[a]					
No education	1.4	0.4	6.6	1.9	^
Less than primary	38.4	36.6	47.8	39.6	^
Primary	43.7	46.2	34.6	34.7	^
Secondary or more	16.5	16.7	11.0	23.8	^
n[3]	**778**	**597**	**109**	**70**	**2**

^ Results not statistically reliable, n<30.

[1] The count is based on household members with known age.

[2] Feed the Future defines adult as an individual age 18 or older. Females age 15-17 are of reproductive age, but are not considered adults by this definition.

[3] Sample n is the unweighted count of all households that responded to the survey.

[a] Significance tests were performed for associations between household characteristics and gendered household type. For example, a test was done between mean household size and gendered household type. When an association is found to be significant ($p<0.05$), a superscript is noted next to the household characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Among all households in the core ZOI, the average household size is 5.4 people. The national value from the 2011 Uganda Demographic and Health Survey (DHS), the most recent DHS available, is 4.9 people.[23] Male and female adult households have an average of 6.2 members, whereas female adult-only and male adult-only households have an average of 3.6 and 2.1 people, respectively. As shown in the superscripts in Table 3.1, household size varies significantly by gendered household type.

The average number of female adults in core ZOI households is 1.2. The average number of children under 2 years is 0.3; the average number of children 0-4 years is 0.9; and the average number of school-age children, those 5-17 years, is 2.2. All four of these household characteristics – mean number of female adults, mean number of children under 2, mean number of children 0-4, and mean number of children 5-17 – vary significant by gendered household type.

Just over half (52.8 percent) of adults in core ZOI households are female. Under half of the households in the core ZOI (43.7 percent) have attained primary education, i.e., they have at least one member whose highest level of education is completed primary, but no members with completed secondary or greater. Fewer households have educational attainment of less than primary (38.4 percent), secondary or more (16.5 percent), or no education (1.4 percent). Gendered household type is significantly associated with household educational attainment.

Table 3.2 shows characteristics of the primary adult male and female decisionmakers in the sampled households in the core ZOI. The primary adult male and primary adult female decisionmakers are household members age 18 or over who self-identify as the primary adult male and/or primary adult female responsible for both social and economic decisionmaking within the household. When they exist within a single household, primary adult male and female decisionmakers are typically, but not necessarily, husband and wife. Table 3.2 shows the age group, literacy status, and educational attainment for these household members. These characteristics are shown for all primary adult decisionmakers and for primary adult decisionmakers according to sex.

Among all primary adult decisionmakers, the modal age group is 30-39; 27.1 percent are within that age group. Age of household decisionmakers varies significantly by sex, with a greater proportion of female than male decisionmakers in the youngest age group (18-24). Among all primary decisionmakers, 63.0 percent are literate, and decisionmaker literacy status is significantly associated with sex. Only about half (50.9 percent) of female decisionmakers in the core ZOI are literate compared to more than three-quarters (76.8 percent) of male decisionmakers. (Note that literacy, defined as the reported ability to read and write, is

[23] Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012). p. 19.

collected for all household members age 3 and above in the household roster. Thus, the measure is reported by the respondent for the household roster for others in the household.)

Decisionmakers' educational attainment is consistent with the literacy finding; highest education attained differs significantly by sex, with a greater share of female decisionmakers – one-quarter of all female decisionmakers – in the "no education" group. Similarly, a greater share of male decisionmakers have attained secondary or more education (11.4 percent).

Table 3.2. Characteristics of the primary adult male and female decisionmakers

Characteristic	Total (all primary adult decisionmakers)		By primary adult decisionmaker sex[a]			
			Male		Female	
	Percent	n	Percent	n	Percent	n
Age[a]						
18-24	14.2	1,333	9.2	628	18.6	705
25-29	15.4	1,333	14.5	628	16.1	705
30-39	27.1	1,333	27.8	628	26.5	705
40-49	21.0	1,333	24.1	628	18.2	705
50-59	12.3	1,333	13.9	628	10.9	705
60+	10.0	1,333	10.5	628	9.7	705
Literacy[a]						
Percent literate[1]	63.0	1,333	76.8	628	50.9	705
Educational attainment[a]						
No education	17.4	1,324	8.8	621	25.0	703
Less than primary	47.8	1,324	47.5	621	48.1	703
Primary	25.8	1,324	32.4	621	20.0	703
Secondary or more	9.0	1,324	11.4	621	7.0	703

[1] The percent who are literate comprises those who report that they can both read and write.

[a] Significance tests were performed for associations between the sex and background characteristics of the decisionmaker. For example, a test was done between sex and age of the decisionmaker. When an association is found to be significant ($p<0.05$), a superscript is noted next to the characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

3.2 Living Conditions

Table 3.3 shows dwelling characteristics of the households in the core ZOI. Many of these measures align with the 2015 Millennium Development Goals (MDG) definitions (UN 2003). The table presents the percentage of households who have access to an improved water source, improved sanitation, electricity, and solid cooking fuel. The average number of people per sleeping room, as well as roof, exterior wall, and floor materials are also presented. Values are shown for all households.

Table 3.3 reveals that nearly two-thirds (66.0 percent) of core ZOI households have access to improved water. This value is consistent with the national value from the 2011 Uganda DHS, which shows that in Uganda overall, 70.3 percent of households have improved water.[24]

Table 3.3. Household dwelling characteristics

Characteristic	Total (all households)	
	Estimate	n
Percent with improved water source[1]	66.0	778
Percent with improved sanitation[2]	51.4	778
Mean persons per sleeping room[3]	2.9	778
Percent using solid fuel for cooking[4]	98.8	774
Percent with access to electricity	17.1	778
Household roof materials (%)[5]		
Natural	21.8	777
Rudimentary	0.0	777
Finished	78.2	777
Household exterior wall materials (%)[6]		
Natural	0.2	777
Rudimentary	57.1	777
Finished	42.7	777
Household floor materials (%)[7]		
Natural	70.9	778
Rudimentary	0.0	778
Finished	29.1	778

[1] Improved water sources include *piped water into the dwelling, piped water into the yard, a public tap/standpipe, a tube well/borehole, a protected dug well, a protected spring,* and *rainwater* (WHO and UNICEF 2006). The proportion of the population with sustainable access to an improved water source is the 2015 MDG indicator #30 (UN 2003); however, as in most major international survey programs, the measure reported here reflects only access to an improved water source, and not the sustainability of that access.

[2] Improved sanitation facilities are those that separate human excreta from human contact and include the categories *flush to piped sewer system, flush to septic tank, flush/pour flush to pit, composting toilet, ventilated improved pit latrine,* and a *pit latrine with a slab*. Because shared and public facilities are often less hygienic than private facilities, shared or public sanitation facilities are not counted as improved (WHO and UNICEF 2006). The proportion of the population with access to improved sanitation is the 2015 MDG indicator #31 (UN 2003).

[3] The average number of persons per sleeping room is a common indicator of crowding (UN 2003).

[4] Solid fuel is defined as *charcoal, wood, animal dung,* and *agriculture crop residue.* The proportion of the population using solid fuels is MDG indicator #29 (UN 2003). The *other* and *no food cooked in household* categories are removed from percentages.

[5] Natural roofs include *no roof, thatch/palm leaf,* and *mud.* Rudimentary roofs include *rustic mat, palm/bamboo, wood planks, cardboard,* and *plastic sheeting.* Finished roofs include *metal, wood, calamine/cement fiber, tiles, cement, roofing shingles*, *iron sheets*, and *asbestos sheets.* The *other* category is removed from percentages.

[6] Natural walls include *thatched/straw.* Rudimentary walls include *mud and poles, unburnt bricks, unburnt bricks with plaster, burnt bricks with mud, cardboard, plywood/reused wood,* and *metal sheeting.* Finished walls include *cement, stone with lime/cement, burnt bricks with cement, cement blocks, covered adobe,* and *wood planks/shingles.* The *other* category is removed from percentages.

[7] Natural floors include *earth/sand* and *earth/dung.* Rudimentary floors include *wood planks* and *palm/bamboo.* Finished floors include *parquet/polished wood, vinyl or asphalt strips, ceramic tiles, cement*, *carpet*, *bricks*, and *stones.* The *other* category is removed from percentages.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Just over half (51.4 percent) of Ugandan core ZOI households have access to improved sanitation. The 2011 Uganda DHS improved sanitation value is substantially lower; nationally, the 2011 DHS reports that 16.4 percent of Ugandan households have access to improved

[24] Ibid. p. 12.

sanitation.[25] Like the core ZOI results presented in Table 3.3, in the 2011 Uganda DHS, shared facilities are not classified as improved, and more than half (51.6 percent) of urban households in the 2011 DHS reported shared sanitation facilities.[26] Moreover, the interim survey data showed an improved sanitation value of 51.4 of households, whereas the core ZOI baseline value for improved sanitation was 62.0 percent.

Households in the core ZOI have an average of just under three people (2.9 people) per sleeping room. Nearly all households – 98.8 percent – report using solid cooking fuel, and only 17.1 percent have access to electricity. These values are consistent with the Uganda National Household Survey (UNHS) 2012/2013 national values of about 95.8 percent of households reporting solid cooking fuel sources (firewood and charcoal), and 13.9 percent of households with access to electricity for lighting.[27]

Most households in the Uganda core ZOI have finished roofs (78.2 percent), although about one-fifth (21.8 percent) have natural roofs. More than half (57.1 percent) have rudimentary walls, although a substantial share (42.7 percent) have finished walls. Most households (70.9 percent) have natural floors, although 29.1 percent have finished floors. At the national level, there is a similar pattern for roofs, a different pattern for walls, and a very similar pattern for floors. In the UNHS 2012/2013, 67.6 percent of households have iron sheet roofs and 31.6 percent have thatched roofs; 39.0 percent have mud and poles walls, and 55.3 percent have brick walls; and 71.1 percent have earth floors and 26.6 percent have cement floors.[28]

3.3 Education

Table 3.4 presents school attendance, educational attainment, and literacy in the core ZOI. The table presents the percent of male, female, and all household members under age 25 who are currently attending school. It also presents the percent of household members over age 9 who have attained a primary level of education, as well as the percent of household members who are reported as literate. Sex ratios in school attendance, attainment of primary education, and – literacy are also presented. These measures align with MDG education indicators.

Uganda has 7 years of primary education and the legal age for school entry is 6 years. The Ugandan Universal Primary Education Program is open to all children of all families.

Table 3.4 reveals that most school-age children and teens in the core ZOI are currently attending school, although school attendance varies significantly by age. The modal age category for currently attending school is age 10-14; 95.6 percent of 10-14 year olds in the core ZOI are

[25] Ibid. p. 13.
[26] Ibid. p. 13.
[27] UNHS. (2014b). pp. 127-128.
[28] Ibid. p. 124.

currently attending school. There are no significant differences in current school attendance by sex.

Table 3.4. School attendance, educational attainment, and literacy

Characteristic	Percent			Female to male ratio			n
	Attending school[1,a]	Attained a primary level of education[2,b]	Literate[3,c]	Attending school[1]	Attained a primary level of education[2]	Literate[3]	
Age group[a,b,c]							
5-9	88.8	n/a[1]	25.5	1.0	n/a[1]	1.2	732
10-14	95.6	6.1	72.4	1.0	1.8	1.0	657
15-19	64.8	47.1	86.7	0.9	1.1	1.0	504
20-24	24.2	54.9	74.5	0.4	0.8	0.9	324
25-29	n/a[2]	51.0	75.0	n/a[2]	0.7	0.7	263
30-34	n/a[2]	40.0	69.8	n/a[2]	0.7	0.7	217
35-54	n/a[2]	29.5	58.8	n/a[2]	0.4	0.6	583
55+	n/a[2]	24.0	49.6	n/a[2]	0.4	0.4	206
Sex[b,c]							
Female							
Age group							
5-9	90.3	n/a[1]	27.9	n/a[3]	n/a[3]	n/a[3]	373
10-14	96.3	7.6	73.8	n/a[3]	n/a[3]	n/a[3]	352
15-19	62.1	49.2	85.0	n/a[3]	n/a[3]	n/a[3]	262
20-24	15.1	48.3	69.3	n/a[3]	n/a[3]	n/a[3]	186
25-29	n/a[2]	40.9	61.5	n/a[3]	n/a[3]	n/a[3]	133
30-34	n/a[2]	32.9	59.2	n/a[3]	n/a[3]	n/a[3]	116
35-54	n/a[2]	17.8	42.8	n/a[3]	n/a[3]	n/a[3]	279
55+	n/a[2]	14.9	30.4	n/a[3]	n/a[3]	n/a[3]	107
Male							
Age group							
5-9	87.3	n/a[1]	23.1	n/a[3]	n/a[3]	n/a[3]	359
10-14	94.7	4.3	70.8	n/a[3]	n/a[3]	n/a[3]	305
15-19	67.7	45.0	88.6	n/a[3]	n/a[3]	n/a[3]	242
20-24	35.6	63.1	81.0	n/a[3]	n/a[3]	n/a[3]	138
25-29	n/a[2]	61.6	89.3	n/a[3]	n/a[3]	n/a[3]	130
30-34	n/a[2]	48.2	81.8	n/a[3]	n/a[3]	n/a[3]	101
35-54	n/a[2]	40.4	73.8	n/a[3]	n/a[3]	n/a[3]	304
55+	n/a[2]	33.8	70.0	n/a[3]	n/a[3]	n/a[3]	99

n/a[1] Not applicable – Children in the age group 5-9 years are not yet old enough to have attained a primary level of education.

n/a[2] Not applicable – Current school attendance applies to school-age children and youth only, ages 5-24.

n/a[3] Not applicable – Female to male ratios cannot be calculated for male-only and female-only disaggregates.

[1] The ZOI interim survey was administered from March to April 2015, which overlapped with the school year in Uganda.

[2] The goals of achieving universal primary education and achieving gender equity with respect to education are assessed by multiple MDG indicators, typically using administrative school data. This table presents respondent-reported school attendance, primary educational attainment, and literacy, as well as the ratio of females to males on these measures (UN 2003).

[3] The MDG indicators for universal primary education and gender equity within education are assessed through the literacy rate (MDG indicator #8) and the ratio of literate women to men (MDG indicator #10) among young adults, age 15-24 years (UN 2003).

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading, and age and sex. For example, a test was done for school attendance by sex, and a test was done for school attendance by age. When an association is found to be significant ($p<0.05$), the superscript of the column heading will appear next to the sex row heading and/or next to the age group row heading.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Among core ZOI household members over age 9, primary education attainment varies significantly by age group as well as by sex, with over half of those in the middle age groups (20-24 and 25-29) reporting having attained primary school. Similarly, literacy also varies by age group and sex, with the highest literacy rates in the middle age groups (15-19, 25-29), and males generally exhibiting higher literacy prevalence than females, especially at the oldest age groups.

Table 3.4 also presents female to male sex ratios of the three indicators of current school attendance among household members age 5-24, achievement of primary education among household members age 10 and above, and literacy among household members age 5 and above. Values less than 1.0 illustrate disparities for females, and values greater than 1.0 illustrate disparities for males. In this table, the greatest disparity between males and females appears to be with respect to primary educational attainment of 10-14 year olds; with a sex ratio of 1.8.

4. Household Economic Status

This section includes a background discussion of monetary poverty in Uganda, including the logic of the Living Standards Measurement Survey (LSMS)[29] and consumption expenditure methodology.

One of the first Sub-Saharan African countries to liberalize its economies in the 1980s, for many years Uganda enjoyed strong growth in the gross domestic product (GDP), averaging 7 percent per year in the 1990s and 2000s. From 2006 onward, growth slowed to an average of 5 percent per year, projected to increase slightly in 2014/2015 to 5.6 percent.[30] Growth reflects relatively recent discoveries of commercial quantities of oil and a major infrastructure development plan. It is not anticipated that strong growth will be seen in the agriculture sector, which makes limited use of improved inputs, irrigation, and mechanization.

The Government of Uganda has made significant progress in reducing poverty, reaching the Millennium Development Goals (MDG) of halving poverty to 19.7 percent in 2012/2013, in advance of the 2015 deadline. Poverty in rural areas is higher, at an estimated 22.8 percent. While poverty rates have declined, Uganda's high population growth rate means there has been little decline in the absolute number of poor people.[31] Further, 43.3 percent of the population is classified as economically insecure, living below twice the poverty line and at risk of falling back into poverty in the event of a shock.[32]

Estimates of per capita expenditures and poverty prevalence are typically derived from surveys similar to the LSMS. For the Feed the Future Zones of Influence (ZOI) interim assessments, these estimates are derived from the data collected in the Household Roster and Household Consumption Expenditure modules of the ZOI interim survey or from secondary household consumption data collected by other organizations. For the Uganda interim assessment, the measures of household economic status are calculated using the Uganda National Household Survey (UNHS) collected from June 2012 to June 2013 by the Uganda Bureau of Statistics (UBOS).

Like the LSMS, the UNHS 2012/2013 collected data on households' consumption of various food and non-food items in order to infer household income and well-being. Individuals' per capita expenditures are then derived by dividing total household expenditures by the number of household members. From these data, household expenditure totals are calculated and used as a proxy for household incomes, based on the assumption that a household's consumption is

[29] Grosh and Glewwe. (1995).
[30] The World Bank. (2015a).
[31] Ibid.
[32] Economic Development Policy and Research Department, Ministry of Finance, Planning and Economic Development. (2014).

closely related to its income. Household consumption and expenditures are often preferred to income when measuring poverty due to the difficulty in accurately measuring income. According to Deaton, expenditure data are less prone to error, easier to recall, and more stable over time than income data.[33]

4.1 Daily Per Capita Expenditures

Table 4.1 presents daily per capita expenditures, the Feed the Future indicator that measures average daily expenditures within the core ZOI per person in 2010 U.S. dollars (USD) after adjusting for 2005 purchasing power parity (PPP). Daily per capita expenditures serve as a proxy for income. This table includes the mean per capita expenditures and percentile distribution of per capita expenditures. The percentiles are interpreted as the percentage of the population that consumes less than the listed value. For example, the cut off point for the 50th percentile is 1.80. This means that 50 percent of individuals consume less than $1.80 (2010 USD) per day. The 50th percentile is also the median. The percentiles are shown to provide information on the distribution of expenditures. As is typical of expenditure and income data, these estimates are positively skewed, with the majority of the population consuming/spending very little, and a small portion consuming much more. This is apparent because the median per capita expenditure of $1.80 (2010 USD) is much lower than the average per capita expenditure of $2.40 (2010 USD).

Estimates in Table 4.1 are shown for all households as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment. The table shows statistically significant differences between the mean per capita expenditures among the different categories of gendered household type, household size and household educational attainment. Male adult(s) only households earn more than other household types. In general, it appears that smaller households have higher per capita expenditures and that per capita expenditures increase among households with higher levels of education.

[33] Deaton, A. (2008).

Table 4.1. Daily per capita expenditures by household characteristic (in 2010 USD)[1]

Characteristic	Estimate (weighted)						
	Mean[a]	Percentile					n[2]
		10th	25th	50th	75th	90th	
Total (All households)	2.40	0.87	1.24	1.80	2.77	4.27	2,522
Gendered household type[a]							
Male and female adults	2.29	0.86	1.20	1.77	2.68	4.05	1,684
Female adult(s) only	2.57	0.90	1.29	1.83	2.77	4.67	584
Male adult(s) only	3.89	1.17	1.66	2.76	4.97	7.55	244
Child(ren) only (no adults)	^	^	^	^	^	^	10
Household size[a]							
Small (1-5 members)	3.00	0.99	1.45	2.14	3.32	5.72	1,597
Medium (6-10 members)	1.95	0.82	1.11	1.61	2.31	3.35	881
Large (11+ members)	2.03	0.86	1.06	1.49	2.29	4.39	44
Household educational attainment[a]							
No education	2.13	0.90	1.15	1.76	2.46	3.49	109
Less than primary	1.86	0.78	1.05	1.52	2.12	3.19	1,060
Primary	2.31	0.88	1.31	1.88	2.85	4.01	884
Secondary or more	3.81	1.25	1.71	2.62	4.39	7.72	454

^ Results not statistically reliable, n<30.

[1] Per capita expenditures were measured in Uganda shillings, local currency units (LCU), and then converted to 2010 USD using the Consumer Price Index (CPI) and the Purchasing Power Parity (PPP) Index estimated by the World Bank. UBOS provided expenditure data in constant 2005 prices. We converted to 2010 USD by using the formula (1/PPP 2005)* (2010 USD CPI /2005 USD CPI) where LCU PPP 2005 = 744.62, 2005 CPI LCU = 100, 2010 USD CPI =111.65, and 2005 USD CPI = 100. The conversion factor was .001499.

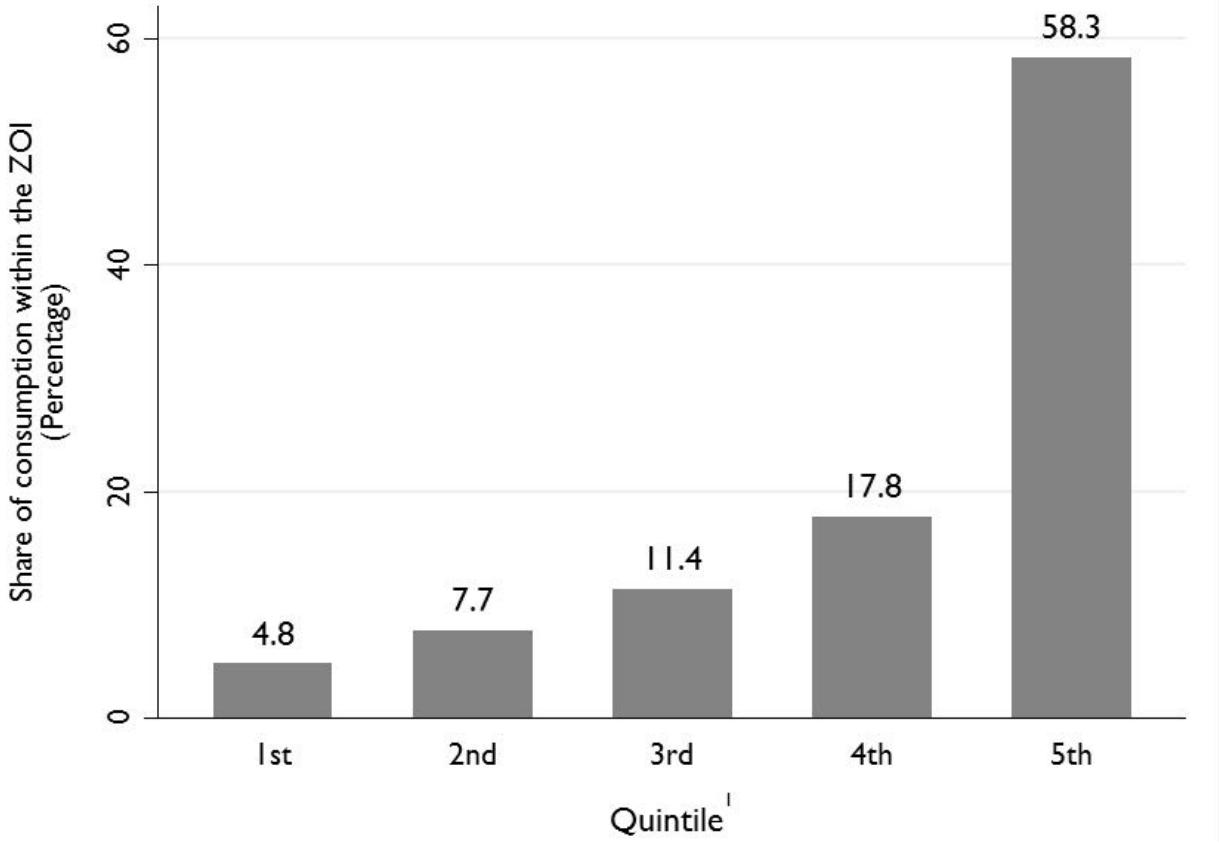
[2] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between per capita expenditures and household characteristics. For example, a test was done between per capita expenditures and gendered household type. When an association is found to be significant ($p<0.05$), the superscript is noted next to the household characteristic.

Source: Uganda National Household Survey (UNHS) 2012/2013.

Figure 4.1 shows the share of total consumption per quintile in the core ZOI. The share of consumption attributed to the lowest quintile (the bottom 20 percent) is a measure of inequality, and an MDG. This figure shows that the poorest 20 percent within the core ZOI consumes only 4.8 percent of the total consumption within the core ZOI. Conversely, the wealthiest 20 percent within the core ZOI consumes 58.3 percent of the total consumption within the core ZOI.

Figure 4.1. Share of consumption per quintile: Feed the Future core ZOI



[1] Share of the poorest quintile in national consumption is an MDG indicator that provides information on income inequality (UN 2003). The poorest quintile is determined as the poorest fifth of the population. The poorest quintile's share of total consumption is calculated by dividing the consumption of the poorest quintile by total consumption within the core ZOI.

Source: Uganda National Household Survey (UNHS) 2012/2013.

4.2 Prevalence and Depth of Poverty in the Core ZOI

The prevalence of poverty, sometimes called the poverty headcount ratio, is measured by determining the percent of individuals living below a poverty threshold.[34] Estimates of poverty prevalence are sensitive to the poverty thresholds used to identify the poor. A standardized poverty threshold of $1.25 per person per day in adjusted[35] 2005 USD is used to track global changes in poverty across countries and over time, including for the purpose of monitoring progress toward international goals such as the MDG to eradicate extreme poverty and hunger. The $1.25 threshold is in effect the extreme poverty threshold and represents the

[34] Note that expenditure data are not collected at the individual level but rather at the level of the household; individuals' per capita expenditures are then derived by dividing total household expenditures by the number of household members.

[35] Adjustments are made according to PPP conversions. These conversions are established by the World Bank to allow currencies to be compared across countries in terms of how much an individual can buy in a specific country. The $1.25 in 2005 PPP means that $1.25 could buy the same amount of goods in another country as $1.25 could in the United States in 2005.

poverty line typical of the world's poorest countries.[36] Poverty estimates are also presented for Uganda's own poverty and food poverty thresholds.

Where the poverty prevalence indicates how *many* individuals are impacted by poverty, it does not speak to how *much* people are impacted by poverty. The depth of poverty, often called the poverty gap, is a useful poverty estimate because it captures the extremity of poverty. This measure indicates the average gap between consumption levels and the poverty line, with the non-poor counted as having a gap of zero. The measure is expressed as a proportion of the poverty line. The depth of poverty or poverty gap represents the entire core ZOI population. The average consumption shortfall of the poor, in contrast, is estimated for only those individuals living below the poverty line.

4.2.1 The $1.25 Poverty Threshold

Table 4.2 presents poverty estimates at the $1.25 per day (2005 PPP) threshold. The prevalence of poverty and depth of poverty at the $1.25 per day poverty line are Feed the Future indicators. Similar to the per capita expenditures table, this table presents poverty estimates for all households in the core ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

Poverty Prevalence

About 32 percent (32.1) of individuals in the core ZOI live below the $1.25 poverty threshold. The prevalence of poverty is significantly different between gendered household type, household size and educational attainment. Poverty is lowest in male adult-only households (those with adult male but no adult female members). Poverty is also lowest in the smallest households and households where a member has obtained secondary education or higher.

Depth of Poverty

The depth of poverty in the core ZOI is 9.2 percent, which indicates that the average gap between consumption levels of the population and the poverty line is $0.12 (2005 PPP).

The depth of poverty provides an indication of the amount of resource transfers that, if *perfectly* targeted to poor households, would be needed to bring everyone below the poverty line up to the poverty line. With a core ZOI population of 14.6 million, a poverty threshold of $1.25 per day, and a poverty gap of 9.2 percent, $1.7 million (2005 PPP) per day would need to be transferred to the poor to bring their income or expenditures up to the poverty threshold.

[36] World Bank. (2011). Poverty and Equality Data FAQs. http://go.worldbank.org/PYLADRLUN0. Accessed 15 April 2015.

Differences in the depth of poverty among the background characteristics are statistically significant. Depth of poverty is lower in male-adult-only households. Moreover, the poverty gap is the lowest among the households with one to five household members. The poverty gap declines across increasing levels of educational attainment.

Table 4.2. Poverty at the $1.25 (2005 PPP)[1] per person per day threshold

Characteristic	Prevalence of poverty[2]		Depth of poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	32.1	2,522	9.2	2,522	0.36	28.6	681
Gendered household type[a,b]							
Male and female adults	33.1	1,684	9.6	1,684	0.36	29.1	510
Female adult(s) only	30.8	584	8.4	584	0.34	27.3	145
Male adult(s) only	17.3	244	3.7	244	^	^	25
Child(ren) only (no adults)	^	10	^	10	^	^	1
Household size[a,b]							
Small (1-5 members)	22.9	1,597	6.3	1,597	0.34	27.4	309
Medium (6-10 members)	39.0	881	11.4	881	0.37	29.3	356
Large (11+ members)	40.4	44	10.8	44	^	^	16
Household educational attainment[a,b,c]							
No education	40.6	109	9.2	109	0.28	22.7	30
Less than primary	42.6	1,060	13.0	1,060	0.38	30.4	383
Primary	29.9	884	8.2	884	0.34	27.5	222
Secondary or more	13.0	454	2.9	454	0.28	22.1	44

^ Results not statistically reliable, n<30.

[1] The Feed the Future poverty indicators are based on the poverty threshold of $1.25 (2005 PPP) per person per day.

[2] The prevalence of poverty is the percentage of individuals living below the $1.25 (2005 PPP) per person per day threshold. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] Superscripts in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: Uganda National Household Survey (UNHS) 2012/2013.

Average Consumption Shortfall of the Poor

The average *poor* person within the core ZOI lives at 71.4 percent of the poverty line, or 28.6 percent below the poverty line. The average value of consumption of a *poor* person is $0.89 (2005 PPP) per day.

Among poor households, there is a significant difference among the levels of educational attainment; those with the highest and, paradoxically, the lowest levels of education are the least impoverished. In other words, poor households with no formal education or secondary education and above live, on average, $0.28 2005 PPP below the poverty line. This is compared to the $0.38 and $0.34 2005 PPP deficits observed among households with less than primary and primary levels of education, respectively.

4.2.2 The National Poverty Threshold

Table 4.3 presents poverty estimates at the national poverty threshold for Uganda. Similar to the $1.25 per day poverty table, this table presents poverty estimates for all households in the core ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

The poverty line most often used as the "official" poverty line for Uganda was derived by Appleton and colleagues using the UNHS 1993/1994. Their poverty line is anchored to the cost of meeting basic needs with a focus on meeting minimum caloric requirements. Unlike the $1.25 2005 PPP poverty per person per day threshold, the national poverty lines were created for adult equivalents and were developed as monthly amounts. The national absolute poverty line is 16,443 Uganda shillings per adult equivalent per month (1993 prices).[37] Inflated to 2005 prices, the national poverty line is 30,377 Uganda shillings ($40.80 2005 PPP).[38]

Poverty lines created in *adult equivalents* are not neatly comparable to poverty lines defined in *per capita* terms. Poverty thresholds defined in adult equivalents vary based on one's age and sex whereas per capita thresholds do not vary based on age and sex. The *average*, national poverty threshold per person per day is 736.97 Uganda shillings in 2005 prices ($0.99 2005 PPP). The difference between *adult equivalents* and *per capita* thresholds are further discussed in Appendix 2.2.

[37] Appleton, Emwanu, Kagugube, and Muwonge. (1999). p.14.

[38] The national poverty is made up of multiple subnational poverty lines, defined by region and residence type. The poverty estimates reported here were calculated using the sub-national poverty lines rather than the summary poverty line of 16,443. A table of subnational poverty lines that have been inflated to 2005 Uganda shillings and converted to 2005 PPP is presented in Appendix 2.2.

Table 4.3. Poverty at the national threshold[1]

Characteristic	Prevalence of poverty[2]		Depth of poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	18.0	2,522	4.1	2,522	0.22	22.9	383
Gendered household type[a,b]							
Male and female adults	19.3	1,684	4.4	1,684	0.22	22.7	295
Female adult(s) only	14.0	584	3.5	584	0.23	24.8	72
Male adult(s) only	9.4	244	1.6	244	^	^	16
Child(ren) only (no adults)	^	10	^	10	-	-	0
Household size[a,b]							
Small (1-5 members)	11.3	1,597	2.7	1,597	0.23	24.2	160
Medium (6-10 members)	22.7	881	5.2	881	0.22	23.0	211
Large (11+ members)	26.7	44	4.2	44	^	^	12
Household educational attainment[a,b]							
No education	18.3	109	2.6	109	^	^	14
Less than primary	24.3	1,060	5.9	1,060	0.23	24.4	220
Primary	17.0	884	3.8	884	0.22	22.3	125
Secondary or more	6.1	454	1.0	454	^	^	22

^ Results not statistically reliable, n<30.

[1] The poverty line derived by Appleton et al. (1999) is widely used as the "official" poverty line by the Uganda Government. The absolute poverty line was established by region of the country, yielding multiple poverty lines depending on location. This methodology and a table of poverty thresholds appear in Appendix 2.2.

[2] The prevalence of poverty is the percentage of individuals living below the national poverty line. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: Uganda National Household Survey (UNHS) 2012/2013.

As seen in Table 4.3, 18 percent of individuals in the core ZOI live below the national poverty threshold. The national poverty line identifies fewer individuals as poor than does the $1.25 2005 PPP poverty threshold because the national poverty line is effectively lower than the international extreme threshold of $1.25 2005 PPP per person per day.

Despite the lower rates of poverty recorded while using the national threshold, the relationships between poverty and household characteristics (gendered household type, household size and household educational attainment) are the same as those observed in Table 4.2. There are significant differences in the prevalence of poverty and depth of poverty between gendered household types, household size, and levels of education.

4.2.3 The National Extreme Poverty Threshold

Table 4.4 presents poverty estimates at the national extreme poverty threshold for Uganda. Similar to prior expenditures and poverty tables, this table presents poverty estimates for all households in the core ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

Table 4.4. Poverty at the national extreme threshold[1]

Characteristic	Prevalence of poverty[2]		Depth of poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	6.5	2,522	1.3	2,522	0.13	19.4	139
Gendered household type[b]							
Male and female adults	7.0	1,684	1.3	1,684	0.13	19.1	109
Female adult(s) only	5.7	584	1.2	584	^	^	26
Male adult(s) only	1.4	244	0.3	244	^	^	4
Child(ren) only (no adults)	^	10	^	10	-	-	0
Household size							
Small (1-5 members)	4.6	1,597	1.0	1,597	0.16	22.1	61
Medium (6-10 members)	8.0	881	1.5	881	0.13	19.1	74
Large (11+ members)	8.7	44	0.8	44	^	^	4
Household educational attainment[a,b]							
No education	1.9	109	0.1	109	^	^	1
Less than primary	10.1	1,060	2.1	1,060	0.14	20.5	90
Primary	5.5	884	1.0	884	0.13	18.9	42
Secondary or more	1.4	454	0.1	454	^	^	6

^ Results not statistically reliable, n<30.

[1] The absolute poverty line derived by Appleton et al. (1999) is widely used as the "official" poverty line by the Uganda Government. The national extreme poverty threshold used in this table is the food poverty threshold of 21,177 shillings in 2005 (28.44 2005 PPP). This threshold is the minimum amount required per month to provide a minimum caloric intake per adult equivalent. This methodology is further discussed in Appendix 2.2.

[2] The poverty prevalence is the percentage of individuals living below the national extreme poverty line. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: Uganda National Household Survey (UNHS) 2012/2013.

The national extreme poverty line used in this analysis is the food poverty line developed by Appleton and colleagues during their calculation of the national absolute poverty line. The food poverty line is the minimum amount required to provide a minimum caloric intake. The food poverty line, as originally calculated, is 11,463 Uganda shillings (1993 prices) per month per adult equivalent.[39] This threshold inflated to 2005 prices is 21,177 Uganda shillings ($28.44 2005 PPP).

Poverty lines created in *adult equivalents* are not neatly comparable to poverty lines defined in *per capita* terms. Poverty thresholds defined in adult equivalents vary based one's age and sex whereas per capita thresholds do not vary based on age and sex. The *average*, food poverty threshold per person per day is 534.30 Uganda shillings in 2005 prices ($0.72 2005 PPP). The difference between *adult equivalents* and *per capita* thresholds are further discussed in Appendix 2.2.

More than 6 percent (6.5) of individuals in the core ZOI live below the national extreme poverty threshold. These individuals do not have access to enough resources to consume the minimum caloric intake for their age and sex group.

Some of the significant relationships that appear in Tables 4.2 and 4.3 can be found in Table 4.4. There are significant differences in the poverty prevalence among levels of educational attainment. Additionally, the depth of poverty at the national extreme threshold is significantly different by gendered household type and levels of educational attainment.

[39] Appleton, Emwanu, Kagugube, and Muwonge. (1999). p. 37.

5. Women's Empowerment in Agriculture

While women play a prominent role in agriculture, they face persistent economic and social constraints. Because of this, women's empowerment is a main focus of Feed the Future. Empowering women is particularly important to achieving the Feed the Future objectives of inclusive agriculture sector growth and improved nutritional status. The WEAI was developed to track the change in women's empowerment that occurs as a direct or indirect result of interventions under Feed the Future and as a programming tool to identify and address the constraints that limit women's full engagement in the agriculture sector.[40] For more information, the WEAI questionnaires and manual can be found online.[41]

5.1 Overview

The WEAI measures empowerment in five domains. The *Production* domain assesses the ability of individuals to provide input and autonomously make decisions about agricultural production. The *Resources* domain reflects individuals' control over and access to productive resources. The *Income* domain monitors individuals' ability to direct the financial resources derived from agricultural production or other sources. The *Leadership* domain reflects individuals' social capital and comfort speaking in public within their community. The *Time* domain reflects individuals' workload and satisfaction with leisure time. The WEAI aggregates information collected for each of the five domains into a single empowerment indicator.

The index is composed of two subindices: the Five Domains of Empowerment (5DE) subindex, which measures the empowerment of women in the five empowerment domains, and the Gender Parity Index (GPI), which measures the relative empowerment of men and women within the household. The WEAI questionnaire is asked of the primary adult male and female decisionmaker in each household and compares the 5DE profiles of women and men in the same household. The primary adult decisionmakers are individuals age 18 or older who are self-identified as the primary adult male or female decisionmaker during the collection of the household roster.[42] The WEAI score is computed as a weighted sum of the ZOI-level 5DE and the GPI.

The ZOI interim survey, however, only collects data for 9 of the 10 indicators and only for the primary adult *female* decisionmakers, not for primary adult *male* decisionmakers, within sampled households. The data collected during the 2015 interim survey allow calculation of 9 of the 10 individual empowerment indicators for primary adult female decisionmakers (referred to hereafter as *surveyed women*), enabling Feed the Future to assess change to the individual

[40] Alkire, Malapit, et al. (2013).
[41] IFPRI. (2013). http://feedthefuture.gov/lp/womens-empowerment-agriculture-index.
[42] The respondents of the WEAI questionnaire are only the primary decisionmakers in the household and, therefore, may not be representative of the entire female and male populations in the surveyed area.

indicators or constraints that are affecting women's empowerment in countries' ZOIs. This section presents findings on these nine empowerment indicators.

Since data were not collected from men and the *Autonomy in Production* indicator is excluded, the WEAI score cannot be calculated for the interim assessment. Interim WEAI data collection was streamlined to reduce the overall length of the WEAI module and survey questionnaire, and to address concerns over the validity of the *Autonomy in Production* sub-module used in the baseline surveys. Feed the Future is still working with partners to revise the *Autonomy in Production* sub-module. Data to calculate the full WEAI will be collected during the 2017 interim survey.

Table 5.1 presents the five empowerment domains, their definitions under the WEAI, the corresponding 10 indicators, and the percentage of women who achieve adequacy in the nine indicators assessed in the interim survey. Because it was not possible to calculate whether a woman is empowered or not based on the complete set of indicators that comprises the 5DE, the percentages presented in Table 5.1 reflect the proportion of all surveyed women with adequacy in individual indicators regardless of their empowerment status (i.e., the uncensored headcount) and not the proportion of surveyed women who are disempowered and achieve adequacy in individual indicators (i.e., the censored headcount).[43] The criteria for determining adequacy in each domain are provided in Appendix A2.3.

Among surveyed women in the Uganda core ZOI, the 5DE indicators with the highest uncensored headcounts (i.e., the greatest achievement of adequacy) are (1) control over the use of income (97.2 percent), (2) input in productive decisions (95.1 percent), and (3) ownership of assets (92.4 percent). The 5DE indicators with the lowest levels of achievement are (1) workload (48.7 percent), (2) access to and decisions on credit (53.0 percent), and (3) satisfaction with leisure time (71.5 percent).

The tables and text in the remainder of Section 5 present further description of the individual components of these 5DE indicators.

[43] See Appendix 2.3 for the criteria for achieving adequacy in each WEAI indicator.

Table 5.1. Achievement of adequacy on Women's Empowerment in Agriculture Index indicators[1]

Domain	Definition of domain	Indicators	Percent with adequate achievement	n
Production	Sole or joint decisionmaking over food and cash crop farming, livestock, and fisheries, and autonomy in agricultural production	Input in productive decisions	95.1	642
		Autonomy in production	n/a	n/a
Resources	Ownership, access to, and decisionmaking power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit	Ownership of assets	92.4	642
		Purchase, sale or transfer of assets	78.5	642
		Access to and decisions on credit	53.0	642
Income	Sole or joint control over income and expenditures	Control over use of income	97.2	642
Leadership	Membership in economic or social groups and comfort in speaking in public	Group member	80.3	642
		Speaking in public	85.8	642
Time	Allocation of time to productive and domestic tasks and satisfaction with the available time for leisure activities	Workload	48.7	642
		Leisure	71.5	642

[1] The interim survey includes an abridged version of the empowerment instrument, and the interim survey did not include information to measure women's autonomy in agricultural production. Due to this omission, censored headcounts and the 5DE cannot be calculated.

n/a Data for this empowerment indicator were not collected for the ZOI interim surveys.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

5.2 Production

Table 5.2 presents economic activities (including agricultural activities) among surveyed women. This table presents the percentage of surveyed women who are involved in agricultural activities (food crop farming, cash crop farming, livestock raising, or fishing); non-farm economic activities; and wage or salaried employment. This table also presents the percentage of women who have input into the decisions made regarding a specific activity.

Nearly all surveyed women (99.1 percent) in the Uganda interim assessment report participate in a productive activity, and, of them, nearly all (98.9 percent) report having input into the decisions made about the activities. Food crop farming (crops grown primarily for household food consumption) is by far the activity with the highest participation, at 91.4 percent of surveyed women in the core ZOI. Roughly half of women report cash crop farming (crops grown primarily for market sale, 49.1 percent) and livestock raising (49.8 percent). More than one-third of women in the core ZOI report participate in non-farm economic activities (38.5 percent) or wage or salaried employment (40.1 percent). Examples of non-farm economic activities include running a small business, self-employment, trading, etc.

Among women who participate in the specific productive activities shown in Table 5.2, they report consistently high levels of input into decisions regarding the activity. For each respective economic activity, more than 90 percent of women report having input into decisionmaking.

Table 5.2. Economic activities and input in decisionmaking on production among surveyed women

Activity	Participates in activity		Has input[1] into decisions about activity	
	Percent	n[2]	Percent	n[1,3]
Total (All surveyed women)	99.1	642	98.9	636
Type of activity				
Food crop farming	91.4	642	95.5	583
Cash crop farming	49.1	642	92.5	305
Livestock raising	49.8	642	92.1	312
Fishing or fishpond culture	1.5	642	^	11
Non-farm economic activities	38.5	642	94.9	247
Wage or salaried employment	40.1	642	97.8	261

^ Results not statistically reliable, n<30.

[1] *Having input* means that a woman reported having input into most or all decisions regarding the activity.

[2] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing/incomplete.

[3] Women who do not participate in an activity or report that no decision was made are excluded from these percentages.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 5.3 shows the percentage of surveyed women who have input into the decisions made regarding the use of income derived from an activity. Nearly all women (97.7 percent) report having input into the use of income generated from the economic activities in which they participate. Wage or salaried employment, which includes agriculture or other wage work that is paid for in cash or in-kind, has the highest level of women's input into the use of income, at 97.8 percent. The economic activity with the lowest level of women's input into the use of income is livestock raising, at 85.7 percent of women.

Table 5.3. Input in decisionmaking on use of income among surveyed women

Activity	Has input[1] into use of income from activity	
	Percent	n[2,3]
Total (All surveyed women)	97.7	605
Type of activity		
Food crop farming	89.8	452
Cash crop farming	91.8	292
Livestock raising	85.7	266
Fishing or fishpond culture	^	10
Non-farm economic activities	95.4	244
Wage or salaried employment	97.8	261

^ Results not statistically reliable, n<30.

[1] *Having input* means that a woman reported having input into most or all decisions regarding the use of income generated from the activity.

[2] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing/incomplete.

[3] Women who do not participate in an activity or report that no decision was made are excluded from these percentages.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

In addition to the decisionmaking of women on broad agricultural and economic activities, the WEAI module collects information on the extent to which women can contribute to specific agricultural and economic activities. **Table 5.4** presents the percent distribution of surveyed women's perceived ability to contribute to decisions regarding various activities. The row percentages total to 100 percent.

Table 5.4. Decisionmaking on production among surveyed women

Activity	Extent to which respondents feel they can make their own decisions (percent)[1,2]				Not applicable[3]	n
	Not at all	Small extent	Medium extent	High extent		
Getting inputs for agricultural production	2.2	17.7	19.7	59.4	0.9	642
The types of crops to grow	2.3	11.8	19.5	65.4	1.1	642
Whether to take crops to the market	6.0	16.1	17.9	53.5	6.4	642
Livestock raising	6.1	18.0	21.8	50.4	3.7	642
Her own wage or salary employment	2.3	7.3	10.6	57.7	22.0	642
Major household expenditures	7.4	24.2	21.8	43.8	2.8	642
Minor household expenditures	1.6	7.6	12.8	78.0	0.1	642

[1] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing or incomplete. Women who do not participate in an activity, or who report that no decision was made, are excluded from these percentages.

[2] When a primary adult female decisionmaker reports that she alone makes decisions about the specified activities, she is not asked any further questions, and is categorized during analysis as making her own decisions "to a high extent." When she reports making decisions about the specified activities in conjunction with other individuals, she is asked an additional question about the extent to which she feels she could make her own personal decisions on the specified matters, with possible response options being "not at all," "to a small extent," "to a medium extent," or "to a high extent." Responses are recoded accordingly.

[3] This category includes respondents who report participating in the activity, but say that making the specified decision is not applicable to their situation.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Across the various activities shown in Table 5.4, the activity with the highest percentage of women reporting that they have no decisionmaking ability at all is with respect to major household expenditures; 7.4 percent of women report having no decisionmaking ability in this area. Major household expenditures would include the purchase of consumer durables such as large appliances, for example. In contrast, only 1.6 percent of women report having no decisionmaking ability with respect to minor household expenditures. Minor household expenses include purchases such as food for daily consumption or other household needs.

Tables 5.2, 5.3, and 5.4 present information contributing to two indicators of the WEAI. *Input into productive decisions*, one indicator of the *Production* domain, is measured by the extent to which individuals make decisions or feel they can make decisions on the agricultural activities listed in the three tables. The *Income* domain is comprised entirely of a single indicator

measuring the control over use of income. This indicator captures individuals' ability to make decisions involving the income generated from their productive activity or the extent to which they feel they can make decisions regarding household expenditure and wage income.

5.3 Productive Resources

One of the 10 indicators of the WEAI is the ownership of productive resources. The ability of women to make decisions on the use of productive resources is a second indicator of the *Resource* domain. **Table 5.5** presents households' ownership of productive resources, as reported by surveyed women. Table 5.5 also presents the percentage of women who can make a decision to purchase or to sell, give away, or rent owned items. Women are counted as having the ability to make a decision if they can solely make a decision or if they can make these decisions with others with any degree of input.

Table 5.5. Household ownership and surveyed women's control over productive resources

Type of resource	Someone in the household owns item		Woman can decide to purchase items		Woman can decide to sell/give/rent owned items	
	Percent	n[1]	Percent	n[1]	Percent	n[1]
Agricultural land	93.6	642	54.1	591	49.8	585
Large livestock	19.3	642	57.7	118	60.3	117
Small livestock	44.1	642	74.7	286	73.6	286
Chickens, ducks, turkeys, and pigeons	56.4	642	72.4	359	72.2	361
Fish pond or fishing equipment	2.5	642	^	15	^	14
Non-mechanized farm equipment	94.7	642	63.6	604	74.8	546
Mechanized farm equipment	0.8	642	^	6	^	5
Nonfarm business equipment	15.3	641	n/a		n/a	
House or other structures	54.9	642	n/a		n/a	
Large consumer durables	36.2	642	n/a		n/a	
Small consumer durables	99.8	642	n/a		n/a	
Cell phone	69.8	642	n/a		n/a	
Non-agricultural land	23.6	642	n/a		n/a	
Means of transportation	39.2	641	n/a		n/a	

^ Results not statistically reliable, n<30.

[1] Estimates exclude households that have no primary adult female decisionmaker or in which Module G data are missing/incomplete. Those who indicate "Not applicable" are excluded from estimates.

n/a Questions regarding who can decide to purchase, sell, give, or rent the item were not included in the ZOI interim surveys.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Of the 14 productive resources included in the WEAI module of the interim survey, those most commonly owned by sampled households (technically only the sub-sample of core ZOI households with a primary adult female decisionmaker) include small consumer durables such as radios or cookware (99.8 percent of households), non-mechanized farm equipment such as hand tools or an animal-drawn plow (94.7 percent), and agricultural land (93.6 percent). The least commonly owned resources include mechanized farm equipment such as a tractor-drawn plow (0.8 percent), fish pond or fishing equipment (2.5 percent), and nonfarm business equipment such as a sewing machine or brewing equipment (15.3 percent).

Of the first seven resources shown in Table 5.5, women were asked the extent of their decisionmaking ability to purchase (the middle set of columns), or sell, give away, or rent the specific owned item. The purchase of small livestock was the item with the greatest percentage of women's decisionmaking, at 74.7 percent of women, followed closely by the purchase of poultry/fowl (chickens, ducks, turkeys, and pigeons), at 72.4 percent of women. Among women who report decisionmaking over selling, giving away, or renting the owned resources, the items with the highest percentages on this measure were non-mechanized farm equipment (74.8 percent), and small livestock (73.6 percent).

Table 5.6 shows the third indicator of the *Resources* domain, access to, and decisionmaking on credit. The table presents the percent of surveyed women who report that a member of the household has in the past 12 months received any loan, either an in-kind loan (such as food items or raw materials), or a cash loan. These categories are not mutually exclusive. Further, for women living in households where a household member has received a loan, the table presents the percentage who report having contributed to the decision to take the loan and the subsequent decisions on how to use the loan. These figures are disaggregated by the source of the loan.

About two-thirds (66.0 percent) of households represented in the WEAI module report a household member receiving any kind of loan in the prior year, and the most common credit source overall is friends or relatives (41.3 percent). When examining type of loans, the most common type by far is cash loans; 62.7 percent of households received a cash loan while only 7.3 percent received an in-kind loan in the prior 12 months. The most common lending source for cash loans is friends or relatives (37.0 percent) followed closely by group-based micro-finance (31.8 percent). (Group-based micro-finance sources in the Ugandan context include Village Savings and Loan Associations or Savings and Credit Cooperative Organizations, Building Resources Across Communities, Pride, Finca, etc.) Among the in-kind loans, the most common credit source is similarly friends or relatives (6.6 percent).

Table 5.6. Credit access among surveyed women

Estimate	Any source (percent)	Credit source (percent)[1]				
		Non-governmental organization	Informal lender	Formal lender	Friends or relatives	Group-based micro-finance
Total receiving a loan (All surveyed women)	66.0	2.8	9.3	6.7	41.3	31.8
Type of loan						
Any loan	66.0	2.8	9.3	6.7	41.3	31.8
In-kind loan	7.3	0.8	0.2	0.0	6.6	0.0
Cash loan	62.7	2.0	9.1	6.7	37.0	31.8
n[2]	**642**	**637**	**637**	**636**	**637**	**638**
Total contributing to a credit decision (All surveyed women)	80.4	^	68.9	58.8	74.1	86.2
Type of decisions						
On whether to borrow	69.4	^	67.0	51.6	64.3	73.0
On how to use loan	76.3	^	64.7	56.7	72.6	79.9
n[2]	**421**	**17**	**57**	**44**	**256**	**204**

^ Results not statistically reliable, n<30.

[1] Percentages sum to more than 100 because loans may have been received from more than one source.

[2] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing/incomplete.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Among women living in households receiving a loan, the bottom half of Table 5.6 presents the percentages who report having contributed to two different decisions surrounding their loan: (1) the decision on whether to borrow and (2) the decision on how to use the loan. Overall, 80.4 percent of women report contributing to at least one of the credit decisions. The type of loan source with the highest reported percentage of women contributing to at least one of the decisions is group-based micro-finance, at 86.2 percent. This is in contrast to formal loans, where only 58.8 percent of women report contributing to at least one of these decisions.

Women appear to have greater input into the decision on how to use a loan (76.3 percent) than the decision on whether to take the loan (69.4 percent). However, the percentage of women contributing to the decision to borrow versus the usage of the loan are often similar, with over half of women contributing to decisions, regardless of the credit source.

5.4 Leadership in the Community

The *Leadership* domain measures an individual's influence and involvement with community organizations and issues impacting her community. The first indicator of the domain is an individual's ease speaking in public, which is measured by three questions related to the level of difficulty an individual faces when voicing her opinion regarding community decisions. On this indicator, 85.8 percent of surveyed women in the core ZOI achieves adequacy in voicing her opinions on community matters (**Table 5.7**).

Table 5.7. Comfort with speaking in public among surveyed women

Topics for public discussion	Percent	n[1]
	Comfortable speaking in public about selected topics	
Total (All surveyed women)	85.8	642
Topics		
To help decide on infrastructure to be built in the community	79.2	641
To ensure proper payment of wages for public works or other similar programs	75.5	633
To protest the misbehavior of authorities or elected officials	68.6	640

[1] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing/incomplete.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

When looking at the three individual topics for public discussion asked about in the survey, 79.2 percent of women report being comfortable speaking up in public regarding infrastructure decisions (e.g., roads, wells, and water supplies). This is followed closely by speaking up in public about wages for public works or similar programs (75.5 percent of women feel comfortable), and speaking up in public to protest the misbehavior of authorities or elected officials (68.6 percent feel comfortable).

The second indicator of the *Leadership* domain is an individual's participation in a community organization. **Table 5.8** shows the percentage of women who are active members of an organization in their community.

In the Uganda core ZOI, 80.3 percent of surveyed women report membership in at least one group. (This is also the uncensored headcount for this indicator; 80.3 percent of women are adequate on the group membership indicator, also shown above in Table 5.1.) The groups with the highest participation include mutual help or insurance groups (such as burial societies) at 46.7 percent of women; religious groups (38.2 percent); and credit or microfinance groups (33.9 percent). The groups with the lowest participation include forest users' groups (0.4 percent), trade and business associations (3.4 percent), and civic or charitable groups (9.2 percent).

Table 5.8. Group membership among surveyed women

Group type	Percent[1] Is an active group member	n[2]
Total (All surveyed women)	80.3	642
Group type		
Agricultural producers' group	12.5	642
Water users' group	11.1	642
Forest users' group	0.4	642
Credit or microfinance group	33.9	642
Mutual help or insurance group	46.7	642
Trade and business association	3.4	642
Civic or charitable group	9.2	642
Local government	12.1	642
Religious group	38.2	642
Other	16.7	642

[1] The denominator for this percentage includes all surveyed women, even those who reported that no group exists or that she is unaware of the existence of a group in her community. Women who report that no group exists or who are unaware of a group are counted as having inadequate achievement of this indicator.

[2] Estimates exclude households who have no primary adult female decisionmaker or whose data are missing/incomplete.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

5.5 Time Use

The last domain of the WEAI is time use. This domain assesses women's work load as directly measured through a time allocation log, as well as the satisfaction felt by the surveyed woman with her leisure time. **Table 5.9** shows the percentage distribution and average hours spent participating in various activities and chores that women often perform. The percentage of women performing an activity indicates the percentage of women who reported doing an activity within the past 24 hours, irrespective of the length of time spent performing the activity. The average hours spent performing an activity is the average across all women, assigning zero hours to women who did not perform an activity. Both primary and secondary activities are presented in Table 5.9. In the core ZOI, 71.5 percent of women, nearly three-quarters, reported being satisfied with their leisure time.

Table 5.9. Time allocation among surveyed women

Activity	Primary activity		Secondary activity[1]	
	Percent of women	Mean hours devoted	Percent of women	Mean hours devoted
Sleeping and resting	100.0	10.4	8.8	0.2
Eating and drinking	96.6	1.3	6.5	0.1
Personal care	76.5	0.6	6.3	0.0
School and homework	0.9	0.1	0.3	0.0
Work as employed	4.9	0.3	0.1	0.0
Own business work	16.0	0.8	2.2	0.1
Farming/livestock/fishing	48.9	1.8	2.3	0.0
Shopping/getting services	13.4	0.3	0.2	0.0
Weaving, sewing, textile care	4.2	0.1	1.3	0.0
Cooking	89.6	3.0	14.4	0.2
Domestic work (fetching food and water)	77.4	1.5	28.7	0.3
Care for children/adults/elderly	46.7	0.6	22.1	0.4
Travel and commuting	69.9	1.5	2.8	0.0
Watching TV/listening to radio/reading	12.2	0.2	21.1	0.7
Exercising	0.2	0.0	0.3	0.0
Social activities and hobbies	44.5	1.0	66.0	2.5
Religious activities	26.4	0.5	0.5	0.0
Other	2.2	0.0	0.3	0.0
n	**642**	**642**	**642**	**642**

[1] Respondents were allowed to report up to two activities per time use increment (15 minutes) in the prior 24 hours. If two activities were reported, one was designated as a primary and the second as a secondary activity. Some women may not have reported secondary activities for each fifteen minute period.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Of all the activities reported in Table 5.9, the most commonly reported primary activities include sleeping and resting (100.0 percent of women, mean 10.4 hours); eating and drinking (96.6 percent, mean 1.3 hours); and cooking (89.6 percent, mean 3.0 hours). Least common activities include exercising (0.2 percent), school and homework (0.9 percent), and other (2.2). Beyond activities of daily life such as sleeping and eating, other common work activities include domestic work (77.4 percent), traveling and commuting (69.9 percent), farming/livestock/fishing (48.9 percent), and caregiving (46.7 percent). Both domestic work and caregiving are commonly reported as secondary activities as well. Social activities and hobbies (66.0 percent) is the most common secondary activity.

6. Hunger and Dietary Intake

This section presents findings related to hunger in the core ZOI as well as women's and young children's dietary intake.

6.1 Household Hunger

The Household Hunger Scale (HHS) is used to calculate the prevalence of households in the Uganda core ZOI experiencing moderate or severe hunger. The HHS was developed by the USAID-funded Food and Nutrition Technical Assistance II Project (FANTA-2/FHI 360) in collaboration with the United Nations Food and Agriculture Organization. It has been cross-culturally validated to allow comparison across different food-insecure contexts. The HHS is used to assess, geographically target, monitor, and evaluate settings affected by substantial food insecurity. The HHS is used to estimate the percentage of households affected by three different severities of household hunger: little to no household hunger (HHS score 0-1); moderate household hunger (HHS score 2-3); and severe household hunger (HHS score 4-6). The HHS should be measured at the same time each year, and ideally at the most vulnerable time of year (right before the harvest, during the dry season, etc.).[44,45]

The bimodal regions of Uganda (which includes the core ZOI) do not have a pronounced hunger season.[46] Data for the interim HHS were collected from March 6 to April 7, 2015. Data for the baseline HHS were collected from late October to late December 2012. For both survey timeframes, the FEWS NET Food Security Outlook rated acute food security as minimal in the bimodal regions.[47] Thus the difference in time of year in which the baseline[48] and interim data collection took place should not reduce comparability of the HHS values.

Table 6.1 presents estimates of household hunger for all households, as well as by household characteristics, including gendered household type, household size, and household educational attainment.

Most households in the core ZOI – 71.8 percent – report that they experience no or little hunger. However, over one-quarter (26.4 percent) experience moderate hunger, and 1.8 percent experience severe hunger. As shown in the Feed the Future ZOI indicator estimates table in the Executive Summary (as well as Appendix 1, Table A1.1, the interim Feed the Future indicator estimates), moderate and severe hunger combined is 28.2 percent.

[44] Deitchler, Ballard, Swindale, and Coates. (2011).
[45] For further description of the household hunger indicator and its calculation, refer to the Feed the Future Indicator Handbook, available at http://feedthefuture.gov/resource/feed-future-handbook-indicator-definitions.
[46] FEWS NET. Seasonal calendar – Typical year. http://www.fews.net/east-africa/uganda. Retrieved July 22, 2015.
[47] FEWS NET. Uganda Food Security Outlook Update November 2012 and March 2015.
[48] The Feed the Future Baseline Report for Uganda is available at http://feedthefuture.gov/resource/uganda-feed-future-baseline-report.

Significance tests were performed for relationships between little to no hunger and household characteristics; this is equivalent to a significance test for moderate and severe hunger combined and each respective household characteristic. None of the characteristics for which tests were performed, including gendered household type, household size, and household educational attainment, showed significant associations with little to no hunger.

Table 6.1. Household hunger

Characteristic	Percent			n[1]
	Little to no hunger[a]	Moderate hunger	Severe hunger	
Total (All households)	71.8	26.4	1.8	757
Gendered household type				
Male and female adults	73.5	24.6	1.8	577
Female adult(s) only	66.7	30.3	3.0	109
Male adult(s) only	65.4	34.6	0.0	69
Child(ren) only (no adults)	^	^	^	2
Household size				
Small (1-5 members)	73.6	25.2	1.2	410
Medium (6-10 members)	69.7	28.2	2.1	312
Large (11+ members)	68.7	24.8	6.5	35
Household educational attainment				
No education	^	^	^	12
Less than primary	65.7	31.9	2.4	298
Primary	71.4	27.0	1.7	317
Secondary or more	86.6	13.4	0.0	130

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample size may not total to the aggregated sample size.

[a] Significance tests were performed for associations between little to no hunger and household characteristics, which is equivalent to testing the association between moderate to severe hunger and household characteristics. For example, a test was done between little to no hunger and gendered household type. When differences were found to be significant ($p<0.05$), the superscript is noted next to the household characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

6.2 Dietary Intake

This section presents information on the dietary diversity of women of reproductive age and on infant and young child feeding in the core ZOI.

6.2.1 Dietary Diversity Among Women Age 15-49 Years

Women of reproductive age (15-49 years) are at risk of multiple micronutrient deficiencies, which can jeopardize their health and their ability to care for their children and participate in income-generating activities (Darnton-Hill et al., 2005). The Feed the Future women's dietary diversity indicator is a proxy for the micronutrient adequacy of women's diets. The dietary diversity indicator reports the mean number of food groups consumed in the previous day by women of reproductive age.

For the interim survey, two dietary diversity indicators for women are calculated: the Women's Dietary Diversity Score (WDDS) and Women's Minimum Dietary Diversity (MDD-W).

Women's Dietary Diversity Score

The Feed the Future women's dietary diversity indicator, presented in Table 6.2, is based on nine food groups: (1) grains, roots, and tubers; (2) legumes and nuts; (3) dairy products; (4) organ meat; (5) eggs; (6) flesh food and small animal protein; (7) vitamin A-rich dark green leafy vegetables; (8) other vitamin A-rich vegetables and fruits; and (9) other fruits and vegetables. The number of food groups consumed is averaged across all women of reproductive age in the sample for whom dietary diversity data were collected to produce a WDDS.

Table 6.2 shows the mean and median WDDS for all women of reproductive age in the core ZOI, and by individual-level and household-level characteristics. Mean WDDS is the Feed the Future high-level indicator. Individual-level characteristics include women's age groups and educational attainment. Household-level characteristics include categories of gendered household type, household size, and household hunger.

In the Uganda core ZOI, the WDDS indicator value is 3.7; in other words, women consume an average of 3.70 food groups of the nine possible groups. The median value is 4 food groups. Mean WDDS varies significantly by women's age, education, and household hunger status.

As shown in Table 6.2, the mean WDDS values generally decline with increasing women's age. In addition, WDDS scores are significantly associated with women's education; women with secondary or more schooling consume on average nearly one food group more than women with no education (4.23 food groups versus 3.27 food groups, respectively). Moreover, women residing in households reporting little to no household hunger report consuming significantly more food groups (3.81) than women in households with moderate or severe hunger (3.43).

Table 6.2. Women's dietary diversity score

Characteristic	Mean[a]	Median	n[l]
Total (All women 15-49)	3.70	4	747
Age[a]			
15-19	3.88	4	172
20-24	3.88	4	145
25-29	3.61	3	111
30-34	3.83	4	109
35-39	3.55	3	85
40-44	3.63	4	69
45-49	3.07	3	56
Educational attainment[a]			
No education	3.27	3	127
Less than primary	3.65	4	375
Primary	3.95	4	195
Secondary or more	4.23	5	49
Gendered household type			
Male and female adults	3.73	4	651
Female adult(s) only	3.46	3	83
Male adult(s) only	^	^	11
Child(ren) only (no adults)	^	^	2
Household size			
Small (1-5 members)	3.70	4	287
Medium (6-10 members)	3.71	4	393
Large (11+ members)	3.64	4	67
Household hunger[a]			
Little to no hunger	3.81	4	555
Moderate or severe hunger	3.43	3	190

^ Results not statistically reliable, n<30.

[l] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between mean women's dietary diversity score and individual/household characteristics. For example, a test was done between mean women's dietary diversity score and age. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Women's Minimum Dietary Diversity

The Feed the Future MDD-W indicator is a new measure introduced in the interim assessments and uses the following 10 food groups: (1) grains, roots, and tubers; (2) legumes and beans; (3) nuts and seeds; (4) dairy products; (5) eggs; (6) flesh foods, including organ meat and miscellaneous small animal protein; (7) vitamin A-rich dark green leafy vegetables; (8) other vitamin A-rich vegetables and fruits; (9) other fruits; and (10) other vegetables.[49] Achievement of MDD-W is defined as having consumed foods from five of the 10 food groups in the past

[49] The differences between the nine food groups used for the WDDS (Table 6.2), which is the current standard Feed the Future indicator, and the 10 food groups used for the new MDD-W measure (Table 6.3) include: (1) legumes and beans are separated from nuts and seeds; (2) meat (flesh foods) and organ meat are combined into one group; and (3) other fruits and other vegetables are separated into two groups.

24 hours. Thus this indicator is a dichotomous variable, and the measure is reported as the percentage of women who achieve a MDD-W.[50]

Table 6.3 shows the percentage of all women of reproductive age in the core ZOI who have achieved the MDD-W threshold by individual-level and household-level characteristics. Individual-level characteristics include women's age groups and educational attainment. Household-level characteristics include categories of gendered household type, household size, and household hunger.

Table 6.3. Women's minimum dietary diversity

Characteristic	Percent[a]	n[1]
Total (All women 15-49)	32.6	747
Age		
15-19	32.8	172
20-24	38.6	145
25-29	34.9	111
30-34	37.3	109
35-39	30.4	85
40-44	24.7	69
45-49	17.7	56
Educational attainment[a]		
No education	17.1	127
Less than primary	33.2	375
Primary	35.4	195
Secondary or more	54.5	49
Gendered household type		
Male and female adults	32.9	651
Female adult(s) only	28.7	83
Male adult(s) only	^	11
Child(ren) only (no adults)	^	2
Household size		
Small (1-5 members)	32.7	287
Medium (6-10 members)	33.8	393
Large (11+ members)	24.2	67
Household hunger		
Little to no hunger	35.9	555
Moderate or severe hunger	23.9	190

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between women's minimum dietary diversity and individual/household characteristics. For example, a test was done between women's minimum dietary diversity and age. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

[50] For more information, refer to Volume 11: Guidance on the First Interim Assessment of the Feed the Future Zone of Influence Population-Level Indicators (October 2014), Section 4.2, available for download at http://www.feedthefuture.gov/sites/default/files/resource/files/ftf_guidanceseries_vol11_interimassessment_oct2014.pdf.

Among women in the Uganda core ZOI, less than one-third (32.6 percent) meet the MDD-W threshold (five food groups). Of disaggregates presented in Table 6.3, only educational attainment is significantly associated with the women's MDD-W indicator. Consistent with the findings for WDDS presented above, Table 6.3 shows that with increasing education, MDD-W prevalence increases. More than half (54.5 percent) of women with secondary or more education obtained a minimum dietary diversity, compared to only 17.1 percent of women with no education.

Table 6.4 shows the percentages of women age 15-49 years who consume each of the 10 food groups by dietary diversity achievement status. As noted above, women who achieve a minimum dietary diversity, consume at least five of the 10 food groups, whereas women who do not achieve this, consume less than five food groups. Those women who have not achieved a minimum dietary diversity will not have as diverse of a diet. Table 5.4 shows where women who have not achieved a minimum dietary diversity are less likely to consume a given food group.

Among women who do not achieve a minimum dietary diversity, only two food groups – grains, roots, and tubers (96.8 percent), and legumes and beans (74.6 percent) – are consumed by at least half of the women. For the other eight food groups, the percentage of women consuming falls below 50 percent (ranging from 45.2 percent for other fruits down to only 1.3 percent for eggs). Women who do not achieve a minimum dietary diversity are significantly less likely to consume each specific food groups with only one exception: legumes and beans.

Table 6.4. Consumption of foods by women's minimum dietary diversity status

Category	Percent of women according to achievement of a minimum dietary diversity[a]	
	Achieving	Not achieving
Women consuming a specific food group		
Grains, roots, and tubers[a]	99.8	96.8
Legumes and beans	85.0	74.6
Nuts and seeds[a]	23.8	9.5
Dairy products[a]	42.3	7.3
Meat and organ meats[a]	66.3	26.1
Eggs[a]	12.6	1.3
Vitamin A-rich dark green leafy vegetables[a]	47.3	26.1
Other vitamin A-rich vegetables and fruits[a]	48.5	10.9
Other fruits[a]	84.9	45.2
Other vegetables[a]	52.6	15.1
n	**246**	**501**

[a] Significance tests were performed for associations between women's achievement of minimum dietary diversity and consumption of a specific food group. For example, a test was done between women's achievement of minimum dietary diversity and consumption of grains, roots, and tubers. When an association is found to be significant ($p<0.05$), a superscript is noted next to the food group.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

6.2.2 Infant and Young Child Feeding

This section presents young children's dietary intake measures, including the Feed the Future indicators of exclusive breastfeeding among babies 0-5 months and the minimum acceptable diet (MAD) indicator among children 6-23 months.

Exclusive Breastfeeding

Exclusive breastfeeding provides children with significant health and nutrition benefits, including protection from gastrointestinal infections and reduced risk of mortality due to infectious disease. Exclusive breastfeeding means the infant received breast milk (including expressed breast milk or breast milk from a wet nurse) and may have received oral rehydration salts, vitamins, minerals, and/or medicines, but did not receive any other food or liquid. This indicator measures the percentage of children 0-5 months of age who were exclusively breastfed during the day preceding the survey.

Table 6.5 shows the prevalence of exclusive breastfeeding among children 0-5 months in the core ZOI. Estimates are shown for all children, as well as by children's sex and by educational attainment of the child's primary caregiver. The caregiver's educational categories include no education, less than primary, completed primary, and completed secondary or more. Note that the data are collected for the self-identified *primary caregiver* and not strictly for the biological mother (although it is often the same person).

Among all children less than 6 months in the Uganda core ZOI, over half (58.2 percent) are exclusively breastfed. This is very similar to the value reported in the 2011 Uganda DHS. Nationally, the DHS shows that about 63.2 percent of children age 0-5 months are exclusively breastfed.[51]

As shown in Table 6.5, there is no significant association between exclusive breastfeeding and child sex or caregiver's education. It is important to note, however, that the sample size of children 0-5 months is very small in the core ZOI interim survey, at just 69 records. Given that the sample was drawn to be representative of the core ZOI, the estimates for exclusive breastfeeding are representative of the core ZOI, but the confidence intervals for these estimates are relatively wide, which implies the estimates are not very precise.

[51] Uganda Bureau of Statistics (UBOS) and ICF International. (2012). p. 148.

Table 6.5. Prevalence of exclusive breastfeeding among children under 6 months

Characteristic	Percent[a]	n[1]
Total (All children under 6 months)	58.2	69
Child sex		
Male	60.9	39
Female	54.8	30
Caregiver's educational attainment[2]		
No education	^	14
Less than primary	59.3	38
Primary	^	12
Secondary or more	^	5

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[2] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a] Significance tests were performed for associations between exclusive breastfeeding and child/caregiver characteristics. For example, a test was done between exclusive breastfeeding and the child's sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Minimum Acceptable Diet

The prevalence of children 6-23 months receiving a MAD measures the proportion of young children who receive a MAD apart from breastfeeding. This composite indicator measures both the minimum feeding frequency and minimum dietary diversity based on caregiver reports of the frequency with which the child was fed in the past 24 hours, and what foods were consumed during the past 24 hours. Tabulation of the indicator requires data on children's age in months, breastfeeding status, dietary diversity, number of semi-solid or solid feeds, and number of milk feeds.

Table 6.6 presents the Feed the Future MAD indicator for children in the core ZOI. Estimates are shown for all children, as well as by characteristics of the children, caregiver, and household. Children's characteristics include children's sex and age group. Caregivers' characteristics include age and sex categories, as well as caregivers' educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Nearly one-quarter (23.1 percent) of children 6-23 months in the Uganda core ZOI receives a MAD. While significance tests were run for differences in prevalence of MAD by child sex, child age, caregiver's educational attainment, gendered household type, household size, and household hunger, no significant associations were found. However, similar to the exclusive breastfeeding indicator presented above, the sample size of children 6-23 months in the core ZOI is fairly small (n=199). In spite of the small sample size for MAD, the sample will still be representative. Since the sample was drawn to be representative of the core ZOI, the estimates

for MAD are representative of the core ZOI, but the confidence intervals for these estimates are relatively wide, which implies the estimates are not very precise.

Table 6.6. Percentage of children age 6-23 months who receive a minimum acceptable diet

Characteristic	Percent[a]	n[1]
Total (All children 6-23 months)	23.1	199
Child sex		
Male	20.8	88
Female	24.8	111
Child age		
6-11 months	17.8	61
12-17 months	19.1	83
18-23 months	34.0	55
Caregiver's educational attainment[2]		
No education	18.8	34
Less than primary	19.7	109
Primary	30.9	43
Secondary or more	^	13
Gendered household type		
Male and female adults	23.1	187
Female adult(s) only	^	10
Male adult(s) only	^	2
Child(ren) only (no adults)	^	0
Household size		
Small (1-5 members)	26.2	88
Medium (6-10 members)	22.6	97
Large (11+ members)	^	14
Household hunger		
Little to no hunger	26.7	156
Moderate or severe hunger	12.2	43

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[2] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a] Significance tests were performed for associations between children receiving a minimum acceptable diet and child/caregiver/household characteristics. For example, a test was done between children receiving a minimum acceptable diet and child's sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 6.7 presents the percentage of children achieving the MAD components (e.g., minimum meal frequency, minimum dietary diversity) and consuming each of the food groups of the minimum dietary diversity indicator. Estimates are shown for all children, as well as by specific age groups, and presented separately for breastfed children and non-breastfed children.

Table 6.7. Components of a minimum acceptable diet among children age 6-23 months

MAD components and food groups	Percent			
	All children[a]	By child age (in months)		
		6 to 11	12 to 17	18 to 23
Breastfed children				
Achieving minimum meal frequency	58.8	63.8	50.2	^
Achieving minimum dietary diversity[a]	38.2	26.5	32.7	^
Consuming				
Grains, roots, and tubers	88.5	77.8	92.8	^
Legumes and nuts	68.2	60.9	72.0	^
Dairy products	25.6	37.8	13.4	^
Flesh foods[a]	35.4	27.5	35.7	^
Eggs	7.3	7.6	7.5	^
Vitamin A-rich fruits and vegetables	39.7	30.6	44.3	^
Other fruits and vegetables	57.2	48.0	60.1	^
n	**154**	**58**	**70**	**26**
Non-breastfed children				
Achieving minimum meal frequency	56.2	^	^	^
Achieving minimum milk feeding frequency	25.2	^	^	^
Achieving minimum dietary diversity[a]	61.9	^	^	^
Consuming				
Grains, roots, and tubers	96.0	^	^	^
Legumes and nuts	80.7	^	^	^
Dairy products	41.9	^	^	^
Flesh foods[a]	58.4	^	^	^
Eggs	13.8	^	^	^
Vitamin A-rich fruits and vegetables	56.1	^	^	^
Other fruits and vegetables	69.3	^	^	^
n	**45**	**3**	**13**	**29**

^ Results not statistically reliable, n<30.

[a] Significance tests were performed for associations between MAD components/food groups for breastfed and non-breastfed children. For example, a test was done for achieving minimum meal frequency and breastfeeding status. When an association is found to be significant ($p<0.05$), a superscript is noted next to the breastfed and non-breastfed row headings corresponding to the MAD component/food group.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 6.7 reveals that among breastfed children, 58.8 percent achieve minimum meal frequency, and 38.2 percent achieve minimum dietary diversity. Among the minority of non-breastfed children (n=45), a similar percentage achieve minimum meal frequency (56.2 percent), but a significantly greater percentage (61.9 percent) achieve minimum dietary diversity.

When examining the individual food groups by breastfeeding status, Table 6.7 shows that the two most common foods for both groups are grains, roots and tubers, and legumes and nuts. Similarly, the two least common foods for both groups are eggs and dairy. The consumption of flesh foods (e.g., meat, fish, organ meat) varies significantly by breastfeeding status, with non-breastfed children more likely to consume flesh foods than breastfed children (58.4 and 35.4 percent, respectively).

Although estimates in Table 6.7 are also presented by children's age group (6-11, 12-17, and 18-23 months), due to small sample sizes, most estimates are suppressed (n<30), particularly for non-breastfed children.

6.2.3 Consumption of Targeted Nutrient-Rich Value Chain Commodities (NRVCC)

U.S. Government (USG)-funded programming supports nutrition-sensitive agricultural value chain[52] interventions to achieve the dual purpose of enhancing both economic and nutritional outcomes. The Feed the Future interim assessments measure the degree to which respondents in the ZOI are consuming targeted nutrient-rich commodities or products made from targeted nutrient-rich commodities being promoted by these value chain activities.

There are three criteria for a food commodity to be considered a targeted NRVCC:

1. Increased production of the commodity must be promoted through a USG-funded value chain activity.

2. The value chain commodity must have been selected for nutrition objectives, in addition to any poverty-reduction or economic-growth related objectives.

3. The commodity must be considered nutrient rich, defined as meeting any one of the following criteria: It is bio-fortified; a legume, nut, or seed; an animal-sourced food, including dairy products (milk, yogurt, cheese), eggs, organ meat, flesh foods, and other miscellaneous small animal protein (e.g., grubs, insects); a dark yellow or orange-fleshed root or tuber; or a fruit or vegetable that meets the threshold for being a "high source" of one or more micronutrients on a per 100 gram basis.

This section presents the core ZOI interim assessment's findings on the consumption of targeted NRVCC among women age 15-49 and children age 6-23 months in Uganda. The targeted commodities in Uganda include beans and bean products.

Women's Consumption of Targeted Nutrient-Rich Value Chain Commodities

Table 6.8 presents women's consumption of targeted NRVCC. Estimates are shown for all women age 15-49, as well as by women's individual and household characteristics. Women's individual characteristics include age and educational attainment. Household characteristics include gendered household type, household size, and household hunger.

[52] From Martin Webber and Patrick Labaste, "Building competitiveness in Africa's agriculture: A guide to value chain concepts and applications," published by The World Bank: "The term 'value chain' describes the full range of value-adding activities required to bring a product or service through the different phases of production, including procurement of raw materials and other inputs, assembly, physical transformation, acquisition of required services such as transport or cooling, and ultimately response to consumer demand (Kaplinsky and Morris (2002), "A Handbook for Value Chain Research," p. 46–47)."

Table 6.8 shows that nearly two-thirds (64.3 percent) of women age 15-49 in the Uganda core ZOI consume beans or bean products. Significance tests were performed for associations between consumption of beans (and consumption of any NRVCC, which is equivalent when there is only one NRVCC) and women's age, educational attainment, gendered household type, household size, and household hunger status. None of these characteristics were significantly associated with women's bean consumption.

Table 6.8. Women's consumption of targeted nutrient-rich value chain commodities

Characteristic	Percent		n[2]
	Any targeted commodity[1,a]	Beans and bean products[b]	
Total (All women 15-49)	64.3	64.3	747
Age			
15-19	63.5	63.5	172
20-24	68.9	68.9	145
25-29	64.7	64.7	111
30-34	66.3	66.3	109
35-39	60.4	60.4	85
40-44	52.2	52.2	69
45-49	71.9	71.9	56
Educational attainment			
No education	67.7	67.7	127
Less than primary	65.9	65.9	375
Primary	59.6	59.6	195
Secondary or more	61.6	61.6	49
Gendered household type			
Male and female adults	64.7	64.7	651
Female adult(s) only	63.1	63.1	83
Male adult(s) only	^	^	11
Child(ren) only (no adults)	^	^	2
Household size			
Small (1-5 members)	64.1	64.1	287
Medium (6-10 members)	64.6	64.6	393
Large (11+ members)	63.3	63.3	67
Household hunger			
Little to no hunger	65.0	65.0	555
Moderate or severe hunger	62.6	62.6	190

^ Results not statistically reliable, n<30.

[1] In contrast to other Feed the Future countries, Uganda has only one NRVCC food (beans and bean products) and so the "consumption of at least one NRVCC" measure is identical to the "consumption of beans and bean products" measure.

[2] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a,b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between any targeted commodity and the woman's age. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Children's Consumption of Targeted Nutrient-Rich Value Chain Commodities

Table 6.9 presents children's consumption of targeted NRVCC. Estimates are shown for all children 6-23 months, as well as by characteristics of the child, caregiver, and household.

Children's characteristics include sex and age, and caregivers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Table 6.9 shows that over half (57.3 percent) of children 6-23 months in the Uganda core ZOI consume beans or bean products. (As with Table 6.8 for women, the "any targeted commodity" indicator is identical when there is only one NRVCC.) Significance tests were performed for associations between consumption of beans and child sex, child age, caregiver's educational attainment, gendered household type, household size, and household hunger status. However, none of these characteristics were significantly associated with children's bean consumption.

Table 6.9. Children's consumption of targeted nutrient-rich value chain commodities

Characteristic	Percent		n[2]
	Any targeted commodity[1,a]	Beans and bean products[b]	
Total (All children 6-23 months)	57.3	57.3	199
Child sex			
Male	56.1	56.1	88
Female	58.1	58.1	111
Child age			
6-11 months	51.3	51.3	61
12-17 months	62.1	62.1	83
18-23 months	56.8	56.8	55
Caregiver's educational attainment[3]			
No education	67.7	67.7	34
Less than primary	56.1	56.1	109
Primary	52.9	52.9	43
Secondary or more	^	^	13
Gendered household type			
Male and female adults	56.6	56.6	187
Female adult(s) only	^	^	10
Male adult(s) only	^	^	2
Child(ren) only (no adults)	^	^	0
Household size			
Small (1-5 members)	59.1	59.1	88
Medium (6-10 members)	56.1	56.1	97
Large (11+ members)	^	^	14
Household hunger			
Little to no hunger	54.7	54.7	156
Moderate or severe hunger	65.3	65.3	43

^ Results not statistically reliable, n<30.

[1] Feed the Future countries, Uganda has only one NRVCC food (beans and bean products) and so the "consumption of at least one NRVCC" measure is identical to the "consumption of beans and bean products" measure.

[2] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[3] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a,b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between any targeted commodity and the sex of the child. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

7. Nutritional Status of Women and Children

This section presents findings related to the Feed the Future indicators of women's underweight and children's anthropometry (stunting, wasting, and underweight).

7.1 Body Mass Index of Women Age 15-49 Years

Table 7.1 presents women's mean BMI as well as the BMI categories of underweight (BMI < 18.5), normal weight (18.5 ≤ BMI < 25.0), overweight (25.0 ≤ BMI < 30.0), and obese (BMI ≥ 30.0). Estimates are shown for all non-pregnant women age 15-49, as well as disaggregated by individual-level and household-level characteristics. Individual characteristics include age and educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Among all non-pregnant women age 15-49 in the Uganda core ZOI, mean BMI is 22.5, or normal weight. This is very similar to the 2011 Uganda Demographic and Health Survey (DHS) national women's BMI value of 22.3.[53] About 1 in 10 women (10.1 percent) in the Uganda core ZOI are underweight, slightly less than the 2011 DHS value of 11.7 percent.[54] Over two-thirds of core ZOI women (69.5 percent) are normal weight, and 16.4 percent and 3.9 percent are overweight and obese, respectively. The 2011 DHS national normal weight, overweight, and obese values are 69.5 percent, 14.6 percent, and 4.2 percent, respectively.[55]

As shown in Table 7.1, mean BMI and BMI category vary significantly by both age group and educational attainment in the core ZOI. While less than 2 percent (1.9 percent) of highly-educated women (those with secondary or more schooling) are underweight, this category has the highest prevalence of overweight (40.5 percent) and obese (6.2 percent) women. Interestingly, household characteristics, particularly household hunger status, are not significantly associated with women's BMI or BMI categories.

[53] Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012). p. 160.
[54] Ibid.
[55] Ibid.

Table 7.1. Prevalence of underweight, normal weight, overweight, and obese women

Characteristic	Mean BMI[a]	Body Mass Index (BMI) category (percent)[b]				n[1]
		Under-weight[c]	Normal weight	Over-weight	Obese	
Total (All women age 15-49)	22.5	10.1	69.5	16.4	3.9	672
Age[a,b]						
15-19	21.3	13.3	78.1	7.7	0.9	162
20-24	21.9	5.3	84.2	10.5	0.0	124
25-29	22.8	7.6	66.1	23.3	2.9	92
30-34	23.4	8.3	58.2	26.8	6.7	96
35-39	22.6	15.8	61.4	21.9	0.9	76
40-44	23.5	11.7	59.0	17.7	11.6	67
45-49	24.0	7.9	62.9	16.3	13.0	55
Educational attainment[a,b]						
No education	22.3	10.5	70.4	15.1	4.0	113
Less than primary	22.0	11.9	72.6	13.1	2.3	341
Primary	22.9	8.5	67.7	17.9	5.9	171
Secondary or more	25.0	1.9	51.4	40.5	6.2	46
Gendered household type						
Male and female adults	22.5	10.7	68.5	16.8	4.0	579
Female adult(s) only	22.6	5.7	74.8	16.0	3.5	82
Male adult(s) only	^	^	^	^	^	9
Child(ren) only (no adults)	^	^	^	^	^	2
Household size						
Small (1-5 members)	22.6	7.1	72.5	17.8	2.6	251
Medium (6-10 members)	22.4	12.4	66.8	16.5	4.3	358
Large (11+ members)	22.9	10.1	72.4	10.3	7.1	63
Household hunger						
Little to no hunger	22.6	9.6	69.0	16.9	4.5	497
Moderate or severe hunger	22.2	11.5	70.6	15.5	2.4	174

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between BMI and the woman's age. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

7.2 Stunting, Wasting, and Underweight Among Children Under 5 Years

This section reports on three anthropometric measurements of undernutrition among children under 5 years in the core ZOI: Stunting (height-for-age), wasting (weight-for-height), and underweight (weight-for-age).

7.2.1 Stunting (Height-for-Age)

Stunting is an indicator of linear growth retardation, most often due to a prolonged inadequate diet and poor health. Reducing the prevalence of stunting among children, particularly age 0-23 months, is important because linear growth deficits accrued early in life are associated with cognitive impairments, poor educational performance, and decreased work productivity as adults (Black et al. 2008, Victoria et al. 2008). Stunting is a height-for-age measurement that reflects chronic undernutrition. This indicator measures the percentage of children 0-59 months who are stunted, as defined by a height-for-age Z-score more than two standard deviations (SDs) below the median of the 2006 WHO Child Growth Standard (<-2SD).[56] The stunting measures presented below include the Feed the Future stunting indicator of moderate or severe stunting combined (<-2SD) as well as the indicator for severe stunting (<-3SD). Mean Z-scores are also presented.

Table 7.2 shows the prevalence of stunting, severe stunting, and mean Z-scores for children under 5 years in the core ZOI. Estimates are presented for all children and by child, caregiver, and household characteristics. Children's characteristics include sex and age. Caregivers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

In the Uganda core ZOI, nearly one-third (29.2 percent) of children are stunted. This is similar to the 2011 DHS national value of 33.4 percent.[57] Just over 1 in 10 (10.2 percent) of children in the core ZOI are severely stunted, compared to the DHS national value of 13.7 percent.[58] The mean height-for-age Z-score in the core ZOI is -1.1, which implies on average the height-for-age for children is below that for the reference population.

As shown in Table 7.2, significance tests were run for both the stunting indicator (<-2SD) as well as the mean Z-scores. There are no significant differences in children's stunting by sex, but children's age is significantly associated with stunting prevalence and mean Z-scores. Stunting prevalence increases from the youngest age group (0-11 months), peaks in the middle age group, and then declines in the oldest age groups. The age group with the greatest stunting prevalence is 24-35 months; 40.4 percent of core ZOI children in that age group are stunted.

Table 7.2 also shows children's stunting by selected characteristics of caregivers and households. In the core ZOI, caregivers' education is significantly associated with height-for-age mean Z-scores. As caregivers' educational attainment increases, mean Z-scores move closer to 0 (the expected value for the reference population), from -1.3 (no education group) to -0.4 (secondary or more education group). It is also noteworthy that gendered household type,

[56] WHO. (2006).
[57] Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012). p. 143.
[58] Ibid. p.143.

household size, and household hunger are not significantly associated with children's stunting measures.

Table 7.2. Stunting (height-for-age) among children under 5 years old

Characteristic	% Stunted (<-2 SD)[a]	% Severely stunted (<-3 SD)	Mean Z-score[b]	n[1]
Total (All children under 5 years)	29.2	10.2	-1.1	649
Child sex				
Male	29.8	11.5	-1.2	312
Female	28.6	9.1	-1.1	337
Child age[a,b]				
0-11 months	9.3	2.2	-0.2	127
12-23 months	26.6	6.0	-1.1	133
24-35 months	40.4	15.2	-1.6	118
36-47 months	37.1	16.4	-1.4	128
48-59 months	32.4	11.3	-1.4	143
Caregiver's educational attainment[2,b]				
No education	34.2	11.1	-1.3	143
Less than primary	30.5	12.7	-1.2	349
Primary	22.5	3.2	-0.9	124
Secondary or more	18.6	4.2	-0.4	32
Gendered household type				
Male and female adults	29.1	10.0	-1.1	598
Female adult(s) only	29.4	10.8	-1.2	44
Male adult(s) only	^	^	^	6
Child(ren) only (no adults)	^	^	^	1
Household size				
Small (1-5 members)	33.7	11.9	-1.3	235
Medium (6-10 members)	26.8	9.6	-1.1	361
Large (11+ members)	25.2	7.2	-0.7	53
Household hunger				
Little to no hunger	28.3	8.6	-1.1	482
Moderate or severe hunger	31.9	14.5	-1.2	165

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[2] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a,b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between percent stunted and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

7.2.2 Wasting (Weight-for-Height)

Wasting is an indicator of acute malnutrition. Children who are wasted are too thin for their height and have a much greater risk of dying than children who are not wasted. This indicator measures the percentage of children 0-59 months who are acutely malnourished, as defined by a weight-for-height Z-score more than two SDs below the median of the 2006 WHO Child Growth Standard. The wasting measures presented below include the Feed the Future wasting indicator of moderate or severe wasting combined (<-2SD) as well as the indicator for severe wasting (<-3SD), and the percentage of children who are overweight (>+2SD) and obese (>+3SD). Mean Z-scores are also presented.

Table 7.3 shows the prevalence of wasting, severe wasting, overweight, obesity, and mean Z-scores for children under 5 years in the core ZOI. Estimates are presented for all children and by child, caregiver, and household characteristics. Children's characteristics include sex and age. Caregivers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

In the Uganda core ZOI, 4.5 percent of children are wasted. This is nearly identical to the 2011 DHS national value of 4.7 percent.[59] One-half of 1 percent (0.5 percent) of children in the core ZOI are severely wasted (<-3SD), compared to the DHS national value of 1.5 percent severely wasted.[60] In the core ZOI, 1.8 percent of children are overweight (>+2SD), and 0.3 percent are obese (>+3SD). The mean weight-for-height Z-score in the core ZOI is -0.1, which implies on average the weight-for-height of children is slightly below that for the reference population.

Table 7.3 includes the results of significance tests for the children's wasting indicator (<-2SD), the overweight indicator (>+2SD), and mean weight-for-height Z-scores. There are no significant differences in these indicators by sex, but children's age group is significantly associated with wasting Z-scores. As with stunting, gendered household type, household size and household hunger are not significantly associated with children's wasting measures.

[59] Ibid. p. 143.
[60] Ibid. p. 143.

Table 7.3. Wasting (weight-for-height) among children under 5 years old

Characteristic	% Wasted (<-2 SD)[a]	% Severely wasted (<-3 SD)	% Overweight (>+2SD)[b]	% Obese (>+3SD)	Mean Z-score[c]	n[1]
Total (All children under 5 years)	4.5	0.5	1.8	0.3	-0.1	649
Child sex						
Male	5.4	0.9	1.0	0.6	-0.1	312
Female	3.7	0.1	2.5	0.0	-0.1	337
Child age[c]						
0-11 months	8.1	0.4	2.4	0.8	-0.4	127
12-23 months	6.4	0.7	0.7	0.0	-0.3	133
24-35 months	0.0	0.0	3.9	0.8	0.3	118
36-47 months	2.7	0.0	0.7	0.0	0.1	128
48-59 months	5.0	1.2	1.6	0.0	-0.2	143
Caregiver's educational attainment[2]						
No education	4.4	0.7	2.5	0.7	-0.2	143
Less than primary	5.7	0.5	1.5	0.0	-0.2	349
Primary	2.2	0.4	1.6	0.0	0.0	124
Secondary or more	0.0	0.0	3.6	3.6	0.2	32
Gendered household type						
Male and female adults	4.3	0.2	1.7	0.3	-0.1	598
Female adult(s) only	5.9	3.9	3.8	0.0	-0.1	44
Male adult(s) only	^	^	^	^	^	6
Child(ren) only (no adults)	^	^	^	^	^	1
Household size						
Small (1-5 members)	5.6	0.8	2.3	0.8	-0.1	235
Medium (6-10 members)	4.2	0.4	1.7	0.0	-0.1	361
Large (11+ members)	1.6	0.0	0.0	0.0	-0.1	53
Household hunger						
Little to no hunger	3.7	0.7	2.4	0.4	0.0	482
Moderate or severe hunger	6.5	0.0	0.4	0.0	-0.2	165

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[2] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between the percent wasted and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

7.2.3 Underweight (Weight-for-Age)

Underweight is a weight-for-age measurement and is a reflection of acute and/or chronic undernutrition. This indicator measures the percentage of children 0-59 months who are underweight, as defined by a weight-for-age Z-score of more than two SDs below the median of the 2006 WHO Child Growth Standard. The underweight measures presented below include the Feed the Future underweight indicator of moderate or severe underweight combined (<-2SD) as well as the indicator for severe underweight (<-3SD). Mean Z-scores are also presented.

Table 7.4 shows the prevalence of underweight, severe underweight, and mean Z-scores for children under 5 years in the core ZOI. Estimates are presented for all children and by child, caregiver, and household characteristics. Children's characteristics include sex and age. Caregivers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

In the Uganda core ZOI, 1 in 10 children (11.0 percent) are underweight. This is slightly lower than the 2011 DHS national value of 13.8 percent.[61] About 2 percent (2.1 percent) of core ZOI children are severely underweight, compared to the DHS national value of 3.4 percent.[62] The mean weight-for-age Z-score in the core ZOI is -0.7, which implies on average the weight-for-age for children is below that for the reference population.

As shown in Table 7.4, significance tests were run for both the underweight indicator (<-2SD) as well as the weight-for-age mean Z-scores. There are no significant differences in children's underweight by sex, but children's age is significantly associated with mean Z-scores. Of the additional caregiver- and household-level disaggregates presented in the table, underweight Z-scores vary significantly by caregivers' educational attainment. As caregivers' level of education increases, mean Z-scores improve (move closer to 0), from -1.3 (no education group) to -0.4 (secondary or more education group). As with the other children's anthropometric indicators of stunting and wasting, the indicators gendered household type, household size, and household hunger are not significantly associated with children's underweight measures.

[61] Ibid. p. 143.
[62] Ibid. p. 143.

Table 7.4. Underweight (weight-for-age) among children under 5 years old

Characteristic	% Underweight (<-2 SD)[a]	% Severely underweight (<-3 SD)	Mean Z-score[b]	n[1]
Total (All children under 5 years)	11.0	2.1	-0.7	649
Child sex				
Male	11.1	2.2	-0.7	312
Female	10.8	1.9	-0.7	337
Child age[b]				
0-11 months	8.8	1.4	-0.4	127
12-23 months	9.8	1.7	-0.8	133
24-35 months	11.1	1.0	-0.7	118
36-47 months	11.1	2.5	-0.8	128
48-59 months	13.6	3.3	-0.9	143
Caregiver's educational attainment[2,b]				
No education	14.3	3.4	-0.9	143
Less than primary	12.4	2.4	-0.8	349
Primary	3.9	0.0	-0.5	124
Secondary or more	7.3	0.0	-0.1	32
Gendered household type				
Male and female adults	10.3	1.9	-0.7	598
Female adult(s) only	21.0	4.2	-0.8	44
Male adult(s) only	^	^	^	6
Child(ren) only (no adults)	^	^	^	1
Household size				
Small (1-5 members)	13.6	1.8	-0.8	235
Medium (6-10 members)	9.9	2.2	-0.7	361
Large (11+ members)	5.8	1.6	-0.4	53
Household hunger				
Little to no hunger	9.3	1.7	-0.7	482
Moderate or severe hunger	15.1	3.0	-0.9	165

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[2] The ZOI interim survey identifies the primary caregiver of each age-eligible child. This person is likely, but not necessarily, the child's biological mother.

[a,b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between the percent underweight and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

8. Agricultural Technologies and Management Practices

This section discusses the agricultural technologies and management practices applied by farmers. Emphasis is placed on the use of improved technologies and practices, which will increase production of these farmers.

8.1 Cultivation of Maize, Beans, and Coffee

Three crops that the Feed the Future program in Uganda focuses on are maize, beans and coffee. **Table 8.1** presents the percent of households that cultivate these three crops. Over 70 percent of households cultivate maize and beans, whereas only about 32 percent of households cultivate coffee. Ninety-one percent of households cultivate a crop of any type, including crops other than maize, beans, or coffee. The majority of farming households, therefore, cultivate maize or beans.

Table 8.1. Proportion of households cultivating Feed the Future focus crops and any crop

	Maize	Beans	Coffee	Any crop[1]	n
Percent of households cultivating crop	73.1	74.7	32.1	90.7	778

[1] These are households that cultivate any crop, including maize, beans, coffee or other crops.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 8.2 further disaggregates farming in households by the gender of the primary individual who makes decisions about the crop. In the text and tables that follow, this farming "decisionmaker" will be referred to as "farmer." Among farmers who cultivate maize and beans, more of the farmers are female than male. About 56 percent of maize farmers are female compared to 44 percent male. Among bean farmers, 74 percent of beans farmers are female, while only 26 percent are male. However, more of the coffee farmers are male (58.1 percent) than female (41.9 percent).

Table 8.2. Gender of primary decisionmaker in the household for specific crops

Crop cultivated by decisionmaker	Percent		n
	Male	Female	
Maize	44.3	55.7	559
Beans	26.2	73.8	561
Coffee	58.1	41.9	240

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Men farming coffee more than women was also found in a study of coffee smallholders in Uganda.[63] Men farmed coffee more than women due to men having greater access to credit, land, education and transport.

Table 8.3 provides additional information about these crops including the number of varieties cultivated, the purpose of the cultivation, and whether the crops were rotated. The number of varieties cultivated applies only to beans. A statistical test found no difference between the distribution of the number of varieties cultivated for males and females. The only statistical difference for the purpose of cultivation was for maize. More female farmers (97.8 percent) cultivated maize for consumption than male farmers (94.0 percent). While these two values are relatively close, there was a marked difference between the cultivation of maize for consumption only for females and males (61.4 vs. 47.6 percent). No statistical difference was found between female and male farmers in terms of whether the crops were rotated.

8.2 Application of Technologies and Management Practices by Farmers

Understanding agricultural practices involves having knowledge of the technologies and management practices applied by farmers for specific crops. In this this case, it is of interest to know which technologies farmers apply for maize, beans, and coffee. This section will look at the technologies applied, regardless of whether the technologies are improved or not. Presenting results on all technologies and practices will give a picture of how much farmers are applying improved technologies verses how much they are still using their traditional technologies.

8.2.1 Land Preparation Technologies

Table 8.4 shows the percent of farmers who apply different types of land preparation technologies, including zero tillage systems, plow systems, planting practice, soil and water management, and irrigation. In this table, improved technologies are annotated with a special superscript (‡). Statistical tests were run to compare use of technologies by male and female farmers.

[63] Hill and Vigneri. (2011).

Table 8.3. Characteristics of maize, bean, and coffee farming

Characteristic	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
Number of varieties cultivated												
1	n/a	n/a	n/a	n/a	55.6	149	42.9	412	n/a	n/a	n/a	n/a
2	n/a	n/a	n/a	n/a	35.5	149	41.6	412	n/a	n/a	n/a	n/a
3+	n/a	n/a	n/a	n/a	8.9	149	15.5	412	n/a	n/a	n/a	n/a
Cultivation for household consumption or sale in market[a]												
Consumption	47.6	245	61.4	313	54.9	149	63.1	410	1.8	112	2.2	85
Market	6.0	245	2.2	313	1.4	149	2.1	410	84.2	112	93.6	85
Consumption and market	46.4	245	36.4	313	43.7	149	34.8	410	14.0	112	4.2	85
Crop rotated												
No	47.8	246	41.6	313	50.3	149	43.0	412	n/a	n/a	n/a	n/a
Yes	52.2	246	58.4	313	49.7	149	57.0	412	n/a	n/a	n/a	n/a

[a-c] For each crop separately (where appropriate), significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between the number of bean varieties cultivated and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 8.4. Percent of maize, bean, and coffee farmers using land preparation techniques

Technique	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
Zero tillage systems[a.b]	**12.8**	**246**	**5.3**	**313**	**8.2**	**149**	**3.3**	**412**				
Slash and plant[a]	8.5	246	2.6	313	3.4	149	1.6	412	n/a	n/a	n/a	n/a
Burn and plant[a]	5.2	246	1.9	313	3.8	149	1.4	412	n/a	n/a	n/a	n/a
Herbicide and plant[‡]	2.2	246	2.2	313	2.3	149	0.8	412	n/a	n/a	n/a	n/a
Plow systems[a,b]	**84.7**	**246**	**93.1**	**313**	**92.9**	**149**	**96.4**	**412**				
Hoe[a.b]	74.6	246	84.6	313	85.3	149	92.8	412	n/a	n/a	n/a	n/a
Animal traction[‡,b]	16.1	246	11.6	313	12.7	149	6.3	412	n/a	n/a	n/a	n/a
Tractor[‡]	0.8	246	1.0	313	0.6	149	0.2	412	n/a	n/a	n/a	n/a
Planting practice												
Rows[‡,a]	89.0	246	76.8	313	53.1	149	42.6	412	n/a	n/a	n/a	n/a
Seeds randomly broadcast[a]	6.8	246	18.6	313	42.4	149	48.2	412	n/a	n/a	n/a	n/a
Planted with other crops	52.5	246	65.3	313	59.5	149	66.5	412	59.1	139	53.8	101
Soil and water management												
Terracing[‡]	9.6	246	5.3	313	7.5	149	6.7	412	n/a	n/a	n/a	n/a
Mulching[‡,a,b]	21.9	246	8.8	313	17.3	149	7.7	412	26.5	139	19.7	101
Soil bands/trenches[‡]	18.6	246	13.9	313	19.7	149	13.0	412	n/a	n/a	n/a	n/a
Contouring[‡]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19.9	139	11.3	101
Irrigation												
By hand	1.2	246	0.6	313	1.2	149	0.3	412	n/a	n/a	n/a	n/a
Canals[‡]	0.0	246	0.0	313	0.0	149	0.0	412	n/a	n/a	n/a	n/a
Permanent hose	0.0	246	0.0	313	0.0	149	0.0	412	n/a	n/a	n/a	n/a
Pumps	0.7	246	0.1	313	0.7	149	0.1	412	n/a	n/a	n/a	n/a

‡ Improved technology or management practice.

[a-c] For each crop separately (where appropriate), significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between maize zero tillage systems and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

More male than female maize and bean farmers applied zero tillage systems. Among maize farmers, more males (12.8 percent) than females (5.3 percent) applied zero tillage systems. A higher percentage of male (8.2 percent) than female bean farmers (3.3 percent) applied these systems. For specific zero tillage systems, more male than female maize farmers applied slash and plant, and burn and plant. There was no difference between male farmers and female farmers for herbicide and plant, which is the only zero tillage system that is considered an improved cultivation practice.

On the other hand, more female than male farmers used a hoe to plow maize and bean plots. About 85 percent of female farmers used a hoe for plowing maize plots, whereas 75 percent of male farmers used a hoe. Likewise, roughly 93 percent of female farmers used a hoe for beans, while 85 percent of male farmers used a hoe. However, twice as many male (12.7 percent) than female farmers (6.3 percent) used animal traction for plowing beans plots. Animal traction is an improved technology. Less than 1percent of male and female farmers used a tractor for plowing.

Noticeably more male (89.0 percent) than female farmers (76.8 percent) planted maize in rows. Planting in rows is an improved practice because it reduces the time and labor required for weeding and harvesting, allows for easier inspection for pests and disease, provides room for mulching and, uses seeds more efficiently than broadcasting.[64] While male farmers applied this improved practice more, female farmers applied the unimproved practice of randomly broadcasting seeds more. Over twice as many female farmers (18.6 percent) than male farmers (6.8 percent) planted maize by randomly broadcasting the seeds.

Soil and water management includes the following improved technologies: terracing, mulching, soil bands/trenches, and contouring. Of these, only mulching had a statistical difference between male and female farmers. More male farmers (21.9 percent) than female farmers (8.8 percent) used mulching to manage soil and water for their maize crops. Similarly, more male farmers (17.3 percent) than female farmers (7.7 percent) applied mulch for their beans crops.

Very little irrigation was reported by the respondents. All of the different types of irrigation were reported by less than 2 percent of the farmers. Canals (an improved technology) and permanent hose were not reported by any of the farmers. None of the differences between female and male farmers were statistically significant.

Overall, among all male and female farmers, except for planting in rows, application of improved technologies by farmers in the core ZOI is low. Over three quarters of farmers planted maize in rows and over 40 percent planted beans in rows. However, less than one-sixth of farmers used animal traction for plowing and one percent or less used a tractor. Less than 3 percent of farmers applied the zero-tillage system herbicide and plant. No farmers applied improved

[64] FAO. (2011).

irrigation technologies. While farmers applied improved soil and water management technologies at a higher rate, these technologies were applied by less than about a quarter of farmers.

8.2.2 Input Practices

Table 8.5 presents results on farmers' input practices related to seeds, fertilizer, and pest and weed management. The results for seeds include those for the source of the seeds or seedlings and the type of seeds. Male farmers (17.7 percent) are more likely to purchase seeds from an ag dealer than female farmers (10.7 percent). No differences between male and female farmers were found for the different sources of bean seeds or coffee tree seedlings. In addition, no differences were found between male and female farmers for seed types (open pollinated varieties or hybrid). Hybrid seeds, which are considered an improved technology if purchased from an ag dealer, were used by less than a third of maize farmers and less than 15 percent of bean farmers.

Fertilizer results are presented for the type of fertilizer applied (organic, inorganic, and foliar feeds/spray) and the timing of application (at planting and mid-crop). All of these are improved technologies. Only for foliar feeds/spray was there a statistical difference between male and female farmers. More male farmers (4.9 percent) applied foliar feeds for beans than female farmers (1.0 percent). Like for foliar feeds, more male farmers (6.2 percent) than female farmers (2.4 percent) applied fertilizer mid-crop for beans.

Results for pest and weed management include those for application of herbicides or using a hoe to control weeds and application of pesticides to control pests. All of these are considered improved technologies. Only application of herbicides had statistical differences between male and female farmers. More male (5.8 percent) than female (2.3 percent) maize farmers applied herbicides for the control of weeds. For coffee, more male farmers (26.5 percent) than female farmers (8.8 percent) applied herbicides to control weeds.

Table 8.5. Percent of maize, bean, and coffee farmers engaging in input practices

Input practice	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
Source of seed												
Self/friend/relative	53.7	245	55.9	312	32.9	147	43.6	409	n/a	n/a	n/a	n/a
Ag dealer‡,a	17.7	245	10.7	312	10.7	147	6.4	409	n/a	n/a	n/a	n/a
Non-ag dealer	28.2	245	31.2	312	55.7	147	48.8	409	n/a	n/a	n/a	n/a
Aid distribution	0.4	245	2.3	312	0.7	147	1.2	409	n/a	n/a	n/a	n/a
Source of seedlings												
Own nursery	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27.6	139	26.0	101
Friend/relative	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	31.4	139	30.9	101
Local nursery‡	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.1	139	13.6	101
Seed type[l]												
Open pollinated variety (OPV)	70.0	246	78.3	313	89.2	149	92.5	412	n/a	n/a	n/a	n/a
Hybrid	30.5	246	21.9	313	14.8	149	12.2	412	n/a	n/a	n/a	n/a
Fertilizer applied‡	**13.6**	**246**	**12.1**	**313**	**11.1**	**149**	**5.8**	**412**	**15.9**	**139**	**13.1**	**101**
Organic‡	2.0	246	5.1	313	3.3	149	3.6	412	9.2	139	10.7	101
Inorganic‡	9.7	246	6.6	313	4.0	149	1.2	412	5.8	139	4.0	101
Foliar feeds/spray‡,b	2.2	246	1.2	313	4.9	149	1.0	412	2.6	139	0.0	101
Timing of fertilizer application												
Planting‡	8.3	246	7.6	313	6.1	149	3.4	412	n/a	n/a	n/a	n/a
Mid-crop‡,b	6.5	246	4.8	313	6.2	149	2.4	412	n/a	n/a	n/a	n/a
Pest and weed management												
Pesticide applied‡	18.6	246	16.5	313	17.4	149	13.0	412	8.8	139	9.5	101
Herbicide applied‡,a,c	5.8	246	2.3	313	1.1	149	1.9	412	26.5	139	8.8	101
Hoe for weeding‡	92.8	246	90.0	313	84.2	149	78.1	412	75.7	139	88.9	101

‡ Improved technology or management practice.

[l] OPV and hybrid seed are only considered an improved technology if purchased from an ag-dealer.

[a-c] For each crop separately (where appropriate), significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between self/friend/relative source of maize seed and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Training received by farmers on input practices is presented in **Table 8.6**. Twice as many male coffee farmers received training in application of inorganic fertilizer (20.7 percent) than female farmers (9.2 percent). Similar results were found for training in application of pesticides for maize and bean farmers. Substantially more male maize farmers (16.1 percent) were trained in application of pesticides than female farmers (8.9 percent). Over twice as many male bean farmers (15.1 percent) than female farmers (7.0 percent) were trained in application of pesticides.

8.2.3 Harvesting Techniques

Table 8.7 presents results for harvesting techniques. Statistically significant differences between male and female farmers were found for drying and shelling techniques, but not for the method of harvesting. Almost all male (99.2 percent) and female (100.0 percent) maize farmers harvested by hand. Conversely, very few male (1.1 percent) and female (0.3 percent) harvested maize with a machine.[65] All bean farmers (male and female) harvested by hand.

More men (5.1 percent) than women (0.5 percent) farmers dried their beans harvest on a drying yard. While the statistical test showed more male than female farmers dried beans on ground covered with dung, the values were low (0.7 and 0.3 percent, respectively). A much larger proportion of male (31.9 percent) than female farmers (19.8 percent) left beans on the plant to dry. Of the drying techniques with a statistical difference between male and female farmers, only the drying yard is an improved technology. Other types of improved technologies (tarpaulins, drying racks, solar dryers, and mechanized dryers) had no statistical differences between male and female farmers. All of these other improved technologies, except tarpaulins, had very low percentages of farmers using the techniques. Whereas, about a third of farmers dried crops on tarpaulins, less than 3 percent dried crops with drying racks and no farmers dried with solar or mechanized dryers.

Shelling is done primarily by hand or with a stick. Over half of maize farmers shelled by hand and more than three quarters of bean farmers shelled with a stick. A larger proportion of male (44.0 percent) than female farmers (30.5 percent) shelled beans by hand. Shelling by machine is an improved technology. A larger percentage of men (16.2 percent) than women farmers (9.3 percent) shelled maize with a machine.

[65] Values for harvesting by hand and machine for men and women are over 100 percent because some farmers may harvest part of the crop by hand and part by machine.

Table 8.6. Percent of maize, bean, and coffee farmers receiving training

Type of training	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
Use and application of inorganic fertilizer‡,c	18.2	246	15.2	313	13.3	149	8.5	412	20.7	139	9.2	101
Use and application of pesticides‡,a,b	16.1	246	8.9	313	15.1	149	7.0	412	15.1	139	12.2	101
Use and application of herbicides‡	10.6	246	6.7	313	7.4	149	4.3	412	11.2	139	7.5	101

‡ Improved technology or management practice.

[a-c] For each crop separately, significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between training in the use and application of inorganic maize fertilizer and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 8.7. Percent of maize, bean, and coffee farmers engaging in harvesting techniques

Technique	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
Method of harvesting												
Hand	99.2	243	100.0	303	100.0	144	100.0	406	n/a	n/a	n/a	n/a
Machine‡	1.1	243	0.3	303	0.0	144	0.0	406	n/a	n/a	n/a	n/a
Drying												
Bare ground	33.3	246	35.3	313	43.1	149	51.6	412	21.8	139	25.1	101
Ground covered with cow dung[b]	1.3	246	0.0	313	0.7	149	0.3	412	0.9	139	0.0	101
Ground covered with straw	0.0	246	0.9	313	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Left to dry on plant[b]	38.2	246	29.6	313	31.9	149	19.8	412	0.0	139	0.0	101
Tarpaulins‡	33.9	246	38.1	313	28.9	149	33.3	412	36.7	139	23.6	101
Drying yard‡,[b]	1.1	246	0.3	313	5.1	149	0.5	412	0.0	139	0.0	101
Drying racks‡	2.1	246	0.9	313	0.5	149	0.0	412	1.6	139	2.2	101
Solar dryers‡	0.0	246	0.0	313	0.0	149	0.0	412	0.0	139	0.0	101
Mechanized dryers‡	0.0	246	0.0	313	0.0	149	0.0	412	0.0	139	0.0	101
Shelling												
Hand[b]	53.4	246	54.1	313	44.0	149	30.5	412	n/a	n/a	n/a	n/a
Stick	38.0	246	39.5	313	75.8	149	80.7	412	n/a	n/a	n/a	n/a
Machine‡,[a]	16.2	246	9.3	313	0.0	149	0.0	412	n/a	n/a	n/a	n/a

‡ Improved technology or management practice.

[a-c] For each crop separately (where appropriate), significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between maize harvesting by hand and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

8.2.4 Storage Practices

Storage practices are presented in **Table 8.8**. Two general types of storage practices are shown: storage of crop in bags and crop storage locations. None of the differences between male and female farmers for storage of maize, beans, and coffee in bags are statistically significant. It is clear, however, that the high majority of crops are stored in single layer bags, which are not an improved technology. Over 87 percent of maize and beans crops are stored in single layer bags and over 60 percent of coffee crops are stored in this type of bag. Conversely, less than one percent of storage is done in a two- or three-layer bag or a hermetic bag, both of which are improved technologies.

Storage locations have a similar pattern to storage in bags. None of the differences between male and female maize, beans and coffee farmers are statistically significant. The majority of crops are stored in a residential house, which is not an improved technology. More than 76 percent of maize and beans crops are stored in residential houses and over 48 percent of coffee crops are stored this way. Of improved technologies, other constructed stores are used most to store crops, but even this storage method only has a range from 4.6 to 8.5 percent.

Table 8.8. Percent of maize, bean, and coffee farmers engaging in storage practices

Practice	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	N	Percent	n	Percent	n
Stored crop in bags												
Single layer woven bag	88.3	246	88.7	313	87.2	149	91.4	412	62.8	139	61.0	101
Two or three layer woven bag‡	0.3	246	0.2	313	0.7	149	0.0	412	0.7	139	0.0	101
Hermetic bag‡	0.0	246	0.0	313	0.0	149	0.0	412	0.0	139	0.0	101
Storage location												
Residential house	76.8	246	82.0	313	85.3	149	89.7	412	52.0	139	48.5	101
Storage unit in home lot	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.6	139	0.0	101
Cribs‡	1.8	246	0.7	313	0.0	149	0.3	412	n/a	n/a	n/a	n/a
Granaries‡	3.8	246	1.7	313	1.5	149	0.3	412	n/a	n/a	n/a	n/a
Warehouses‡	0.0	246	0.0	313	0.0	149	0.0	412	1.6	139	0.0	101
Storage silo‡	0.0	246	0.0	313	n/a	n/a	n/a	n/a	0.0	139	0.0	101
Other constructed stores‡	8.5	246	5.8	313	6.5	149	4.6	412	5.2	139	7.4	101

‡ Improved technology or management practice.

[a-c] For each crop separately, significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between maize storage in a single layer bag and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

8.3 Use of Improved Technologies and Management Practices

Results for use of improved technologies and management practices by farmers are presented in this section. Estimates for the number of farmers in Uganda applying improved technologies and practices in the core ZOI are presented, along with the percent of farmers using improved technologies and practices. **Table 8.9** presents estimates for the number of maize, beans, and coffee farmers in the core ZOI that use one or more improved technologies or management practices. Over 2 million male and 2 million female farmers applied improved technologies and practices for maize and for beans. This is among an estimated 2.8 million male and 3 million female farmers in the core ZOI. There are an estimated 2,277,311 (male) and 2,418,765 (female) farmers in the core ZOI that cultivate maize; 2,312,631 (male) and 2,444,964 (female) farmers that cultivate beans; and 1,042,112 (male) and 1,090,122 (female) farmers that cultivate coffee. About half as many male and female farmers (roughly one million) applied improved technologies and practices for coffee. Nearly all of these maize, beans, and coffee farmers used improved cultural practices, which includes planting in rows and weeding with a hoe. The next improved technologies most often used were post-harvest technologies. About half as many farmers applied these technologies compared to cultural practices. Behind post-harvest technologies were soil-related fertility and conservation, extension services, water management (non-irrigation based), pest management, land preparation, and crop genetics. Herbicide use and harvesting has far fewer farmers and irrigation had none.

The percentage of farmers applying improved technologies and management practices followed the same pattern as the number of farmers. **Table 8.10** shows over 90 percent of male and female farmers applied one or more improved technology. This higher percentage is driven by cultural practices with over 75 percent of male and female farmers applying these practices. The next most prevalent are post-harvest technologies which were applied from about 30 to 54 percent of male and female farmers. Except for male coffee and maize farmers, 36 to 37 percent of whom applied soil fertility and conservation practices, less than 31 percent of male and female farmers applied the other types of improved technologies and practices.

Some differences were found between male and female farmers in terms of application of improved technologies and management practices. Overall, a higher percentage of male than female maize farmers used one or more improved technologies or practices. A higher percentage of male maize farmers applied improved crop genetics and soil fertility and conservation practices than female farmers. Among bean farmers, a higher percentage of male than female farmers applied improved land preparation technologies. Finally, a higher percentage of male maize and coffee farmers used herbicides than female farmers. In all of these cases, more male than female farmers used improved technologies and management practices.

Table 8.9. Number of maize, bean, and coffee farmers using one or more improved technology or management practice, by technology type[1]

Characteristic	Maize		Beans		Coffee	
	Male (n=246)	Female (n=313)	Male (n=149)	Female (n=412)	Male (n=139)	Female (n=101)
One or more improved technologies or management practices	2,259,490	2,315,097	2,214,936	2,206,815	997,579	1,059,347
Technology type						
Crop genetics[2]	400,529	257,351	244,097	154,981	157,101	147,845
Cultural practices[3]	2,206,007	2,234,652	1,995,476	1,992,109	789,147	969,181
Pest management[4]	422,540	397,932	401,274	318,400	91,744	103,593
Soil-related fertility and conservation[5]	846,735	561,556	710,950	434,571	376,186	301,927
Irrigation[6]	0	0	0	0	n/a	n/a
Water management – non-irrigation-based[7]	422,581	336,365	456,555	316,872	207,090	122,908
Post-harvest – handling and storage[8]	1,234,939	1,193,832	857,571	915,798	437,541	323,041
Land preparation[9]	432,626	357,469	363,357	178,858	n/a	n/a
Extension services[10]	591,250	481,382	422,497	302,319	254,668	152,876
Herbicide use[11]	130,991	56,340	24,675	45,334	275,770	95,973
Harvesting[12]	25,683	6,369	0	0	n/a	n/a

[1] The number of maize, bean, and coffee farmers in the core ZOI is estimated by using the population estimate presented Table 2.1 and the percentage of households cultivating the different crops. We assume that all adult (18+) household members are engaged in farming when the household cultivates a crop. We then apply the percentages using specific technologies, identified in Table 8.10, to produce an estimated number of farmers using a technology.

[2] Seed from an ag dealer (including OPV and hybrid seed), local nursery (for coffee plants).

[3] Planting in rows, controlling weeds with hoe.

[4] Pesticide use.

[5] Fertilizer use (organic, inorganic, foliar feed/spray; application at planting or mid-crop), mulching, terracing.

[6] Irrigation canals.

[7] Soil band/trenches, contouring.

[8] Improved packaging (two or three layer woven bag, hermetic bag); improved drying (on tarpaulins, drying yard, drying racks, solar dryers, mechanized dryers); shelling by machine; storage of crop in cribs, granaries, warehouses, storage silos or other constructed stores.

[9] Plowing with animal traction or tractor, zero tillage with herbicide and plant.

[10] Training in use and application of fertilizer, pesticides or herbicides.

[11] Use of herbicides one or more times.

[12] Harvesting with a machine.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 8.10. Percent of maize, bean and coffee farmers using one or more improved technology or management practice, by technology type

Characteristic	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
One or more improved technologies or management practices[a]	99.2	246	95.7	313	95.8	149	90.3	412	95.7	139	97.2	101
Technology type												
Crop genetics[1,a]	17.6	246	10.6	313	10.6	149	6.3	412	15.1	139	13.6	101
Cultural practices[2]	96.9	246	92.4	313	86.3	149	81.5	412	75.7	139	88.9	101
Pest management[3]	18.6	246	16.5	313	17.4	149	13.0	412	8.8	139	9.5	101
Soil-related fertility and conservation[4,a]	37.2	246	23.2	313	30.7	149	17.8	412	36.1	139	27.7	101
Irrigation[5]	0.0	246	0.0	313	0.0	149	0.0	412	n/a	n/a	n/a	n/a
Water management – non-irrigation-based[6]	18.6	246	13.9	313	19.7	149	13.0	412	19.9	139	11.3	101
Post-harvest – handling and storage[7]	54.2	246	49.4	313	37.1	149	37.5	412	42.0	139	29.6	101
Land preparation[8,b]	19.0	246	14.8	313	15.7	149	7.3	412	n/a	n/a	n/a	n/a
Extension services[9]	26.0	246	19.9	313	18.3	149	12.4	412	24.4	139	14.0	101
Herbicide use[10,a,c]	5.8	246	2.3	313	1.1	149	1.9	412	26.5	139	8.8	101
Harvesting[11]	1.1	246	0.3	313	0.0	149	0.0	412	n/a	n/a	n/a	n/a

[1] Seed from an ag dealer (including OPV and hybrid seed), local nursery (for coffee plants).

[2] Planting in rows, controlling weeds with hoe.

[3] Pesticide use.

[4] Fertilizer use (organic, inorganic, foliar feed/spray; application at planting or mid-crop), mulching, terracing.

[5] Irrigation canals.

[6] Soil band/trenches, contouring.

[7] Improved packaging (two or three layer woven bag, hermetic bag); improved drying (on tarpaulins, drying yard, drying racks, solar dryers, mechanized dryers); shelling by machine; storage of crop in cribs, granaries, warehouses, storage silos or other constructed stores.

[8] Plowing with animal traction or tractor, zero tillage with herbicide and plant.

[9] Training in use and application of fertilizer, pesticides or herbicides.

[10] Use of herbicides one or more times.

[11] Harvesting with a machine.

[a-c] For each crop separately, significance tests were performed for associations between outcome variables (shown in the rows) and sex. For example, a test was done between any maize improved technology or management practice and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

n/a – Not available.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Farmers who use improved technologies and practices may use more than one improved technology or practice. Of interest is how many improved technologies and practices farmers use. **Table 8.11** presents the number of maize, beans, and coffee farmers who use improved technologies by the number of technologies used. More male farmers use two improved technologies and practices than use one practice. For male farmers, the highest number of farmers uses two improved technologies. Similarly, more female maize farmers use two technologies than use one. However, more female beans and coffee farmers use one improved technology and practices than use two technologies. The most common number of improved technologies for female maize farmers is two, but for beans and coffee the most common number of improved technologies is one. A substantial number of male and female farmers use three or four technologies, and for larger numbers of improved technologies the number of farmers declines.

Table 8.12 shows the percentage of farmers using improved technologies and practices by the number of technologies used. Statistical tests were run to compare the distributions of number of improved technologies between men and women by crop. All these tests were statistically significant, which implies that the distributions of number of improved technology types applied by male and female farmers are different. The key difference between male and female farmers in these distributions is the proportion that uses two or more improved technologies.[66] Male farmers use two or more improved technologies more than female farmers across all three crops (maize, beans, and coffee). Conversely, female farmers only use one technology more than male farmers. For maize, 26 percent of female farmers use one improved technology while 17 percent of male farmers do so. Likewise, more female (32.3 percent) than male (27.3 percent) bean farmers and more female (37.8 percent) than male (22.8 percent) coffee farmers use only one improved technology.

[66] While this is not shown directly in Table 8.12, it can be found by summing the percentages in the rows for 2 through 8+ improved technologies by gender (male/female) and crop.

Table 8.11. Number of maize, bean and coffee farmers using one or more improved technology or management practice[1]

Number of improved technologies or management practices[2]	Maize		Beans		Coffee	
	Male (n=246)	Female (n=313)	Male (n=149)	Female (n=412)	Male (n=139)	Female (n=101)
1	391,459	634,450	630,944	789,793	237,672	411,900
2	640,001	668,809	677,619	736,305	299,760	345,765
3	464,285	509,591	475,865	414,566	243,770	170,611
4	419,796	284,773	235,714	203,289	131,441	96,623
5	145,760	107,421	68,431	44,427	34,359	8,833
6	153,260	73,735	106,878	11,198	37,071	7,878
7	37,411	26,754	19,485	7,237	7,287	17,737
8+	7,518	9,566	0	0	6,219	0

[1] The estimated number of maize, bean, and coffee farmers using a specific number of improved technologies and management practices was found by multiplying the total number of farmers for the crop and gender by the percent of farmers using that number of improved technologies in Table 8.12.

[2] This is a count of the technology types (listed in Table 8.9) that the farmer engages in at least one improved technology or management practice.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

Table 8.12. Percent of maize, bean and coffee farmers using one or more improved technology or management practice

Number of improved technologies or management practices[1,a,b,c]	Maize[a]				Beans[b]				Coffee[c]			
	Male (n=246)		Female (n=313)		Male (n=149)		Female (n=412)		Male (n=139)		Female (n=101)	
	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent	n
1	17.2	246	26.2	313	27.3	149	32.3	412	22.8	139	37.8	101
2	28.1	246	27.7	313	29.3	149	30.1	412	28.8	139	31.7	101
3	20.4	246	21.1	313	20.6	149	17.0	412	23.4	139	15.7	101
4	18.4	246	11.8	313	10.2	149	8.3	412	12.6	139	8.9	101
5	6.4	246	4.4	313	3.0	149	1.8	412	3.3	139	0.8	101
6	6.7	246	3.0	313	4.6	149	0.5	412	3.6	139	0.7	101
7	1.6	246	1.1	313	0.8	149	0.3	412	0.7	139	1.6	101
8+	0.3	246	0.4	313	0.0	149	0.0	412	0.6	139	0.0	101

[1] This is a count of the technology types (listed in Table 8.7) that the farmer engages in at least one improved technology or management practice.

[a-c] For each crop separately, significance tests were performed for associations between the number of improved technology or management practices used and sex. For example, a test was done between the number of maize improved technology or management practices used and sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the row heading.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

8.4 Effect of Bean Farming on Consumption of Beans

An important question for development programs that focus on increasing production of a nutritious crop is whether farming of that crop increases consumption of the crop. In the case of beans, it is important to know whether a higher proportion of households with bean farming consume beans. It is possible that bean production could increase without consumption increasing, if all of the crop produced is being sold commercially.

The measure of household bean consumption in the analysis is based on whether women or children in the household consumed beans in the last 24 hours. This snapshot will miss the contribution of men to beans consumption and will miss households that consumed beans in the last week, but not in the last 24 hours. It does, however, provide a consistent way to measure beans consumption that can serve as the basis for comparison of bean consumption in households with and without beans farming.

Table 8.13 presents results of this analysis. A model was run to test the effects of farming of beans and gendered household type (households with male and female adults, and those with female, but no male adults) on consumption of beans. This model also tested the combined effect of beans farming and gendered household type. The combined effect will show if the effect of beans farming was different for households with male and female adults, compared to households with female, but no male adults. No statistically significant effects were found in this model. The implication is that while a higher percentage of household with beans farming (70.9 percent) than those without beans farming (64.1 percent) consumed beans, this difference was not statistically significant. From a statistical perspective, it is not possible to say that consumption of beans in households that farmed beans is really different from households that do not farm beans. Likewise, the difference in beans consumption between households with male and female adults and those with female, but not male adults, also was not statistically significant. The combined effect of beans farming and gendered household type was not statistically significant as well.

Table 8.13. Percent of households consuming beans by whether household produced (farmed) beans and gendered household type[1]

Household farmed beans	Household consumed beans	
	Percent	n
Household farmed beans		
Yes	70.9	450
No	64.1	146
Gendered household type		
Male and female adults	70.0	517
Female adult(s) only	64.3	68
Male adult(s) only	^	9
Household farmed beans		
Yes		
Gendered household type		
Male and female adults	71.9	391
Female adult(s) only	63.5	50
Male adult(s) only	^	8
Household farmed beans		
No		
Gendered household type		
Male and female adults	63.9	126
Female adult(s) only	^	18
Male adult(s) only	^	1

^ Results not statistically reliable, n<30.

[1] A model was run to see the effect of households farming beans and gendered household type on consumption of beans. The model also tested the combined (interaction) effect of households farming beans and gendered household type on consumption of beans. None of these effects were statistically significant.

Source: FTF FEEDBACK ZOI Interim Survey, Uganda 2015.

9. Summary and Conclusions

This report presents the results of the first interim assessment for the Feed the Future Uganda core Zone of Influence (ZOI). The first interim assessment was designed to provide point estimates for standard Feed the Future indicators, and was not powered to measure change in indicator values from the 2012 baseline assessment in the Uganda core ZOI. Thirteen Feed the Future indicators are included in this assessment: (1) Daily per capita expenditures (as a proxy for income) in United States Government (USG)-assisted areas; (2) Prevalence of Poverty; (3) Depth of Poverty; (4) Prevalence of households with moderate or severe hunger; (5) Women's Dietary Diversity; (6) Prevalence of children 6-23 months receiving a minimum acceptable diet (MAD); (7) Prevalence of exclusive breastfeeding among children under 6 months of age; (8) Prevalence of women of reproductive age who consume targeted nutrient-rich value chain commodity (NRVCC); (9) Prevalence of children 6-23 months who consume targeted NRVCC; (10) Prevalence of underweight women; (11) Prevalence of stunted children under 5 years of age; (12) Prevalence of wasted children under 5 years of age; and (13) Prevalence of underweight children under 5 years of age.

In Uganda, interim indicators for the core ZOI are calculated from both secondary and primary data. The secondary data source, used to calculate daily per capita expenditures, prevalence of poverty and depth of poverty, is the 2012/2013 Uganda National Household Study (UNHS). The primary data source used to calculate all other indicators is the Uganda interim survey. The interim survey was conducted in March-April 2015 by FTF FEEDBACK in conjunction with its Ugandan data collection partner, Service for Generations (SFG).

9.1 Summary of Key Findings

Household Economic Status

In the Uganda core ZOI, average daily per capita expenditures is $2.40 (2010 USD). The percentage of people living below $1.25 per day (2005 purchasing power parity (PPP)) is 32.1 percent, and the depth of poverty (the mean percent shortfall relative to the $1.25 per day poverty line) is 9.2 percent.

WEAI Indicators

While neither the Women's Empowerment in Agriculture Index (WEAI) nor its component sub-indices can be calculated for the interim assessments, this report presents uncensored headcounts for 9 of the 10 WEAI indicators. Uncensored headcounts are the percent of primary adult female decisionmakers who achieve adequacy on each of the WEAI indicators regardless of their overall empowerment status. The WEAI indicators with the highest achievement include control over the use of income (97.2 percent), input in productive decisions (95.1 percent), and ownership of assets (92.4 percent). The WEAI indicators with the

lowest achievement include workload (48.7 percent) and access to and decisions on credit (53.0 percent).

Hunger and Dietary Intake

Over one-fourth (28.2 percent) of households in the Uganda core ZOI experience moderate or severe hunger. The women's dietary diversity indicator is 3.70 food groups. This is the mean number of food groups (of nine possible groups) consumed by women of reproductive age (15-49 years). The prevalence of exclusive breastfeeding among children under 6 months is 58.2 percent; over half of infants in the Uganda core ZOI are exclusively breastfed. Among children 6-23 months, less than one-fourth (23.1 percent) receive a MAD.

The NRVCC in Uganda is beans and bean products. Questions about consumption of beans or foods made from beans were incorporated into the women's and children's dietary intake questions (Modules H and I, respectively). Among women of reproductive age, nearly two-thirds (64.3 percent) consume beans. Among children 6-23 months, over one-half (57.3 percent) consume beans.

Nutritional Status of Women and Children

About 1 in 10 (10.1 percent) non-pregnant women of reproductive age in the core ZOI is underweight (a BMI less than 18.5). Among children less than 5 years in the Uganda core ZOI, 29.2 percent (more than one-fourth) are stunted; these children have low height-for-age, indicating long term, chronic undernutrition. About 4.5 percent of children are wasted, or have low weight-for-height. Wasting is an indicator of acute malnutrition. Finally, 11.0 percent of children are underweight, or have low weight-for-age. Underweight is an indicator of either acute or chronic undernutrition in children.

Agricultural Technologies

In Uganda, the interim survey also included a module on the use of agricultural technologies and management practices among households involved in maize, bean or coffee production. While more women than men cultivate maize and beans, the pattern is reversed for coffee; more men than women cultivate coffee (which is primarily a commercial crop). However, male farmers appear to utilize improved agricultural technologies more often than female farmers. For example, twice as many of the male bean farmers use animal traction for plowing (12.7 percent versus 6.3 percent, respectively). Over twice as many male maize and bean farmers apply mulch for soil and water management. Male maize farmers purchase seeds from an agricultural dealer more than women (17.7 percent versus 10.7 percent, respectively). About twice the percentage of male maize and bean farmers received training in the application of pesticides relative to their female counterparts. When considering the number of improved technologies applied, men more often than women apply two or more improved technologies. Conversely, higher

percentages of women than men maize, bean and coffee farmers only apply one improved technology. Finally, significance tests were done to see if bean farming increased the consumption of beans. However, no significant association was found between bean farming and women's and children's bean consumption in the household.

Conclusions

The Uganda interim survey was not powered to measure change from baseline indicator values, nor was it designed to draw conclusions about attribution or causality. For a few indictors, however, non-overlapping confidence intervals (CIs) between baseline and interim point to a statistically significant change from 2012 baseline estimates. (It should be noted that when CIs do overlap, which is the case for most indicators, conclusions cannot be made regarding statistically significant change from baseline to interim.) While the CIs for the main (all households') estimates for per capita expenditures, prevalence of poverty, and depth of poverty all overlap, the CIs for the per capita expenditure disaggregate values for "female adult(s) only" households show a significant increase between baseline and interim. Among female adult-only households in the Uganda core ZOI, per capita expenditures increased significantly from $2.13 (2010 USD) at baseline to $2.57 (2010 USD) at interim.[67]

In addition, four WEAI uncensored headcounts show a significant increase from the 2012 Uganda baseline assessment. The percent of primary adult female decisionmakers who achieved adequacy on *ownership of assets* increased from 86.3 percent at baseline to 92.4 percent at interim. Similarly, the *access to and decisions on credit* indicator increased (42.5 percent to 53.0 percent), the *control over the use of income* indicator increased (90.3 percent to 97.2 percent), and the *workload* indicator increased (38.2 percent to 48.7 percent) between baseline and interim. The women's dietary diversity indicator also showed significant change from baseline, increasing from an average of 3.34 food groups to 3.70 food groups (of nine possible food groups).

This first interim assessment presents point estimates for the Feed the Future indicators. The second interim assessment for the Uganda core ZOI, planned for 2017, will explicitly explore change in indicator estimates over time.

[67] Note that the timing of the two UNHS surveys from which the expenditure and poverty indicators were calculated preceded the respective baseline and interim FTF FEEDBACK ZOI surveys. The baseline UNHS took place in 2009-2010, and the interim UNHS occurred between 2012-2013.

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Appendix 1. Supplementary Data and Figures

A1.1 Interim Feed the Future Indicator Estimates

Unweighted sample sizes, point estimates, standard deviations, confidence intervals, design effects (DEFF), and nonresponse rates for the interim Feed the Future indicators for the Zone of Influence.

Feed the Future indicator	Estimate					n
	Indicator[a]	SD	95% CI	DEFF	Nonresponse rate[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2010 USD)[a]						
All households	2.40	2.25	2.28 – 2.53	2.1	n/a	2,522
Male and female adults	2.29	1.84	2.16 – 2.42	2.1	n/a	1,684
Female adult(s) only	2.57	3.23	2.35 – 2.79	0.7	n/a	584
Male adult(s) only	3.89	5.39	3.41 – 4.38	0.5	n/a	244
Child(ren) only (no adults)	^	^	^	^	n/a	10
Prevalence of Poverty: Percent of people living on less than $1.25/day (2005 PPP)[a]						
All households	32.1	-	29.1 – 35.2	3.0	n/a	2,522
Male and female adults	33.1	-	29.9 – 36.6	2.8	n/a	1,684
Female adult(s) only	30.8	-	25.9 – 36.1	1.5	n/a	584
Male adult(s) only	17.3	-	11.7 – 25.0	0.8	n/a	244
Child(ren) only (no adults)	^	-	^	^	n/a	10
Depth of Poverty: Mean percent shortfall relative to the $1.25/day (2005 PPP) poverty line[a]						
All households	9.2	16.3	8.0 – 10.3	3.2	n/a	2,522
Male and female adults	9.6	15.3	8.4 – 10.9	3.0	n/a	1,684
Female adult(s) only	8.4	18.5	6.6 – 10.2	1.4	n/a	584
Male adult(s) only	3.7	15.0	2.1 – 5.3	0.7	n/a	244
Child(ren) only (no adults)	^	^	^	^	n/a	10
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators[2]						
Input in productive decisions	95.1	-	92.6 – 96.8	1.4	8.9%	642
Autonomy in production	n/a	-	n/a	n/a	n/a	n/a
Ownership of assets	92.4	-	88.1 – 95.2	2.6	8.9%	642
Purchase, sale or transfer of assets	78.5	-	73.0 – 83.1	2.3	8.9%	642
Access to and decisions on credit	53.0	-	47.7 – 58.3	1.8	8.9%	642
Control over use of income	97.2	-	95.6 – 98.2	0.9	8.9%	642
Group member	80.3	-	75.4 – 84.5	2.0	8.9%	642
Speaking in public	85.8	-	79.7 – 90.3	3.5	8.9%	642
Workload	48.7	-	44.2 – 53.2	1.3	8.9%	642
Leisure	71.5	-	66.3 – 76.2	1.8	8.9%	642
Prevalence of households with moderate or severe hunger						
All households	28.2	-	20.8 – 37.1	6.1	4.5%	757
Male and female adults	26.5	-	19.1 – 35.3	4.8	5.2%	577
Female adult(s) only	33.3	-	21.8 – 47.4	2.1	1.9%	109
Male adult(s) only	34.6	-	21.0 – 51.2	1.7	3.3%	69
Child(ren) only (no adults)	^	-	^	^	1.9%	2
Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age						
All women age 15-49	3.70	1.29	3.56 – 3.85	2.3	18.8%	747

Feed the Future indicator	Estimate					n
	Indicator[a]	SD	95% CI	DEFF	Nonresponse rate[1]	
Prevalence of exclusive breastfeeding among children under 6 months of age						
All children	58.2	-	46.2 – 69.4	1.0	5.3%	69
Male children	60.9	-	41.6 – 77.3	1.4	4.6%	39
Female children	54.8	-	37.6 – 70.9	0.9	6.3%	30
Prevalence of children 6-23 months receiving a minimum acceptable diet						
All children	23.1	-	16.8 – 31.0	1.3	5.6%	199
Male children	20.8	-	13.0 – 31.5	1.0	6.1%	88
Female children	24.8	-	16.4 – 35.7	1.4	5.1%	111
Prevalence of women of reproductive age who consume targeted nutrient-rich value chain commodities						
Beans and bean products: All women age 15-49	64.3	-	58.4 – 69.8	2.6	18.8%	747
Prevalence of women of reproductive age who consume at least one targeted nutrient-rich value chain commodity						
All women age 15-49	64.3	-	58.4 – 69.8	2.6	18.8%	747
Prevalence of children 6-23 months who consume specific targeted nutrient-rich value chain commodities						
Beans and bean products: All children	57.3	-	46.5 – 67.4	2.1	5.6%	199
Prevalence of children 6-23 months who consume at least one targeted nutrient-rich value chain commodity						
All children	57.3	-	46.5 – 67.4	2.1	5.6%	199
Male children	56.1	-	40.7 – 70.4	1.8	6.1%	88
Female children	58.1	-	46.6 – 68.8	1.4	5.1%	111
Prevalence of underweight women						
All non-pregnant women age 15-49	10.1	-	7.7 – 13.3	1.4	19.3%	672
Prevalence of stunted children under 5 years of age						
All children	29.2	-	25.8 – 32.8	0.9	10.1%	649
Male children	29.8	-	24.9 – 35.3	1.0	9.3%	312
Female children	28.6	-	23.3 – 34.6	1.3	10.8%	337
Prevalence of wasted children under 5 years of age						
All children	4.5	-	2.9 – 7.0	1.4	10.1%	649
Male children	5.4	-	3.0 – 9.5	1.4	9.3%	312
Female children	3.7	-	1.6 – 8.2	2.1	10.8%	337
Prevalence of underweight children under 5 years of age						
All children	11.0	-	8.4 – 14.1	1.3	10.1%	649
Male children	11.1	-	7.4 – 16.4	1.5	9.3%	312
Female children	10.8	-	7.2 – 15.8	1.5	10.8%	337

n/a Not available.

^ Results not statistically reliable, n<30.

[1] Nonresponse rates for each indicator are derived by the difference between the number of eligible cases and the number of observations available for analysis divided by the number of eligible cases. Nonresponse rates are not reported for indicators calculated from secondary data.

[2] The full WEAI score cannot be calculated because interim data were collected from women only and the autonomy indicator was dropped. The second interim survey (2017) will collect the full set of data from women and men and will report on the full WEAI.

[a] Significance tests were run for associations between each indicator (bold text title in the rows) and the disaggregate variable below the indicator title. For example, a test was done between per capita expenditures and gendered household type. When an association between the indicator and disaggregate variable is found to be significant ($p<0.05$), the superscript is noted next to the indicator.

Source(s): FTF FEEDBACK ZOI Interim Survey, Uganda 2015; Uganda National Household Survey (UNHS) 2012/2013.

Appendix 2. Methodology

A2.1 Sampling and Weighting

Sampling

The sample of households for the interim survey followed a two-stage stratified cluster sampling design. The stratification is by region and urban/rural. In the first stage, enumeration areas (EAs) were selected from the 2014 national census frame in 38 districts by probability proportional to size (PPS) sampling. EAs with a total number of households less than 80 in the frame were combined with one or two adjacent ones to form a bigger cluster for selection. A total of 42 clusters were selected. In the second stage, 20 households were selected for interview at random from a comprehensive list of households generated during a listing operation that was fielded from December 2014 to January 2015.

Weighting

Data required for weighting of survey data were collected throughout the sampling process, and included: (1) EA measure of size (where size is in terms of number of population or number of households) used for selection of EAs; (2) measure of size of strata from which EAs are drawn; (3) measure of size of EAs at time of listing; and (4) response rates among households, women, and men. Weights were calculated for households, women, men, and children in the sample.

Design weights were calculated based on the separate sampling probabilities for each sampling stage and for each cluster. We have:

P_{1hi} = first-stage sampling probability of the *i*-th cluster in stratum *h*.

P_{2hi} = second-stage sampling probability within the *i*-th cluster (household selection).

The probability of selecting cluster *i* in the sample is:

$$P_{1hi} = \frac{m_h \times N_{hi}}{N_h}$$

The second-stage probability of selecting a household in cluster *i* is:

$$P_{2hi} = \frac{n_{hi}}{L_{hi}}$$

where:

m_h = number of sample clusters selected in stratum *h*.

N_{hi} = total population in the frame for the *i*-th sample cluster in stratum *h*.

N_h = total population in the frame in stratum *h*.

n_{hi} = number of sample households selected for the *i*-th sample cluster in stratum *h*.

L_{hi} = number of households listed in the household listing for the *i*-th sample cluster in stratum *h*.

The overall selection probability of each household in cluster *i* of stratum *h* is the product of the selection probabilities of the two stages:

$$P_{hi} = P_{1hi} \times P_{2hi} = \frac{m_h \times N_{hi}}{N_h} \times \frac{n_{hi}}{L_{hi}}$$

The design weight for each household in cluster *i* of stratum *h* is the inverse of its overall selection probability:

$$W_{hi} = \frac{1}{p_{hi}} = \frac{N_h \times L_{hi}}{m_h \times N_{hi} \times n_{hi}}$$

The sampling weight was calculated with the design weight corrected for nonresponse for each of the selected clusters. Response rates were calculated at the cluster level as ratios of the number of interviewed units over the number of eligible units, where units could be household or individual (woman, child, or Women's Empowerment in Agriculture Index (WEAI)).

Multiple Testing Adjustment

Overall group testing was performed to assess group differences. In particular, tests could identify if there was a significant difference among the categories of a disaggregate or subgroups and another outcome. To adjust for multiple testing, the false discovery rates (FDR) method was be used to reduce the likelihood of identifying false positives while maintaining the statistical power necessary to identify significant associations.[68,69] In this approach, an adjusted p-value (or q-value) was produced to identify statistically significant differences while accounting for the fact that some large differences may appear due to chance and multiple testing. An FDR adjusted p-value (or q-value) of 0.05 implies that 5 percent of significant tests will result in false positives.

[68] Newson, R.B. (2010). Frequentist q-values for multiple-test procedures. Stata journal,10(4), 568.
[69] Storey, J.D. (2002). A direct approach to false discovery rates. Journal of the Royal Statistical Society: Series B (Statistical Methodology), 64(3), 479-498.

A2.2 Poverty Prevalence and Expenditure Methods

Data Source

The expenditure and poverty indicators calculated for the interim assessment were derived using data collected by Uganda Bureau of Statistics (UBOS) in the Uganda National Household Survey (UNHS) 2012/2013. These survey data were collected between June 2012 and June 2013. The representative survey sampled 7,500 households, and after excluding households with incomplete data, 6,888 households provided complete expenditure data. The nationally representative data were subset to include only 1,190 from the core ZOI.

Data Preparation

As a consumption survey, the UNHS 2012/2013 collected expenditure and consumption data for many food and non-food items over varying recall periods. Where possible, the interim assessment indicators for poverty and expenditures are calculated following a country's own methodology for deriving poverty and the Deaton and Zaidi[70] approach. As with the baseline estimates, the estimates presented in this report are derived following the same methodology used by UBOS[71] to prepare national estimates of poverty in Uganda.

- Food consumption was measured with a 7-day recall period.
  - Purchased and received free foods were valued in current prices.
  - Home produced foods were valued in current market farm gate/producer prices.
- Non-food, non-durable goods and frequently purchased services were recorded with a 30-day recall period.
  - Non-consumption goods were excluded from the analysis. The exclusion of non-consumption goods is standard under the consumption poverty methodology advocated by Deaton and Zaidi.[72] Expenses such as taxes, fees and donations typically do not improve the well-being of the household incurring the expense.

[70] Deaton and Zaidi. (2002).
[71] The Economic Policy Research Centre (EPRC) provided technical contributions to UBOS during the data analysis portion of the UNHS survey. See Uganda Bureau of Statistics (UBOS). (2014). Uganda National Household Survey 2012/2013. Kampala, Uganda; UBOS. Available online at http://www.ubos.org/onlinefiles/uploads/ubos/UNHS_12_13/2012_13%20UNHS%20Final%20Report.pdf.
[72] Deaton and Zaidi. (2002).

Price Adjustments

Several adjustments were performed. Food quantities first were converted from local to metric units. Spatial and temporal price adjustments were performed. Finally, all prices were revalued to constant 2005 prices.

Unit Conversion

Quantities of food consumed were collected based on the source of the food: purchased from the market by the household, farmed or produced by the household or gifted to the household. The quantities of consumed foods were reported using various local quantity units, e.g., *heap*, *bunch*, and *tin*, and these local quantities were converted into a metric equivalent (kilograms/liters) using conversion factors recorded during a simultaneous market survey conducted by UBOS in tandem with the UNHS.

Spatial Price Adjustment

Food prices vary markedly across geographical areas, and this is particularly true in Uganda where the food markets are not well integrated. Prices have been adjusted for this spatial variation.

Intertemporal Price Adjustment

The UNHS 2012/2013 was collected throughout a 12-month period, and as with spatial variation, prices fluctuate across time. UBOS conducts monthly price assessments that are used to calculate the consumer price index (CPI). The various consumption aggregates were converted to 2005/2006 (=100) prices. The food consumption was deflated using the monthly, food-specific CPI that was observed during the month of a household's interview. Recent non-food, non-durable consumption was adjusted by the average CPI of the month in which the household was interviewed and the month preceding the interview. The durable good expenditure, measured with a 365-day recall, was deflated by the average CPI of the 12 months prior to a household's interview.

Currency Conversions Using CPI and PPP

As all spatial and temporal adjustments were prepared by UBOS during its preparation of the data, the UNHS 2012/2013 price data that were analyzed were in 2005 prices. The currency conversions presented in this analysis were prepared as follows:

- The $1.25 2005 purchasing power parity (PPP) poverty threshold was converted to 2005 Uganda shillings by using the Uganda 2005 PPP value of 744.62. The $1.25 2005 PPP threshold is equivalent to 930.79 Uganda shillings, per person, per day in 2005 prices.

- UBOS provided consumption data in 2005 Uganda shillings. These were converted to 2010 United States Dollar (USD) by adjusting for 2005 PPP. Then, it was converted to 2010 USD by using the formula (1/PPP 2005)* (2010 USD CPI /2005 USD CPI) where PPP 2005 = 744.62, 2010 USD CPI =111.65, and 2005 USD CPI = 100. The conversion factor was .001499.

- When inflating the original national poverty thresholds from 1993 to 2005 prices, the 1993 price should be multiplied by the 2005 CPI (100) divided by the 1993 CPI (54.13). This value is 1.847.

- The CPI values used for the currency conversions listed here were taken from the World Bank's Databank.[73] CPI values were adjusted to a base year of 2005 from a base year of 2010.

Weights

Expenditure estimates are reflective of the consumption and poverty of individuals within the core ZOI. The data are collected at the household level, and individual estimates are produced by multiplying the household sampling weight by the number of *usual* household members in the household.

National Poverty Thresholds

The absolute poverty line, as derived by Appleton and colleagues,[74] is widely used as the "official" poverty line by the Uganda Government. It is anchored to the cost of meeting the basic needs with a focus on meeting minimum caloric requirements. The national poverty line used in this analysis is based on a poverty thresholds identified by region and residence type. These poverty lines refer to the minimum amount of consumption needed by an adult equivalent per month. The national extreme poverty line used in this analysis is the food poverty line. Like the absolute poverty line, this threshold is per adult equivalent per month, but unlike the poverty line, it does not vary by region or urban/rural areas.

The national poverty lines were estimated using a "basic needs approach" and are anchored to the minimum caloric needs that were derived by the World Health Organization (WHO).[75] In estimating the minimum cost of attaining caloric requirements, Appleton and colleagues[76] focused on the food basket consumed by the poorest 50 percent of the population. The food basket consisted of 28 major food items, including staple and non-staple food items. These food items were converted into their caloric equivalent, and at the time of data collection, the

[73] World Bank. (2015b). Consumer Price Index (2010=100). Retrieved from http://data.worldbank.org/indicator/FP.CPI.TOTL. Accessed September 18, 2015.
[74] Appleton, Emwanu, Kagugube , and Muwonge. (1999).
[75] WHO. (1985).
[76] Appleton, Emwanu, Kagugube, and Muwonge. (1999).

poorest 50 percent of Ugandans consumed 1,373 calories per person per day. The minimum calorie requirements varied by age and sex, and using data from the same survey, food costs per metric unit were then applied to the food basket to identify the minimum amount of food that could be purchased for an individual to sustain the minimum caloric intake of his or her age and sex group. The minimum amount required to purchase the minimum number of calories formed the basis for the food poverty line.

Non-food requirements were estimated and added to the food poverty line to form the absolute poverty line, which has been presented in this report as the national poverty line. Non-food requirements were estimated using the regression-based approach of Ravallion and Bidani,[77] with the costs of non-food expenses varying across region and rural/urban locations.

As mentioned, the national absolute and food poverty lines were derived based on the adult equivalent, which in the case of Uganda, refers to an 18- to 30-year-old male. These poverty lines are not easily compared to a per capita poverty line. To aid in comparison, **Table A2.1** presents national thresholds as a daily per capita measure. These are averages because households have different national thresholds depending on the sex and age composition of the individuals in the households. These averages were created by identifying the national threshold for a household based on the number of adult equivalents in the household, dividing by the number of household members, and then taking the average across households.

Table A2.1. National poverty thresholds

Region	National poverty line (monthly per adult equivalent)		Average[1] national poverty line (daily per capita)		Average[1] national extreme poverty line (daily per capita)	
	2005/6 shilling	2005 PPP	2005/6 shilling	2005 PPP	2005/6 shilling	2005 PPP
National	30,376	40.79	736.97	0.99	534.30	0.72
Central						
Rural	29,572	39.71	745.60	1.00	535.97	0.72
Urban	32,106	43.12	830.36	1.12	549.78	0.74
Eastern						
Rural	28,642	38.47	714.03	0.96	529.94	0.71
Urban	30,685	41.21	771.42	1.04	534.41	0.72
Northern						
Rural	28,947	38.88	716.70	0.96	526.31	0.71
Urban	30,234	40.60	767.23	1.04	539.44	0.72
Western						
Rural	28,165	37.83	707.11	0.95	533.68	0.72
Urban	29,993	40.28	772.37	1.04	547.43	0.74

[1] The national thresholds in per capita terms are averages because households have different national thresholds depending on the sex and age composition of the individuals in the households. These averages were created by identifying the national threshold for a household and then dividing by the number of household members.

[77] Ravallion and Bidani. (1994).

International Poverty Threshold of $1.90 2011 PPP

In 2011 the International Comparison Program collected data to update the purchasing power parity indexes that are used to standardize consumption across different economies.[78] In late 2015, the World Bank updated the $1.25 2005 PPP poverty threshold to a comparable $1.90 2011 PPP.[79] The update reflects changes in market prices and currencies based on the 2011 PPP maintaining while the substantive level of poverty measured by the $1.25 2005 PPP measure. Because future assessments in Uganda are likely to evaluate poverty using the $1.90 2011 PPP thresholds, **Table A2.2** has been prepared to provide a comparison for future assessments.

All indicators and analyses presented in this report have utilized the 2005 PPP to convert between Uganda shillings and US dollars. The only use of the 2011 PPP was to create Table A2.2. The $1.90 2011 PPP poverty threshold was converted to 2005 Uganda shillings by using the Uganda 2011 PPP value of 946.89.[80] The $1.90 2011 PPP threshold is equivalent to 1,799.09 Uganda shillings, per person, per day in 2011 prices. Using the 2011 CPI of 178.01 (2005=100), the $1.90 2011 PPP threshold is 1,010.67 Uganda shillings in 2005 prices.

The $1.90 2011 PPP poverty line in 2005 Uganda shillings is 1,010.67, which is notably higher than 930.79 shillings ($1.25 2005 PPP) threshold. Because the 2011 PPP threshold is higher than the 2005 PPP threshold, poverty rates under the new threshold are higher than the rates reported in Table 4.2. The poverty prevalence using the 2005 PPP threshold is 32.1 percent whereas the poverty prevalence under the 2011 PPP threshold is 38.5 percent. Despite the overall higher levels of poverty under the $1.90 2011 PPP threshold, the differences among the disaggregates are the same as those reported in Table 4.2.

[78] The World Bank. (2014). *Purchasing power parities and the real size of world economies: A comprehensive report of the 2011 international comparison program*. Retrieved from http://elibrary.worldbank.org/doi/book/10.1596/978-1-4648-0329-1. Accessed December 29, 2015.

[79] The World Bank. (2015c). *PovcalNet: an online analysis tool for global poverty monitoring.* Retrieved from http://iresearch.worldbank.org/PovcalNet/index.htm. Accessed December 29, 2015.

[80] The World Bank. (2015d). *PPP conversion factor, private consumption (LCU per international $).* Retrieved from http://data.worldbank.org/indicator/PA.NUS.PRVT.PP. Accessed December 29, 2015.

Table A2.2. Poverty at the $1.90 (2011 PPP)[1] per person per day threshold

Characteristic	Prevalence of poverty[2]		Depth of poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2011 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	38.5	2,522	11.0	2,522	0.54	28.6	817
Gendered household type[a,b]							
Male and female adults	39.9	1,684	11.5	1,684	0.55	28.8	618
Female adult(s) only	35.8	584	10.2	584	0.54	28.4	167
Male adult(s) only	21.0	244	4.8	244	0.43	22.9	30
Child(ren) only (no adults)	^	10	^	10	^	^	2
Household size[a,b]							
Small (1-5 members)	27.7	1,597	7.6	1,597	0.52	27.3	376
Medium (6-10 members)	46.2	881	13.6	881	0.56	29.5	419
Large (11+ members)	52.3	44	13.1	44	^	^	22
Household educational attainment[a,b,c]							
No education	45.7	109	11.7	109	0.49	25.6	34
Less than primary	49.5	1,060	15.3	1,060	0.59	31.0	448
Primary	36.8	884	9.9	884	0.51	27.0	271
Secondary or more	17.4	454	3.7	454	0.40	21.1	61

^ Results not statistically reliable, n<30.

[1] The international poverty line was updated in 2015. The line is $1.90 (2011 PPP) per person per day.

[2] The prevalence of poverty is the percentage of individuals living below the $1.90 (2011 PPP) per person per day threshold. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] Superscripts in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: Uganda National Household Survey (UNHS) 2012/2013.

A2.3 Criteria for Achieving Adequacy for Women's Empowerment in Agriculture Indicators

The below table presents the Women's Empowerment in Agriculture five dimensions of empowerment, their corresponding empowerment indicators, the survey questions that are used to elicit the data required to establish adequacy or inadequacy for each empowerment indicator, and how adequacy criteria are defined for each empowerment indicator.

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
Production	Input in productive decisions	G2.02 A-C, F How much input did you have in making decisions about: food crop farming, cash crop farming, livestock raising, fish culture; G5.02 A-D To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: agriculture production, what inputs to buy, what types of crops to grow for agricultural production, when or who would take crops to market, livestock raising	Must have at least some input into or can make own personal decisions in at least two decisionmaking areas	Inadequate if individual participates BUT does not have at least some input in decisions; or she does not make the decisions nor feels she could.
	Ownership of assets	G3.02 A-N Who would you say owns most of the [ITEM]? Agricultural land, Large livestock, Small livestock, chicks etc.; Fish pond/ equipment; Farm equipment (non-mechanized); Farm equipment (mechanized); Nonfarm business equipment; House; Large durables; Small durables; Cell phone; Non-agricultural land (any); Transport	Must own at least one asset, but not only one small asset (chickens, non-mechanized equipment, or small consumer durables)	Inadequate if household does not own any asset or only owns one small asset, or if household owns the type of asset BUT she does not own most of it alone

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
Resources	Purchase, sale, or transfer of assets	G3.03-G3.05 A-G Who would you say can decide whether to sell, give away, rent/ mortgage [ITEM] most of the time? G3.06 A-G Who contributes most to decisions regarding a new purchase of [ITEM]? Ag land; Large livestock, Small livestock; Chickens etc.; Fish pond; Farm equipment (non-mechanized); Farm equipment (mechanized)	Must be able to decide to sell, give away, or rent at least one asset, but not only chickens and non-mechanized farming equipment	Inadequate if household does not own any asset or only owns one small asset, or household owns the type of asset BUT she does not participate in the decisions (exchange or buy) about it
	Access to and decisions on credit	G3.08-G3.09 A-E Who made the decision to borrow/what to do with money/item borrowed from [SOURCE]? Non-governmental organization (NGO); Informal lender; Formal lender (bank); Friends or relatives; ROSCA (savings/credit group)	Must have made the decision to borrow or what to do with credit from at least one source	Inadequate if household has no credit OR used a source of credit BUT she did not participate in ANY decisions about it
Income	Control over use of income	G2.03 A-F How much input did you have in decisions on the use of income generated from: Food crop, Cash crop, Livestock, Non-farm activities, Wage & salary, Fish culture; G5.02 E-G To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: Your own wage or salary employment? Minor household expenditures?	Must have some input into decisions on income, but not only minor household expenditures	Inadequate if participates in activity BUT she has no input or little input on decisions about income generated

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
Leadership	Group member	G4.05 A-K Are you a member of any: Agricultural/livestock/ fisheries producer/ market group; Water, forest users', credit or microfinance group; Mutual help or insurance group (including burial societies); Trade and business association; Civic/charitable group; Local government; Religious group; Other women's group; Other group.	Must be an active member of at least one group	Inadequate if not an active member of a group or if unaware of any group in the community or if no group in community
	Speaking in public	G4.01 – G4.03 Do you feel comfortable speaking up in public: To help decide on infrastructure (like small wells, roads) to be built? To ensure proper payment of wages for public work or other similar programs? To protest the misbehavior of authorities or elected officials?	Must feel comfortable speaking in at least one public setting	Inadequate if not at all comfortable speaking in public
Time	Workload	G6 Worked more than 10.5 hours in previous 24 hours.	Total summed hours spent toward labor must be less than 10.5	Inadequate if works more than 10.5 hours a day
	Leisure	G6.02 How would you rate your satisfaction with your available time for leisure activities like visiting neighbors, watching TV, listening to radio, seeing movies or doing sports?	Must rate satisfaction level as at least five out of 10	Inadequate if not satisfied (<5)

Feed the Future Uganda Zone of Influence Interim Survey Questionnaire

Disclaimer: The Feed the Future Uganda Zone of Influence Interim Survey Questionnaire is available on the Development Experience Clearinghouse and Development Data Library in the English language only. Should you require the translated version(s) of this questionnaire in Luganda, Lugisu, Luo, Lusoga, Runyankore, and/or Runyoro language, please contact the United States Agency for International Development, Bureau for Food Security via email at bfs.mel@usaid.gov.

MODULE A. HOUSEHOLD IDENTIFICATION COVER SHEET

HOUSEHOLD IDENTIFICATION	CODE
A01. HOUSEHOLD IDENTIFICATION	
A02. ENUMERATION AREA	
A03. PARISH/LC2 NAME	
A04. SUB-COUNTY NAME	
A05. COUNTY	
A06. DISTRICT	
A07. GPS COORDINATES OF HOUSEHOLD	° ′ ″

NOTE:

THE **PRIMARY MALE AND PRIMARY FEMALE DECISIONMAKERS** ARE THOSE WHO ARE AGE 18 OR OLDER, AND WHO SELF-IDENTIFY AS THE PRIMARY MALE AND/OR PRIMARY FEMALE MEMBERS RESPONSIBLE FOR THE DECISIONMAKING, BOTH SOCIAL AND ECONOMIC, WITHIN THE HOUSEHOLD.

IN HOUSEHOLDS WITH BOTH MALE AND FEMALE DECISIONMAKERS, THE PRIMARY MALE AND PRIMARY FEMALE DECISIONMAKERS ARE USUALLY HUSBAND AND WIFE; HOWEVER THEY CAN ALSO BE OTHER HOUSEHOLD MEMBERS, AS LONG AS THEY ARE AGED 18 AND OVER.

A09. INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY / MONTH / YEAR
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER
RESULT*	_____	_____	_____	RESULT
NEXT VISIT DATE	_____	_____		TOTAL NUMBER OF VISITS
TIME	_____	_____		

*RESULT CODES:
1 COMPLETED
2 NOT HOME
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD
4 POSTPONED/UNAVAILABLE
5 REFUSED
6 DWELLING VACANT
7 NOT A DWELLING
8 DWELLING DESTROYED
9 DWELLING NOT FOUND
10 TOO ILL TO RESPOND/COGNITIVELY IMPAIRED
11 OTHER (SPECIFY)
12 PARTIAL COMPLETE

A10. TOTAL PERSONS IN HOUSEHOLD

A11. TOTAL NUMBER OF WOMEN 15-49

A12. TOTAL NUMBER OF CHILDREN AGE 0-5

A13. LINE NO. OF RESPONDENT TO MODULE C

A14. SENIOR SUPERVISOR	A15. QC INTERVIEWER	A16. INTERVIEWER CODE
NAME _____	NAME _____	

A17.LANGUAGE OF QUESTIONNAIRE**

A18. LANGUAGE OF INTERVIEW**

A19. NATIVE LANGUAGE OF RESPONDENT**

A20. WAS A TRANSLATOR USED? (YES=1, NO=2)

** LANGUAGE CODES: 1 LUGANDA 2 LUO 3 RUNYANKOLE-RUKIGA 4 LUSOGA 5 LUGISU 6 RUNYORO-RUTORO 7 ENGLISH 9 OTHER (SPECIFY)

MODULE B(1). INFORMED CONSENT

INTRODUCE THE HOUSEHOLD TO THE SURVEY AND OBTAIN THE CONSENT OF A RESPONSIBLE ADULT IN THE HOUSEHOLD TO PARTICIPATE IN MODULES C AND D OF THE QUESTIONNAIRE.

AT THE BEGINNING OF EACH SUBSEQUENT MODULE, YOU WILL BE PROMPTED TO OBTAIN INFORMED CONSENT FROM EACH ELIGIBLE RESPONDENT PRIOR TO INTERVIEWING HIM OR HER.

ASK TO SPEAK WITH A RESPONSIBLE ADULT IN THE HOUSEHOLD:

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from Service for Generations International. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. The survey includes questions about the household generally, and questions about individuals within your household, if applicable. The questions about the household and its characteristics will take about 30 minutes to complete. If additional questions are relevant for members of your household, the interview in total will take approximately 2-3 hours to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact Service for Generations International by calling 0-312-517-670. We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____ DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1

CONTINUE WITH HOUSEHOLD ROSTER:

"First, I'd like to ask you about the members of your household."

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 → END. "Thank you very much for your time."

MODULE B(2). INFORMED CONSENT AND CONTACT INFORMATION TO LEAVE WITH THE HOUSEHOLD

Thank you for the opportunity to speak with you. We are a research team from Service for Generations International. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. The survey includes questions about the household generally, and questions about individuals within your household, if applicable. The questions about the household and its characteristics will take about 30 minutes to complete. If additional questions are relevant for members of your household, the interview in total will take approximately 2-3 hours to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact Service for Generations International by calling 0-312-517-670.This form is for you so that you will have a record of your participation in the study, and the contact information for the survey organization.

NAME OF SURVEY IMPLEMENTING ORGANIZATION: Service for Generations International

NAME OF SURVEY DIRECTOR: Dr. Daniel Kibuuka Musoke

PHONE NUMBER: 0-312-517-670

MAILING ADDRESS: P.O. Box 75838,
Plot 2D, Nakasero Hill Road
Block A, First Floor, Room 16
Kampala, Uganda.

EMAIL ADDRESS: sfginfo@sfg-group.com

MODULE C. HOUSEHOLD ROSTER AND DEMOGRAPHICS

Household identification (*in data file, each module must be matched with the HH ID*) | | | | | | |

C01a. Who would you say is the primary male decisionmaker in this household? This person should be 18 years old or older.

YES, PRIMARY MALE DECISIONMAKER EXISTS IN HOUSEHOLD 1
NO PRIMARY MALE DECISIONMAKER IN HOUSEHOLD 2

IF THERE IS A PRIMARY MALE DECISIONMAKER, ENTER HIS NAME ON LINE 01 OF THE ROSTER. C02 AND C03 ARE PRE-FILLED FOR THIS LINE NUMBER.

C01b. Who would you say is the primary female decisionmaker in this household? This person should be 18 years old or older.

YES, PRIMARY FEMALE DECISIONMAKER EXISTS IN HOUSEHOLD..... 1
NO PRIMARY FEMALE DECISIONMAKER IN HOUSEHOLD..... 2

IF THERE IS A PRIMARY FEMALE DECISIONMAKER, ENTER HER NAME ON LINE 02 OF THE ROSTER. SEX (CO2) IS PRE-FILLED FOR THIS LINE NUMBER. ENTER THE RELATIONSHIP (CO3) OF THE FEMALE DECISIONMAKER TO THE PERSON LISTED ON LINE 01; IF NO ONE IS LISTED ON LINE 01, ENTER CODE '01' FOR CO3.

LINE NUMBER	Now, please tell me the names of all of the other people who usually live here. LIST ALL HOUSEHOLD MEMBERS, THEIR SEX (C02), AND THEIR RELATIONSHIP TO THE PRIMARY DECISIONMAKER NAMED IN LINE 01 (C03), OR NAMED IN LINE 02 IF NO HH MEMBER LISTED ON LINE 01. IF THERE IS NO PRIMARY MALE OR FEMALE DECISIONMAKER IN THE HOUSEHOLD, START THE HOUSEHOLD LISTING ON LINE 03. THEN ASK: Are there any other people who live here, even if they are not home now? These may include children in school or household members at work. Any other people like small children or infants that we have not listed? Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? IF YES, COMPLETE LISTING FOR QUESTIONS C02-C03. THEN, ASK QUESTIONS STARTING WITH C04 FOR EACH PERSON ONE AT A TIME.	What is [NAME's] sex? M = 1 F = 2	What is [NAME's] relationship to the primary male decision-maker? IF NO PRIMARY MALE DECISION-MAKER: What is [NAME's] relationship to the primary female decision-maker? SEE CODES BELOW IF NO ADULT DECISION-MAKER: ENTER CODE 16	What is [NAME's] age? IN YEARS IF 95 OR OLDER, ENTER '95'	Did [NAME] stay here last night? YES=1 NO=2	How long has it been since [NAME] has spent the night in this household? SEE CODES BELOW	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49 WHO SPENT THE NIGHT IN THE HOUSE-HOLD WITHIN THE PAST 5 MONTHS	CIRCLE LINE NUMBER OF ALL CHILD-REN AGE 0-5 WHO SPENT THE NIGHT IN THE HOUSE-HOLD WITHIN THE PAST 5 MONTHS	Has [NAME] ever attended school? YES=1 NO=2	Is [NAME] currently attending school? YES=1 NO=2	What is the highest grade of education completed by [NAME]? SEE CODES BELOW	Can [NAME] read and write? SEE CODES BELOW
										IF AGE 3 OR OLDER			
	C01	**C02**	**C03**	**C04**	**C05**	**C06**	**C07**	**C08**	**C09**	**C10**	**C11**	**C12**
01		1	0 1		1→C07 2	1 2 3	01	01	1 2→C12	1 2		
02		2			1→C07 2	1 2 3	02	02	1 2→C12	1 2		
03		1 2			1→C07 2	1 2 3	03	03	1 2→C12	1 2		
04		1 2			1→C07 2	1 2 3	04	04	1 2→C12	1 2		
05		1 2			1→C07 2	1 2 3	05	05	1 2→C12	1 2		
06		1 2			1→C07 2	1 2 3	06	06	1 2→C12	1 2		

C03 RESULT CODES: RELATIONSHIP TO PRIMARY MALE (OR FEMALE, IF NO MALE) DECISIONMAKER:

SELF..... 01
SPOUSE/PARTNER..... 02
SON/DAUGHTER..... 03
SON/DAUGHTER-IN-LAW..... 04
GRANDSON/ GRANDDAUGHTER..... 05
MOTHER/FATHER..... 06
BROTHER/SISTER..... 07
NEPHEW/NIECE..... 08
NEPHEW/NIECE OF SPOUSE.09
COUSIN.....10
BROTHER/SISTER-IN-LAW...11
MOTHER/FATHER-IN-LAW....12
OTHER RELATIVE.....13
SERVANT/MAID.....14
LABORER.....15
NO DECISIONMAKER AGE 18 IN HOUSEHOLD.....16
OTHER RELATIONSHIP 96

C06 RESULT CODES: TIME SINCE SPENT THE NIGHT

CIRCLE 1 IF DAYS; ENTER # OF DAYS IN BOX (1-6)

CIRCLE 2 IF WEEKS; ENTER # OF WEEKS IN BOX (1-5)

CIRCLE 3 IF MONTHS; ENTER # OF MONTHS IN BOX MEMBER HAS BEEN AWAY

C11 RESULT CODES: EDUCATION

NO FORMAL EDUCATION.....01
LESS THAN PRIMARY 02
COMPLETED PRIMARY 03
COMPLETED O-LEVEL 04
COMPLETED A-LEVEL.....05
TERTIARY EDUCATION.....09
COMPLETED UNIVERSITY.....06
ADULT LITERACY ONLY (NO FORMAL EDUCATION) 08
DON'T KNOW/NOT APPLICABLE.....91

C12 RESULT CODES: LITERACY

CANNOT READ & WRITE.... 1
CAN SIGN (WRITE) ONLY...2
CAN READ ONLY.....3
CAN READ & WRITE.....4

MODULE C. HOUSEHOLD ROSTER AND DEMOGRAPHICS (cont.)

Household identification (*in data file, each module must be matched with the HH ID*) | | | | | | |

LINE NUMBER	Now, please tell me the names of all of the other people who usually live here. LIST ALL HOUSEHOLD MEMBERS, THEIR SEX (C02), AND THEIR RELATIONSHIP TO THE PRIMARY DECISIONMAKER NAMED IN LINE 01 (C03), OR NAMED IN LINE 02 IF NO HH MEMBER LISTED ON LINE 01. IF THERE IS NO PRIMARY MALE OR FEMALE DECISIONMAKER IN THE HOUSEHOLD, START THE HOUSEHOLD LISTING ON LINE 03. THEN ASK: Are there any other people who live here, even if they are not at home now? These may include children in school or household members at work. Any other people like small children or infants that we have not listed? Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? IF YES, COMPLETE LISTING FOR QUESTIONS C02-C03. THEN, ASK QUESTIONS STARTING WITH CO4 FOR EACH PERSON, ONE AT A TIME.	What is [NAME's] sex? M = 1 F = 2	What is [NAME's] relation-ship to the primary male decision-maker? IF NO PRIMARY MALE DECISION-MAKER: What is [NAME's] relation-ship to the primary female decision-maker? SEE CODES BELOW IF NO ADULT DECISION-MAKER: ENTER CODE 16	What is [NAME's] age? IN YEARS IF 95 OR OLDER, ENTER '95'	Did [NAME] stay here last night? YES=1 NO=2	How long has it been since [NAME] has spent the night in this household? SEE CODES BELOW	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49 WHO SPENT THE NIGHT IN THE HOUSE-HOLD WITHIN THE PAST 5 MONTHS	CIRCLE LINE NUMBER OF ALL CHILD-REN AGE 0-5 WHO SPENT THE NIGHT IN THE HOUSE-HOLD WITHIN THE PAST 5 MONTHS	Has [NAME] ever attended school? YES=1 NO=2	Is [NAME] currently attending school? YES=1 NO=2	What is the highest grade of education completed by [NAME]? SEE CODES BELOW	Can [NAME] read and write? SEE CODES BELOW
	C01	**C02**	**C03**	**C04**	**C05**	**C06**	**C07**	**C08**	**C09**	**C10**	**C11**	**C12**
									IF AGE 3 OR OLDER			
07		1 2			1→C07 2	1 2 3	07	07	1 2→C12	1 2		
08		1 2			1→C07 2	1 2 3	08	08	1 2→C12	1 2		
09		1 2			1→C07 2	1 2 3	09	09	1 2→C12	1 2		
10		1 2			1→C07 2	1 2 3	10	10	1 2→C12	1 2		
11		1 2			1→C07 2	1 2 3	11	11	1 2→C12	1 2		
12		1 2			1→C07 2	1 2 3	12	12	1 2→C12	1 2		
13		1 2			1→C07 2	1 2 3	13	13	1 2→C12	1 2		
14		1 2			1→C07 2	1 2 3	14	14	1 2→C12	1 2		

C03 RESULT CODES: RELATIONSHIP TO PRIMARY MALE (OR FEMALE, IF NO MALE) DECISIONMAKER:

SELF	01	COUSIN	10
SPOUSE/PARTNER	02	BROTHER/SISTER-IN-LAW	11
SON/DAUGHTER	03	MOTHER/FATHER-IN-LAW	12
SON/DAUGHTER-IN-LAW	04	OTHER RELATIVE	13
GRANDSON/ GRANDDAUGHTER	05	SERVANT/MAID	14
MOTHER/FATHER	06	LABORER	15
BROTHER/SISTER	07	NO DECISIONMAKER AGE 18 IN HOUSEHOLD	16
NEPHEW/NIECE	08	OTHER RELATIONSHIP	96
NEPHEW/NIECE OF SPOUSE	09		

C06 RESULT CODES: TIME SINCE HOME

CIRCLE 1 IF DAYS; ENTER # OF DAYS IN BOX (1-6)

CIRCLE 2 IF WEEKS; ENTER # OF WEEKS IN BOX (1-5)

CIRCLE 3 IF MONTHS; ENTER # OF MONTHS IN BOX MEMBER HAS BEEN AWAY

C11 RESULT CODES: EDUCATION

NO FORMAL EDUCATION	01
LESS THAN PRIMARY	02
COMPLETED PRIMARY	03
COMPLETED O-LEVEL	04
COMPLETED A-LEVEL	05
TERTIARY EDUCATION	09
COMPLETED UNIVERSITY	06
ADULT LITERACY ONLY (NO FORMAL EDUCATION)	08
DON'T KNOW/NOT APPLICABLE	91

C12 RESULT CODES: LITERACY

CANNOT READ & WRITE	1
CAN SIGN (WRITE) ONLY	2
CAN READ ONLY	3
CAN READ & WRITE	4

MODULE D. DWELLING CHARACTERISTICS

Household identification (*in data file, each module must be matched with the HH ID*) | | | | | | |

CONTINUE INTERVIEWING THE SAME RESPONDENT FROM MODULE C.

"Now I'd like to ask you a few questions about your home."

QNO.	QUESTIONS	RESPONSE CODES
D01.	**OBSERVE (DO NOT ASK)** ROOF TOP MATERIAL (OUTER COVERING):	**D01:TYPE OF ROOF** NATURAL ROOFING NO ROOF ..... 11 THATCH/PALM LEAF ..... 12 MUD ..... 13 RUDIMENTARY ROOFING RUSTIC MAT ..... 21 PALM/BAMBOO ..... 22 WOOD PLANKS ..... 23 CARDBOARD ..... 24 PLASTIC SHEETING ..... 25 FINISHED ROOFING METAL ..... 31 WOOD ..... 32 CALAMINE/CEMENT FIBER ..... 33 TILES ..... 34 CEMENT ..... 35 ROOFING SHINGLES ..... 36 IRON SHEETS ..... 37 ASBESTOS SHEETS ..... 38 OTHER 96
D02.	**OBSERVE (DO NOT ASK)** FLOOR MATERIAL:	**D02:TYPE OF FLOOR** NATURAL FLOOR EARTH/SAND ..... 11 EARTH AND DUNG ..... 12 RUDIMENTARY FLOOR WOOD PLANKS ..... 21 PALM/BAMBOO ..... 22 FINISHED FLOOR PARQUET/POLISHED WOOD ..... 31 VINYL OR ASPHALT STRIPS ..... 32 CERAMIC TILES ..... 33 CEMENT ..... 34 CARPET ..... 35 BRICKS ..... 36 STONES ..... 37 OTHER 96
D03.	**OBSERVE (DO NOT ASK)** EXTERIOR WALLS:	**D03:TYPE OF WALLS** NATURAL WALLS THATCHED/STRAW ..... 14 RUDIMENTARY WALLS MUD AND POLES ..... 21 UNBURNT BRICKS ..... 22 UNBURNT BRICKS WITH PLASTER ..... 23 BURNT BRICKS WITH MUD ..... 24 CARDBOARD ..... 25 PLYWOOD/REUSED WOOD ..... 26 METAL SHEETING ..... 27 FINISHED WALLS CEMENT ..... 31 STONE WITH LIME/CEMENT ..... 32 BURNT BRICKS WITH CEMENT ..... 33 CEMENT BLOCKS ..... 34 COVERED ADOBE ..... 35 WOOD PLANKS/SHINGLES ..... 36 OTHER 96

QNO.	QUESTIONS	RESPONSE CODES
D04.	How many rooms in this dwelling are used for sleeping?	**D04. NUMBER OF ROOMS USED FOR SLEEPING:** ☐☐
D05.	What is the main type of toilet your household uses?	**D05: TYPE OF TOILET** FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM ..... 11 FLUSH TO SEPTIC TANK..... 12 FLUSH TO PIT LATRINE ..... 13 FLUSH TO SOMEWHERE ELSE..... 14 FLUSH, DON'T KNOW WHERE..... 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE (VIP) ..... 21 PIT LATRINE WITH SLAB..... 22 PIT LATRINE WITHOUT SLAB/OPEN PIT ..... 23 ECOSAN/COMPOSTING TOILET ..... 31 BUCKET TOILET..... 41 HANGING TOILET/HANGING LATRINE ..... 51 NO FACILITY/BUSH/FIELD..... 61 → SKIP TO D08 OTHER..... 96
D06.	Do you share this toilet with other households?	**D06: IF TOILET IS SHARED** YES..... 1 NO..... 2 → SKIP TO D08
D07.	How many households use this toilet?	**D07: NUMBER OF HOUSEHOLDS WITH WHOM TOILET IS SHARED** NUMBER OF HOUSEHOLDS (IF LESS THAN 10) ..... 0☐ 10 OR MORE HOUSEHOLDS.....95 DON'T KNOW.....98
D08.	What is the main source of drinking water for your household?	**D08: MAIN DRINKING WATER SOURCE** PIPED WATER PIPED INTO DWELLING .....11 PIPED TO YARD/PLOT .....12 PUBLIC TAP/STANDPIPE .....13 TUBE WELL OR BOREHOLE .....21 DUG WELL PROTECTED WELL.....31 UNPROTECTED WELL .....32 WATER FROM SPRING PROTECTED SPRING.....41 UNPROTECTED SPRING .....42 RAINWATER .....51 TANKER TRUCK.....61 CART WITH SMALL TANK .....71 SURFACE WATER (RIVER/DAM/LAKE/ POND/STREAM/CANAL/ IRRIGATION CHANNEL) ..... 81 BOTTLED WATER.....91 OTHER 96

QNO.	QUESTIONS	RESPONSE CODES
D09.	Does this household have electricity?	**D09: ELECTRICITY** YES ..... 1 NO 2
D10.	What is the main source of cooking fuel for your household?	**D10: COOKING FUEL** ELECTRICITY ..... 01 LIQUID PROPANE GAS ..... 02 NATURAL GAS ..... 03 BIOGAS ..... 04 KEROSENE ..... 05 COAL, LIGNITE ..... 06 CHARCOAL ..... 07 WOOD ..... 08 STRAW/SHRUBS/GRASS ..... 09 AGRICULTURAL CROP RESIDUE ..... 10 ANIMAL DUNG ..... 11 NO FOOD COOKED IN HOUSEHOLD ... 95 OTHER 96
D11.	Did you or anyone in your household cultivate any crops in the past 1 year?	**D11: CROPS** YES ..... 1 NO ..... 2 → SKIP TO MODULE F
D12A.	Did anyone in your household cultivate maize in the past 1 year?	**D12A: MAIZE** YES ..... 1 NO ..... 2 → SKIP TO D13A
D12B.	Who is the person in your household who made most of the decisions about cultivating maize in the past 1 year?	**D12B: LINE NUMBER OF PERSON WHO MADE MOST OF THE DECISIONS ABOUT CULTIVATING MAIZE:** ☐☐
D13A.	Did anyone in your household cultivate beans in the past 1 year?	**D13A: BEANS** YES ..... 1 NO ..... 2 → SKIP TO D14A
D13B.	Who is the person in your household who made most of the decisions about cultivating beans in the past 1 year?	**D13B: LINE NUMBER OF PERSON WHO MADE MOST OF THE DECISIONS ABOUT CULTIVATING BEANS:** ☐☐
D14A.	Did anyone in your household cultivate coffee in the past 1 year?	**D14A: COFFEE** YES ..... 1 NO ..... 2 → SKIP TO MODULE F
D14B.	Who is the person in your household who made most of the decisions about cultivating coffee in the past 1 year?	**D14B: LINE NUMBER OF PERSON WHO MADE MOST OF THE DECISIONS ABOUT CULTIVATING COFFEE:** ☐☐

MODULE F. HOUSEHOLD HUNGER SCALE

Household identification (*in data file, each module must be matched with the HH ID*) | | | | | | |

CHECK THE INFORMED CONSENT REGISTER AND ENSURE THAT THE RESPONDENT TO MODULE F HAS PREVIOUSLY PROVIDED INFORMED CONSENT; IF NOT, ADMINISTER THE MODULE F INFORMED CONSENT PROCEDURE (ANNEX 4) TO THE RESPONDENT.

ASK THESE QUESTIONS OF THE PERSON RESPONSIBLE FOR HOUSEHOLD FOOD PREPARATION.

"Moving on to another topic, I'd like to ask you a couple of questions about the availability of food in your home."

QNO.	QUESTION	RESPONSE
F01	In the past 30 days, was there ever no food to eat of any kind in your house because of lack of resources to get food?	YES.....1 NO.....2 → GO TO F03 REFUSED.....9 → GO TO F03
F02	How often did this happen in the past 30 days?	RARELY (1-2 TIMES).....1 SOMETIMES (3-10 TIMES)..... 2 OFTEN (MORE THAN 10 TIMES)..... 3 REFUSED.....9
F03	In the past 30 days, did you or any household member go to sleep at night hungry because there was not enough food?	YES.....1 NO.....2 → GO TO F05 REFUSED.....9 → GO TO F05
F04	How often did this happen in the past 30 days?	RARELY (1-2 TIMES).....1 SOMETIMES (3-10 TIMES)..... 2 OFTEN (MORE THAN 10 TIMES).....3 REFUSED.....9
F05	In the past 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?	YES.....1 NO.....2 → END MODULE REFUSED.....9 → END MODULE
F06	How often did this happen in the past 30 days?	RARELY (1-2 TIMES).....1 SOMETIMES (3-10 TIMES)..... 2 OFTEN (MORE THAN 10 TIMES).....3 REFUSED.....9

MODULE G. WOMEN'S EMPOWERMENT IN AGRICULTURE INDEX

THIS QUESTIONNAIRE SHOULD BE ADMINISTERED TO THE PRIMARY FEMALE DECISIONMAKER (AGE 18 OR OLDER) IDENTIFIED ON LINE 02 OF THE HOUSEHOLD ROSTER (SECTION C) OF THE HOUSEHOLD LEVEL QUESTIONNAIRE.

YOU SHOULD COMPLETE THIS COVERSHEET FOR EACH ELIGIBLE RESPONDENT EVEN IF THE INDIVIDUAL IS NOT AVAILABLE TO BE INTERVIEWED.

PLEASE DOUBLE-CHECK TO ENSURE:

- YOU HAVE COMPLETED THE ROSTER SECTION OF THE HOUSEHOLD QUESTIONNAIRE TO IDENTIFY THE CORRECT PRIMARY FEMALE DECISIONMAKER;
- RESPONDENTS TO THIS MODULE ARE AGE 18 OR OLDER;
- YOU HAVE NOTED THE HOUSEHOLD ID AND INDIVIDUAL ID CORRECTLY FOR THE PERSON YOU ARE ABOUT TO INTERVIEW;
- YOU HAVE SOUGHT TO INTERVIEW THE INDIVIDUAL IN PRIVATE OR WHERE OTHER MEMBERS OF THE HOUSEHOLD CANNOT OVERHEAR OR CONTRIBUTE ANSWERS; AND
- YOU HAVE CHECKED THE INFORMED CONSENT REGISTER AND ENSURED THAT THE RESPONDENT(S) TO MODULE G HAVE PREVIOUSLY PROVIDED INFORMED CONSENT; IF NOT, ADMINISTER THE MODULE G INFORMED CONSENT PROCEDURE (ANNEX 5) TO THE RESPONDENT(S).

SUB-MODULE G1. INDIVIDUAL IDENTIFICATION

	Code		Code
G1.01. HOUSEHOLD IDENTIFICATION:	☐☐☐☐☐☐	**G1.03.** OUTCOME OF INTERVIEW	COMPLETED ..... 1 HOUSEHOLD MEMBER TOO ILL TO RESPOND/COGNITIVELY IMPAIRED ..... 2 RESPONDENT NOT AT HOME/TEMPORARILY UNAVAILABLE ..... 3 RESPONDENT NOT AT HOME/EXTENDED ABSENCE ..... 4 REFUSED ..... 5 COULD NOT LOCATE 6
G1.02. NAME OF RESPONDENT CURRENTLY BEING INTERVIEWED (LINE NUMBER FROM ROSTER IN SECTION C HOUSEHOLD ROSTER): **SURNAME, FIRST NAME:**_____	☐☐	**G1.04.** ABILITY TO BE INTERVIEWED ALONE: (SELECT ALL THAT APPLY)	ALONE ..... A ADULT FEMALES PRESENT ..... B ADULT MALES PRESENT ..... C CHILDREN PRESENT ..... D

NO.	QUESTION	RESPONSE
G1.05	In what month and year were you born?	☐☐ MONTH DK MONTH….98 ☐☐☐☐ YEAR DK YEAR….9998
G1.06	Please tell me how old you are. What was your age at your last birthday? RECORD AGE IN COMPLETED YEARS	☐☐ YEARS IF RESPONDENT KNOWS HER/HIS AGE, SKIP TO G1.08 IF RESPONDENT CANNOT REMEMBER HOW OLD SHE/HE IS, ENTER '98' AND ASK QUESTION G1.07.
G1.07	Are you 18 years old or older?	YES.....1 NO.....2 DK.....8 → RESPONDENT NOT ELIGIBLE FOR THIS MODULE; END MODULE G (WEAI) AND PROCEED TO MODULE H.
G1.08	CHECK G1.05, G1.06, AND G1.07 (IF APPLICABLE): IS THE RESPONDENT 18 YEARS OLD OR OLDER? IF THE INFORMATION IN G1.07, G1.08, AND G1.09 CONFLICTS, DETERMINE WHICH IS MOST ACCURATE USING THE AGE/YEAR OF BIRTH CONSISTENCY CHART AND GUIDANCE FROM YOUR INTERVIEWER'S MANUAL.	YES.....1 NO.....2 DK.....8 → RESPONDENT NOT ELIGIBLE FOR THIS MODULE; END MODULE G (WEAI) AND PROCEED TO MODULE H.
G1.09	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED.....1 YES, LIVING WITH A MAN .....2 → GO TO SUB-MODULE G2 NO, NOT IN UNION.....3 REFUSED.....9
G1.10	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED.....1 YES, LIVED WITH A MAN.....2 NO.....3 → GO TO SUB-MODULE G2 REFUSED.....9
G1.11	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED.....1 DIVORCED.....2 SEPARATED.....3

SUB-MODULE G2. ROLE IN HOUSEHOLD DECISIONMAKING AROUND PRODUCTION AND INCOME GENERATION

HOUSEHOLD IDENTIFICATION (IN DATA FILE, EACH SUB-MODULE (G2-G6) MUST BE LINKED WITH HH AND RESPONDENT ID) | | | | | | |

RESPONDENT ID CODE | | |

"Now I'd like to ask you some questions about your participation in certain types of work activities."

ACTIVITY		Did you yourself participate in [ACTIVITY] in the past 12 months?	How much input did you have in making decisions about [ACTIVITY]?	How much input did you have in decisions on the use of income generated from [ACTIVITY]
ACTIVITY CODE	**ACTIVITY DESCRIPTION**	**G2.01**	**G2.02**	**G2.03**
A	**Food crop farming:** These are crops that are grown primarily for household food consumption	YES ..... 1 NO ..... 2 → SKIP TO NEXT ACTIVITY	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99
B	**Cash crop farming:** These are crops that are grown primarily for sale in the market	YES ..... 1 NO ..... 2 → SKIP TO NEXT ACTIVITY	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99
C	**Livestock raising**	YES ..... 1 NO ..... 2 → SKIP TO NEXT ACTIVITY	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99
D	**Non-farm economic activities:** This would include things like running a small business, self-employment, buy-and-sell	YES ..... 1 NO ..... 2 → SKIP TO NEXT ACTIVITY	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99
E	**Wage and salary employment:** This could be work that is paid for in cash or in-kind, including both agriculture and other wage work	YES ..... 1 NO ..... 2 → SKIP TO NEXT ACTIVITY	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99
F	**Fishing or fishpond culture**	YES ..... 1 NO ..... 2 → SKIP TO MODULE G3	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS .....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED 99	NO INPUT OR INPUT INTO VERY FEW DECISIONS.....01 INPUT INTO SOME DECISIONS.....02 INPUT INTO MOST OR ALL DECISIONS..03 NO DECISION MADE .....93 REFUSED.....99

SUB-MODULE G3(A). ACCESS TO PRODUCTIVE CAPITAL

"Now I'd like to ask you about your household's ownership of a number of items that could be used to generate income."

PRODUCTIVE CAPITAL		Does anyone in your household currently have any [ITEM]?	How many of [ITEM] does your household currently have?	Who would you say owns most of the [ITEM]? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to sell [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to give away [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide to mortgage or rent out [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who contributes most to decisions regarding a new purchase of [ITEM]? **CIRCLE ALL APPLICABLE**
PRODUCTIVE CAPITAL		**G3.01a**	**G3.01b**	**G3.02**	**G3.03**	**G3.04**	**G3.05**	**G3.06**
A	Agricultural land (plots)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
B	Large livestock (oxen, cattle)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
C	Small livestock (goats, pigs, sheep)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
D	Chickens, ducks, turkeys, and pigeons	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
E	Fishpond or fishing equipment	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
F	Farm equipment (non-mechanized: hand tools, animal-drawn ploughs)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM		SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER……. C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9

PRODUCTIVE CAPITAL		Does anyone in your household currently have any [ITEM]?	How many of [ITEM] does your household currently have?	Who would you say owns most of the [ITEM]? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to sell [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to give away [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide to mortgage or rent out [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who contributes most to decisions regarding a new purchase of [ITEM]? **CIRCLE ALL APPLICABLE**
PRODUCTIVE CAPITAL		**G3.01a**	**G3.01b**	**G3.02**	**G3.03**	**G3.04**	**G3.05**	**G3.06**
G	Farm equipment (mechanized: tractor-drawn plough, power tiller, treadle pump, spraying pumps)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED ……9	SELF……A PARTNER/SPOUSE ……B OTHER HH MEMBER…… C OTHER NON-HH MEMBER . D NOT APPLICABLE……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED……9	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER ……C OTHER NON-HH MEMBER..D NOT APPLICABLE ……Z REFUSED ……9
H	Nonfarm business equipment (solar panels used for recharging, sewing machine, brewing equipment, fryers)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				
I	House or other structures	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				
J	Large consumer durables (refrigerator, TV, sofa)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				
K	Small consumer durables (radio, cookware)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				
L	Cell phone	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				
M	Other land not used for agricultural purposes (plots, residential or commercial land)	YES……1 NO……2→ SKIP TO REFUSED .. 9→ NEXT ITEM	☐☐☐	SELF ……A PARTNER/SPOUSE……B OTHER HH MEMBER……C OTHER NON-HH MEMBER ..D NOT APPLICABLE……Z REFUSED……9				

PRODUCTIVE CAPITAL		Does anyone in your household currently have any [ITEM]?	How many of [ITEM] does your household currently have?	Who would you say owns most of the [ITEM]? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to sell [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide whether to give away [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who would you say can decide to mortgage or rent out [ITEM] most of the time? **CIRCLE ALL APPLICABLE**	Who contributes most to decisions regarding a new purchase of [ITEM]? **CIRCLE ALL APPLICABLE**
PRODUCTIVE CAPITAL		**G3.01a**	**G3.01b**	**G3.02**	**G3.03**	**G3.04**	**G3.05**	**G3.06**
N	Means of transportation (bicycle, motorcycle, car)	YES.....1 NO.....2→ SKIP TO REFUSED .. 9→ MODULE G3(B)	☐☐☐	SELF .....A PARTNER/SPOUSE.....B OTHER HH MEMBER.....C OTHER NON-HH MEMBER ..D NOT APPLICABLE.....Z REFUSED.....9				

SUB-MODULE G3(B). ACCESS TO CREDIT

"Next I'd like to ask about your household's experience with borrowing money or other items in the past 12 months."

LENDING SOURCES		Has anyone in your household taken any loans or borrowed cash/in-kind from [SOURCE] in the past 12 months?	Who made the decision to borrow from [SOURCE]? **CIRCLE ALL APPLICABLE**	Who makes the decision about what to do with the money item borrowed from [SOURCE]? **CIRCLE ALL APPLICABLE**
LENDING SOURCE NAMES		**G3.07**	**G3.08**	**G3.09**
A	Non-governmental organization (NGO) or religious organization such as World Vision fund, Catholic Relief Services (CRS), Caritas, etc.	YES, CASH ..... 1 YES, IN-KIND ..... 2 YES, CASH AND IN-KIND ..... 3 NO ..... 4 → GO TO NEXT SOURCE DON'T KNOW ..... 8 → GO TO NEXT SOURCE REFUSED ..... 9 → GO TO NEXT SOURCE	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9
B	Informal lender	YES, CASH ..... 1 YES, IN-KIND ..... 2 YES, CASH AND IN-KIND ..... 3 NO ..... 4 → GO TO NEXT SOURCE DON'T KNOW ..... 8 → GO TO NEXT SOURCE REFUSED ..... 9 → GO TO NEXT SOURCE	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9
C	Formal lender (bank/financial institution)	YES, CASH ..... 1 YES, IN-KIND ..... 2 YES, CASH AND IN-KIND ..... 3 NO ..... 4 → GO TO NEXT SOURCE DON'T KNOW ..... 8 → GO TO NEXT SOURCE REFUSED ..... 9 → GO TO NEXT SOURCE	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9
D	Friends or relatives	YES, CASH ..... 1 YES, IN-KIND ..... 2 YES, CASH AND IN-KIND ..... 3 NO ..... 4 → GO TO NEXT SOURCE DON'T KNOW ..... 8 → GO TO NEXT SOURCE REFUSED ..... 9 → GO TO NEXT SOURCE	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9
E	Group based micro-finance or lending, including Village Savings and Loan Associations (VSLAs) or SACCOs, Building Resources Across Communities (BRAC), Pride, Finca etc.	YES, CASH ..... 1 YES, IN-KIND ..... 2 YES, CASH AND IN-KIND ..... 3 NO ..... 4 → GO TO NEXT SOURCE DON'T KNOW ..... 8 → GO TO NEXT SOURCE REFUSED ..... 9 → GO TO NEXT SOURCE	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9	SELF ..... A PARTNER/SPOUSE ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z REFUSED 9

SUB-MODULE G4(A). INDIVIDUAL LEADERSHIP AND INFLUENCE IN THE COMMUNITY

"Now I have a few questions about how comfortable you feel speaking up in public when the community needs to make important decisions."

QNO.	QUESTION	RESPONSE
G4.01	Do you feel comfortable speaking up in public to help decide on infrastructure (like small wells, roads, water supplies) to be built in your community?	NO, NOT AT ALL COMFORTABLE .....1 YES, BUT WITH DIFFICULTY.....2 YES, COMFORTABLY .....3 NOT APPLICABLE .....5 REFUSED.....9
G4.02	Do you feel comfortable speaking up in public to ensure proper payment of wages for public works or other similar programs?	NO, NOT AT ALL COMFORTABLE .....1 YES, BUT WITH DIFFICULTY.....2 YES, COMFORTABLY .....3 NOT APPLICABLE .....5 REFUSED.....9
G4.03	Do you feel comfortable speaking up in public to protest the misbehavior of authorities or elected officials?	NO, NOT AT ALL COMFORTABLE .....1 YES, BUT WITH DIFFICULTY.....2 YES, COMFORTABLY .....3 NOT APPLICABLE .....5 REFUSED.....9

SUB-MODULE G4(B). GROUP MEMBERSHIP

"The next few questions are about different groups or organizations that may exist in your community."

GROUP MEMBERSHIP		Is there a [GROUP] in your community?	Are you an active member of this [GROUP]?
GROUP CATEGORIES		**G4.04**	**G4.05**
A	Agricultural / livestock/ fisheries producer's group (including marketing groups) such as National Farmer's Association (NFA) and committees	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
B	Water users' group such as Beach Management Units (BMUs)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
C	Forest users' group such as National Forest Association (NFA) and committees	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
D	Credit or microfinance group including SACCOs/merry-go-rounds/ VSLAs, Finca, Pride and Building Resources Across Communities (BRAC).	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
E	Mutual help or insurance group (including burial societies and Nigiina)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
F	Trade and business association such as Kampala City Traders Association (KACITA)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
G	Civic groups (improving community) or charitable group (helping others)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
H	Local government (including Uganda local government association)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9

GROUP MEMBERSHIP		Is there a [GROUP] in your community?	Are you an active member of this [GROUP]?
GROUP CATEGORIES		**G4.04**	**G4.05**
I	Religious group including Catholic Charismatic Renewal (CCR), Mother's union, Father's union, Christian Women Fellowship (CWF), Christian Men Fellowship (CMF)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
J	Other women's group (only if it does not fit into one of the other categories)	YES.....1 NO.....2 → SKIP TO NEXT GROUP DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9
K	Any other group or organization (SPECIFY)_____	YES.....1 NO.....2 → SKIP TO MODULE G5A DON'T KNOW.....8	YES.....1 NO .....2 REFUSED.....9

SUB-MODULE G5(A). DECISIONMAKING

"Now I have some questions about making decisions about various aspects of household life."

ACTIVITY		When decisions are made regarding [ACTIVITY], who is it that normally takes the decision? CIRCLE ALL APPLICABLE	FILTER: CHECK G5.01	To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to?
	ACTIVITY	**G5.01**	**G5.01A**	**G5.02**
A	Getting inputs for agricultural production	SELF ..... A SPOUSE/PARTNER ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z → SKIP TO NEXT ACTIVITY REFUSED ..... 9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE ..... 1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE .... 2 → GO TO G5.02	NOT AT ALL ..... 1 SMALL EXTENT ..... 2 MEDIUM EXTENT ..... 3 TO A HIGH EXTENT ..... 4 REFUSED 9
B	The types of crops to grow	SELF ..... A SPOUSE/PARTNER ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z → SKIP TO NEXT ACTIVITY REFUSED ..... 9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE ..... 1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE .... 2 → GO TO G5.02	NOT AT ALL ..... 1 SMALL EXTENT ..... 2 MEDIUM EXTENT ..... 3 TO A HIGH EXTENT ..... 4 REFUSED 9
C	Taking crops to the market (or not)	SELF ..... A SPOUSE/PARTNER ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z → SKIP TO NEXT ACTIVITY REFUSED ..... 9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE ..... 1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE .... 2 → GO TO G5.02	NOT AT ALL ..... 1 SMALL EXTENT ..... 2 MEDIUM EXTENT ..... 3 TO A HIGH EXTENT ..... 4 REFUSED 9
D	Livestock raising	SELF ..... A SPOUSE/PARTNER ..... B OTHER HH MEMBER ..... C OTHER NON-HH MEMBER ..... D NOT APPLICABLE ..... Z → SKIP TO NEXT ACTIVITY REFUSED ..... 9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE ..... 1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE .... 2 → GO TO G5.02	NOT AT ALL ..... 1 SMALL EXTENT ..... 2 MEDIUM EXTENT ..... 3 TO A HIGH EXTENT ..... 4 REFUSED 9

ACTIVITY		When decisions are made regarding [ACTIVITY], who is it that normally takes the decision? **CIRCLE ALL APPLICABLE**	**FILTER:** **CHECK G5.01**	To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to?
	ACTIVITY	**G5.01**	**G5.01A**	**G5.02**
E	Your own (singular) wage or salary employment	SELF.....A SPOUSE/PARTNER.....B OTHER HH MEMBER.....C OTHER NON-HH MEMBER.....D NOT APPLICABLE.....Z → SKIP TO NEXT ACTIVITY REFUSED.....9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE.....1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE....2 → GO TO G5.02	NOT AT ALL.....1 SMALL EXTENT.....2 MEDIUM EXTENT.....3 TO A HIGH EXTENT.....4 REFUSED.....9
F	Major household expenditures (such as a large appliance for the house like refrigerator)	SELF.....A SPOUSE/PARTNER.....B OTHER HH MEMBER.....C OTHER NON-HH MEMBER.....D NOT APPLICABLE.....Z → SKIP TO NEXT ACTIVITY REFUSED.....9 → SKIP TO NEXT ACTIVITY	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE.....1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE....2 → GO TO G5.02	NOT AT ALL.....1 SMALL EXTENT.....2 MEDIUM EXTENT.....3 TO A HIGH EXTENT.....4 REFUSED.....9
G	Minor household expenditures (such as food for daily consumption or other household needs)	SELF.....A SPOUSE/PARTNER.....B OTHER HH MEMBER.....C OTHER NON-HH MEMBER.....D NOT APPLICABLE.....Z → SKIP TO NEXT MODULE REFUSED.....9 → SKIP TO NEXT MODULE	CHECK G5.01: "SELF" ("A") IS THE ONLY RESPONSE.....1 → GO TO NEXT ACTIVITY "SELF" ("A") IS **NOT** THE ONLY RESPONSE....2 → GO TO G5.02	NOT AT ALL.....1 SMALL EXTENT.....2 MEDIUM EXTENT.....3 TO A HIGH EXTENT.....4 REFUSED.....9

SUB-MODULE G6(A). TIME ALLOCATION

G6.01: PLEASE RECORD A LOG OF THE ACTIVITIES FOR THE INDIVIDUAL IN THE LAST COMPLETE 24 HOURS (STARTING YESTERDAY MORNING AT 4 AM, FINISHING 3:59 AM OF THE CURRENT DAY). THE TIME INTERVALS ARE MARKED IN 15 MINUTE-INTERVALS AND ONE TO TWO ACTIVITIES CAN BE MARKED FOR EACH TIME PERIOD BY DRAWING A LINE THROUGH THAT ACTIVITY. IF TWO ACTIVITIES ARE MARKED, THEY SHOULD BE DISTINGUISHED WITH A '1' FOR THE PRIMARY ACTIVITY AND A '2' FOR THE SECONDARY ACTIVITY WRITTEN NEXT TO THE LINES. PLEASE ADMINISTER USING THE PROTOCOL IN THE INTERVIEWER MANUAL.

"Now I'd like to ask you about how you spent your time during the past 24 hours. This will be a detailed accounting. We'll begin from yesterday morning at 4am, and continue through to 4am of this morning."

ACTIVITY		NIGHT								MORNING						DAY																																	
CODE	ACTIVITY	4				5				6				7				8				9				10				11				12				13				14				15			
A	Sleeping and resting																																																
B	Eating and drinking																																																
C	Personal care																																																
D	School (including homework)																																																
E	Work as employed																																																
F	Own business work																																																
G	Farming/livestock/fishing																																																
H	Shopping/getting service (including health services)																																																
I	Weaving, sewing, textile care																																																
J	Cooking																																																
K	Domestic work (including fetching wood and water)																																																
L	Care for children/adults/elderly																																																
M	Travel and commuting																																																
N	Watching TV/listening to radio/reading																																																
O	Exercising																																																
P	Social activities and hobbies																																																
Q	Religious activities																																																
X	____________________Other (SPECIFY)																																																

SUB-MODULE G6(A). TIME ALLOCATION (cont.)

ACTIVITY CODE	ACTIVITY	DAY						EVENING		NIGHT																																							
		16				17				18				19				20				21				22				23				24				1				2				3			
A	Sleeping and resting																																																
B	Eating and drinking																																																
C	Personal care																																																
D	School (including homework)																																																
E	Work as employed																																																
F	Own business work																																																
G	Farming/livestock/fishing																																																
H	Shopping/getting service (including health services)																																																
I	Weaving, sewing, textile care																																																
J	Cooking																																																
K	Domestic work (including fetching wood and water)																																																
L	Care for children/adults/elderly																																																
M	Travel and commuting																																																
N	Watching TV/listening to radio/reading																																																
O	Exercising																																																
P	Social activities and hobbies																																																
Q	Religious activities																																																
X	________________________Other (SPECIFY)																																																

SUB-MODULE G6(B). SATISFACTION WITH TIME ALLOCATION

QNO.	QUESTION	RESPONSE OPTIONS/INSTRUCTIONS
G6.01B	In the past 24 hours, did you work, either at home or outside the home, more than usual, about the same amount as usual, or less than usual?	MORE THAN USUAL……..1 ABOUT THE SAME AS USUAL……..…2 LESS THAN USUAL…….……...3
G6.02	Next, I am going to ask you a question about how satisfied you are with the time you have to yourself to do things you enjoy. Please give your opinion on a scale of 1 to 10. 1 means you are not satisfied and 10 means you are very satisfied. If you are neither satisfied nor dissatisfied, this would be in the middle, or 5, on the scale. How satisfied are you with your available time for leisure activities like visiting neighbors, watching TV, listening to the radio, seeing movies or doing sports?	SATISFACTION RATING: ☐☐

MODULE H: WOMEN'S ANTHROPOMETRY AND DIETARY DIVERSITY

HOUSEHOLD IDENTIFICATION (IN DATA FILE, EACH RESPONDENT MUST BE MATCHED WITH THE HH ID) | | | | | | |

ASK THESE QUESTIONS OF EACH WOMAN AGE 15-49 YEARS IN THE HOUSEHOLD. CHECK THE INFORMED CONSENT REGISTER AND ENSURE THAT THE RESPONDENT(S) TO MODULE H HAVE PREVIOUSLY PROVIDED INFORMED CONSENT; IF NOT, ADMINISTER THE MODULE H INFORMED CONSENT PROCEDURE (ANNEX 6) TO THE RESPONDENT(S).

CARRY DUPLICATE COPIES OF THIS MODULE IN CASE THERE ARE MORE THAN 5 WOMEN OF AGE 15-49 IN THE HOUSEHOLD.

ENSURE THAT THE ENTIRETY OF MODULE H, INCLUDING DIETARY DIVERSITY, IS COMPLETED FOR WOMAN 1 BEFORE MOVING ON TO WOMAN 2.

"In order to learn more about peoples' nutrition in our country, we would like to take measures of your growth – your height and your weight – and we'd also like to learn more about what kinds of foods you eat."

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
H01	WOMAN'S ID CODE AND NAME FROM THE HOUSEHOLD ROSTER	|__|__| NAME:_____________	|__|__| NAME:_____________	|__|__| NAME:_____________	|__|__| NAME:_____________	|__|__| NAME:_____________
H02	In what month and year were you born?	|__|__| MONTH DK MONTH….98 |__|__|__|__| YEAR DK YEAR….9998	|__|__| MONTH DK MONTH….98 |__|__|__|__| YEAR DK YEAR….9998	|__|__| MONTH DK MONTH….98 |__|__|__|__| YEAR DK YEAR….9998	|__|__| MONTH DK MONTH….98 |__|__|__|__| YEAR DK YEAR….9998	|__|__| MONTH DK MONTH….98 |__|__|__|__| YEAR DK YEAR….9998
H03	Please tell me how old you are. What was your age at your last birthday? RECORD AGE IN COMPLETED YEARS	|__|__| YEARS IF RESPONDENT KNOWS HER AGE, SKIP TO H05. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04.	|__|__| YEARS IF RESPONDENT KNOWS HER AGE, SKIP TO H05. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04.	|__|__| YEARS IF RESPONDENT KNOWS HER AGE, SKIP TO H05. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04.	|__|__| YEARS IF RESPONDENT KNOWS HER AGE, SKIP TO H05. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04.	|__|__| YEARS IF RESPONDENT KNOWS HER AGE, SKIP TO H05. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04.

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
H04	Are you between the ages of 15 and 49 years old?	YES .....1 NO .....2 DK.....8	YES .....1 NO .....2 DK.....8	YES.....1 NO.....2 DK.....8	YES.....1 NO .....2 DK.....8	YES..... 1 NO..... 2 DK..... 8
H05	CHECK H02, H03, AND H04 (IF APPLICABLE): IS THE RESPONDENT BETWEEN THE AGES OF 15 AND 49 YEARS? IF THE INFORMATION IN H02, H03, AND H04 CONFLICTS, DETERMINE WHICH IS MOST ACCURATE USING THE AGE/YEAR OF BIRTH CONSISTENCY CHART AND GUIDANCE FROM YOUR INTERVIEWER'S MANUAL.	YES .....1 NO .....2 ┐ CHECK DK.....8 → FOR OTHER WOMEN AGE 15-49 IN THE HOUSEHOLD; IF NONE, SKIP TO MODULE I	YES .....1 NO .....2 ┐ CHECK DK.....8 → FOR OTHER WOMEN AGE 15-49 IN THE HOUSEHOLD; IF NONE, SKIP TO MODULE I	YES.....1 NO.....2 ┐ CHECK DK.....8 → FOR OTHER WOMEN AGE 15-49 IN THE HOUSEHOLD; IF NONE, SKIP TO MODULE I	YES.....1 NO .....2 ┐ CHECK DK.....8 → FOR OTHER WOMEN AGE 15-49 IN THE HOUSEHOLD; IF NONE, SKIP TO MODULE I	YES..... 1 NO..... 2 ┐ CHECK DK..... 8 → FOR OTHER WOMEN AGE 15-49 IN THE HOUSEHOLD; IF NONE, SKIP TO MODULE I
	WOMEN'S NUTRITIONAL STATUS					
H06	Are you currently pregnant?	YES ..... 1 → SKIP TO DIETARY DIVERSITY NO .....2 DK.....8 REFUSED 9	YES ..... 1 → SKIP TO DIETARY DIVERSITY NO .....2 DK.....8 REFUSED 9	YES..... 1 → SKIP TO DIETARY DIVERSITY NO..... 2 DK..... 8 REFUSED..... 9	YES..... 1 → SKIP TO DIETARY DIVERSITY NO .....2 DK.....8 REFUSED.....9	YES..... 1 → SKIP TO DIETARY DIVERSITY NO..... 2 DK..... 8 REFUSED..... 9
H07	Weight in kilograms: WEIGH THE WOMAN	KG ☐☐☐.☐ NOT PRESENT.....9994 OTHER.....9996 REFUSED 9999	KG ☐☐☐.☐ NOT PRESENT.....9994 OTHER.....9996 REFUSED 9999	KG ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999	KG ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999	KG ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999
H08	Height in centimeters: MEASURE THE WOMAN	CM ☐☐☐.☐ NOT PRESENT.....9994 OTHER.....9996 REFUSED 9999	CM ☐☐☐.☐ NOT PRESENT.....9994 OTHER.....9996 REFUSED 9999	CM ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999	CM ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999	CM ☐☐☐.☐ NOT PRESENT .....9994 OTHER .....9996 REFUSED.....9999

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
	WOMEN'S DIETARY DIVERSITY					
	"Now I'd like to ask you to describe everything that you ate yesterday during the day or night, whether you ate it while you were at home, or while you were somewhere else." **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? CONTINUE PROBING 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? CONTINUE PROBING 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? CONTINUE PROBING UNTIL RESPONDENT SAYS "NOTHING ELSE." AS THE RESPONDENT RECALLS FOODS, UNDERLINE THE CORRESPONDING FOOD AND ENTER '1' IN THE COLUMN NEXT TO 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. 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, '2' IF NO, AND '8' IF DON'T KNOW. Yesterday during the day or night, did you drink/eat any [food group items]?					

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
	OTHER FOODS: PLEASE WRITE DOWN OTHER FOODS THAT RESPONDENT MENTIONED, BUT ARE NOT IN THE LIST BELOW, IN THE SPACE TO THE RIGHT OF THIS BOX. THIS WILL ALLOW THE SURVEY SUPERVISOR OR OTHER KNOWLEDGEABLE INDIVIDUAL TO CLASSIFY THE FOOD LATER.	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:
H14	Food made from rice; maize; millet; sorghum; arrowroot; or other grains such as bread, noodles, porridge, chapatti, doughnut, pancakes, rice cereal, weetabix, cornflakes etc.?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
H15	Pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H16	Cassava, yams, white sweet potatoes, Irish potatoes, or any other foods made from roots?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H17	Any dark green leafy vegetables such as such as spinach, amaranth leaves, cassava leaves, pumpkin leaves, cowpea leaves, kale, or bean leaves?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H17 A	Any other vegetables such as cabbage or eggplant?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H18	Ripe mangoes or pawpaw?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H18 A	Any other fruits like banana including dishes made from it such as Matoke, guava, passionfruiit, jack fruit, watermelon, or orange?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H19	Any liver; kidney; heart; or other organ meats from domesticated animals such as beef, pork, lamb, goat, chicken, rabbit, or duck?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H19 A	Any meat from domesticated animals such as beef, pork, lamb, goat, chicken, rabbit, or duck? These meats can be in forms such as kebabs, sausage, chicken, beef stew, etc.	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H20	Any liver; kidney; heart; or other organ meats from wild animals such as hippopotamus, buffalo, Ugandan kob, warthog, cane rat; or others?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H20 A	Any flesh from wild animals such as hippopotamus, buffalo, Ugandan kob, warthog, cane rat; or others?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H22	Eggs, for example from chicken, quail, or duck?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H23	Fresh or dried fish, shellfish, or seafood?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8

NO.	QUESTION	WOMAN 1	WOMAN 2	WOMAN 3	WOMAN 4	WOMAN 5
H24 A	Any foods made from any type of beans, including cowpeas or pigeon peas? The beans can be served in stew, bean soup, bean paste, bean sauce, etc.	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H24 B	Any foods made from other legumes such as lentils or groundnuts?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H24 C	Any foods made from nuts or seeds, like cashews or almonds, pistachio nuts, or like pumpkin or sesame seeds?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H25	Milk, cheese, yogurt, sour milk, or other milk products?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H26	Any oil, fats, or butter, or foods made with any of these?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H27	Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H28	Condiments for flavor, such as chilies, spices, herbs, curry powder, or fish powder?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H29	Insects, like grasshoppers, white ants, or termites?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8
H30	Foods made with red palm oil, red palm nut, or red palm nut pulp sauce?	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8

MODULE I. CHILD ANTHROPOMETRY AND INFANT AND YOUNG CHILD FEEDING

HOUSEHOLD IDENTIFICATION (IN DATA FILE, EACH RESPONDENT MUST BE MATCHED WITH THE HH ID) | | | | | | |

ASK THESE QUESTIONS OF THE PRIMARY CAREGIVER OF EACH CHILD AGED 0–59 MONTHS IN THE HOUSEHOLD. CHECK THE INFORMED CONSENT REGISTER AND ENSURE THAT THE RESPONDENT(S) TO MODULE I HAVE PREVIOUSLY PROVIDED INFORMED CONSENT; IF NOT, ADMINISTER THE MODULE I (ANNEX 7) INFORMED CONSENT PROCEDURE TO THE RESPONDENT(S) (THE PRIMARY CAREGIVER OF EACH CHILD AGED 0–59 MONTHS IN THE HOUSEHOLD).

YOU SHOULD CARRY DUPLICATE COPIES OF THIS MODULE IN CASE THERE ARE MORE THAN 5 CHILDREN 0-59 MONTHS OLD IN THE HOUSEHOLD.

"In order to learn more about child nutrition in our country, we would like to measure your child(ren)'s growth – their height and their weight – and we'd also like to learn more about what kinds of foods they eat."

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I01	CAREGIVER'S ID CODE FROM THE HOUSEHOLD ROSTER					
I02	CHILD'S ID CODE AND FIRST NAME FROM THE HOUSEHOLD ROSTER	CHILD'S NAME	CHILD'S NAME	CHILD'S NAME	CHILD'S NAME	CHILD'S NAME
I03	What is [CHILD'S NAME]'s sex?	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2
I04	I would like to ask you some question about [CHILD'S NAME]. What is [his/her] birthday? In what month and year was [CHILD'S NAME] born?	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I04A	CHECK I04: IS THE INFORMATION ON THE CHILD'S DAY, MONTH, AND YEAR OF BIRTH COMPLETE?	YES..... 1 → SKIP TO I05 NO 2	YES .....1 → SKIP TO I05 NO 2	YES .....1 → SKIP TO I05 NO....... 2	YES..... 1 → SKIP TO I05 NO....... 2	YES..... 1 → SKIP TO I05 NO 2
I04B	Does [CHILD'S NAME] have a health or vaccination card with the birth date recorded?	YES........... 1 NO .... 2 DK............. 8 → SKIP TO I05	YES .... 1 NO .... 2 DK............. 8 → SKIP TO I05	YES ....1 NO.............2 DK ....8 → SKIP TO I05	YES...........1 NO.............2 DK ....8 → SKIP TO I05	YES........... 1 NO .... 2 DK............. 8 → SKIP TO I05
I04C	May I please see the card?	YES............. 1 NO .... 2 CARD NOT AVAILABLE . 8 → SKIP TO I05	YES ....1 NO ....2 CARD NOT AVAILABLE ..8 → SKIP TO I05	YES ....1 NO...............2 CARD NOT AVAILABLE..8 → SKIP TO I05	YES............. 1 NO............... 2 CARD NOT AVAILABLE . 8 → SKIP TO I05	YES............. 1 NO .... 2 CARD NOT AVAILABLE . 8 → SKIP TO I05
I04D	CONFIRM WITH THE RESPONDENT THAT THE INFORMATION ON THE CARD IS CORRECT. IF THE HEALTH/VACCINATION CARD IS SHOWN AND THE RESPONDENT CONFIRMS THE INFORMATION IS CORRECT, RECORD THE DATE OF BIRTH AS DOCUMENTED ON THE CARD.	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998	DAY DK DAY….98 MONTH DK MONTH….98 YEAR DK YEAR….9998
I05	How old was [CHILD'S NAME] at [his/her] last birthday? RECORD AGE IN COMPLETED YEARS	YEARS	YEARS	YEARS	YEARS	YEARS
I06	How many months old is [CHILD'S NAME]? RECORD AGE IN COMPLETED MONTHS	MONTHS	MONTHS	MONTHS	MONTHS	MONTHS

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I07	CHECK I04, I04D, I05, AND I06 TO VERIFY CONSISTENCY					
I07A	CHECK: IS THE YEAR RECORDED IN I04 OR I04D CONSISTENT WITH THE AGE IN YEARS RECORDED IN I05?	YES....................1 NO......................2	YES.................... 1 NO...................... 2	YES....................1 NO......................2	YES....................1 NO......................2	YES....................1 NO......................2
107B	ARE YEAR AND MONTH OF BIRTH RECORDED IN I04 OR I04D CONSISTENT WITH AGE IN MONTHS RECORDED IN I06?	YES....................1 NO......................2	YES.................... 1 NO...................... 2	YES....................1 NO......................2	YES....................1 NO......................2	YES....................1 NO......................2
107C	CHECK 107A AND 107B: IF THE ANSWER TO A OR B IS 'NO,' RESOLVE ANY INCONSISTENCIES. IF THE BIRTHDATE WAS RECORDED ON A HEALTH CARD, THIS MAY BE USED AS THE CORRECT DATA SOURCE.					
I08	CHECK I06. IS THE CHILD UNDER 60 MONTHS?	YES....................1 NO......................2 DON'T KNOW.......8 PROCEED TO NEXT CHILD OR, IF THERE ARE NO OTHER CHILDREN, END MODULE	YES.................... 1 NO...................... 2 DON'T KNOW...... 8 PROCEED TO NEXT CHILD OR, IF THERE ARE NO OTHER CHILDREN, END MODULE	YES....................1 NO......................2 DON'T KNOW.......8 PROCEED TO NEXT CHILD OR, IF THERE ARE NO OTHER CHILDREN, END MODULE	YES....................1 NO......................2 DON'T KNOW.......8 PROCEED TO NEXT CHILD OR, IF THERE ARE NO OTHER CHILDREN, END MODULE	YES....................1 NO......................2 DON'T KNOW.......8 PROCEED TO NEXT CHILD OR, IF THERE ARE NO OTHER CHILDREN, END MODULE
	"Now I would like to assess your child for a condition called 'edema,' which occurs when too much fluid is retained by the body. It can be related to nutrition. To perform the test, I need to gently press my thumbs on [NAME]'s feet."					
I09	DOES CHILD HAVE EDEMA?	YES .... 1 NO .... 2 NOT PRESENT............ 4 OTHER......................... 6 REFUSED 9	YES.............................1 NO ....2 NOT PRESENT ....4 OTHER ....6 REFUSED.....................9	YES .... 1 NO .... 2 NOT PRESENT............ 4 OTHER......................... 6 REFUSED 9	YES.............................1 NO...............................2 NOT PRESENT.............4 OTHER..........................6 REFUSED.....................9	YES.............................1 NO...............................2 NOT PRESENT ....4 OTHER..........................6 REFUSED.....................9

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I10	WEIGHT IN KILOGRAMS: WEIGH THE CHILD	KG ___.___ NOT PRESENT..... 9994 OTHER..... 9996 REFUSED 9999	KG ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999	KG ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999	KG ___.___ NOT PRESENT..... 9994 OTHER..... 9996 REFUSED 9999	KG ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999
I11	CHILDREN UNDER 24 MONTHS SHOULD BE MEASURED LYING DOWN; CHILDREN 24 MONTHS OR OLDER SHOULD BE MEASURED STANDING UP. HEIGHT IN CENTIMETERS: MEASURE THE CHILD	CM ___.___ NOT PRESENT..... 9994 OTHER..... 9996 REFUSED 9999	CM ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999	CM ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999	CM ___.___ NOT PRESENT..... 9994 OTHER..... 9996 REFUSED 9999	CM ___.___ NOT PRESENT ..... 9994 OTHER ..... 9996 REFUSED..... 9999
I11A	WAS THE CHILD MEASURED LYING DOWN OR STANDING UP?	LYING DOWN ..... 1 STANDING UP..... 2 NOT MEASURED ... 6	LYING DOWN..... 1 STANDING UP ..... 2 NOT MEASURED... 6	LYING DOWN..... 1 STANDING UP ..... 2 NOT MEASURED... 6	LYING DOWN ..... 1 STANDING UP..... 2 NOT MEASURED ... 6	LYING DOWN.....1 STANDING UP .....2 NOT MEASURED....6
	EXCLUSIVE BREASTFEEDING AND MINIMUM ACCEPTABLE DIET					
I15	CHECK QUESTION I05. IS THE CHILD UNDER 3 YEARS OF AGE?	YES.....1 NO.....2 → PROCEED TO NEXT CHILD OR END MODULE	YES ..... 1 NO ..... 2 → PROCEED TO NEXT CHILD OR END MODULE	YES ..... 1 NO ..... 2 → PROCEED TO NEXT CHILD OR END MODULE	YES.....1 NO.....2 → PROCEED TO NEXT CHILD OR END MODULE	YES.....1 NO.....2 → PROCEED TO NEXT CHILD OR END MODULE

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I16	Has [CHILD'S NAME] ever been breastfed?	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9 SKIP TO I18	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED .....9 SKIP TO I18	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED .....9 SKIP TO I18	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9 SKIP TO I18	YES.....1 NO .....2 DON'T KNOW.....8 REFUSED.....9 SKIP TO I18
I17	Was [CHILD'S NAME] breastfed yesterday during the day or at night?	YES.....1 → SKIP TO I19 NO.....2 DON'T KNOW.....8	YES .... 1 → SKIP TO I19 NO .....2 DON'T KNOW 8	YES .... 1 → SKIP TO I19 NO .....2 DON'T KNOW 8	YES.....1 → SKIP TO I19 NO.....2 DON'T KNOW.....8	YES.....1 → SKIP TO I19 NO .....2 DON'T KNOW.....8
I18	Sometimes babies are fed breast milk in different ways, for example by spoon, cup, or bottle. This can happen when the mother cannot always be with her baby. Sometimes babies are breastfed by another woman or given breast milk from another woman by spoon, cup, bottle, or some other way. This can happen if a mother cannot breastfeed her own baby. Did [CHILD'S NAME] consume breast milk in any of these ways yesterday during the day or at night?	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES.....1 NO .....2 DON'T KNOW.....8 REFUSED.....9
I19	Now I would like to ask you about some medicines and vitamins that are sometimes given to infants. Was [CHILD'S NAME] given any vitamin drops or other medicines as drops yesterday during the day or at night?	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES.....1 NO .....2 DON'T KNOW.....8 REFUSED.....9
I20	Was [CHILD'S NAME] Oral Rehydration Solution (ORS) yesterday during the day or at night?	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES .....1 NO .....2 DON'T KNOW .....8 REFUSED 9	YES.....1 NO.....2 DON'T KNOW.....8 REFUSED.....9	YES.....1 NO .....2 DON'T KNOW.....8 REFUSED.....9
	READ THE QUESTIONS BELOW. READ THE LIST OF LIQUIDS ONE BY ONE AND MARK YES OR NO, ACCORDINGLY. **"Next I would like to ask you about some liquids that [CHILD'S NAME] may have had yesterday during the day or at night."** Did [CHILD'S NAME] have any [ITEM FROM LIST]?:					
I21	Plain water?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I22	Infant formula?	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I24	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I24	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I24	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I24	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I24
I23	How many times yesterday during the day or at night did [CHILD'S NAME] consume any formula?	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98
I24	Did [CHILD'S NAME] have any milk such as tinned, powdered, or fresh animal milk?	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I26	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I26	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I26	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I26	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I26
I25	How many times yesterday during the day or at night did [CHILD'S NAME] consume any milk?	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98
I26	Did [CHILD'S NAME] have any juice or juice drinks?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
I27	Clear broth?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
I28	Yogurt?	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I30	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I30	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I30	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I30	YES.....1 NO.....2 DON'T KNOW.....8 SKIP TO I30
I29	How many times yesterday during the day or at night did [CHILD'S NAME] consume any yogurt?	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98	☐☐ TIMES DON'T KNOW.....98
I30	Did [CHILD'S NAME] have any thin porridge?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I31	Any other liquids such as black tea, rice water, glucose water?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I32	Any other liquids?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
	"Now I'd like to ask you to describe everything that [CHILD'S NAME] ate yesterday during the day or night, whether [he/she] ate it while at home, or while somewhere else." A) Think about when [CHILD'S NAME] first woke up yesterday. Did [CHILD'S NAME] eat anything at that time? IF YES: Please tell me everything [child's name] ate at that time. PROBE: Anything else? CONTINUE TO PROBE UNTIL RESPONDENT SAYS "NOTHING ELSE." THEN CONTINUE TO PART B). IF NO, CONTINUE TO PART B). B) What did [CHILD'S NAME] do after that? Did [CHILD'S NAME] eat anything at that time? IF YES: Please tell me everything [CHILD'S NAME] ate at that time. PROBE: Anything else? CONTINUE TO PROBE UNTIL RESPONDENT SAYS "NOTHING ELSE." REPEAT QUESTION B) UNTIL THE RESPONDENT SAYS THE CHILD 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? CONTINUE TO PROBE UNTIL RESPONDENT SAYS "NOTHING ELSE." AS THE RESPONDENT RECALLS FOODS, UNDERLINE THE CORRESPONDING FOOD AND ENTER '1' IN THE RESPONSE BOX NEXT TO 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. ONCE THE RESPONDENT FINISHES RECALLING FOODS EATEN, READ EACH FOOD GROUP WHERE '1' WAS NOT ENTERED IN THE RESPONSE BOX, ASK THE FOLLOWING QUESTION AND ENTER '1' IF RESPONDENT SAYS YES, '0' IF NO, AND '8' IF DON'T KNOW: Yesterday, during the day or night, did [CHILD'S NAME] drink/eat any [FOOD GROUP ITEMS]?					
NO.	**QUESTION**	**CHILD 1**	**CHILD 2**	**CHILD 3**	**CHILD 4**	**CHILD 5**
	OTHER FOODS: PLEASE WRITE DOWN OTHER FOODS (TO THE RIGHT OF THIS BOX) THAT 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 MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:
I33	Food made from rice; maize; millet; sorghum; arrowroot; or other grains such as bread, noodles, porridge, chapatti, doughnut, pancakes, rice cereal, weetabix, cornflakes etc.?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I34	Pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I35	Cassava, yams, white sweet potatoes, Irish potatoes or any other foods made from roots?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I36	Any dark green leafy vegetables such as such as spinach, amaranth leaves, cassava leaves, pumpkin leaves, cowpea leaves, kale, or bean leaves?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I36A	Any other vegetables, such as cabbage or eggplant?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I37	Ripe mangoes or pawpaw?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I37A	Any other fruits like banana including dishes made from it such as Matoke, guava, passionfruiit, jack fruit, watermelon, or orange?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I38	Any liver; kidney; heart; or other organ meats from domesticated animals such as beef, pork, lamb, goat, chicken, or duck?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I38A	Any meat from domesticated animals such as beef, pork, lamb, goat, chicken, or duck? These meats can be in forms such as kebabs, sausage, chicken, beef stew, etc.	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I39	Any liver kidney; heart; or other organ meats from wild animals such as hippopotamus, buffalo, Ugandan kob, warthog, cane rat, or others	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I39A	Any flesh from wild animals such as hippopotamus, buffalo, Ugandan kob, warthog, cane rat, or others?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I41	Eggs, for example from chicken quail or duck?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I42	Fresh or dried fish, shellfish, or seafood?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I43A	Any foods made from any type of beans, including cowpeas or pigeon peas? The beans can be served in stew, bean soup, bean paste, bean sauce, etc.	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I43B	Any foods made from other legumes such as lentils or groundnuts?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8
I43C	Any foods made from nuts or seeds, like cashews, almonds, pistachio nuts, or like pumpkin or sesame seeds?	YES.....1 NO.....2 DON'T KNOW.....8	YES .....1 NO .....2 DON'T KNOW 8	YES .....1 NO .....2 DON'T KNOW 8	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO .....2 DON'T KNOW.....8

NO.	QUESTION	CHILD 1	CHILD 2	CHILD 3	CHILD 4	CHILD 5
I44	Cheese, yogurt, sour milk, or other milk products?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
I45	Any oil, fats, or butter, or foods made with any of these?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
I46	Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
I47	Condiments for flavor, such as chilies, spices, herbs, curry powder, or fish powder?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
I48	Insects, like grasshoppers, white ants, or termites?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
I49	Foods made with red palm oil, red palm nut, or red palm nut pulp sauce?	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8	YES......1 NO......2 DON'T KNOW......8
	CHECK CATEGORIES 33-49 IF ALL 'NO,' GO TO I50 IF AT LEAST ONE 'YES' OR ALL 'DON'T KNOW,' GO TO I51					
I50	Did [CHILD'S NAME] eat any solid, semi-solid, or soft foods yesterday during the day or at night? IF 'YES' PROBE: What kind of solid, semi-solid, or soft foods did [CHILD'S NAME] eat?	YES......1 GO BACK TO I33–I49 AND RECORD FOODS EATEN. THEN CONTINUE WITH I51. NO......2 DON'T KNOW......8 PROCEED TO NEXT CHILD OR END MODULE	YES......1 GO BACK TO I33–I49 AND RECORD FOODS EATEN. THEN CONTINUE WITH I51. NO......2 DON'T KNOW......8 PROCEED TO NEXT CHILD OR END MODULE	YES......1 GO BACK TO I33–I49 AND RECORD FOODS EATEN. THEN CONTINUE WITH I51. NO......2 DON'T KNOW......8 PROCEED TO NEXT CHILD OR END MODULE	YES......1 GO BACK TO I33–I49 AND RECORD FOODS EATEN. THEN CONTINUE WITH I51. NO......2 DON'T KNOW......8 PROCEED TO NEXT CHILD OR END MODULE	YES......1 GO BACK TO I33–I49 AND RECORD FOODS EATEN. THEN CONTINUE WITH I51. NO......2 DON'T KNOW......8 PROCEED TO NEXT CHILD OR END MODULE
I51	How many times did [child's name] eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night?	__ __ TIMES DON'T KNOW....98	__ __ TIMES DON'T KNOW.....98	__ __ TIMES DON'T KNOW.....98	__ __ TIMES DON'T KNOW....98	__ __ TIMES DON'T KNOW....98

MODULE J. AGRICULTURAL TECHNOLOGIES

HOUSEHOLD IDENTIFICATION (IN DATA FILE, EACH RESPONDENT MUST BE MATCHED WITH THE HH ID)						

CHECK QUESTIONNAIRE ITEMS D12B, D13B, AND D14B TO DETERMINE IF THERE ARE ANY HOUSEHOLD MEMBERS ELIGIBLE TO RESPOND TO MODULE J.

- IF THE HOUSEHOLD **DID NOT PLANT MAIZE, BEANS, OR COFFEE** IN THE PAST YEAR AND THERE IS NO HOUSEHOLD MEMBER ELIGIBLE TO RESPOND TO MODULE J, THANK THE RESPONDENT FOR THEIR TIME AND END THE INTERVIEW.

- IF THE HOUSEHOLD **DID PLANT MAIZE, BEANS, OR COFFEE** LAST YEAR AND YOU HAVE IDENTIFIED THE MEMBER OF THE HOUSEHOLD WHO IS ELIGIBLE TO RESPOND TO MODULE J, CHECK THE INFORMED CONSENT REGISTER AND ENSURE THAT THE RESPONDENT HAS PREVIOUSLY PROVIDED INFORMED CONSENT; IF NOT, ADMINISTER THE MODULE J INFORMED CONSENT PROCEDURE (ANNEX 8) TO THE RESPONDENT.

"Next I would like to ask you about some of the crops you planted in the past 1 year."

NO.	QUESTION	RESPONSE
J1.01	CHECK D12B: DID RESPONDENT CULTIVATE MAIZE IN THE PAST 1 YEAR?	YES.....1 NO.....2 → SKIP TO J2.01
J1.02	What kind of land preparation did you use for the maize you planted in the past year? SELECT ALL THAT APPLY	NONE.....A → J1.07 ZERO TILLAGE.....B PLOUGHING.....C OTHER (SPECIFY)_____.....Z
J1.03	CHECK J1.02: DID RESPONDENT USE ZERO TILLAGE TO PREPARE THE LAND?	YES.....1 NO.....2 → J1.05
J1.04	What kind of zero tillage system did you use for the maize? SELECT ALL THAT APPLY	SLASH AND PLANT.....A BURN AND PLANT.....B HERBICIDE AND PLANT.....C OTHER (SPECIFY)_____.....Z
J1.05	CHECK J1.02: DID RESPONDENT USE PLOUGHING TO PREPARE THE LAND?	YES.....1 NO.....2 → J1.07
J1.06	What did you use for ploughing for the maize? SELECT ALL THAT APPLY	HAND TILLAGE (HOE).....A ANIMAL TRACTION.....B TRACTOR.....C OTHER (SPECIFY)_____.....Z
J1.07	What was your main source of maize seed?	HOME-SAVED (SELF/FRIEND/RELATIVE).....1 PURCHASED FROM FRIEND/RELATIVE.....2 PURCHASED FROM AG DEALER.....3 PURCHASED IN MARKET (NON-AG DEALER).....4 AID DISTRIBUTION.....5 OTHER (SPECIFY)_____.....6

NO.	QUESTION	RESPONSE
J1.08	CHECK J1.07: DID RESPONDENT PURCHASE MAIZE SEED FROM AN AGRICULTURAL OR NON-AGRICULTURAL DEALER (3 OR 4)?	YES ..... 1 NO ..... 2 → J1.10
J1.09	Please tell me the name of the dealer from which you purchased the maize seed.	NAME OF MAIZE SEED DEALER (SPECIFY)_____ ....1 DON'T KNOW 8
J1.10	CHECK J1.07: DID RESPONDENT PURCHASE MAIZE SEED FROM A FRIEND OR RELATIVE (2)?	YES ..... 1 NO ..... 2 → J1.12
J1.11	Why did you purchase maize seed from a friend or relative?	LESS EXPENSIVE.....1 MORE ACCESSIBLE THAN MARKET/DEALER .....2 QUALITY OF MAIZE YIELD IS GOOD.....3 OTHER (SPECIFY)_____.....6
J1.12	What type of maize seed did you plant in the past year? SELECT ALL THAT APPLY	OPEN POLLINATED VARIETIES (OPVs)..... A HYBRID..... B DON'T KNOW X
J1.13	Was the maize crop grown to provide food for the household, or was it grown to be sold or traded in the market?	GROWN FOR FOOD ONLY .....1 GROWN FOR MARKET ONLY .....2 GROWN FOR BOTH FOOD & MARKET .....3 OTHER (SPECIFY) _____ 6
J1.14	Some farmers plant maize seeds in rows or randomly broadcast or plant with other crops growing in the plot. How did you plant the maize seeds? SELECT ALL THAT APPLY	IN ROWS ..... A RANDOMLY BROADCAST ..... B PLANTED WITH OTHER CROPS GROWING IN THE PLOT..... C
J1.15	Over the past two planting seasons, did you rotate maize with other crop(s) in the same plot area?	YES .....1 NO .....2 OTHER (SPECIFY) _____ .....6 DON'T KNOW 8
J1.16	Did you apply fertilizer to the maize in the past year?	YES ..... 1 NO ..... 2→ J1.19
J1.17	At which times did you apply fertilizer to the maize? SELECT ALL THAT APPLY	PLANTING ..... A MID-CROP ..... B OTHER (SPECIFY)_____..... Z

NO.	QUESTION	RESPONSE
J1.18	What type of fertilizer did you use? SELECT ALL THAT APPLY	ORGANIC ..... A INORGANIC ..... B FOLIAR FEEDS ..... C OTHER (SPECIFY)_____ ..... Z
J1.19	Inorganic fertilizer is a man-made fertilizer that you can buy in a bag at the shop. Have you been trained in how to use and apply inorganic fertilizer for maize?	YES ..... 1 NO 2
J1.20	Did you have any insect, rodent, or disease attacks on your maize in the past year?	YES ..... 1 NO 2
J1.21	Did you use chemicals to control insect, rodent, or disease attacks on the maize?	YES ..... 1 NO ..... 2→ J1.23
J1.22	Was the use of chemicals preventive, or was it in response to an insect, rodent, or disease attack?	PREVENTIVE/ROUTINE ..... 1 RESPONSE TO ATTACK 2
J1.23	Have you been trained in when to use and how to apply pesticides for maize?	YES ..... 1 NO 2
J1.24	How many times did you control weeds among your maize crops in the past year?	NUMBER OF TIMES: ☐☐ NONE ..... 95 → J1.26
J1.25	How did you control the weeds among your maize crops? SELECT ALL THAT APPLY	HOE ..... A HERBICIDE ..... B MULCHING ..... C INTERCROPPING ..... D SLASHING ..... E PULL BY HAND ..... F
J1.26	Have you been trained in when to use and how to apply herbicides for maize?	YES ..... 1 NO 2
J1.27	In the past year, did you use any of the following techniques to manage soil and water for your maize crop? SELECT ALL THAT APPLY Terracing? Mulching? Soil bands or trenches? Intercropping? Crop rotation? Some other technique? IF YES: What was the technique?	TERRACING ..... A MULCHING ..... B SOIL BANDS/TRENCHES ..... C INTERCROPPING ..... D CROP ROTATION ..... E NONE ..... X OTHER (SPECIFY)_____ ..... Z

NO.	QUESTION	RESPONSE
J1.28	Besides rainfall, did you use any additional irrigation methods for the maize?	YES ..... 1 NO ..... 2→ J1.30
J1.29	What type of irrigation did you use? SELECT ALL THAT APPLY	BY HAND (WATERING CAN, HOSE, ETC.) ..... A CANALS ..... B PERMANENT HOSE ..... C PUMPS ..... D OTHER (SPECIFY)_____ ..... Z
J1.30	How did you harvest the maize?	BY HAND ONLY ..... 1 WITH A MACHINE ONLY ..... 2 SOME BY HAND, SOME WITH A MACHINE ..... 3 NOT YET HARVESTED 4
J1.31	Did you dry any of your maize harvest before sale or use?	YES ..... 1 NO ..... 2→ J1.33
J1.32	What did you dry the maize on? SELECT ALL THAT APPLY	BARE GROUND ..... A GROUND PLASTERED WITH COW DUNG ..... B GROUND COVERED WITH STRAW ..... C LEFT TO DRY ON PLANT IN FIELD ..... D TARPAULINS ..... E DRYING YARD ..... F DRYING RACKS ..... G SOLAR DRYERS ..... H MECHANIZED DRYERS ..... I OTHER (SPECIFY)_____ ..... Z
J1.33	How did you shell the maize? SELECT ALL THAT APPLY	BY HAND ONLY ..... A BY STICKS ..... B WITH A SHELLING MACHINE ..... C DID NOT SHELL ..... D OTHER (SPECIFY)_____ ..... Z
J1.34	Did you put the maize in bags after harvest for storage or transport?	YES ..... 1 NO ..... 2→ J1.36
J1.35	What type of storage bag did you use for the maize?	WOVEN BAG, SINGLE LAYER ..... 1 TWO- OR THREE-LAYERED WOVEN BAGS ..... 2 HERMETIC BAG 3

NO.	QUESTION	RESPONSE
J1.36	Did you use any of the following storage locations to store the maize? SELECT ALL THAT APPLY Residential house? Cribs? Granaries? Other constructed stores? Warehouses? Storage silos? Some other type of location? IF YES: What was the storage location you used?	RESIDENTIAL HOUSE ..... A CRIBS ..... B GRANARIES ..... C OTHER CONSTRUCTED STORES ..... D WAREHOUSES ..... E STORAGE SILOS ..... F NONE/DID NOT STORE ANY MAIZE ..... X → SKIP TO J2.01 OTHER (SPECIFY)_____ ..... Z
J1.37	Was your maize attacked by insects, rodents, or disease while in storage?	YES ..... 1 NO 2
J2.01	CHECK D13B: DID RESPONDENT CULTIVATE BEANS IN THE PAST 1 YEAR?	YES ..... 1 NO ..... 2 → SKIP TO J3.01
J2.01A	How many varieties of beans did you cultivate?	NUMBER OF VARIETIES CULTIVATED: ☐☐ DON'T KNOW 98
J2.02	What kind of land preparation did you use for the beans you planted in the past year? SELECT ALL THAT APPLY	NONE ..... A → J2.07 ZERO TILLAGE ..... B PLOUGHING ..... C OTHER (SPECIFY) _____ Z
J2.03	CHECK J2.02: DID RESPONDENT USE ZERO TILLAGE TO PREPARE THE LAND?	YES ..... 1 NO ..... 2 → J2.05
J2.04	What kind of zero tillage system did you use for the beans? SELECT ALL THAT APPLY	SLASH AND PLANT ..... A BURN AND PLANT ..... B HERBICIDE AND PLANT ..... C OTHER (SPECIFY)_____ Z
J2.05	CHECK J2.02: DID RESPONDENT USE PLOUGHING TO PREPARE THE LAND?	YES ..... 1 NO ..... 2 → J2.07
J2.06	What did you use for ploughing for the beans? SELECT ALL THAT APPLY	HAND TILLAGE (HOE) ..... A ANIMAL TRACTION ..... B TRACTOR ..... C OTHER (SPECIFY)_____ Z

NO.	QUESTION	RESPONSE
J2.07	What was your main source of bean seed?	HOME-SAVED (SELF/FRIEND/RELATIVE).....1 PURCHASED FROM FRIEND/RELATIVE.....2 PURCHASED FROM AG DEALER.....3 PURCHASED IN MARKET (NON-AG DEALER) .....4 AID DISTRIBUTION.....5 OTHER (SPECIFY)_____.....6
J2.08	CHECK J2.07: DID RESPONDENT PURCHASE BEAN SEED FROM AN AGRICULTURAL OR NON-AGRICULTURAL DEALER (3 OR 4)?	YES.....1 NO.....2 → J2.10
J2.09	Please tell me the name of the dealer from which you purchased the bean seed.	NAME OF BEAN SEED DEALER (SPECIFY)_____ ....1 DON'T KNOW 8
J2.10	CHECK J2.07: DID RESPONDENT PURCHASE BEAN SEED FROM A FRIEND OR RELATIVE (2)?	YES.....1 NO.....2 → J2.12
J2.11	Why did you purchase bean seed from a friend or relative?	LESS EXPENSIVE.....1 MORE ACCESSIBLE THAN MARKET/DEALER .....2 QUALITY OF BEAN YIELD IS GOOD.....3 OTHER (SPECIFY)_____.....6
J2.12	What type of bean seed did you plant in the past year? SELECT ALL THAT APPLY	OPEN POLLINATED VARIETIES (OPVs)..... A HYBRID..... B DON'T KNOW X
J2.13	Was the bean crop grown to provide food for the household, or was it grown to be sold or traded in the market?	GROWN FOR FOOD ONLY .....1 GROWN FOR MARKET ONLY .....2 GROWN FOR BOTH FOOD & MARKET .....3 OTHER (SPECIFY) _____ 6
J2.14	Some farmers plant bean seeds in rows, or randomly broadcast, or plant with other crops growing in the plot. How did you plant the bean seeds? SELECT ALL THAT APPLY	IN ROWS ..... A RANDOMLY BROADCAST ..... B PLANTED WITHIN OTHER CROPS GROWING IN THE PLOT..... C
J2.15	Over the past two planting seasons did you rotate beans with other crop(s) in the same plot area?	YES.....1 NO.....2 OTHER (SPECIFY) _____ .....6 DON'T KNOW.....8

NO.	QUESTION	RESPONSE
J2.16	Did you apply fertilizer to the beans in the past year?	YES ..... 1 NO ..... 2→ J2.19
J2.17	At which times did you apply fertilizer to the beans? SELECT ALL THAT APPLY	PLANTING ..... A MID-CROP ..... B OTHER (SPECIFY)_____ ..... Z
J2.18	What type of fertilizer did you use? SELECT ALL THAT APPLY	ORGANIC ..... A INORGANIC ..... B FOLIAR FEEDS ..... C OTHER (SPECIFY)_____ ..... Z
J2.19	Inorganic fertilizer is a man-made fertilizer that you can buy in a bag at the shop. Have you been trained in how to use and apply inorganic fertilizer for beans?	YES ..... 1 NO 2
J2.20	Did you have any insect, rodent, or disease attacks on your beans in the past year?	YES ..... 1 NO 2
J2.21	Did you use chemicals to control insect, rodent, or disease attacks on the beans?	YES ..... 1 NO ..... 2→ J2.23
J2.22	Was the use of chemicals preventive, or was it in response to an insect, rodent, or disease attack?	PREVENTIVE/ROUTINE ..... 1 RESPONSE TO ATTACK 2
J2.23	Have you been trained in when to use and how to apply pesticides for beans?	YES ..... 1 NO 2
J2.24	How many times did you control weeds among your bean crops in the past year?	NUMBER OF TIMES: ☐☐ NONE ..... 95 → J2.26
J2.25	How did you control the weeds among your bean crops? SELECT ALL THAT APPLY	HOE ..... A HERBICIDE ..... B MULCHING ..... C INTERCROPPING ..... D SLASHING ..... D PULL BY HAND ..... E
J2.26	Have you been trained in when to use and how to apply herbicides for beans?	YES ..... 1 NO 2

NO.	QUESTION	RESPONSE
J2.27	In the past year, did you use any of the following techniques to manage soil and water for your bean crop? SELECT ALL THAT APPLY Terracing? Mulching? Soil bands or trenches? Intercropping? Crop rotation? Row planting? Some other technique? IF YES: What was the technique?	TERRACING ..... A MULCHING ..... B SOIL BANDS/TRENCHES ..... C INTERCROPPING ..... D CROP ROTATION ..... E ROW PLANTING ..... F NONE ..... X OTHER (SPECIFY)_____ ..... Z
J2.28	Besides rainfall, did you use any irrigation for the beans?	YES ..... 1 NO ..... 2→ J2.30
J2.29	What type of irrigation did you use? SELECT ALL THAT APPLY	BY HAND (WATERING CAN, HOSE, ETC.) ..... A CANALS ..... B PERMANENT HOSE ..... C PUMPS ..... D OTHER (SPECIFY)_____ ..... Z
J2.30	How did you harvest the beans?	BY HAND ONLY ..... 1 WITH A MACHINE ONLY ..... 2 SOME BY HAND, SOME WITH A MACHINE ..... 3 NOT YET HARVESTED 4
J2.31	Did you dry any of your bean harvest before sale or use?	YES ..... 1 NO ..... 2→ J2.33
J2.32	What did you dry the beans on? SELECT ALL THAT APPLY	BARE GROUND ..... A GROUND PLASTERED WITH COW DUNG ..... B LEFT TO DRY ON PLANT IN FIELD ..... C TARPAULINS ..... D DRYING YARD ..... E DRYING RACKS ..... F SOLAR DRYERS ..... G MECHANIZED DRYERS ..... H OTHER (SPECIFY)_____ ..... Z
J2.33	How did you shell the beans? SELECT ALL THAT APPLY	BY HAND ONLY ..... A BY STICKS ..... B WITH A SHELLING MACHINE ..... C DID NOT SHELL ..... D OTHER (SPECIFY)_____ ..... Z
J2.34	Did you put the beans in bags after harvest for storage or transport?	YES ..... 1 NO ..... 2→ J2.36

NO.	QUESTION	RESPONSE
J2.35	What type of storage bag did you use for the beans?	WOVEN BAG, SINGLE LAYER.....1 TWO- OR THREE-LAYERED WOVEN BAGS .....2 HERMETIC BAG.....3
J2.36	Did you use any of the following storage locations to store the beans? SELECT ALL THAT APPLY Residential house? Cribs? Granaries? Other constructed stores? Warehouses? Some other type of location? IF YES: What was the storage location you used?	RESIDENTIAL HOUSE.....A CRIBS .....B GRANARIES .....C OTHER CONSTRUCTED STORES .....D WAREHOUSES .....E NONE/DID NOT STORE ANY BEANS .....X → SKIP TO J3.01 OTHER (SPECIFY)_____..... Z
J2.37	Were your beans attacked by insects, rodents, or disease while in storage?	YES .....1 NO.....2

NO.	QUESTION	RESPONSE
J3.01	CHECK D14B: DID RESPONDENT CULTIVATE COFFEE IN THE PAST 1 YEAR?	YES.....1 NO.....2 → SKIP TO END
J3.02	What was your main source of coffee seedlings?	LOCAL NURSERY.....1 OWN NURSERY.....2 FROM FRIEND/RELATIVE.....3 OTHER (SPECIFY)_____.....6 DON'T KNOW.....8
J3.03A	CHECK J3.02: DID RESPONDENT PURCHASE COFFEE FROM A LOCAL NURSERY (1)?	YES.....1 NO.....2 → J3.04A
J3.03B	Was the nursery where you purchased the coffee seedlings a registered or certified nursery?	YES.....1 NO.....2 DON'T KNOW.....8
J3.04A	CHECK J3.02: DID RESPONDENT PURCHASE COFFEE SEEDLINGS FROM A FRIEND OR RELATIVE (3)?	YES.....1 NO.....2 → J3.05
J3.04B	Why did you purchase coffee seedlings from a friend or relative?	LESS EXPENSIVE.....1 MORE ACCESSIBLE THAN MARKET/DEALER .....2 QUALITY OF COFFEE BEAN YIELD IS GOOD .....3 OTHER (SPECIFY)_____.....6
J3.05	Was the coffee grown for household consumption, or was it grown to be sold or traded in the market?	GROWN FOR HH CONSUMPTION ONLY .....1 GROWN FOR MARKET ONLY .....2 GROWN FOR BOTH HH CONSUMPTION & MARKET .....3 OTHER (SPECIFY) _____ 6
J3.06	Did you apply fertilizer to the coffee?	YES.....1 NO.....2→ J3.09
J3.07	At which times did you apply fertilizer to the coffee trees?	(SPECIFY)_____ ..... Z
J3.08	What type of fertilizer did you use? SELECT ALL THAT APPLY	ORGANIC .....A INORGANIC.....B FOLIAR SPRAY .....C OTHER (SPECIFY)_____..... Z
J3.09	Have you been trained in how to use and apply fertilizer for coffee trees?	YES.....1 NO.....2

NO.	QUESTION	RESPONSE
J3.10	Did you have any insect, rodent, or disease attacks on your coffee trees in the past year?	YES.....1 NO.....2
J3.11	Did you use chemicals to control insect, rodent, or disease attacks on your coffee trees?	YES.....1 NO.....2→ J3.13
J3.12	Was the use of chemicals preventive, or was it in response to an insect, rodent, or disease attack?	PREVENTIVE/ROUTINE.....1 RESPONSE TO ATTACK.....2
J3.13	Have you been trained in when to use and how to apply pesticides for coffee trees?	YES.....1 NO.....2
J3.14	How many times did you control weeds among your coffee trees in the past year?	NUMBER OF TIMES: ☐☐ NONE.....95 → J3.16
J3.15	How did you control the weeds among your coffee trees? SELECT ALL THAT APPLY	HOE.....A HERBICIDE.....B MULCHING.....C INTERCROPPING.....D SLASHING.....E PULL BY HAND.....F
J3.16	Have you been trained in when to use and how to apply herbicides for coffee trees?	YES.....1 NO.....2
J3.17	Are your coffee trees planted using any of the following techniques to take account of soil and moisture conservation? SELECT ALL THAT APPLY Contouring? Mulching? Intercropping? Some other way? IF YES: What way?	CONTOURING.....A MULCHING.....B INTERCROPPING.....C NONE.....X OTHER (SPECIFY)_____.....Z
J3.18	Did you dry your coffee harvest before sale or use?	YES.....1 NO.....2→ J3.20
J3.19	How did you dry the coffee? SELECT ALL THAT APPLY	BARE GROUND.....A GROUND PLASTERED WITH COW DUNG.....B LEFT TO DRY ON PLANT IN FIELD.....C TARPAULINS.....D DRYING YARD.....E DRYING RACKS.....F SOLAR DRYERS.....G MECHANIZED DRYERS.....H OTHER (SPECIFY)_____.....Z

NO.	QUESTION	RESPONSE
J3.20	Did you put the coffee in bags after harvest for storage?	YES ..... 1 NO ..... 2→ J3.22
J3.21	What type of storage bag did you use for the coffee?	WOVEN BAG, SINGLE LAYER ..... 1 TWO- OR THREE-LAYERED WOVEN BAGS ..... 2 HERMETIC BAG 3
J3.22	Did you use any of the following storage locations to store the coffee? SELECT ALL THAT APPLY Residential house? A storage unit in your home lot? Other constructed stores? Warehouses? Storage silos? Some other type of location? IF YES: What was the storage location you used?	RESIDENTIAL HOUSE ..... A STORAGE UNIT IN HOME LOT ..... B OTHER CONSTRUCTED STORES ..... C WAREHOUSES ..... D STORAGE SILOS ..... E NONE/DID NOT STORE ANY COFFEE ..... X→ END MODULE OTHER (SPECIFY)_____ ..... Z
J3.23	Was your coffee attacked by insects, rodents or disease while in storage?	YES ..... 1 NO 2

CONCLUDE THE INTERVIEW:

"Thank you very much for your time in responding to this survey. Your contributions are greatly appreciated."

Annex 1. Events Calendar

The purpose of this event calendar template is to assist in ascertaining dates of birth (month and year) for children identified as age 6 or under in the household roster. The local events calendar should be developed in conjunction with local key informants who have a good knowledge of past events in the areas to be surveyed; the events should be specific to the survey area and population at the [province/district] level. The final calendars should be tested by interviewers during the pilot to ensure that the calendar is appropriate for the local population.

LOCAL EVENTS CALENDAR (UGANDA)								
Month	**Events/Festivals**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
January	New Year's Day	1 Jan	1 Jan	1 Jan	1 Jan	1 Jan	1 Jan	1 Jan
	Liberation Day	26 Jan	26 Jan	26 Jan	26 Jan	26 Jan	26 Jan	26 Jan
March	International Women's Day	8 Mar	8 Mar	8 Mar	8 Mar	8 Mar	8 Mar	8 Mar
March or April	Good Friday	21 Mar	10 Apr	2 Apr	22 Apr	6 Apr	29 Mar	18 Apr
March or April	Easter Sunday	23 Mar	12 Apr	4 Apr	24 Apr	8 Apr	31 Mar	20 Apr
March or April	Easter Monday	24 Mar	13 Apr	5 Apr	25 Apr	9 Apr	1 Apr	21 April
May	Labor Day	1 May	1 May	1 May	1 May	1 May	1 May	1 May
June	Martyr's Day	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun	3 Jun
	National Heroes Day	9 Jun	9 Jun	9 Jun	9 Jun	9 Jun	9 Jun	9 Jun
Month varies	End of Ramadan (Eid ul-Fitr)	1 Oct	21 Sep	10 Sep	31 Aug	19 Aug	8 Aug	28 Jul
Month varies	Feast of Sacrifice (Eid al-Adha)	8 Dec	27 Nov	16 Nov	6 Nov	26 Oct	15 Oct	4 Oct
October	Independence Day	9 Oct	9 Oct	9 Oct	9 Oct	9 Oct	9 Oct	9 Oct
December	Christmas Day	25 Dec	25 Dec	25 Dec	25 Dec	25 Dec	25 Dec	25 Dec
	Boxing Day	26 Dec	26 Dec	26 Dec	26 Dec	26 Dec	26 Dec	26 Dec

Annex 2. Age/Birth Date Consistency Chart for Survey in 2015

The purpose of this chart is to check the consistency of reported ages and dates, and to help resolve any apparent inconsistencies. Please refer to the Interviewer's Manual for instructions on how to use the chart.

Current Age	Year of birth: Has not had birthday in 2015	Year of birth: Has already had birthday in 2015		Current Age	Year of birth: Has not had birthday in 2015	Year of birth: Has already had birthday in 2015
	Don't know				Don't know	
0	2014	--		30	1984	1985
1	2013	2014		31	1983	1984
2	2012	2013		32	1982	1983
3	2011	2012		33	1981	1982
4	2010	2011		34	1980	1981
5	2009	2010		35	1979	1980
6	2008	2009		36	1978	1979
7	2007	2008		37	1977	1978
8	2006	2007		38	1976	1977
9	2005	2006		39	1975	1976
10	2004	2005		40	1974	1975
11	2003	2004		41	1973	1974
12	2002	2003		42	1972	1973
13	2001	2002		43	1971	1972
14	2000	2001		44	1970	1971
15	1999	2000		45	1969	1970
16	1998	1999		46	1968	1969
17	1997	1998		47	1967	1968
18	1996	1997		48	1966	1967
19	1995	1996		49	1965	1966
20	1994	1995		50	1964	1965
21	1993	1994		51	1963	1964
22	1992	1993		52	1962	1963
23	1991	1992		53	1961	1962
24	1990	1991		54	1960	1961
25	1989	1990		55	1959	1960
26	1988	1989		56	1958	1959
27	1987	1988		57	1957	1958
28	1986	1987		58	1956	1957
29	1985	1986		59	1955	1956

Annex 4. Informed Consent Form for Respondents Answering Module F Who Were Not Consented for Prior Modules

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from SERVICE FOR GENERATIONS INTERNATIONAL. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. This part of the survey includes questions about availability of food in the household. The questions for this part of the survey will take about 5 minutes to complete. If additional questions are relevant for you to answer, the interview in total will take approximately 1-2 hours to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact SERVICE FOR GENERATIONS INTERNATIONAL by calling 0-312-517-670. We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____

DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1 ⟶ CONTINUE WITH MODULE F.

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 ⟶ END. **"Thank you very much for your time."**

Annex 5. Informed Consent Form for Respondents Answering Module G Who Were Not Consented for Prior Modules

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from SERVICE FOR GENERATIONS INTERNATIONAL. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. This part of the survey includes questions on how you make decisions about the work you do, and how you spend your time during the day. The questions for this part of the survey will take about 30 minutes to complete. If additional questions are relevant for you to answer, the interview in total will take approximately 1-2 hours to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact SERVICE FOR GENERATIONS INTERNATIONAL by calling 0-312-517-670. We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____

DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1 ⟶ CONTINUE WITH MODULE G.

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 ⟶ END. **"Thank you very much for your time."**

Annex 6. Informed Consent Form for Respondents Answering Module H (Women 15-49) Who Were Not Consented for Prior Modules

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from SERVICE FOR GENERATIONS INTERNATIONAL. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption and nutrition of women and children. This part of the survey includes questions on the kinds of foods you eat, and your nutritional status, including measurement of your weight and height. The questions for this part of the survey will take about 20 minutes to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact SERVICE FOR GENERATIONS INTERNATIONAL by calling 0-312-517-670. We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____

DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1 ⟶ CONTINUE WITH MODULE H.

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 ⟶ END. **"Thank you very much for your time."**

Annex 7. Informed Consent Form for Parents or Guardians of Children Eligible for Module I (Children 0-59 Months)

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from SERVICE FOR GENERATIONS INTERNATIONAL. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. This part of the survey includes questions on the kinds of foods your child eats, and [his/her/their] nutritional status, including measurement of [his/her/their] weight and height. The questions for this part of the survey will take about 20 minutes to complete per child. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a database, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact SERVICE FOR GENERATIONS INTERNATIONAL by calling 0-312-517-670.We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____

DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1 ⟶ CONTINUE WITH MODULE I.

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 ⟶ END. **"Thank you very much for your time."**

Annex 8. Informed Consent Form for the Person Eligible for Module J (Household Member Who Made the Most Decisions About Planting Crops in the Past Year)

STATEMENT TO BE READ TO THE RESPONDENT:
Thank you for the opportunity to speak with you. We are a research team from SERVICE FOR GENERATIONS INTERNATIONAL. We are conducting a survey to learn about agriculture, food security, food consumption, nutrition, and well-being of households in this area. Your household has been selected to participate in an interview that includes questions on topics such as your family background, dwelling characteristics, household expenditures and assets, agricultural technologies, food consumption, and nutrition of women and children. This part of the survey includes questions on growing certain kinds of crops. The questions for this part of the survey will take about 30 minutes to complete. Your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with anyone. After entering the questionnaire into a data base, we will destroy all information such as your name that could link these responses to you.

Do you have any questions about the survey or what I have said? If in the future you have any questions regarding the survey or the interview, or concerns or complaints, we welcome you to contact SERVICE FOR GENERATIONS INTERNATIONAL by calling 0-312-517-670. We will leave a copy of this statement and our organization's complete contact information with you so that you may contact us at any time.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER: _____

DATE: _____

RESPONDENT AGREES TO BE INTERVIEWED….1 ⟶ CONTINUE WITH MODULE J.

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED…….2 ⟶ END. **"Thank you very much for your time."**

Annex 9. Informed Consent Register

INTERVIEWER INSTRUCTIONS: KEEP THIS SHEET IN A SECURE PLACE SO YOU CAN EASILY AND QUICKLY IDENTIFY ELIGIBLE RESPONDENTS FOR DIFFERENT PARTS OF THE SURVEY AND CONFIRM THAT RESPONDENTS HAVE PROVIDED INFORMED CONSENT. USE THE COLUMN FOR INTERVIEWER NOTES TO ADD COMMENTS, REMINDERS, QUESTIONS, OR CONCERNS.

INFORMED CONSENT REGISTER – UGANDA				
Line Number	**First and Last Name**	**Age**	**Gender**	**Interviewer Notes**