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### Gender-Disaggregated Seasonal and Daily Calendars of Farmers in Uganda and Tanzania

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### Ethics Approval

*This research was approved by the Institutional Review Board of Clark University (IRB Proposal No. 2014-089; Date: 19/06/2015).*

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August 2021

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# Contents

Acknowledgments .....	iii
Summary.....	2
Introduction.....	3
Materials and Methods .....	4
Data Processing and Analysis .....	4
Results.....	5
Section 1: Socio-Demographic Characteristics of Participants.....	6
Section 2: Crops .....	7
2.1 Crops Grown .....	7
2.2 Crop Importance .....	8
2.3 Cropping Activities.....	11
Section 3: Seasonal Variation .....	16
3.1 Seasonal Variation .....	16
3.2 Cropping Activities across the Year.....	19
Section 4: Daily and Weekly Calendars.....	20
4.1 Weekly Activities .....	20
4.2 Daily Activities .....	23
Section 5: Conclusions .....	27
Literature Cited.....	29
Appendix .....	30
Crop Importance by Country.....	31
Monthly Total Crop Activities .....	31
Total Monthly Activities.....	36
Weather Type Intensity across the Year per District .....	38

## Tables

Table 1. Socio-demographic characteristics of participants (% of participants).....	6
Table 2. Crops grown by district in Uganda and Tanzania .....	7
Table 3. Crop importance for all by district.....	9
Table 4. Aggregated activities for banana.....	12
Table 5. Aggregated categories for activities reported in weekly calendar focus groups.....	21
Table 6. Number of FGDs reporting men’s and women’s daily activities.....	23
Table 7. Aggregated categories for activities reported in daily calendar focus groups.....	24
Table 8. Proportion of reported total hours spent on different activity categories over the course of a day.....	25
Table A1. Socio-demographic characteristics of participants disaggregated by sex and FGD type.....	30
Table A2. Crops grown at the study sites.....	31
Table A3. Sex-disaggregated cropping activities for banana .....	31



# Figures

Figure 1.	Crop importance for all by country .....	8
Figure 2.	Reported crop importance for women and men.....	9
Figure 3.	Crop importance for women by country.....	10
Figure 4.	Crop importance for men by country.....	10
Figure 5.	Banana production activities by sex .....	11
Figure 6.	Maize production activities by sex.....	12
Figure 7.	Millet production activities by sex .....	13
Figure 8.	Cassava production activities by sex.....	13
Figure 9.	Coffee cultivation and production activities by sex.....	14
Figure 10.	Bean cultivation activities by sex .....	14
Figure 11.	Tea cultivation activities by sex .....	15
Figure 12.	Sweet potato cultivation activities by sex .....	15
Figure 13.	Reported seasonal weather across all districts .....	17
Figure 14.	Seasonal variation in Uganda and Tanzania.....	17
Figure 15.	Seasonal variation across districts.....	18
Figure 16.	Crop activities and seasons across the year .....	19
Figure 17.	Total reported frequency of daily activity types for all seasons.....	21
Figure 18.	Total reported daily activities by category for busy months/seasons.....	22
Figure 19.	Total reported daily activities by category for quiet months/seasons .....	22
Figure 20.	Total reported weekly hours in different daily activities on busy and quiet days .....	24
Figure 21.	Proportion of day spent on different activity categories by women .....	25
Figure 22.	Proportion of day spent on different activity categories by men.....	26
Figure A1.	Total reported banana activities across the year .....	32
Figure A2.	Total reported maize activities across the year.....	33
Figure A3.	Total reported millet activities across the year .....	33
Figure A4.	Total reported cassava activities across the year.....	33
Figure A5.	Total reported coffee activities across the year.....	34
Figure A6.	Total reported bean activities across the year. ....	34
Figure A7.	Total reported tea activities across the year. ....	35
Figure A8.	Total reported sweet potato activities across the year.....	35
Figure A9.	Total reported green vegetable activities across the year .....	36
Figure A10.	Total number of different activities reported for each day during all seasons .....	36
Figure A11.	Total number of different activities reported for each day during a busy season .....	37
Figure A12.	Total number of different activities reported for each day during a quiet season .....	37
Figure A13.	Reported seasonal weather in Uganda’s Luweero District.....	38
Figure A14.	Reported seasonal weather in Uganda’s Mbarara District .....	38
Figure A15.	Reported seasonal weather in Tanzania’s Bukoba District.....	39
Figure A16.	Reported seasonal weather in Tanzania’s Meru District.....	39
Figure A17.	Reported seasonal weather in Tanzania’s Moshi District.....	40
Figure A18.	Reported seasonal weather in Tanzania’s Rungwe District .....	40



# Summary

This report discusses the agricultural activities (seasonal, weekly, and daily) that take place in a typical year to provide insight into men's and women's perceptions of the seasons, agricultural activities, crops grown, and sex-disaggregated division of labor related to those crops and activities performed during specific times in a day or week in selected regions of Uganda and Tanzania. Qualitative data were collected from 38 sex-disaggregated focus group discussions (FGDs) conducted with a total of 341 participants. Sixteen FGDs consisted of men only and 22 consisted of women only. Research was conducted in two districts in Uganda (Luweero in the Central Region and Mbarara in the Western Region) and four districts in Tanzania – Meru in Arusha Region, Moshi in Kilimanjaro (Northeastern zone), Rungwe in Mbeya Region (Southern Highland zone), and Bukoba in Kagera Region (Northwestern zone). Agriculture was the main occupation for the participants in both countries. The ten most commonly grown crops across all districts included banana, maize, beans, coffee, sweet potatoes, cassava, groundnuts, and vegetables (including leafy greens), with banana being ranked as the most important crop in both countries. Maize and beans were mostly emphasized by women as important food and cash crops. The ranking of crop importance provides insight into what participants viewed as important for meeting household subsistence needs as well as providing cash income. The month of March was reported as the start of the farming season by most FGDs, with peak rainfall occurring in April and November. Peak sunshine occurred in July and January/February. There were also some slight seasonal variations across the different districts in the timing and types of cropping activities. For instance, most sweet potato activity takes place during the rainy

season, while for beans and banana, two peaks of activities occur, one in the rainy season and one in the dry season. Coffee activities increase and decrease when bean and banana activities decrease and increase, respectively, indicating when labor can be transferred between these crops. The division of labor by men and women showed that cropping activities for banana were mostly done by men as they spent more labor on banana than on other crops. As such, banana was regarded as a men's crop. These activities, which include land preparation, procuring planting material, and digging holes and trenches, were not specific to a banana usage type (e.g., dessert, cooking, beer). Similar to banana, coffee was considered a cash and men's crop, as men undertake most (72%) of the cultivation activities. Maize production activities were undertaken by 59% women and 41% men, while women undertook most (81%) of the bean production activities. The types of activities done over a week in busy and quiet months, for instance, home activities, child care, and farm work, occurred consistently across the week. Some activities took place on specific days of the week such as worship in mosques or churches. Sunday was reported as a specific rest day. Home, farming, and livestock activities occur throughout the year regardless of the season. Daily activities such as those done around the home (e.g., food preparation) were consistently undertaken regardless of the season (busy or quiet). Daily activities differed between men and women. While men reported more time spent resting and socializing than women on both busy and quiet days, women reported more time in food preparation, child care, and home activities (which include cleaning but also making handicrafts or other income-generating activities).



Photo: CIAT/G. Smith

# Introduction

Seasonal, weekly, and daily calendars are qualitative participatory rural appraisal (PRA) tools. PRA tools are often praised for consensus building, as participants work together in small groups to create maps, graphs, or resource lists. These tools allow men and women to discuss how they perceive their own and others' labor participation in the daily operations of running a household and a farm. Calendars provide insight into how men and women farmers perceive how they themselves and others (usually of the opposite sex) spend their time in different agricultural and domestic tasks. These simple tools engage participants in both verbal and non-verbal ways and allow them to visually depict how they spend time over a particular period of time (a day, a week, or a month in the agricultural season) and on what tasks. Given the seasonality of agriculture, for the weekly and daily calendars, participants described what they perceived to be their workload (and that of their spouses, time permitting) during a "busy" day in the agricultural cycle and during a "quiet" day (i.e., when planting is finished and the harvest has yet to begin). Seasonal calendar activity did not use the notion of busy or quiet, but rather focused on activities undertaken as well as the general climate and weather patterns during that particular month of the year.

The advantages of PRA methods are that the visual nature of the exercise is generally easy for all participants to understand. As the topics of agricultural labor and planted crops are ones that all participants have in common, the nature of the information is not necessarily private or risky to discuss (Nchanji et al., 2017). As participants can draw in their own calendar contributions, the facilitator of the exercise does not hold all the power to determine the exercise's direction and what information can or cannot be placed on the calendar, which contributes to the idea that PRA tools privilege participants' knowledge (Sieber et al., 2014). Given the focus on weather and climate, Sieber et al. (2014) state that seasonal calendars "represent ... the interrelationship of knowledge" of phenomena, such as "climate characteristics, reproductive periods, availability of resources, the periodic incidence of pests and diseases" (2014:50), and the presence or absence of crop yields.

Critics of calendar methods note that the data might be inaccurate as the tool relies on memory, "and could even be biased because of hidden agendas" held by participants (Salm, n.d.). To overcome such shortcomings and to increase the trustworthiness and credibility of the calendar-gathered data in the BBB baseline study, we engaged in methods triangulation (Patton, 2002), cross-referencing calendar data with



other baseline study data collected (e.g., standardized household-level questionnaires, wealth-ranking exercises) to take account of consistencies and inconsistencies across the different tools.

This report presents the results of seasonal, weekly, and daily calendar exercises conducted in 2015-2016 through 38 sex-disaggregated focus group discussions (FGDs) in Tanzania and Uganda. The seasonal calendar FGD tool<sup>1</sup> was used to discuss the agricultural activities that take place in a typical year, including seasons, crops grown in the village, activities required to produce the most important crops grown, and the sex-disaggregated division of labor related to those crops. The weekly and daily calendar FGD tool<sup>2</sup> was used to discuss the activities that participants perform in a typical busy week in a busy season, and, if time allowed, also the activities that they and their spouses perform in a typical quiet week in a quiet season. The findings presented in this report also complement other quantitative and qualitative methods used in the baseline research for the 'Breeding Better Bananas' project, which include a household-level questionnaire conducted with 1,319 participants and other participatory rural appraisal tools that focused on banana trait preferences (Marimo et al., 2019) and community wealth ranking (Marimo et al., forthcoming). The overall aim of the baseline study was to understand agricultural production systems and the socioeconomic context of these systems in the target regions.

1 <https://hdl.handle.net/10568/91042>

2 <https://hdl.handle.net/10568/91043>



# Materials and Methods

Baseline data were collected from two districts in Uganda (Luweero in the Central Region and Mbarara in the Western Region) and four districts in Tanzania – Meru in Arusha Region, Moshi in Kilimanjaro (Northeastern zone), Rungwe in Mbeya Region (Southern Highland zone), and Bukoba in Kagera Region (Northwestern zone) – during 2015–2016. The baseline study was done prior to conducting on-station and on-farm evaluations of new NARITA<sup>3</sup> hybrid banana cultivars. Meru and Moshi districts in Tanzania were sampled as one district as they are linked to one on-station trial; however, analysis was done separately.

The districts were purposively sampled, given the importance of banana production in these areas for food and income,<sup>4</sup> and were selected by project partners as the intended target areas for the introduction of new banana cultivars.

Within each district, a four-stage sampling scheme was used, in which administrative lists were created for each sub-unit and random sampling was used to select the next sub-units:

1. In a first step, for each district, a list of all sub-counties (for Uganda) or divisions (for Tanzania) was compiled, all non-banana-producing sub-counties/divisions were removed from the list, and the remaining sub-counties/divisions were numbered and one to three sub-counties/divisions that grow banana were selected using a random number generator.
2. In a second step, for each selected sub-county/division, a list of all parishes (for Uganda) or wards (for Tanzania) was compiled, all non-banana-producing parishes/wards were removed from the list, and the remaining parishes/wards were numbered and two to five parishes/wards that grow banana were selected using a random number generator.
3. In a third step, for each selected parish/ward, a list of all villages was compiled, the villages were numbered, and one to two villages were selected within the largest parish/ward along with one to two villages in the smallest parish/ward using a random number generator.

4. To select participants for the focus group discussions, for each selected village, a list of banana farmers was compiled by the village chairman and a random number generator was used to select participating farmers.

In total, 38 FGDs were conducted, with 341 participants. Sixteen FGDs consisted of men only (143 participants) and 22 FGDs were women only (198 participants). Twenty-three FGDs (9 men only and 14 women only; 8 in Uganda and 15 in Tanzania) focused on the seasonal calendar exercise and 15 FGDs (7 men only and 8 women only; 7 in Uganda and 8 in Tanzania) covered weekly and daily activities. Participants could take part in only one FGD. The average number of participants in each FGD was nine.

Before conducting any activities, informed consent was sought from all participants in the local language. During the group discussions, the local languages of the respective localities were used as the medium of communication to increase participation and capture detailed information. Handwritten notes and visual pictorials were used to capture information during the discussions using notebooks and flip charts.

## Data Processing and Analysis

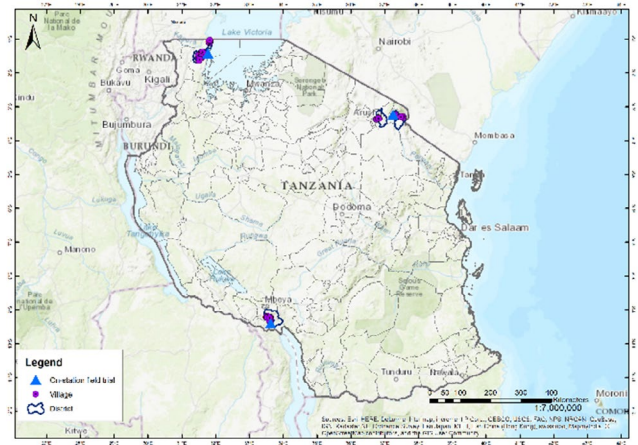
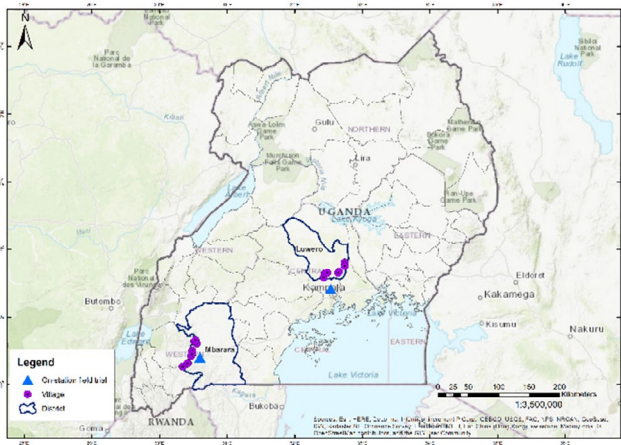
After data collection, all the data were translated into English. The translators were native speakers who were familiar with the target areas and ensured that as much detail and as many nuances were captured. The handwritten notes and information from pictorials drawn during the exercise were combined and transcribed into an electronic format using Microsoft (MS) Word. Data cleaning, coding, and analysis followed a series of steps. First, the transcribed data were transferred from MS Word to Excel, where they were systematically and thematically coded. When text was transferred to Excel, it was categorized in columns/rows based on the main topics from the FGD script/guideline. The data were then coded based on different themes and sorted for analysis. This was an iterative process that involved coding, recording, and sorting until all the data were organized and ready for analyses. Data analyses were conducted in Excel using content analysis, means, frequencies, percentages, and graphs.

3 <http://www.promusa.org/NARITA+hybrids>

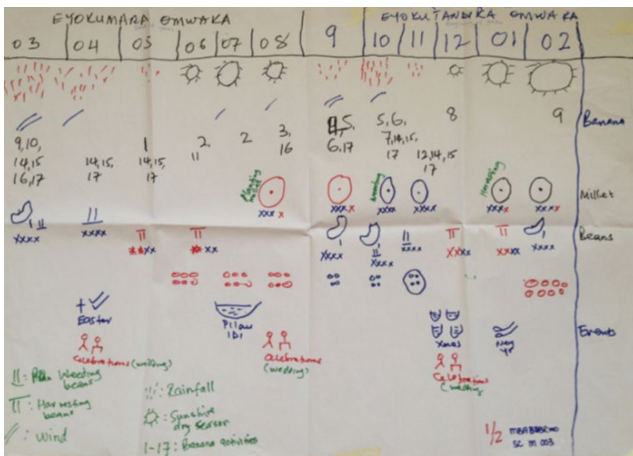
4 Kilimo Trust 2012: Banana Value Chain(s) in the EAC: consumption, productivity and challenges. <https://docplayer.net/61355939-Banana-value-chain-s-in-east-africa.html>



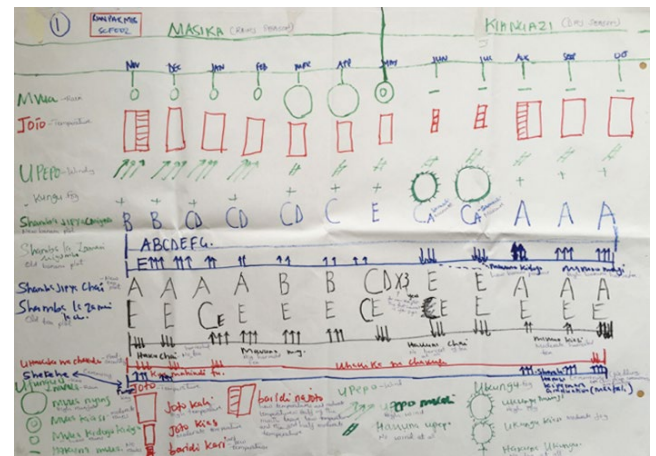




Maps showing the study areas in Uganda and Tanzania.



Seasonal calendar (men-only FGD, Mbarara, Uganda)



Seasonal calendar (women-only FGD, Rungwe, Tanzania)

## Results

Section 1 is an overview of the demographic characteristics of the participants. Section 2 highlights the crops grown in different districts, their relative importance, and the main activities associated with their production, with data disaggregated by sex. Section 3 covers the climatic seasons in the different districts and the seasonal variation in activities associated with the production of banana and the other two most important crops across the year. Section 4 summarizes the daily and weekly calendar, including differences by season and sex of the participants. Section 5 is a brief discussion of the results reported in Sections 2 to 4.



Photo: R. Crichton

# Section 1: Socio-Demographic Characteristics of Participants

The socio-demographic characteristics of the participants who took part in the FGDs are summarized in Table 1. Most participants were more than 30 years old (87%) and just over half were from 31 to 50 years old (58%). The men were slightly older than the women participants in both countries. The majority of the participants were married/cohabitating (73%) and, in both countries, a higher proportion of women was widowed (18% for women vis-à-vis 1% for men across the two countries). Most participants had primary-

level education (77%) across the two countries. More respondents in Uganda (22% and 25%) had received secondary education than in Tanzania (9% and 8%), for women and men, respectively. Uganda also had a higher proportion of participants with no formal education (14% and 3% in Uganda vis-à-vis 1% for both women and men in Tanzania). Agriculture was the most common occupation for participants in both countries (95%).

**Table 1. Socio-demographic characteristics of participants (% of participants)<sup>5</sup>.**

	Tanzania			Uganda			All			
	Women <i>n</i> = 112	Men <i>n</i> = 71	All <i>n</i> = 183	Women <i>n</i> = 86	Men <i>n</i> = 72	All <i>n</i> = 158	Women <i>n</i> = 198	Men <i>n</i> = 143	All <i>n</i> = 341	
<b>Marital status</b>	Single, never married	8	11	9	10	11	11	9	11	10
	Married/cohabiting	57	89	69	73	82	77	64	85	73
	Divorced, separated	13	0	8	5	6	5	9	3	6
	Widowed	22	0	14	12	1	7	18	1	11
<b>Education</b>	No formal education	1	1	1	14	3	9	7	2	5
	Primary	90	89	90	60	63	61	77	76	77
	Secondary	9	8	9	22	25	23	15	17	16
	Post-secondary	0	1	1	3	10	6	2	6	3
<b>Primary occupation</b>	Agriculture	98	96	97	92	92	92	95	94	95
	Salaried job	0	1	1	2	3	3	1	2	1
	Casual labour	0	0	0	0	0	0	0	0	0
	Other activities	2	3	2	6	6	6	4	4	4
<b>Age<sup>x</sup></b>	Youth (<30)	10	3	7	24	15	20	17	9	13
	Middle age (31-50)	62	61	61	55	53	54	59	57	58
	Older adults (>50)	28	37	31	21	32	26	25	34	29
	Average age (yrs.)*	44 (11)	48 (11)	46 (11)	41 (12)	44 (13)	42 (13)	43 (12)	46 (12)	44 (12)

<sup>x</sup> Five women FGD participants from Tanzania did not report their age. These observations were excluded from the analysis for age.

\* Presented as mean, standard deviation in parentheses.

<sup>5</sup> Socio-demographic characteristics disaggregated by the different types of FGDs are available in Appendix A.



## Section 2: Crops

### 2.1 Crops Grown

This section summarizes data from 23 FGDs (9 in Uganda, 14 in Tanzania) covering the type of crops grown in the districts. The ten most commonly grown crops cited by focus group participants across all districts included banana, maize, beans, coffee, sweet potatoes, cassava, groundnuts, vegetables (including leafy greens), and avocado. Participants in all districts reported growing banana, maize, and beans (Table 2). There were some differences between Tanzania and Uganda, with participants from all Ugandan sites reporting growing cassava and sweet potatoes, while

coffee was reported to be grown at all Tanzanian sites. Soybeans were reported to be grown only in Uganda, while taro, tea, and bambara nuts were reported only in Tanzania. Cassava, millet, peas, trees, fruit trees (e.g., mango), and sorghum were more common in Uganda. Some crops were reported only in single districts, such as vanilla in Bukoba and cardamom, ginger, and tea in Rungwe. They are grown as cash crops. The aggregated crop importance by country is shown in Appendix Table A2.

**Table 2. Crops grown by district in Uganda and Tanzania.** Percentage of FGDs in which participants reported growing specific crops.

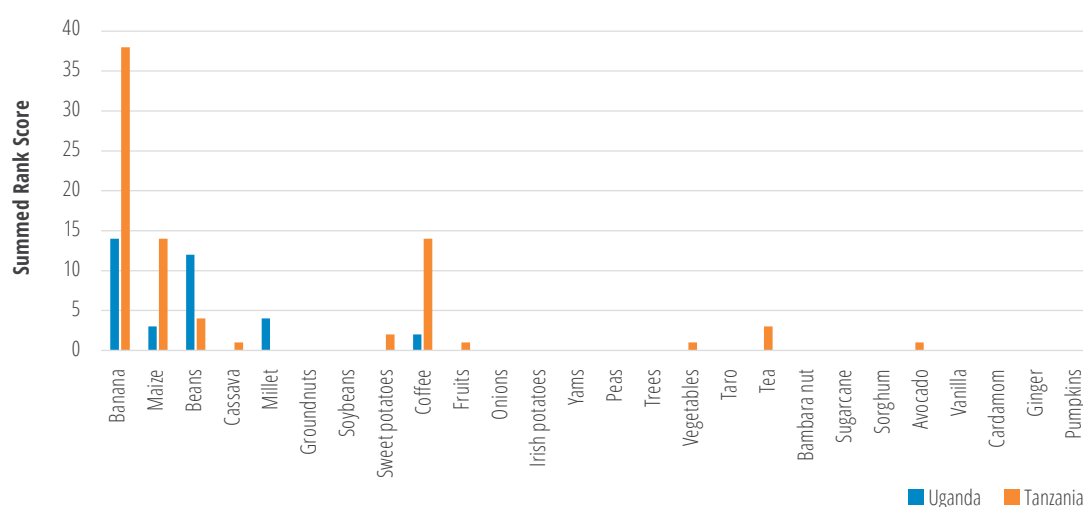
Country	Uganda		Tanzania			
	District Luweero <i>n</i> = 4	District Mbarara <i>n</i> = 4	District Bukoba <i>n</i> = 3	District Meru <i>n</i> = 2	District Moshi <i>n</i> = 4	District Rungwe <i>n</i> = 6
Banana	100	100	100	100	100	100
Maize	100	100	100	100	100	100
Beans	100	100	100	100	100	100
Cassava	100	100	100	100	0	83
Millet	0	100	33	0	0	0
Groundnuts	75	100	100	0	0	100
Soybeans	75	50	0	0	0	0
Sweet potatoes	100	100	100	100	50	83
Coffee	75	100	100	100	100	100
Fruits	75	50	0	0	25	67
Onions	0	25	0	0	0	0
Irish potatoes	25	75	0	100	25	0
Yams	75	25	100	0	50	50
Peas	50	50	33	0	0	17
Trees	50	50	0	0	0	33
Vegetables	100	25	100	100	75	50
Taro	0	0	0	50	50	50
Tea	0	0	0	0	0	67
Bambara nut	0	0	100	0	0	50
Sugarcane	25	25	67	0	0	33
Sorghum	25	25	33	0	0	0
Avocado	50	25	100	0	50	50
Vanilla	0	0	33	0	0	0
Cardamom	0	0	0	0	0	33
Ginger	0	0	0	0	0	17
Pumpkin	25	0	33	50	0	0



## 2.2 Crop Importance

As indicated in the methods section, men and women focus group participants were asked to rank the three most important crops in their community; the data from these activities are summarized in Figures 1 through 6 as crop ranking scores. The y-axis in each figure is the total inverted ranked score each crop received (i.e., if a crop was ranked the most important, it received a score of 3, the second most a 2, and the third most a 1). As not all focus groups reported crop importance, the sample size is 19 (rather than 23; two FGDs in Luweero District, Uganda, and one FGD in Rungwe District, Tanzania, did not report crop importance) (see Figures 2-4).

That said, differences to note that emerged from the crop ranking demonstrate that banana was an important crop for all districts (Figure 1; Table 3). A significant difference between crop ranking by men and women was the emphasis on maize and beans for women, and coffee for men, in both countries (Figure 2). Maize and beans were reported as important sources of food as well as crops with which women had roles in various activities. Coffee was reported as a cash crop, with coffee activities primarily conducted by men (see Section 2.3).



**Figure 1. Crop importance for all by country (FGD Uganda, n = 6; Tanzania, n = 13).**



Photo: World Agroforestry/Joseph Gachoka

*In the Ugandan districts, banana and beans had summed ranked scores of 14 and 12, respectively, while the next highest crops, maize and millet, had summed ranked scores of 3 and 4, respectively. The highest possible score for Uganda was 18. Participants in Tanzanian districts reported banana as the most important crop (summed ranked score of 38), while maize and coffee were the next highest, with summed ranked scores of 14 each. The highest possible score for Tanzania was 39.*

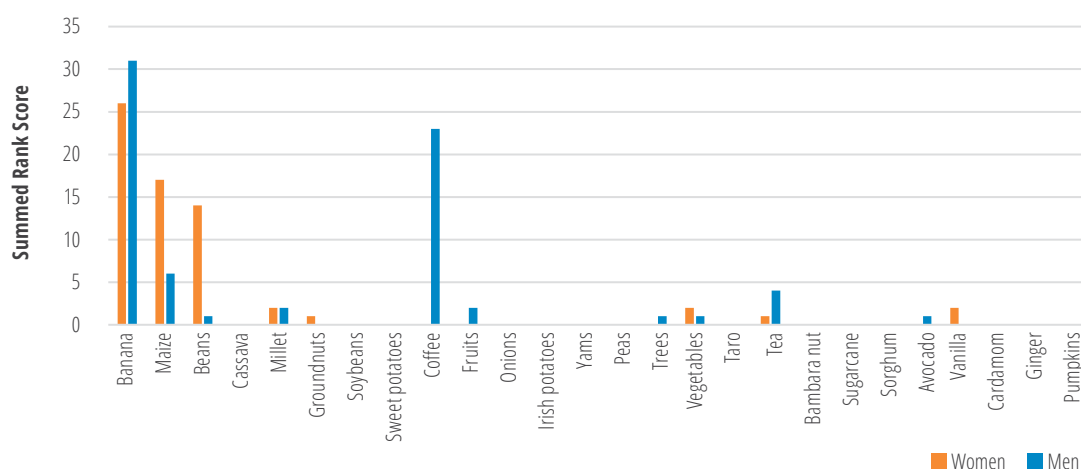


**Table 3. Crop importance for all by district.** The number indicates the summed inverted crop importance ranking for all FGDs in each district. For example, a crop ranked as most important would receive a score of 3; therefore, the higher the score, the more importance was placed on that crop. Crops with a score of 1 were given the lowest importance by one FGD and crops with scores greater than 1 were ranked as at least the third most important by more than one FGD.

Country	Uganda		Tanzania			
	District	Luweero FGD n=2	Mbarara FGD n=4	Bukoba FGD n=3	Meru FGD n=2	Moshi FGD n=4
Banana	2	12	9	5	6	18
Maize	3	0	3	1	1	9
Beans	6	6	3	0	0	1
Cassava	0	0	1	0	0	0
Millet	0	4	0	0	0	0
Sweet potatoes	0	0	2	0	0	0
Coffee	0	2	0	5	4	5
Fruits	0	0	0	0	1	0
Vegetables	0	0	0	1	0	0
Tea	0	0	0	0	0	3
Avocado	0	0	0	0	1	0

Variation also occurred at the district level in the two countries (Table 3). Banana was ranked the highest in all districts except Luweero, which ranked beans the highest. The two FGDs that ranked crop importance in Luweero were both women's FGDs, which may explain why beans were ranked the most important crop, followed by maize and then banana. Mbarara District was the only district to rank millet as an important crop, which may be related to the higher proportion of women only (three) to men only (one)

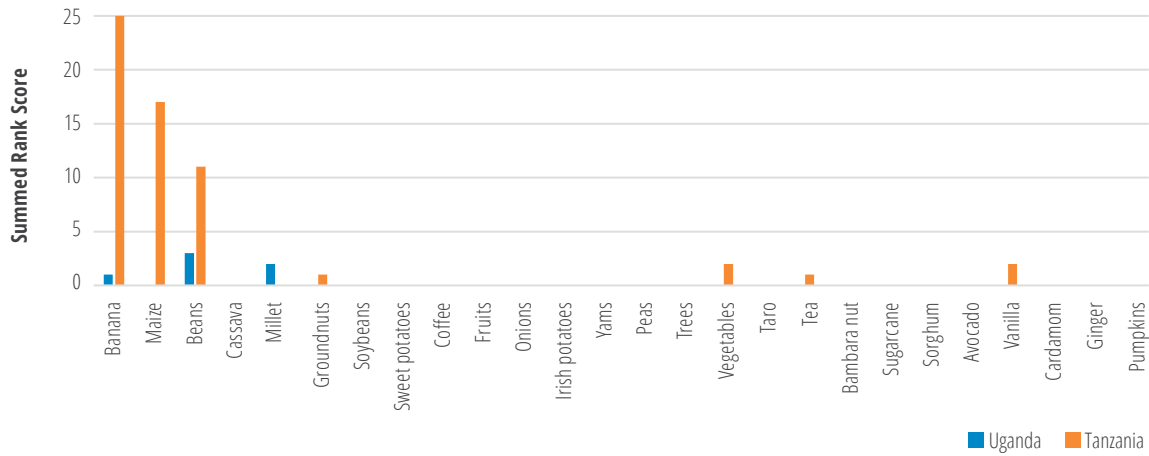
FGDs in the district. In Tanzania, coffee is ranked as tied for first, second, and third in Meru, Moshi, and Rungwe districts, respectively, while it is not ranked as an important crop in Bukoba. In Rungwe, Bukoba, Mbarara, and Luweero, a clearer hierarchy of crop importance emerged from the rankings, while in Meru and Moshi districts two crops emerged as the most important (banana and coffee in both), with two or three other crops ranked by one FGD but not by others as important.



**Figure 2. Reported crop importance for women and men (FGD n = 12).**

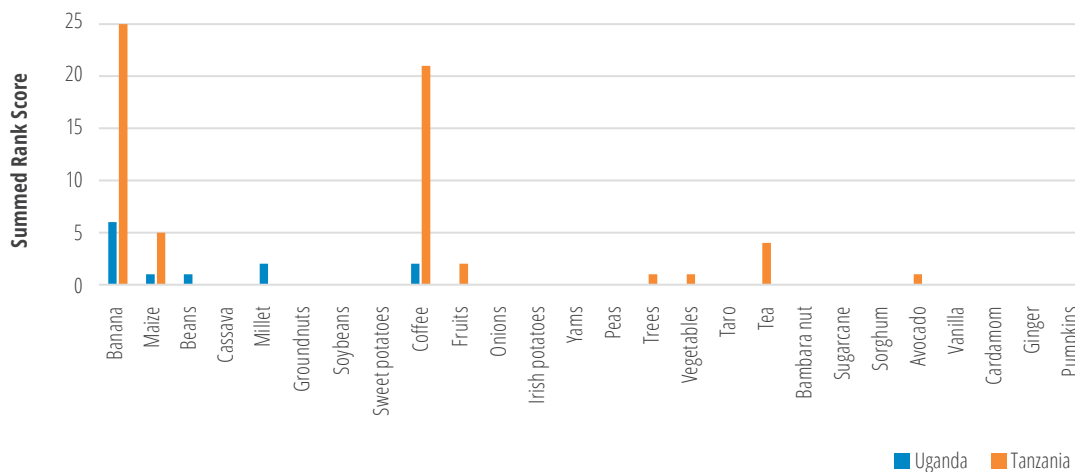
The highest possible score for women was 30 and the summed ranked score for banana was 26. In all but two focus groups, women identified banana as the most important crop for women (FGD  $n = 10$ ). The highest possible score for men was 36 and the summed ranked

score for banana was 31. Participants in all but three focus groups with men only identified banana as the most important crop for men, and all but one identified coffee as an important crop for men.



**Figure 3. Crop importance for women by country** (FGD Uganda  $n = 1$ ; Tanzania  $n = 9$ ).

As Figure 3 shows, only one Ugandan FGD reported crop importance specifically for women. At that site, beans were the most important, followed by millet and banana; hence, caution should be used when interpreting these results as they are based on a single FGD. The Tanzanian districts reported banana as the most important crop (summed ranked score of 25), while maize and beans were the next highest with summed ranked scores of 17 and 11, respectively. The highest possible score for Tanzania was 27.



**Figure 4. Crop importance for men by country** (FGD Uganda  $n = 2$ ; Tanzania  $n = 10$ ).

In the Ugandan districts, participants ranked banana as the most important crop for men (summed ranked score of 6), with millet and coffee as the next most important (summed ranked score of 2 for each) (Figure 4). The highest possible score for Uganda was 6, as only two Ugandan FGDs reported crop importance for men. Participants from the Tanzanian districts reported banana as the most important crop (summed ranked score of 25), while maize, beans, and coffee were the next highest, with summed ranked scores of 14 each. The highest possible score for Tanzania was 30.

## 2.3 Cropping Activities

This section focuses on cropping activities and men's and women's participation in each activity for each crop type (20 of the 23 FGDs provided gender-disaggregated data on cropping activities, with an example shown in the photo to the right). The crops included banana, maize, millet, cassava, coffee, beans, tea, sweet potato, and vegetables. Of these, tea, sweet potato, and vegetables<sup>6</sup> had only one FGD reporting specific cropping activities.

Banana cultivation occurred in all districts. Because of the variation when reporting and describing activities, Figure 5 aggregates activities into ten main categories (from 39 different reported activities; see Table 4 below and Table A3 in the Appendix for sex-disaggregated information for all categories). Participants could allocate 4 units per activity between men and women, and 63% of the total units were allocated to men (37% to women). Figure 5 shows the variation in this split, with women's participation in some activities higher than men's (e.g., selling and irrigation activities). There is a need to note that the activities for banana were not specific to a banana usage type (cooking, dessert,

*Shamba la Mijomba*

*Nam anefanya nini*

	<i>Wamama</i>	<i>Wababa</i>
1. <i>Kulima</i> - planting	XXX	X
2. <i>Kuchimba mashimo</i> - digging holes	XXX	X
3. <i>Kuwela mboke</i> - to put fertilizer	XXX	X
4. <i>Kuanda miche</i> - to prepare seedlings	XX	XX
5. <i>Kupanda</i> - to plant	XX	XX
6. <i>Palizi</i> - weeding	XXXX	
7. <i>Kukatia majani</i> - to leeching	XXXX	
8. <i>Kuvuna na kuka</i> - Harvesting and cleaning	XXXX	

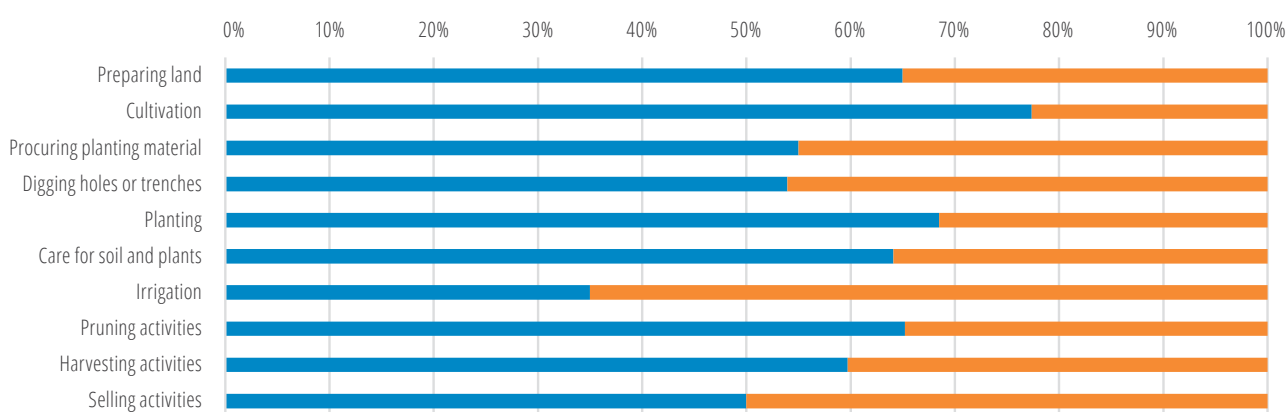
  

*Shamba la Zamani*

1. <i>Kupanga za machipukazi</i> - weeding	XX	XX
2. <i>Kupakia</i> - weeding	XXXX	
3. <i>Kuchimbia mboke</i> - to put fertilizer	XX	XX
4. <i>Kukatia majani</i> - to leeching	XXXX	
5. <i>Kuvuna/Kub/Kuza</i> - to harvest/cleaning/selling	XXXX	

Labour allocation exercise (women only FGD, Moshi, TZ).

roasting, beverage) but it is possible that differences exist in the activities for each of the types. Figures 6 to 12 aggregate activities for other crops.



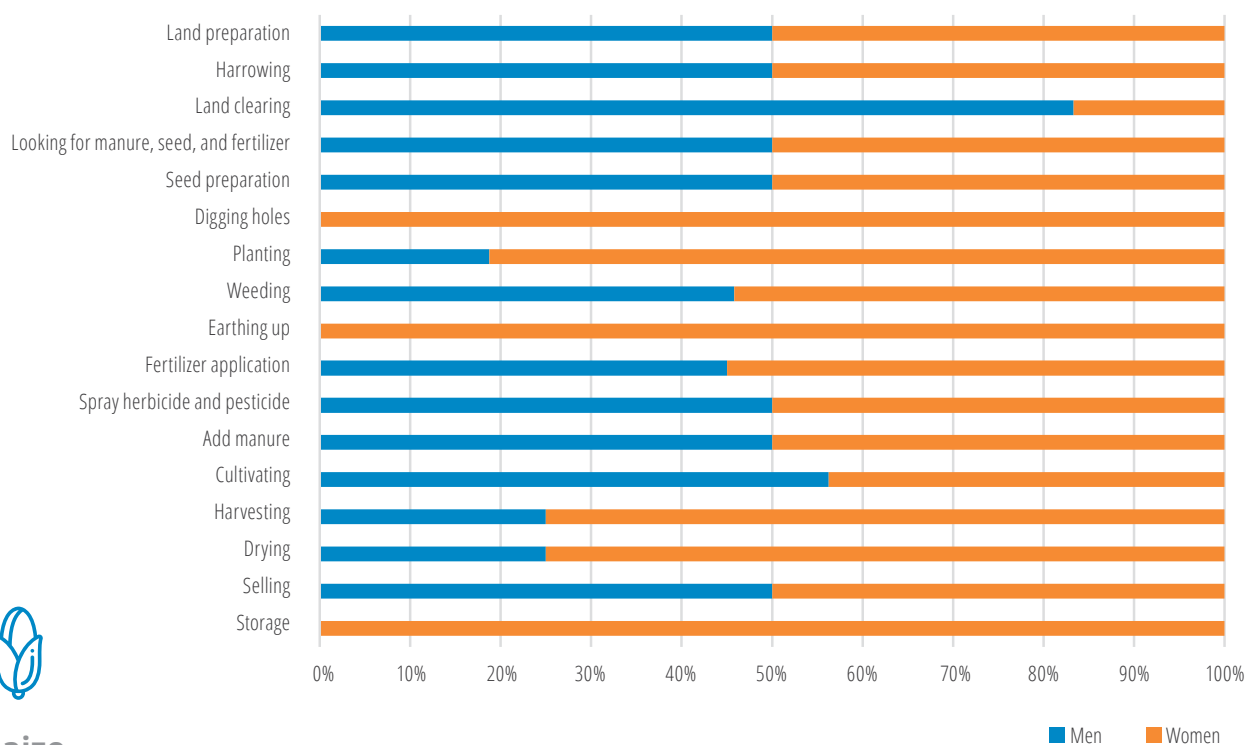
### Banana

Figure 5. Banana production activities by sex (aggregate categories) (FGD n = 19).

6 The term vegetables was used interchangeably in FGDs to refer to both leafy green vegetables and others (specific types were not mentioned).

**Table 4. Aggregated activities for banana.**

Aggregate activity	Types of activities recorded
Preparing land	Preparing to plant matooke; cutting grass/using herbicide; land clearing; burning waste material; land preparation
Procuring planting material	Sourcing for planting material: looking for suckers; selecting good-quality seed
Cultivation	Harrowing; ploughing; deep cultivation; primary cultivation; secondary cultivation; cultivation
Digging holes or trenches	Digging holes; digging trenches/planting
Planting	Planting; replacing old/diseased plants; planting (in holes)
Care for soil and plants	Fertilizer; mix soil with manure; add manure; weeding; mulching; staking
Irrigation	Irrigation
Pruning activities	Detrashing; deleafing; removing male buds; desuckering
Harvesting activities	Harvesting; harvesting for cooking; harvesting for selling; harvesting for eating and selling
Selling activities	Selling; carrying bananas to the roadside

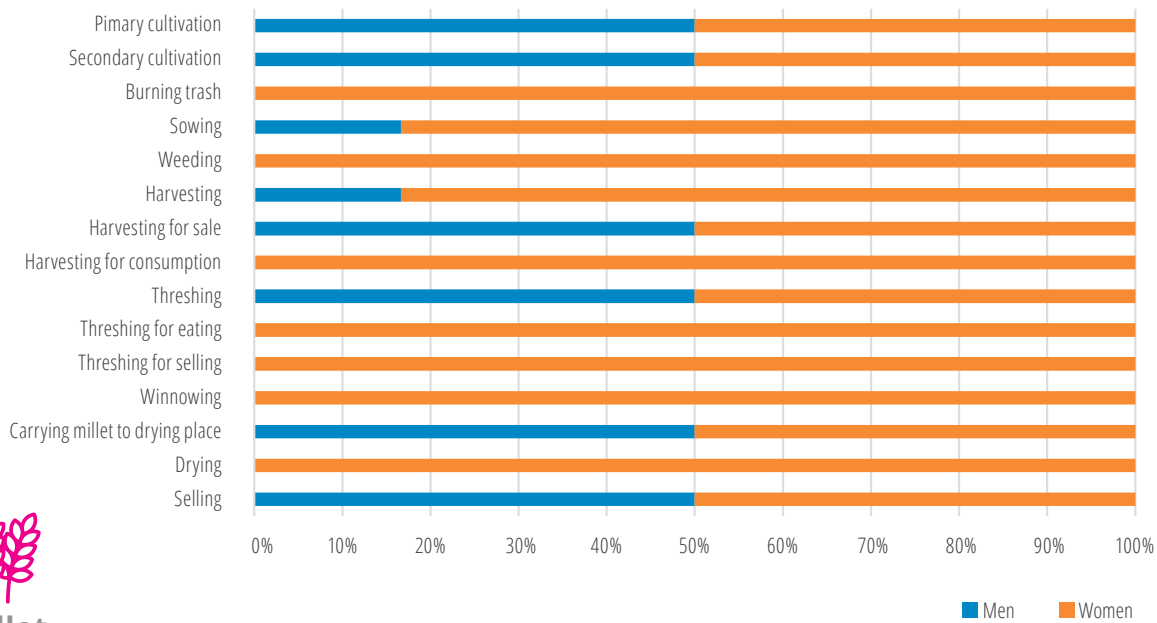


**Maize**

**Figure 6. Maize production activities by sex (FGD n = 6).**

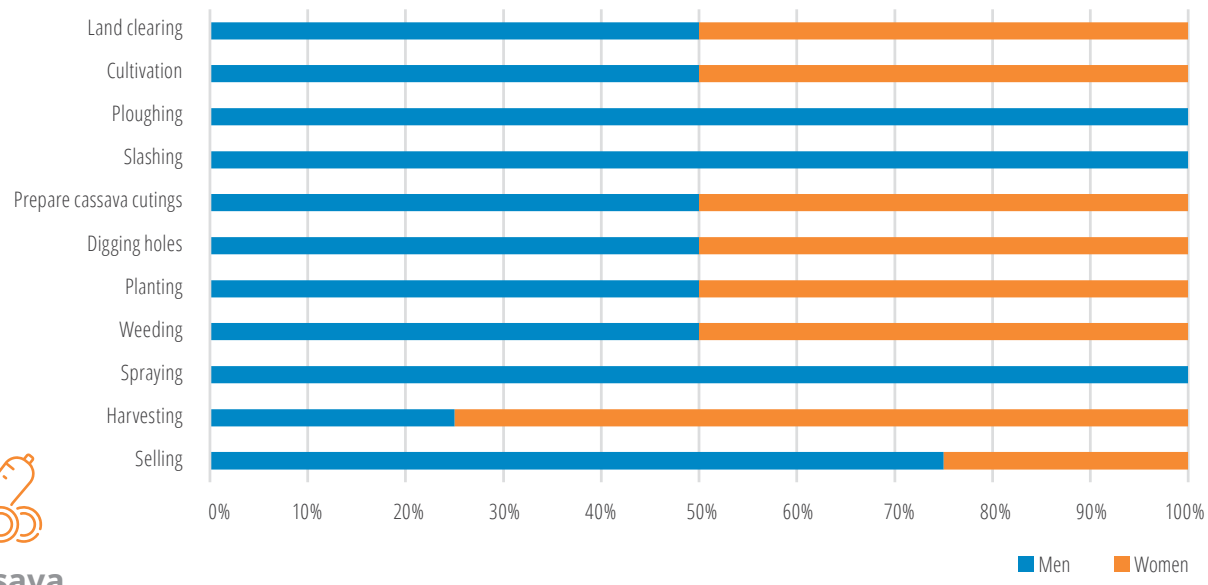
*Of all reported labor activities for maize, women were reported to undertake 59% and men 41%.*





**Figure 7. Millet production activities by sex** (FGD n = 3).

Focus group discussion participants reported women undertaking 80% and men 20% of millet activities. However, women are involved in at least 50% of all activities and men are involved in up to 50% of some activities, such as threshing, cultivation, selling, and carrying the millet.

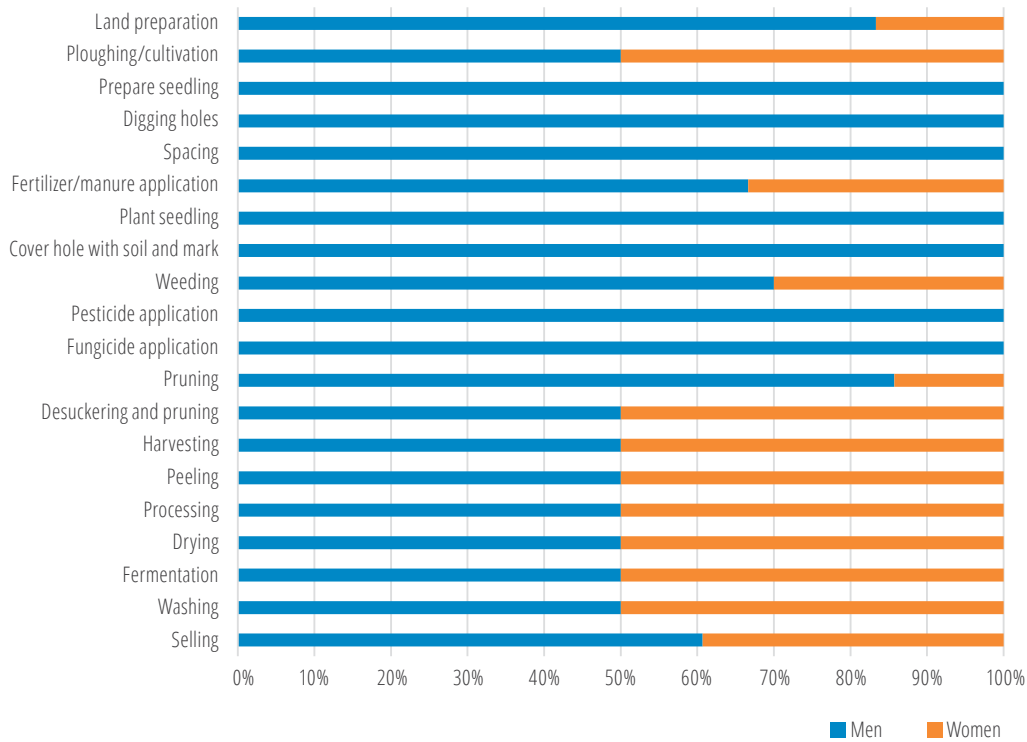


**Figure 8. Cassava production activities by sex** (FGD n = 2).

Participants from FGDs reported women undertaking 41% and men 59% of cassava activities. However, the small sample size (FGD n = 2, one men and one women focus group) makes drawing conclusions about how widespread this division of labor is difficult.



## Coffee

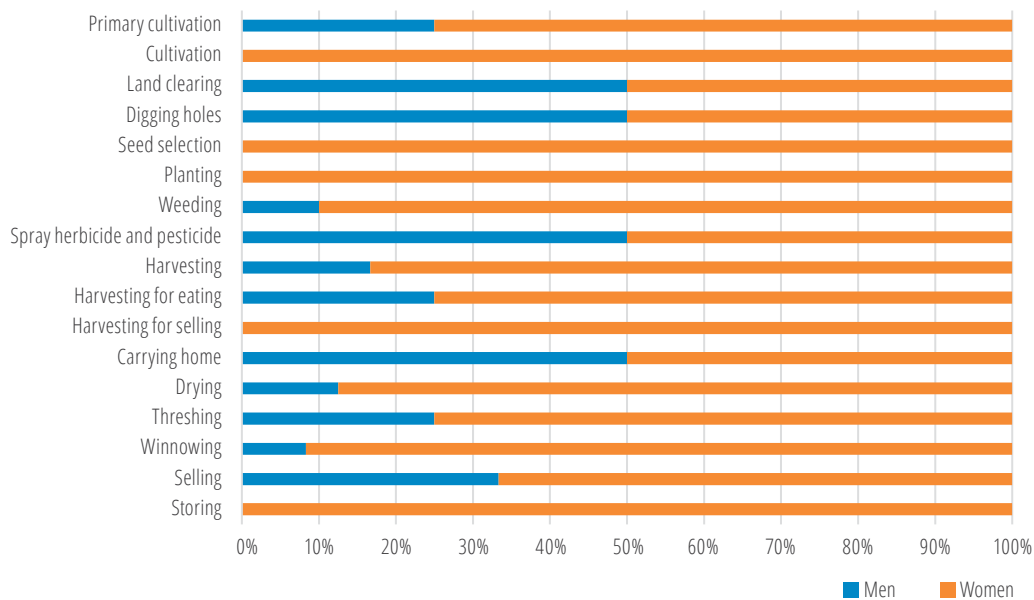


**Figure 9. Coffee cultivation and production activities by sex (FGD n = 6).**

Coffee was mentioned by three FGDs (one women only and two men only) specifically as a “male crop” as well as being a cash crop. A total of 26% of all seasonal calendar FGDs also made the association between cash crops being primarily men’s crops, and the division of labor reflects this, with women undertaking no more than 50% of any activity and 9 of 22 activities being performed exclusively by men. Of all reported labor activities for coffee, men were reported to undertake 72% and women 28%.



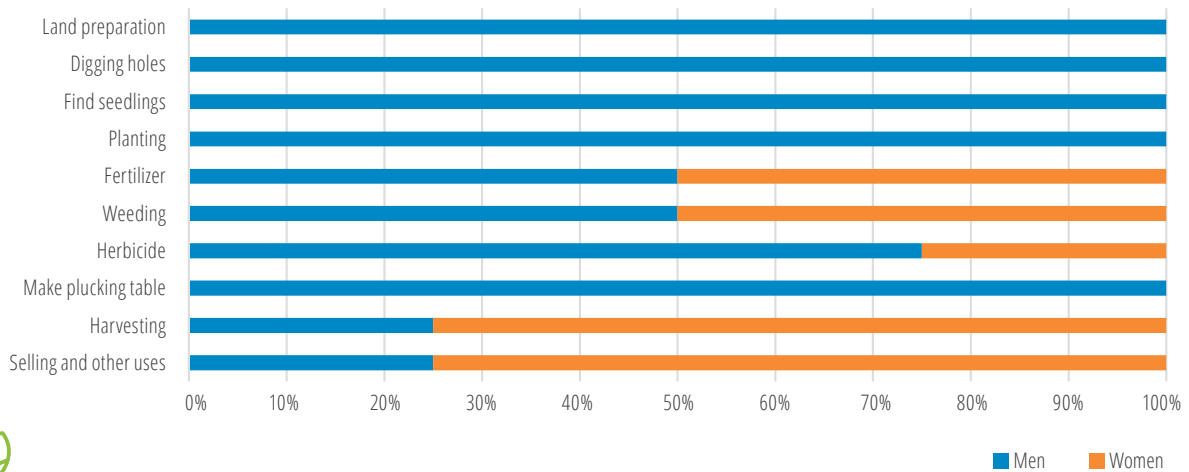
## Beans



**Figure 10. Bean cultivation activities by sex (FGD n = 5).**

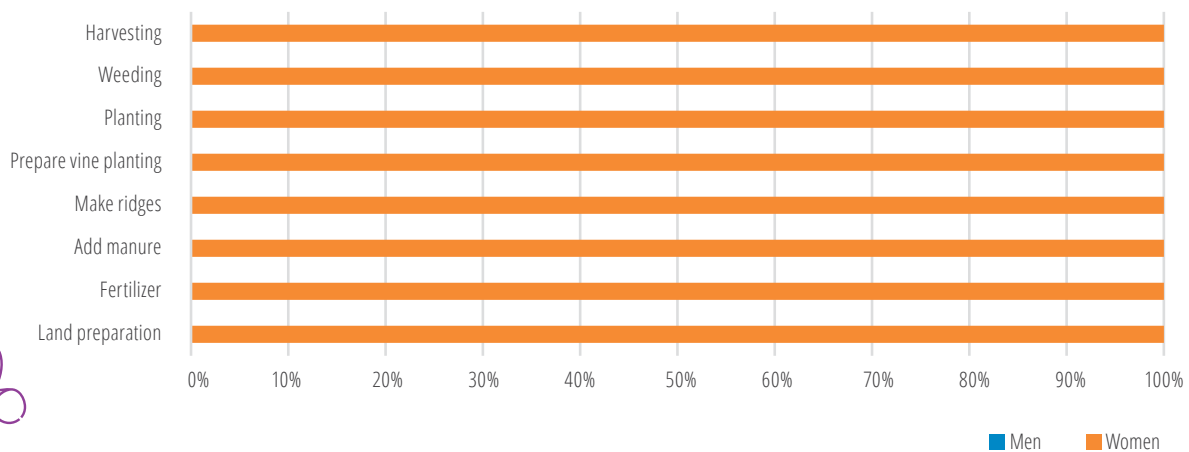
Focus group discussion participants reported a much higher proportion of women’s labor activities (81%) for beans than men’s (19%). Participants in FGDs also reported that they intercropped beans with maize or banana. Six focus groups explicitly referred to beans as a “women’s crop” and this is also indicated in the sex-disaggregated labor division for beans. These

FGDs also discussed beans as a “personal crop” for women, as well as being both a food and cash crop that women could sell. Men were reported as having higher participation in activities such as clearing the land or carrying crops from the field, while all activities are at least carried out 50% of the time by women.



**Figure 11. Tea cultivation activities by sex (FGD n = 1).**

Focus group discussion participants reported women undertaking 36% and men 64% of tea activities. These activities were differentiated by whether it was a new or old tea plot. The activities for an old tea plot were applications of fertilizer and herbicide, harvesting, and selling, while these activities and additional activities (e.g., making plucking table, digging holes, etc.) were specific to new plantations only. Focus group participants also reported that tea plots take three years to produce tea. However, the small sample size (one focus group, a women’s group) reporting tea activities means that it is hard to draw conclusions as to how widespread this labor division or activities are across the region.



**Figure 12. Sweet potato cultivation activities by sex (FGD n = 1).**

Participants from one focus group discussion (a women’s focus group) reported that women engage in all labor activities for sweet potatoes. However, the small sample size (n = 1) reporting sweet potato activities means that it is hard to draw conclusions about the extent to which this labor division or activities exist across the region.

Green vegetable activities were reported by one focus group (a women’s group); however, no sex-disaggregated breakdown of activities was recorded. The reported activities were nursery preparation, field preparation, transplanting, irrigation, weeding, and harvesting.





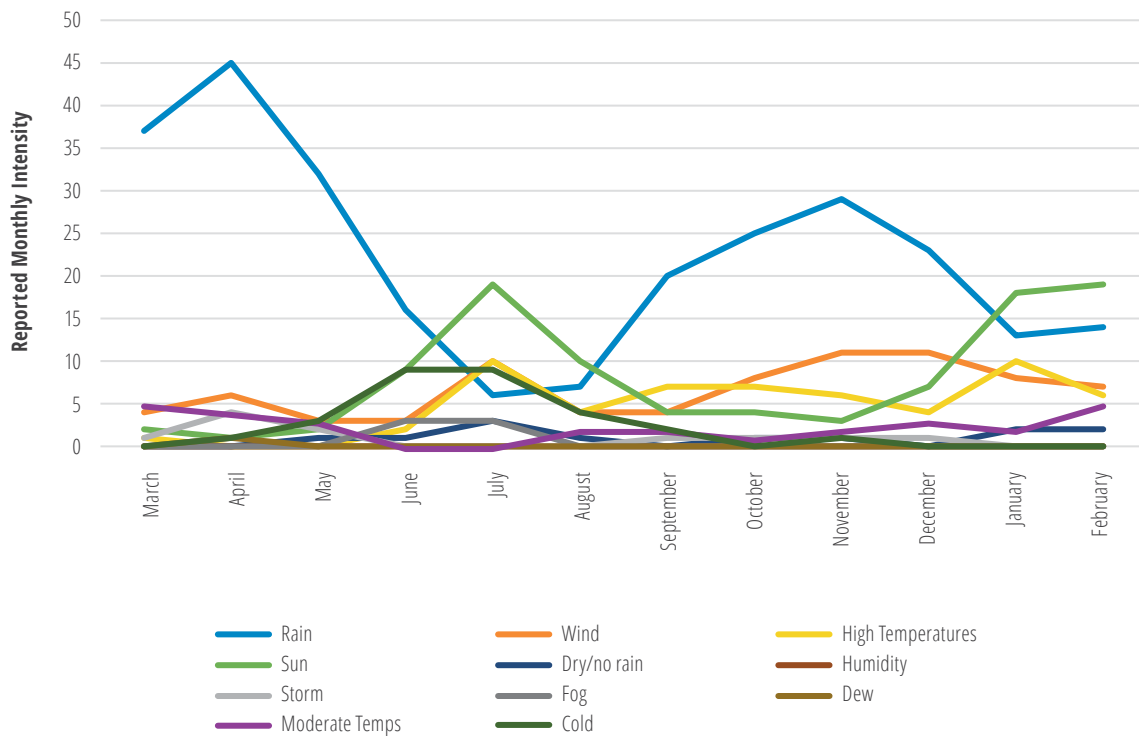


Figure 13. Reported seasonal weather across all districts (FGD n = 23).

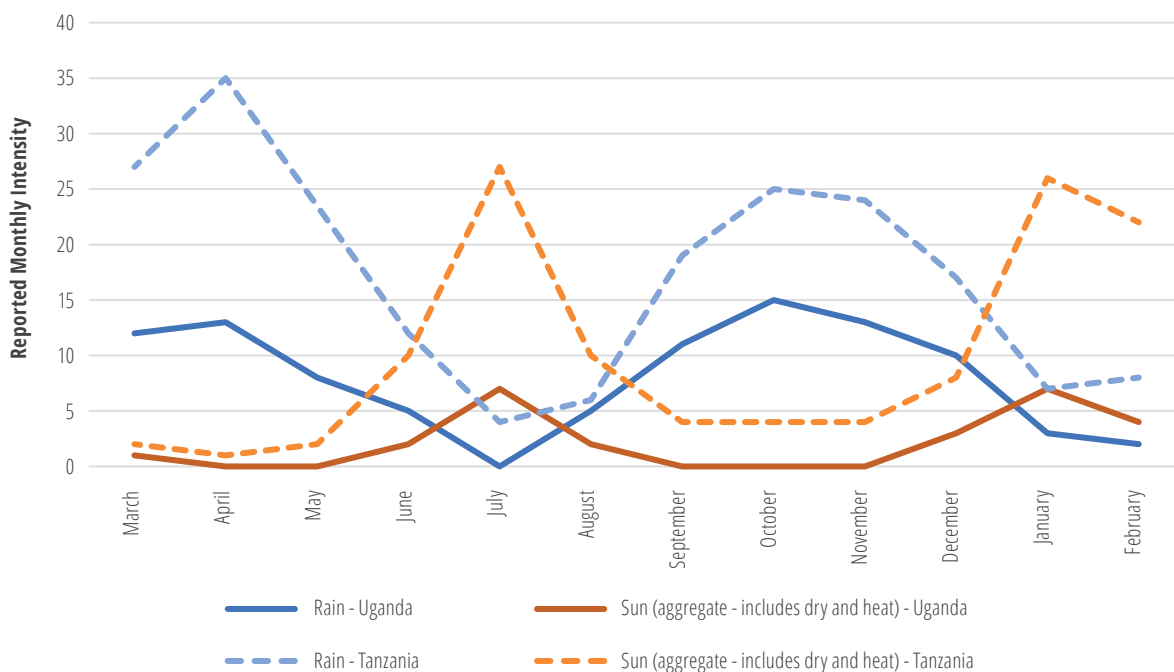
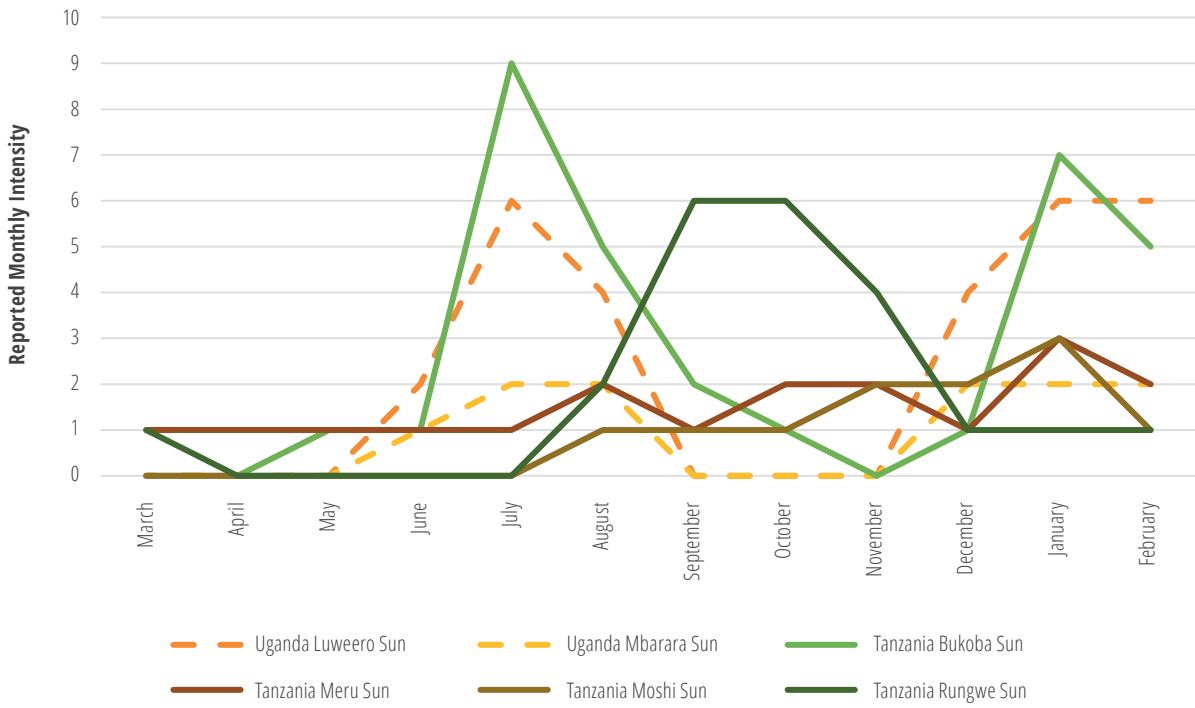
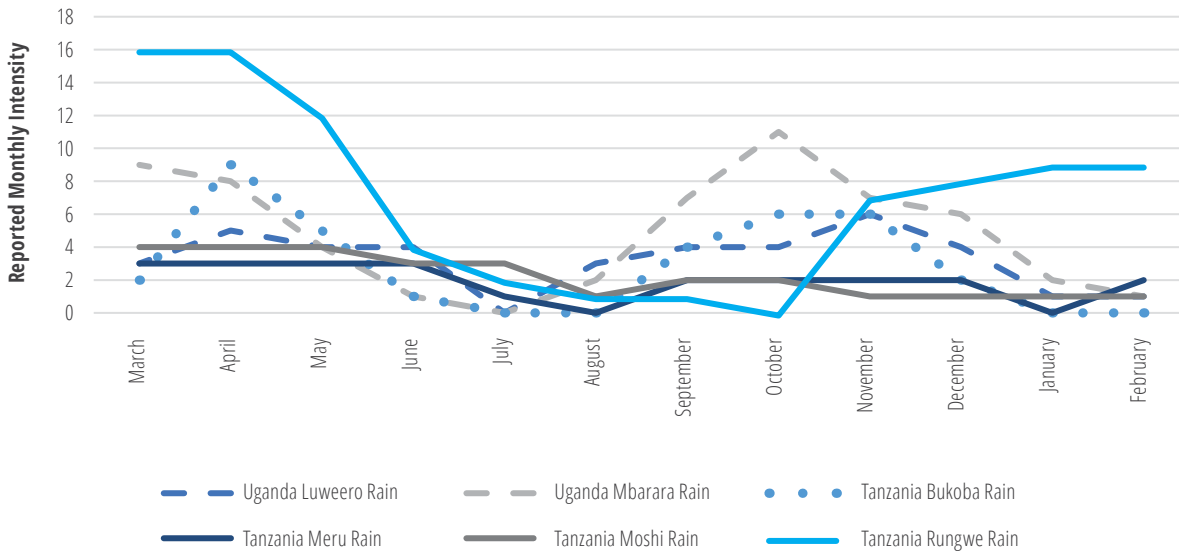


Figure 14. Seasonal variation in Uganda and Tanzania. To compare the two main seasons, reported rainfall intensity for each country is plotted as a proxy for the wet season, while an aggregate of reported sun, heat, dry/no rain, and high temperatures is plotted as a proxy for the dry/sunny season. FGD Uganda n = 9; Tanzania n = 14.

a)



b)



**Figure 15. Seasonal variation across districts.** To compare the two main seasons, reported rainfall intensity for each district is plotted as a proxy for the wet season, while an aggregate of reported sun, heat, dry/no rain, and high temperatures is plotted as a proxy for the dry/sunny season. (a) is the aggregate dry/sunny season across the six districts. (b) is the reported wet/rainy season across the six districts. FGD Uganda Luweero n = 4; Uganda Mbarara n = 4; Tanzania Bukoba n = 3; Tanzania Meru n = 2; Tanzania Moshi n = 3; Tanzania Rungwe n = 6.

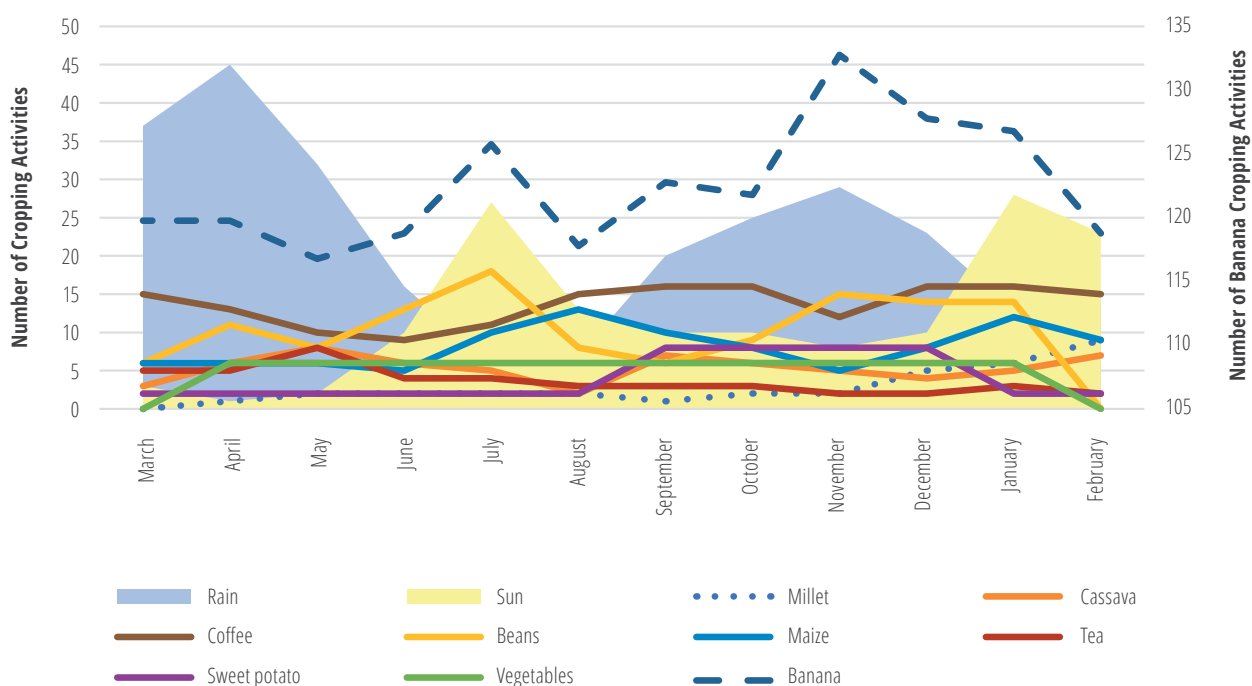


### 3.2 Cropping Activities across the Year

The frequency of cropping activities varied across the year. Figure 16 demonstrates total monthly reported activities for the eight crops with reported activities.<sup>7</sup> When these activities are compared to seasonal variation, some interesting patterns emerge. Most sweet potato activity takes place during the rainy season. For beans and banana, two peaks of activities occur, one in the rainy season and one in the dry season. Coffee activities increase and decrease when bean and banana activities, respectively, decrease and increase, indicating when labor might be transferred between these crops. Although more banana activities are undertaken by men, they also participate in bean activities (women, however, provide most of the labor). Similarly, women have a role in coffee activities (although to a lesser extent than men). Tea activities were highest during the rainy season, while green vegetable activities were consistent across the year.



Photo: CGIAR Research Program on Roots, Tubers and Bananas (RTB)



**Figure 16. Crop activities and seasons across the year.** Total monthly reported activities for each crop across the year in Tanzania and Uganda. Banana (dashed line) is plotted on a secondary axis to permit comparative peaks in activity with other crops. The blue and yellow shaded areas indicated peak sunshine or rainy seasons ( $n=23$ ).

<sup>7</sup> See Appendix for cropping activities per crop.

## Section 4: Daily and Weekly Calendars

This section discusses the results of 15 focus group activities (7 men only and 8 women only) covering weekly and daily activities. Participants were asked to describe general activities that take place over a busy week in a busy season and a quiet week in a quiet season. Participants also reported in greater detail activities that men and women would engage in during the course of a day.

### 4.1 Weekly Activities

This section discusses the results of types of activities done over the week in busy and quiet months. In total, participants identified more than 26 separate activities in the 15 FGDs (Figures A9 to A11 in the Appendix). For ease of understanding, these activities

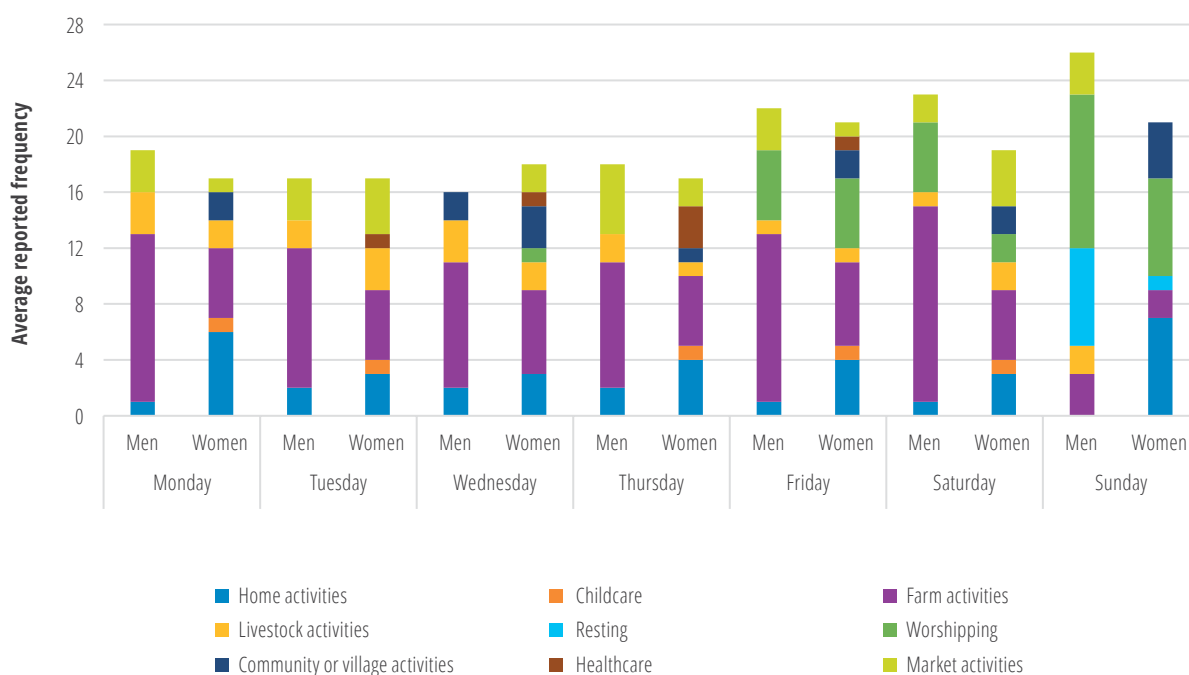
were grouped together into nine categories based on type, for example, activities done around the home such as cleaning and caring for the home, preparing food, and washing utensils are grouped together as Home activities (Table 5).

Some activities occurred consistently across the week, for example, activities related to the home, child care, livestock, and farming (Fig. 17). Some communities had specific days of the week for community activities and those related to healthcare (e.g., a health visitor coming), and these all occurred during the week. Worship, discussed as attending services in mosques or churches, took place on Wednesday and Friday through Sunday. Sunday was also the day reported as a specific rest day.



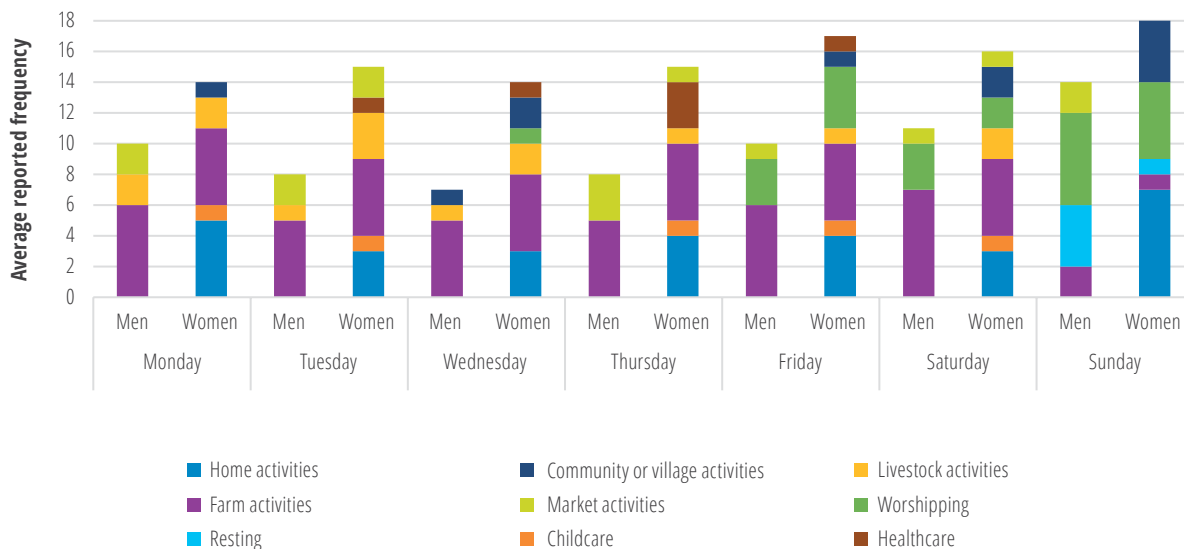
**Table 5. Aggregated categories for activities reported in weekly calendar focus groups.**

Activity	Reported activities from focus group discussions
Home activities	Home activities; sweeping; washing clothes, cooking; washing utensils; collecting firewood; fetching water; brick making; home improvements
Child care	Child care
Farm activities	Farming: related to crop activities only
Livestock activities	Livestock
Resting	Resting; eating
Worshipping	Worshipping
Community or village activities	Community activities; community activities for men; credit and savings group meetings
Healthcare	Antenatal care; immunization; healthcare worker visit; sanitation day with health worker
Market activities	Business; market day; preparing for market; working day

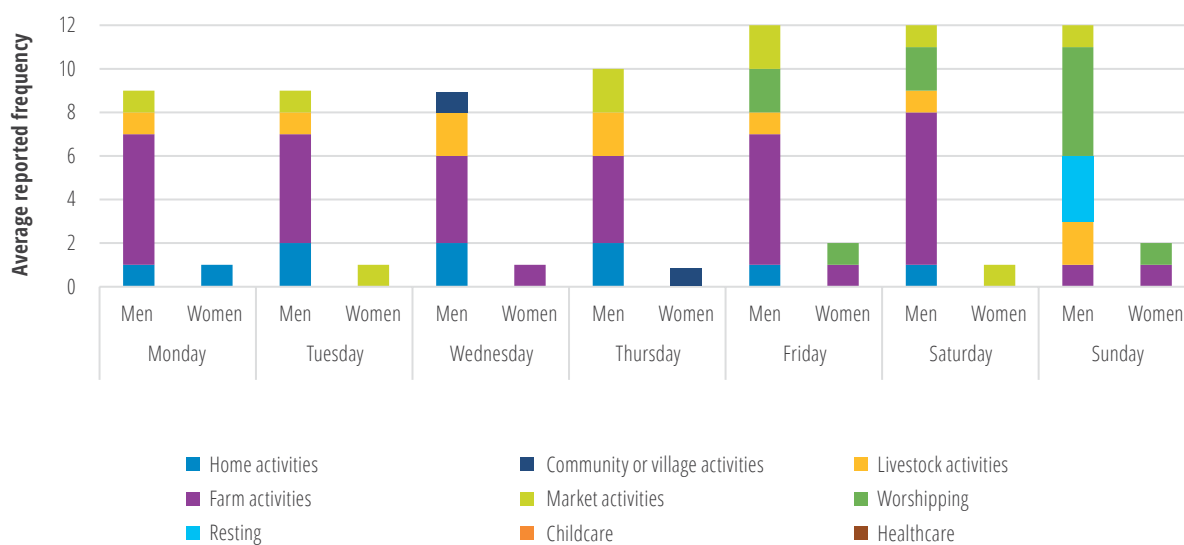


**Figure 17. Total reported frequency of daily activity types for all seasons.** The reported frequency is an average as there are twice as many men's as women's groups. The women's groups on average reported more types of activities than men's groups (men on average reported 3.8 types of activities whereas women reported 7). Total FGDs n = 21; men n = 14; women n = 7.

When weekly activities in busy and quiet months or seasons are compared, there are notable differences. Home, farming, and livestock activities occur throughout the year, regardless of season (Figures 18 and 19). However, only one women only focus group discussed activities during a quiet week (one did not specify a busy/quiet month and only five reported busy months/seasons). The women's FGD that reported quiet season activities mentioned only one activity per day, except Fridays and Sundays, when worshipping was also reported. Other FGDs, despite the sex of participants, reported multiple types of activity per day, so interpreting this should be done with caution. Only women's FGDs mentioned home activities and child care as a specific weekly activity. Healthcare activities and community/village activities were mentioned more often during the quiet season than during the busy season.



**Figure 18. Total reported daily activities by category for busy months/seasons.** While there are more men-only than women-only groups, women on average reported nearly twice as many types of activities than men (men on average reported 2.6 types of activities whereas women reported 5.3. Total FGDs n=12; men n=7; women n=5.



**Figure 19. Total reported daily activities by category for quiet months/seasons.** While there were more men-only than women-only discussion groups, women on average reported more types of activities than men (men on average reported 0.6 types of activities whereas women reported 1.3. Total FGDs n=9; men n=8; women n=1.



In one Ugandan men only focus group,<sup>8</sup> participants said that the dry season was the quiet season for them but it was the busiest season for women as it was harvesting time, and women were responsible for harvesting. It was unclear in these FGDs when the busy and quiet seasons were, as well as unclear what crops the men were discussing. In this same focus group, men reported occasional conflict within the home if the women viewed the men as not participating enough in activities in the garden or with harvesting, for example, if the men were absent to watch football or socialize at the trading center. The most frequently reported conflict was women harassing men or denying them meals. In these FGDs, there was no mention of when exactly (month) the busy or quiet season was or what crops were being referred to; hence, results could not be provided that show seasonal activities by activity category. In subsequent use of the tool, users should ensure that they probe further to gather such information.

In quiet months (e.g., April), days with heavy rain prevented men from going to work in the fields so the men reported using that time to socialize. This was not reported by participants in women’s FGDs from the same community.

## 4.2 Daily Activities

This section discusses the results of types of activities done over a day in busy and quiet weeks. In total, more than 20 separate activities were identified in 15 FGDs; however, some participants reported both men’s and women’s activities while others reported on activities of only men or women (Table 6). In future use of the tool, researchers need to ensure that such detailed information from men and women is collected in order to allow for important comparisons.

For analysis purposes, the activities were organized into 15 categories based on type (e.g., activities done around the home focused on cleaning and caring for the home). Food preparation was grouped separately as FGD participants referred to food-related activities separately from other home activities (Table 7).

Between busy and quiet seasons, some activities were consistent while others were different (Figure 20). A higher proportion of time was reported for resting, socializing, and food preparation activities on a quiet day, whereas a higher proportion of time was reported for home, livestock, and farm activities on a busy day (Figure 20).

**Table 6. Number of FGDs reporting men’s and women’s daily activities.**

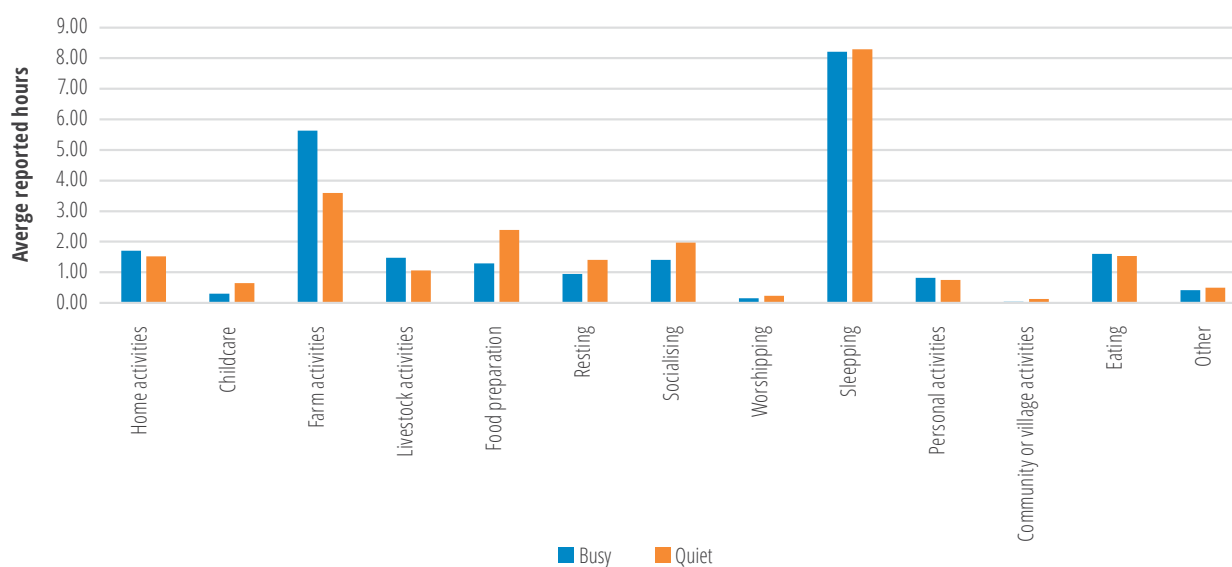
Number of FGDs	Season			Total
	Busy	Quiet	N/A	
Men reporting men’s activities	7	6		13
Men reporting women’s activities	7	6		13
Women reporting women’s activities	7	5	1	13
Women reporting men’s activities	5	4		9
Total FGDs reporting men’s activities	13	12		25
Total FGDs reporting women’s activities	12	13		25

Additionally, daily activities differed between men and women. Table 8 and Figures 21 and 22 describe the relative proportion of time spent by men and women on different types of activities.

<sup>8</sup> Focus group ID MBANDEKITDCM004; the women’s group from the same community did not specify quiet or busy months for women.

**Table 7. Aggregated categories for activities reported in daily calendar focus groups.**

Activity	Reported activities from focus group discussions
Home activities	Cleaning, sweeping; making handicrafts; washing clothes; washing utensils; collecting water and firewood; preparing for tomorrow
Child care	Bathing children; preparing children for school; picking children up from school
Farm activities	Digging; planting; desuckering
Livestock activities	Milking; taking livestock to/from grazing areas; collecting feed
Food preparation	Preparing tea, breakfast, lunch, or dinner; collecting food for meals from fields or market
Resting	Resting
Socializing	Socializing; going for walks; family time
Worshipping	Worshipping at church or mosque; praying at home
Sleeping	Sleeping; going to bed
Personal activities	Bathing; personal grooming or care
Community or village activities	Attending meetings (e.g., savings group); community or village events or duties such as cleaning the village
Eating	Consuming breakfast, tea, lunch, or dinner
Healthcare	Immunizations; health worker visit; antenatal care
Market activities	Attending market; preparing for market; business
Other	Going out; seeking money; going out working and socializing (simultaneous activity reported)

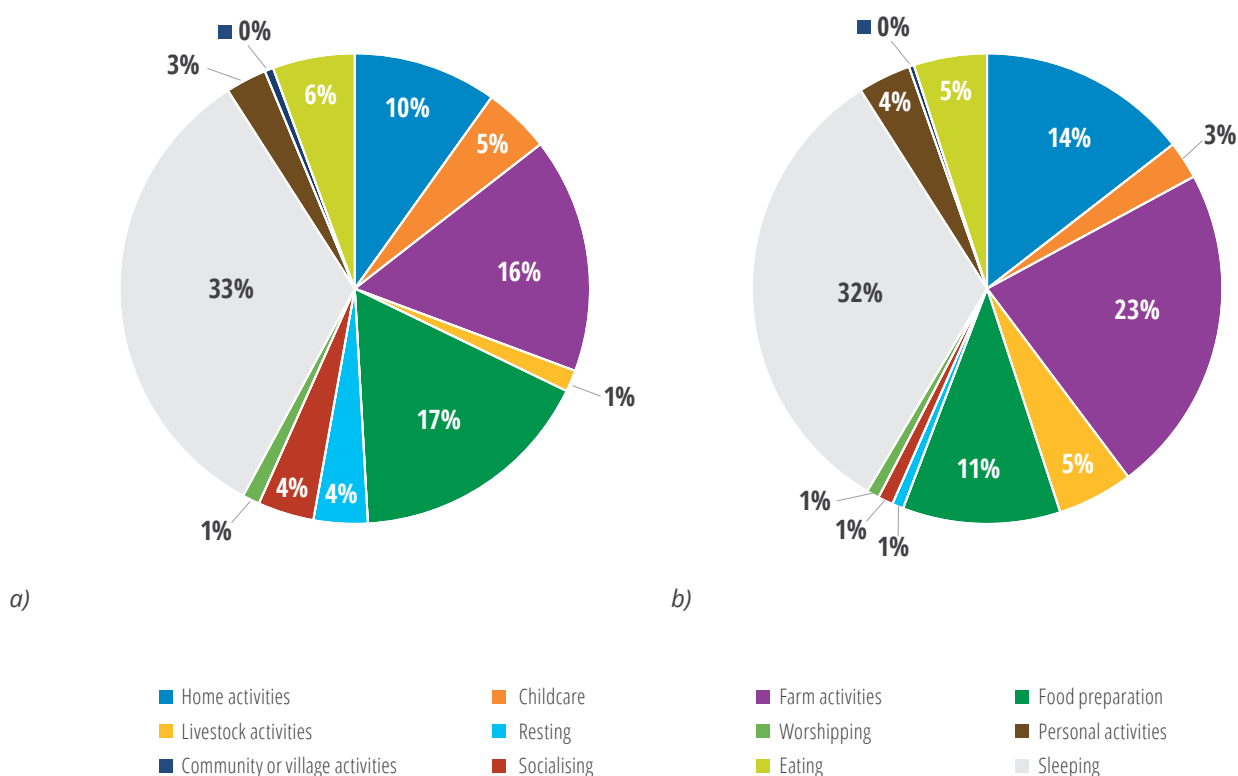


**Figure 20. Total reported weekly hours in different daily activities on busy and quiet days. (FGD busy n = 25; quiet n = 25).**

**Table 8. Proportion of reported total hours spent on different activity categories over the course of a day.**

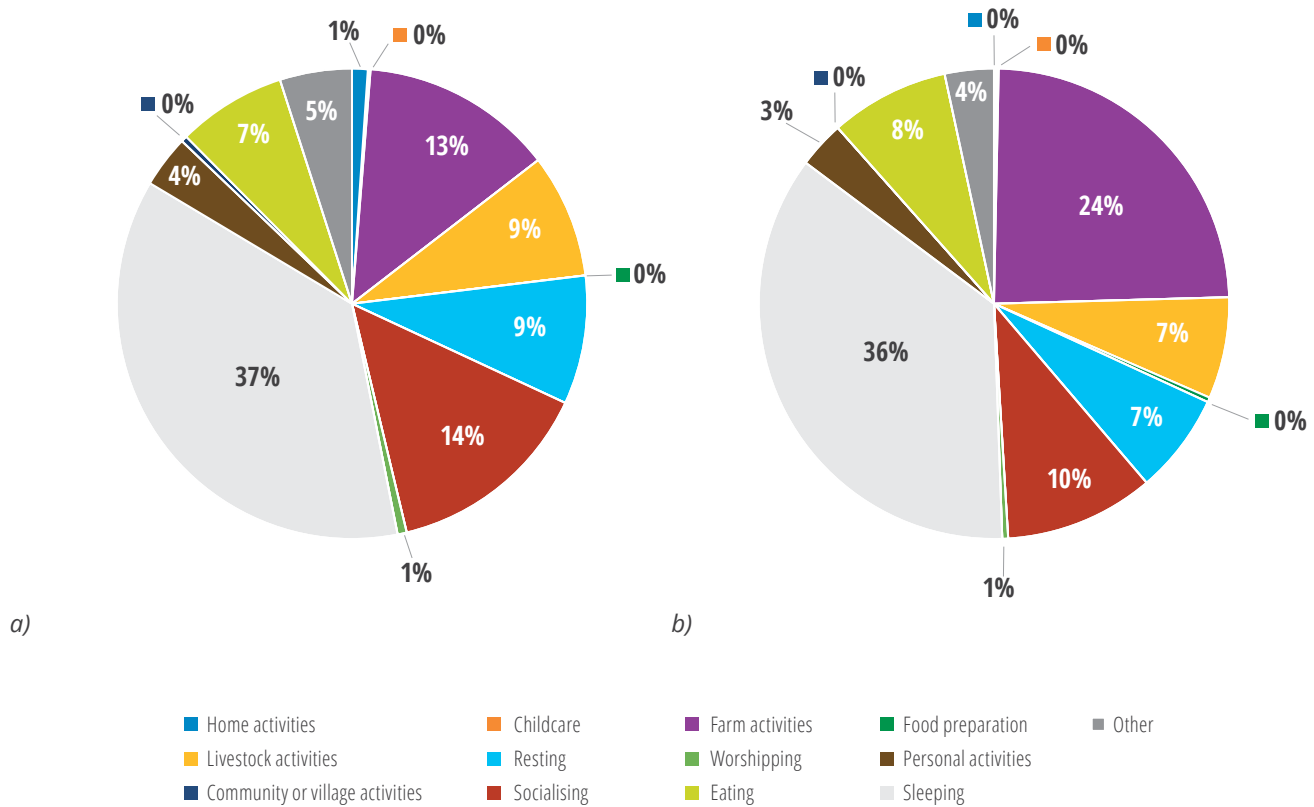
(FGD n = 50; men n = 25; women n = 25).

Activities	Busy day		Quiet day	
	Men	Women	Men	Women
Home activities	0.3%	14.5%	1.3%	9.9%
Child care	0.0%	2.6%	0.0%	4.6%
Farm activities	24.2%	22.7%	13.3%	16.2%
Livestock activities	7.0%	5.2%	8.5%	1.5%
Food preparation	0.3%	10.9%	0.0%	16.9%
Resting	6.9%	0.8%	8.9%	3.7%
Socializing	10.3%	1.0%	14.3%	3.9%
Worshipping	0.4%	0.9%	0.6%	1.2%
Sleeping	35.8%	32.5%	36.7%	33.0%
Personal activities	3.2%	3.7%	3.6%	2.8%
Community or village activities <sup>9</sup>	0.0%	0.4%	0.4%	0.6%
Eating	8.2%	5.0%	7.5%	5.7%
Other	3.4%	0.0%	4.9%	0.0%



**Figure 21. Proportion of day spent on different activity categories by women.** (a) Proportion of time spent on different activities by women on a quiet day in a quiet week; (b) proportion of time spent on different activities by women on a busy day in a busy week. Activities in (a) and (b) were reported by women as well as men. FGD quiet day n = 13; busy day n = 12.

9 Community and village activities include reported activities such as cleaning the village, attending meetings, or other activities explicitly stated as community activities.



**Figure 22. Proportion of day spent on different activity categories by men.** (a) Proportion of time spent on different activities by men on a quiet day in a quiet week; (b) proportion of time spent on different activities by men on a busy day in a busy week. Activities in (a) and (b) were reported by men as well as women. *FGD quiet day n = 12; busy day n = 13.*

Men and women reported spending different proportions of their day on some types of activities. For example, men reported spending slightly more time resting and socializing than women on both busy and quiet days, while women reported more time on home activities and food preparation. However, although the home activities category does not explicitly include socializing, some participants stated that home activities could include a social element, such as working on handicrafts or how time in between cleaning and washing may also involve visiting with neighbors or friends. Some men reported that the socializing they do, such as going on evening walks, is to find out information about current events in the local community and wider world, which they saw as important for planning business or agricultural activities and engaging with the community.

Some activities are also almost exclusively engaged in by men and women. For example, no men reported

child care or food preparation activities in any season, while child care accounted for 5% and 3% of women's days on quiet and busy days, respectively. Food preparation accounted for between 11% and 27% of women's days (on quiet and busy days, respectively).

Some men recognized that they had more rest time than women and that women's daily activities allowed little time to rest. Some men in Uganda reported that a small number of men in a village do help with cleaning and bathing their children; however, that was not reported as a common practice in any community.

Although farm activities were reported as taking up most of men's time, especially on busy days in the mornings, one men only focus group<sup>10</sup> reported that men who have a *boda-boda*<sup>11</sup> would drive that on mornings in busy and quiet times and work on their farms later in the day.

<sup>10</sup> LUWMAKKABDCM001 focus group reported *boda-boda* drivers in their discussion when listing farm activities as the main morning activity for men on the daily activity poster they collectively produced.

<sup>11</sup> A motorcycle with a space for a passenger or for carrying goods, often used as a taxi.



## Section 5: Conclusions

The ranking of crop importance provides insight into what participants viewed as important for meeting household subsistence needs as well as providing cash income. In both Tanzania and Uganda, banana is reported as the most important crop. The social importance of banana was also mentioned by FGD participants from both countries. Participants described banana as being the food available at social functions, what is eaten at home, and what is eaten when someone is ill.

When analyzed at the district level, banana was ranked as the most important crop by all districts except Luweero in Uganda. For Luweero, the ranking results are based on two women FGDs, which both ranked beans as the most important crop (followed by maize and then banana). None of the men only FGDs provided a crop ranking. Mbarara ranked banana as the most important, followed by beans and millet, and was the only district to rank millet as an important crop.

In Tanzania, there was widespread agreement that banana is the most important crop, as indicated by the high score placed on banana by the FGD participants (Figure 1; 38 out of a possible total score of 39, meaning that participants from only one focus group discussion out of 18 selected banana as the second most important rather than the most important crop). Participants in Tanzania ranked maize and coffee equally as the next two important crops. Maize and coffee received the same ranking, reflecting their respective importance as a subsistence crop (maize) and cash crop (coffee). Two Tanzanian districts, Meru and Moshi, ranked maize and coffee as the most important crop, while banana was the most important crop in Bukoba and Rungwe. In Bukoba, maize and beans ranked equally as the second most important crop, while in Rungwe maize and coffee were the next most important crops after banana. Two districts reported specific cash crops not grown in other districts: vanilla in Bukoba and cardamom, ginger, and tea in Rungwe.

Some crops were associated with men or women (i.e., described as a men's or women's crop). Often, men's crops were also cash crops while women's crops were for sustenance. For example, participants in one FGD

in Uganda described how bananas were formally a women's crop until they became marketable, and then became a men's crop. The sex association is also based on who (men or women) participated in associated cropping activities. For example, sweet potato cropping activities were conducted entirely by women<sup>12</sup> and sweet potatoes were described as a women's crop in both Tanzania and Uganda. Bananas were also often described by FGD participants as a men's crop because of men spending more labor on bananas than on other crops such as maize or beans; for example, by participants from one FGD in Uganda. The association between bananas (and coffee) and men can also extend to land ownership. Women FGD participants from both countries reported marrying into a man's family with an established banana (or coffee) plantation, and that the plantation was therefore for the men. Other crops associated with women, such as beans, were described as women's crops as women do the primary physical labor and planning for crop activities. Although most cash crops were associated with men (e.g., coffee, tea), women also participated in the cultivation and selling of these and other crops. FGD participants in Tanzania described how the profits from crops sold by women were used for school fees.

Some of these associations between specific crops and sex (e.g., coffee, tea, beans, and maize) are reflected in the crop importance rankings by sex (Figures 3 and 4). In Tanzania, women ranked banana as the most important crop, followed by maize and beans, while men ranked banana highest, followed by coffee and maize. The crop importance scores for men for banana and coffee were closer than the crop importance scores for women, indicating that there was wider agreement by the women FGD participants on the ranking order of these three crops (banana, maize, and beans) than by the men. In Uganda,<sup>13</sup> women ranked beans as the most important, followed by millet and banana, while men ranked banana as the most important, followed by millet/coffee and beans/maize (two crops ranked as equally second and equally third most important). However, as noted in Section 1, because of the limited number of FGDs that reported sex-differentiated rankings, caution should be used when interpreting these results.

<sup>12</sup> Figure 14; caution should be used when interpreting these results as only one FGD (a women's FGD) reported sweet potato cropping activities.

<sup>13</sup> In Uganda, only one FGD reported on crop importance for women and only two reported on crop importance for men, so caution should be used when interpreting how widespread these rankings may be for men and women in Uganda.

Some crops had peaks in activity that mirrored the rainy and dry seasons to some extent (e.g., beans, banana; Figure 15); however, most other cropping activities were consistent in terms of the total number of activities across the year without a strong relationship to weather patterns. In terms of daily and weekly activities, there was a more marked difference between men and women and between busy and slow seasons. Friday-Sunday is the time for faith-based activities (Figures 18 and 19). Faith-based and farming activities were consistent across busy and less busy weeks; however, more time was spent on healthcare, child care, and community/village activities in less busy weeks. Some of these differences may also be because of weather affecting the ability of certain work to be completed (as reported by participants from a men's FGD), such as heavy rain preventing men from attending to their fields and using that time to socialize instead.

Differences in busy/quiet days included more time spent on farm and livestock activities on busy days and more time on food preparation (women) and socializing (women and men) on quiet days (Figures 21 and 22). Men reported more time spent resting and socializing than women on both busy and quiet days, whereas women reported more time in food preparation, child care, and home activities (which include cleaning but also making handicrafts or other income-generating activities).

In subsequent use of FGD tools, researchers should ensure that adequate information on the different sections is collected in the field to be able to answer specific research questions. This will allow for meaningful comparisons at the data analysis stage. At various points in the report, there were gaps in the data from inadequate sample sizes (e.g., cases when only one or two FGDs reported data); hence, some results must be treated with caution. For example, in locations where participants completed the ranking exercise, not all reported sex-differentiated rankings. Focus group data from Uganda reported sex-differentiated crop importance less frequently than in Tanzania.<sup>14</sup> Therefore, interpreting crop ranking by sex and at the country level should be approached with some caution. Furthermore, there is a need to probe and obtain more detailed information to adequately inform the conclusions and recommendations.

It is possible that response bias occurred.

<sup>14</sup> The focus group in Uganda that reported for women specifically was a women's focus group, while the two that reported specifically for men were both men's focus groups.



Photo: CIP/S. Quinn



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Photo: World Bank/Peter Kapuscinski

# Appendix

Table A1. Socio-demographic characteristics of participants disaggregated by sex and FGD type (% of participants).

Seasonal calendar FGDs		Tanzania			Uganda			All		
		Women <i>n</i> = 73	Men <i>n</i> = 48	All <i>n</i> = 121	Women <i>n</i> = 45	Men <i>n</i> = 34	All <i>n</i> = 79	Women <i>n</i> = 123	Men <i>n</i> = 82	All <i>n</i> = 200
<b>Marital status</b>	Single, never married	8	17	12	2	21	10	6	18	11
	Married/cohabiting	55	83	66	80	71	76	64	78	70
	Divorced, separated	19	0	12	4	9	6	14	4	10
	Widowed	18	0	11	13	0	8	16	0	10
<b>Education</b>	No formal education	1	2	2	18	3	11	8	2	6
	Primary	90	88	89	56	53	54	77	73	76
	Secondary	8	8	8	20	32	25	13	18	15
	Post-secondary	0	2	1	7	12	9	3	6	4
<b>Primary occupation</b>	Agriculture	97	98	98	93	97	95	96	98	97
	Salaried job	0	0	0	0	0	0	0	0	0
	Casual labour	0	0	0	0	0	0	0	0	0
	Other activities	3	2	2	7	3	5	4	2	4
<b>Age</b>	Young adults (<30 yrs.)	6	4	5	18	21	19	11	11	11
	Middle age (30-50 yrs.)	66	54	61	62	44	54	65	50	58
	Older adults (51+ yrs.)	28	42	34	20	35	27	25	39	31
	Average age (yrs.)*	44 (10)	49 (12)	46 (11)	41 (11)	43 (15)	42 (13)	43 (11)	47 (13)	45 (12)
Daily and Weekly Calendar FGDs		Tanzania			Uganda			All		
		Women <i>n</i> = 39	Men <i>n</i> = 23	All <i>n</i> = 62	Women <i>n</i> = 41	Men <i>n</i> = 38	All <i>n</i> = 79	Women <i>n</i> = 80	Men <i>n</i> = 61	All <i>n</i> = 141
<b>Marital status</b>	Single, never married	8	0	5	20	3	11	14	2	9
	Married/cohabiting	62	100	76	66	92	78	64	95	77
	Divorced, separated	0	0	0	5	3	4	3	2	2
	Widowed	31	0	19	10	3	6	20	2	12
<b>Education</b>	No formal education	0	0	0	10	3	6	5	2	4
	Primary	90	91	90	66	71	68	78	79	78
	Secondary	10	9	10	24	18	22	18	15	16
	Post-secondary	0	0	0	0	8	4	0	5	2
<b>Primary occupation</b>	Agriculture	100	91	97	90	87	89	95	89	92
	Salaried job	0	4	2	5	5	5	3	5	4
	Casual labour	0	0	0	0	0	0	0	0	0
	Other activities	0	4	2	5	8	6	3	7	4
<b>Age</b>	Young adults (<30 yrs.)	18	0	11	32	11	22	25	7	17
	Middle age (30-50 yrs.)	54	74	61	46	61	53	50	66	57
	Older adults (51+ yrs.)	28	26	27	22	29	25	25	28	26
	Average age (yrs.)*	44 (13)	45 (10)	44 (12)	40 (13)	44 (11)	42 (12)	42 (13)	44 (11)	43 (12)

\* Presented as means, standard deviation in parentheses



## Crop Importance by Country

**Table A2. Crops grown at the study sites.** Percentage of FGDs where participants reported growing specific crops.

FGD Uganda n = 9; Tanzania n = 14.

	All	Uganda	Tanzania		All	Uganda	Tanzania
Banana	100	100	100	Peas	26	44	14
Maize	100	100	100	Trees	26	44	14
Beans	100	100	100	Bambara nut	26	0	43
Coffee	96	89	100	Millet	22	44	7
Sweet potatoes	87	100	79	Soybeans	22	56	0
Cassava	78	100	64	Taro	22	0	43
Vegetables	70	67	71	Tea	17	0	29
Groundnuts	70	78	64	Pumpkin	13	11	14
Yams	52	44	57	Sorghum	13	22	7
Avocado	48	33	57	Cardamom	9	0	14
Fruits	43	56	36	Vanilla	4	0	7
Irish potatoes	30	56	14	Ginger	4	0	7
Sugarcane	26	22	29	Onions	4	11	0

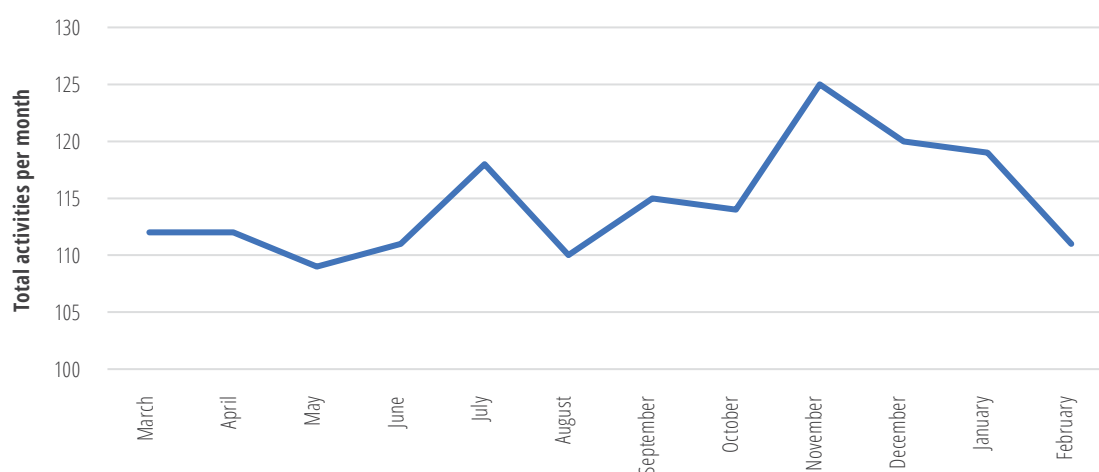
## Monthly Total Crop Activities

**Table A3. Sex-disaggregated cropping activities for banana.** Proportion of men and women engaged in different activities related to banana cropping. FGD participants were able to allocate 0 to 4 in indicate the amount of time men and women spent doing each activity. These are then summed and divided by the total number of FGDs (n=20) for an average proportion of time each sex engages in each activity across all the districts in both countries.

Activities	Total reported number		Proportion	
	Men	Women	Men	Women
Preparing to plant matooke	4	0	5	0
Land preparation	25	7	3	3
Land clearing	12	12	6	14
Burning waste material	2	2	49	41
Cutting grass/using herbicide	2	2	3	3
Selecting good-quality seed	8	8	70	25
Searching for a farm	3	1	94	51
Looking for suckers	3	1	20	10
Primary cultivation	5	11	54	36
Deep cultivation	1	3	39	31
Secondary cultivation	7	1	0	5
Cultivation	33	3	76	29
Harrowing	8	0	11	4
Ploughing	11	1	10	10
Digging holes	39	33	15	20
Digging trenches/planting	2	2	5	15

Planting (in a plot)	3	1	10	10
Planting (in holes)	2	2	4	1
Planting	46	22	3	3
Replacing old/diseased plants	6	2	0	0
Adding manure	56	20	31	9
Fertilizer	37	17	8	3
Mixing soil with manure	6	2	1	4
Mulching	31	25	3	3
Staking	4	12	46	21
Removing remaining banana stems	4	4	9	16
Weeding	75	41	15	15
Irrigation	7	13	3	3
Detrashing	16	8	4	1
Deleafing	43	29	5	5
Removing male buds	0	4	10	0
Desuckering	61	23	4	1
Harvesting for eating and selling	2	2	9	1
Harvesting	24	16	41	4
Harvesting for cooking	9	3	58	28
Harvesting for selling	8	8	14	1
Carrying bananas to the roadside	4	0	15	10
Selling	12	16	30	20

Monthly total crop activities across the year for banana, millet, cassava, coffee, beans, tea, sweet potato, and green vegetables are found in Figures A1 to A8.



**Figure A1. Total reported banana activities across the year.** The total number of activities at any one time is higher than the 38 activities in Table A3 as multiple activities occur simultaneously. For example, weeding, deleafing, and desuckering are among the activities that occur year-round and were reported by almost all FGDs each month. FGD n = 23.



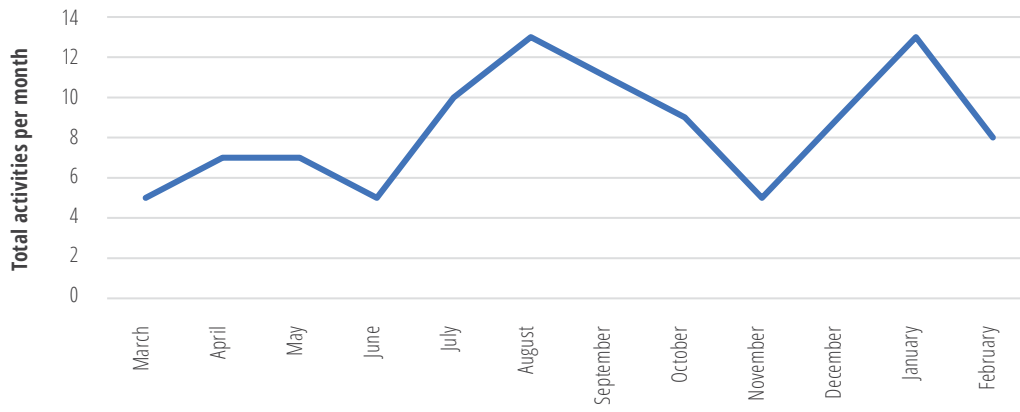


Figure A2. Total reported maize activities across the year (FGD  $n = 6$ ).

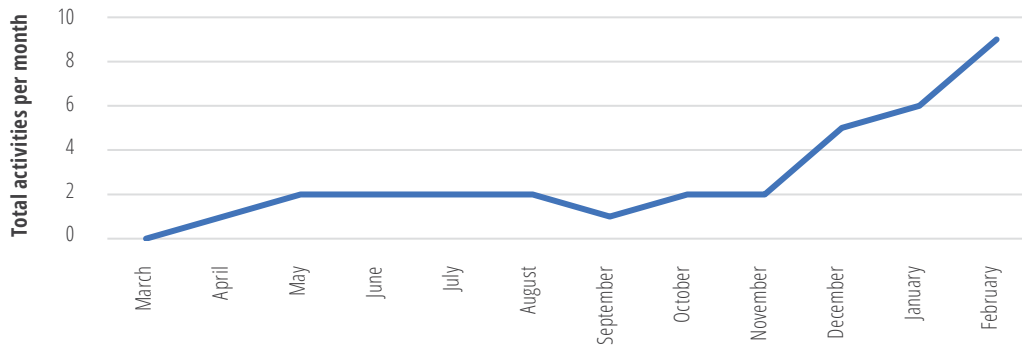


Figure A3. Total reported millet activities across the year (FGD  $n = 3$ ).

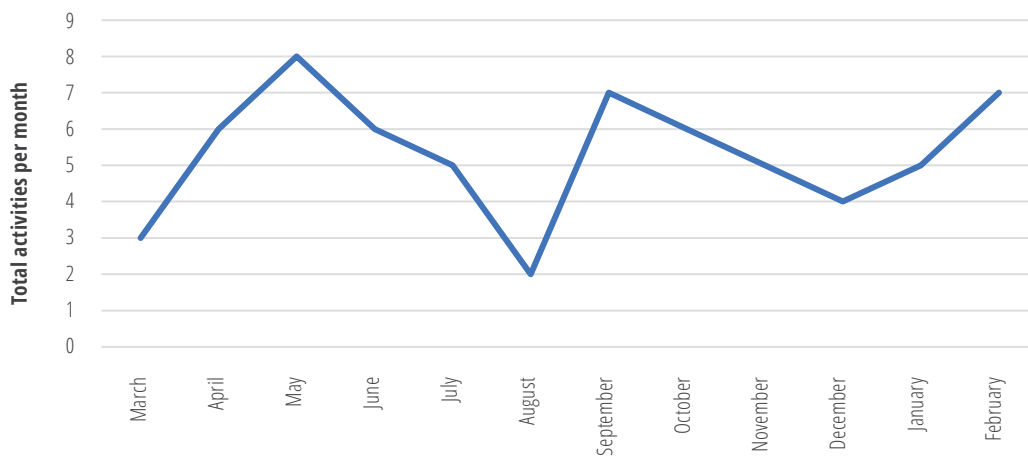


Figure A4. Total reported cassava activities across the year (FGD  $n = 2$ ).

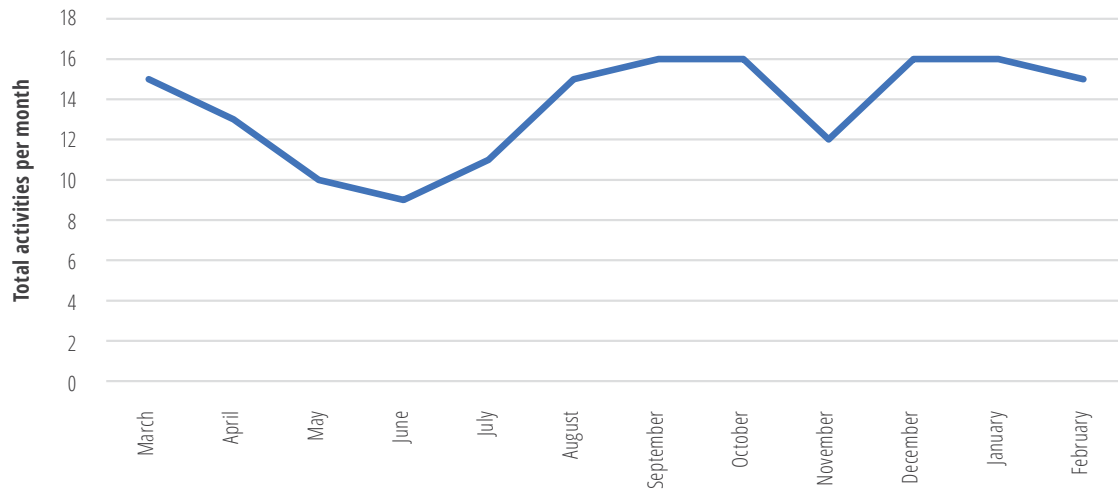


Figure A5. Total reported coffee activities across the year (FGD n = 6).

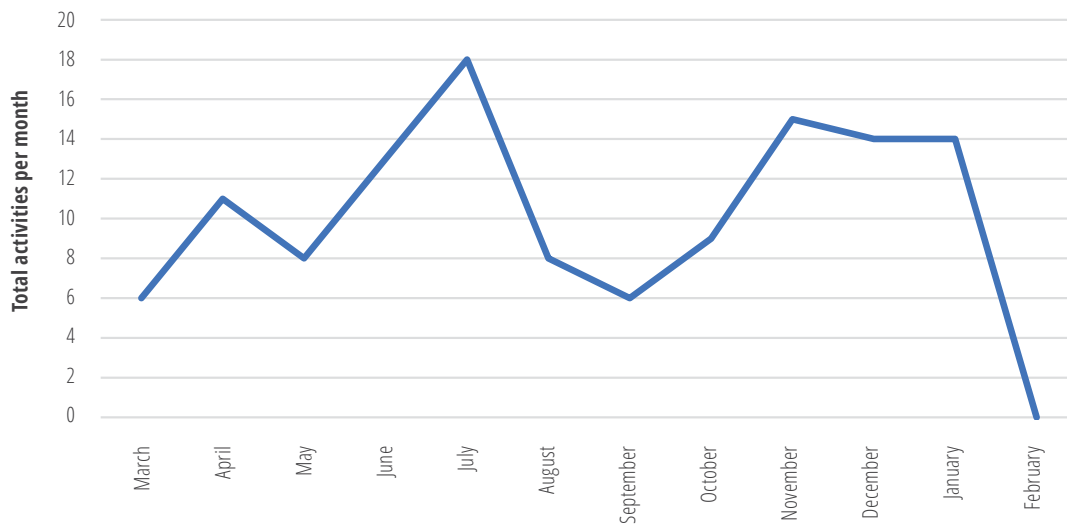


Figure A6. Total reported bean activities across the year (FGD n = 5).





Figure A7. Total reported tea activities across the year (FGD n = 1).

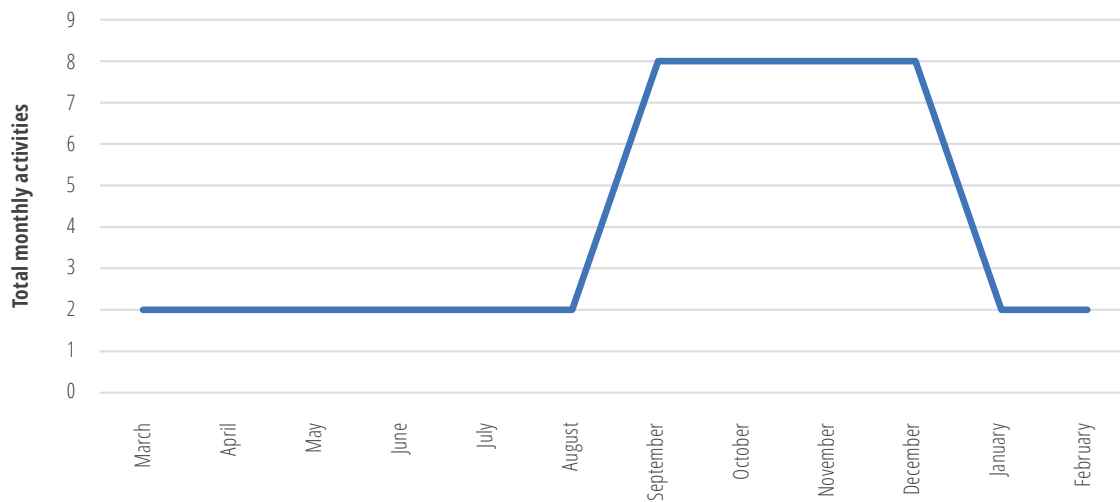


Figure A8. Total reported sweet potato activities across the year (FGD n = 1).

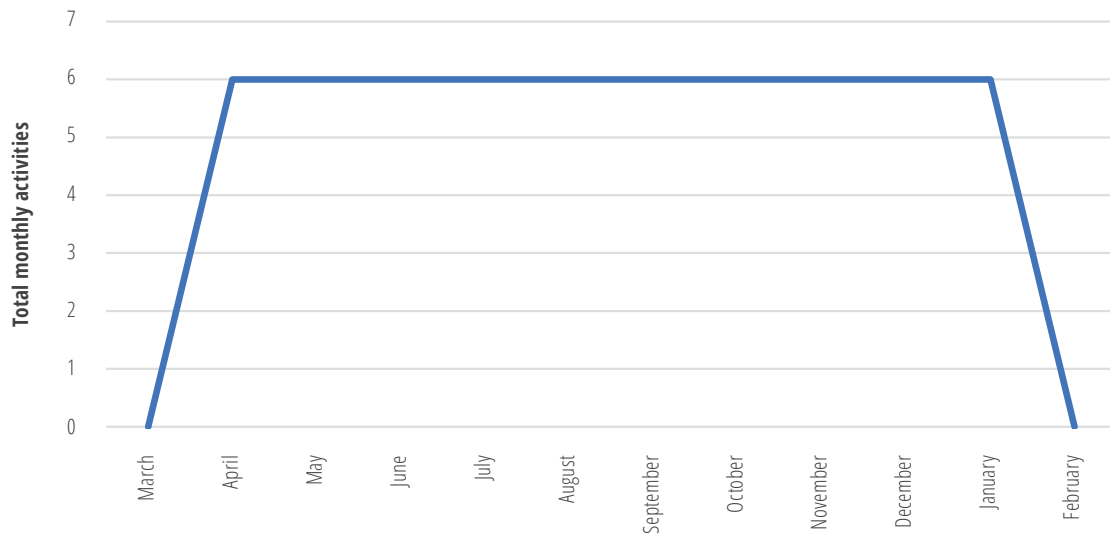


Figure A9. Total reported green vegetable activities across the year (FGD n = 1).

## Total Monthly Activities

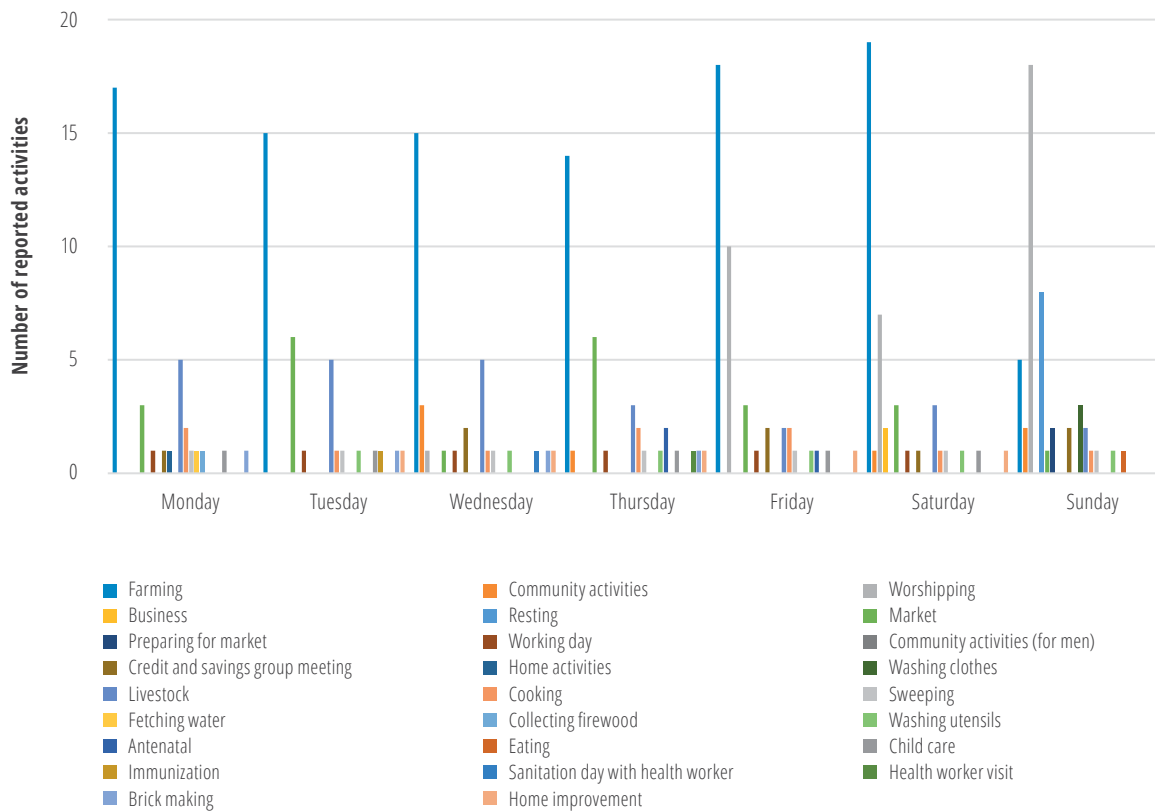


Figure A10. Total number of different activities reported for each day during all seasons (FGD n = 21).

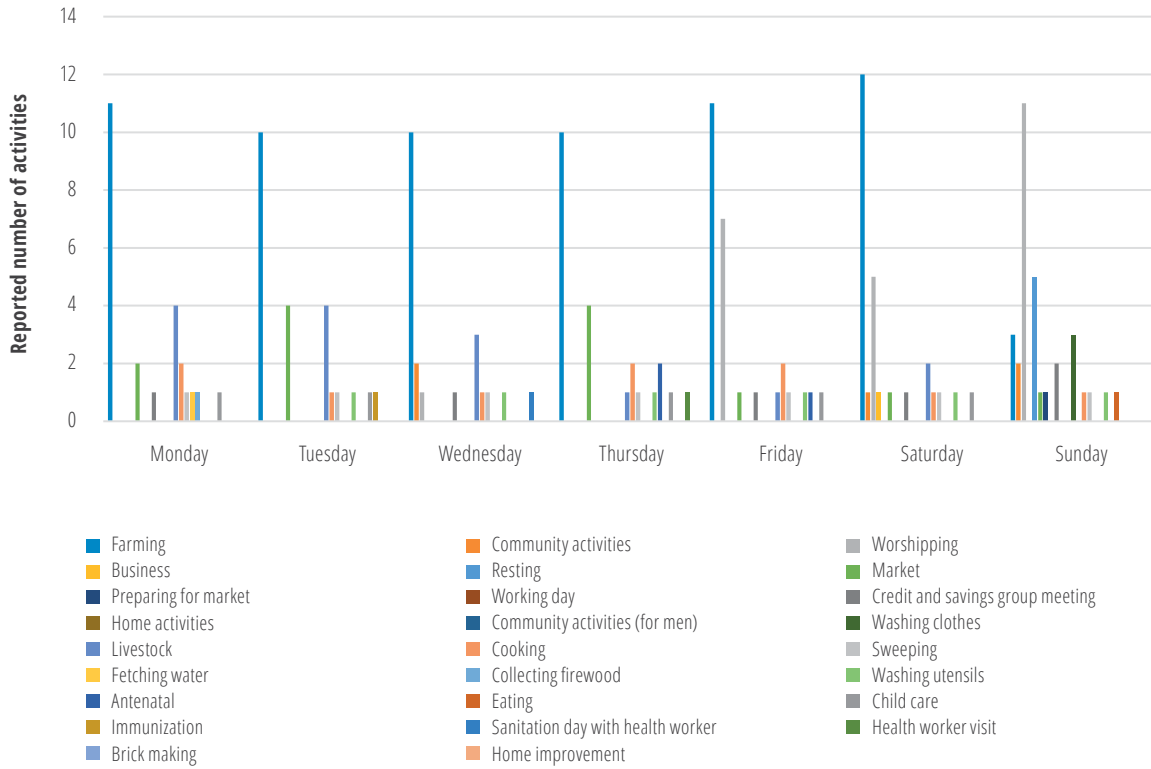


Figure A11. Total number of different activities reported for each day during a busy season (FGD n = 12).

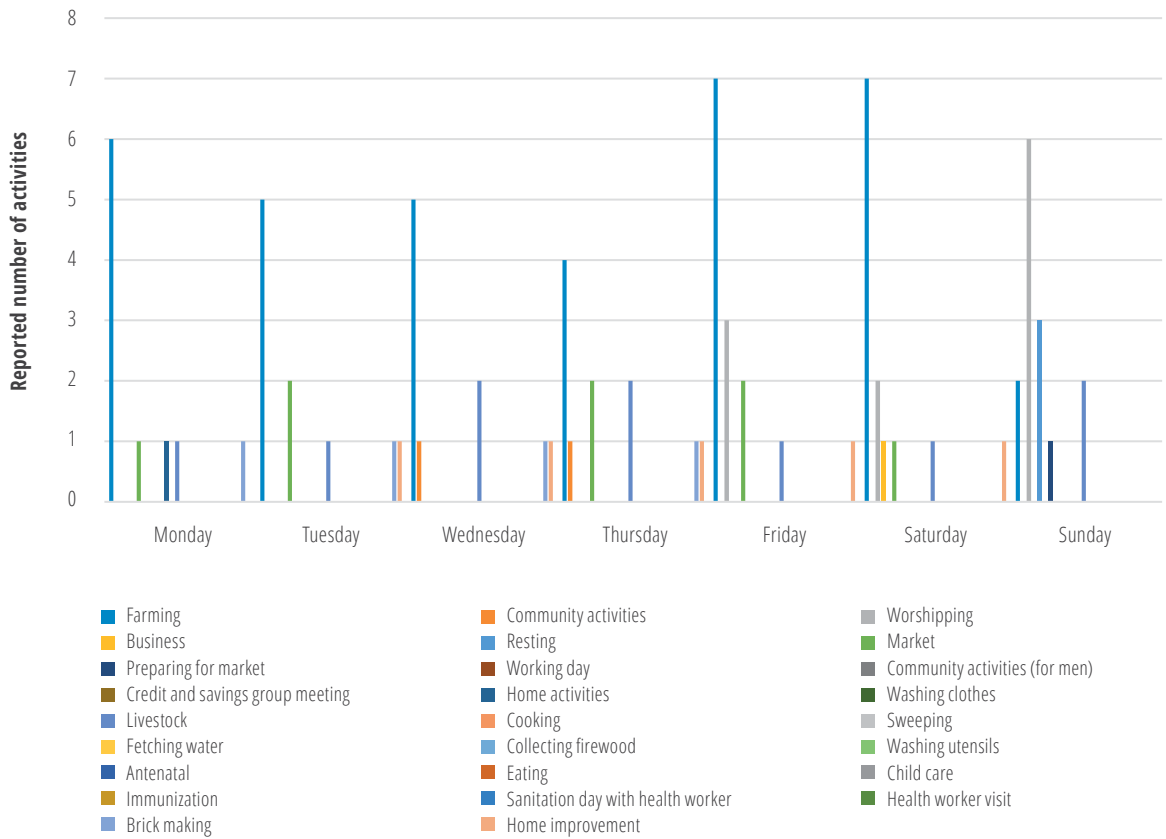


Figure A12. Total number of different activities reported for each day during a quiet season (FGD n = 9).

## Weather Type Intensity across the Year per District

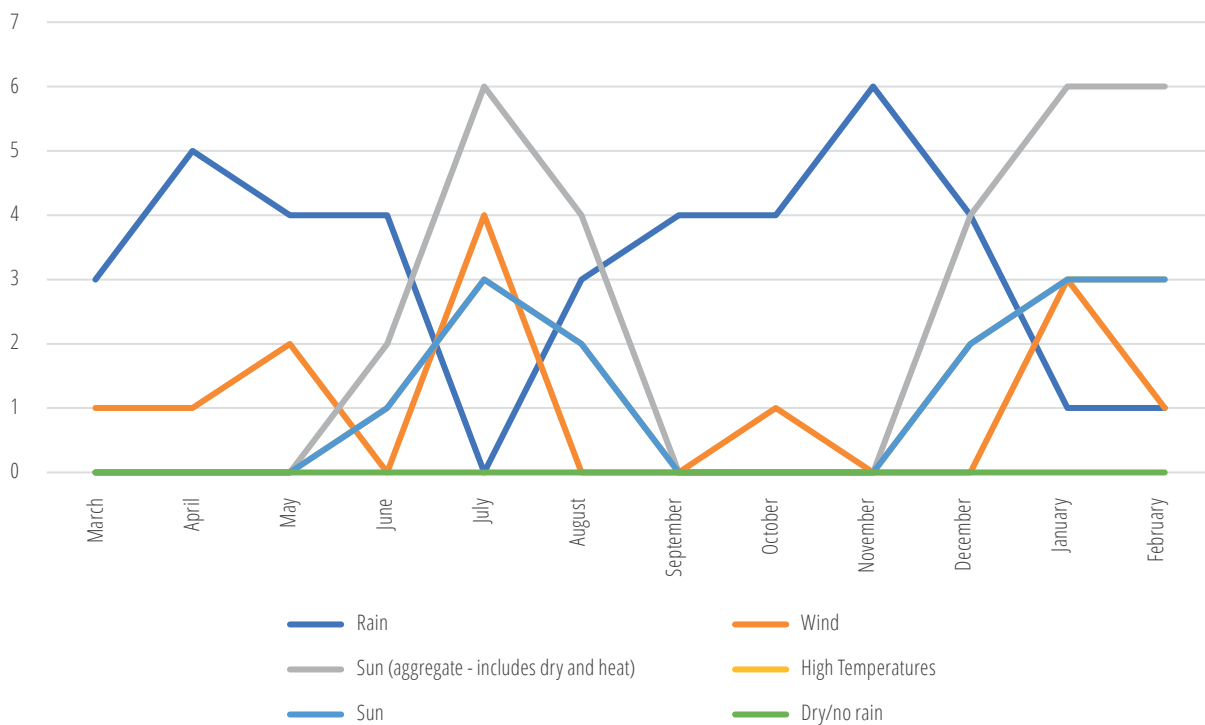


Figure A13. Reported seasonal weather in Uganda's Luweero District (FGD n = 4).

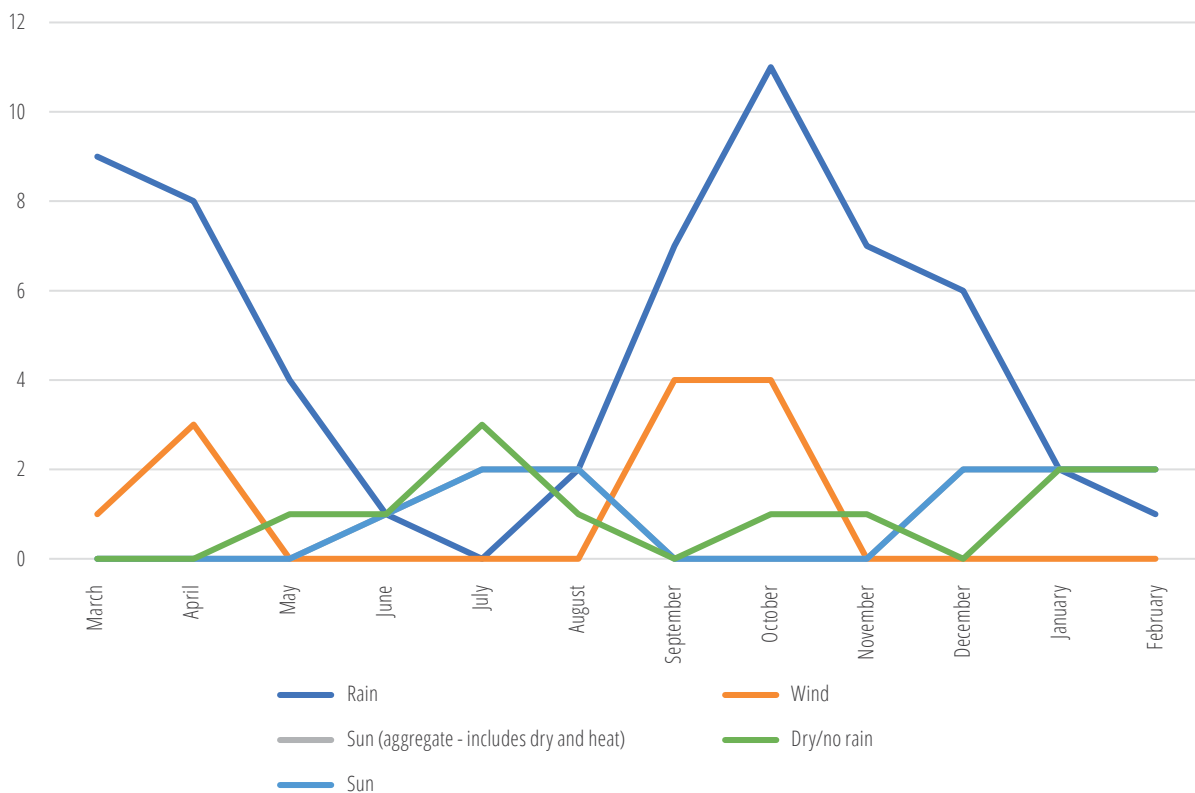


Figure A14. Reported seasonal weather in Uganda's Mbarara District (FGD n = 4).



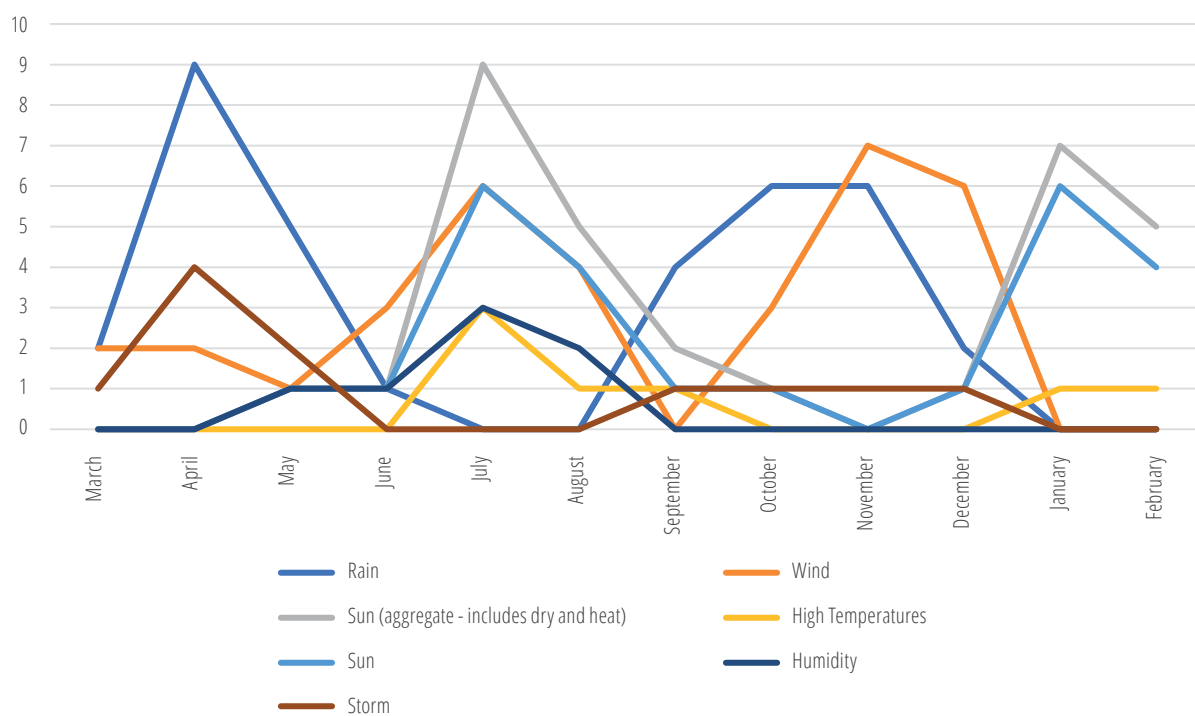


Figure A15. Reported seasonal weather in Tanzania's Bukoba District (FGD n = 3).

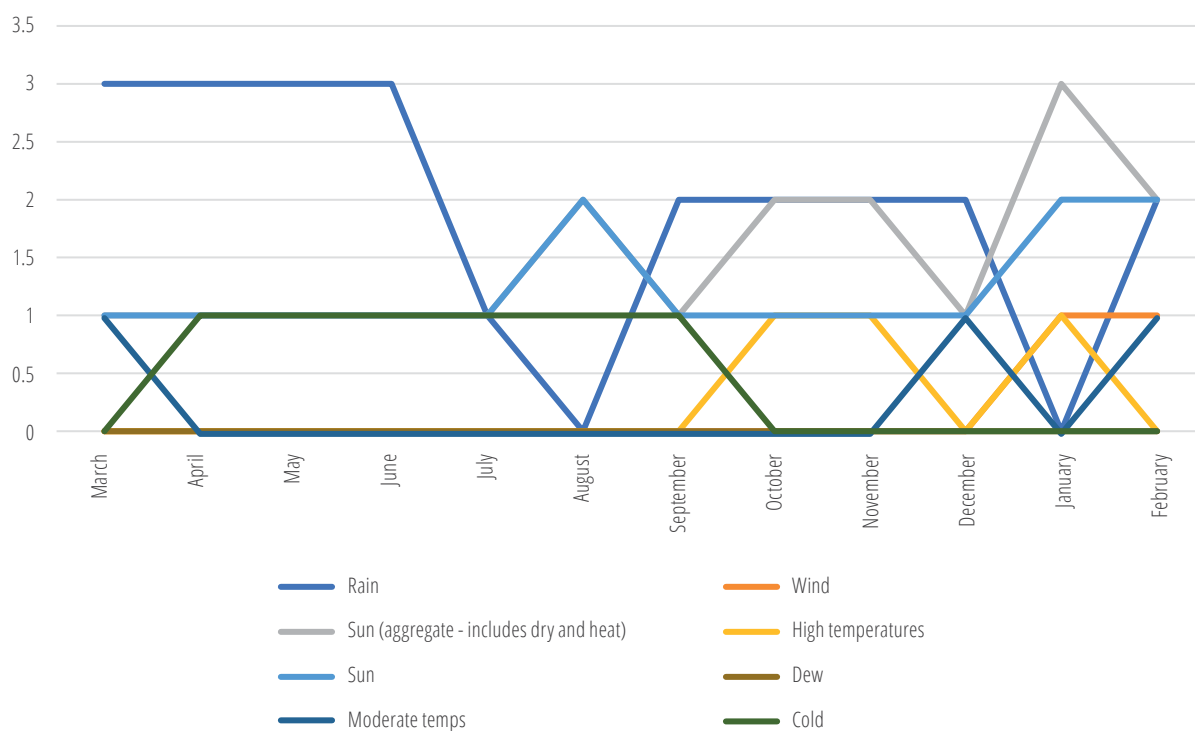


Figure A16. Reported seasonal weather in Tanzania's Meru District (FGD n = 2).

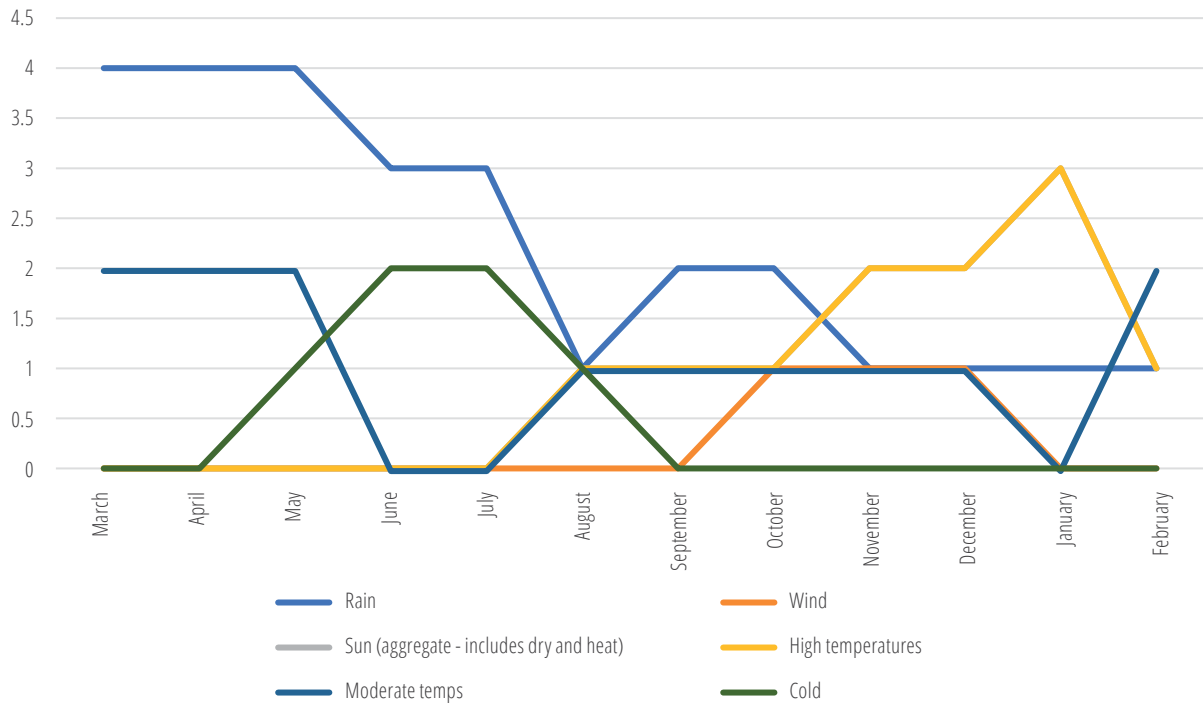


Figure A17. Reported seasonal weather in Tanzania's Moshi District (FGD n = 3).

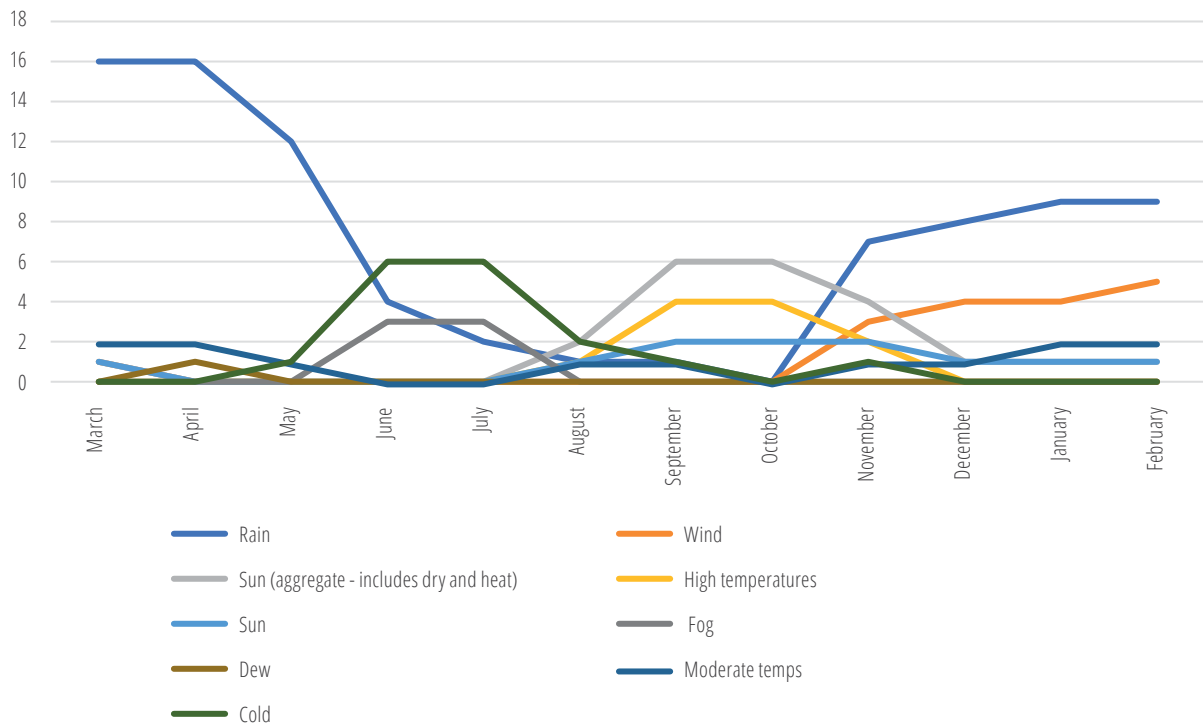


Figure A18. Reported seasonal weather in Tanzania's Rungwe District (FGD n = 6).





Photo: H. Holmes/CGIAR Research Program on Roots, Tubers and Bananas (RTB)



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