

LSMS - INTEGRATED SURVEYS ON AGRICULTURE
UNITED REPUBLIC OF TANZANIA: GENDER APPENDIX

Professor Leigh Anderson, *Principal Investigator*

Associate Professor Mary Kay Gugerty, *Principal Investigator*

Claire Kpaka, Amy Pennington, Mary Kay Gugerty, & C. Leigh Anderson
Prepared for the Agricultural Policy Team of the Bill & Melinda Gates Foundation



Appendix: LSMS-ISA: Gender

The tables below provide the details for analysis done in EPAR Brief #190, including 95% confidence intervals, the number of observations, and p-values where available.

Table of Contents

Household Composition of Male- and Female-Headed Households 2

Education and Nutrition by Gender of Household Head 3

Crop Cultivation and Sales by Gender of Household Head 4

Productivity and Yields by Gender of Household Head 7

Input Usage Rates by Gender of Household Head 9

Hired Labor by Gender of Household Head..... 10

Gender of Hired Laborers..... 11

Non-Agricultural and Agricultural Household Labor Allocation 12

Household Farm Labor Days by Gender of Worker 13

Zonal Analysis of Household Farm Labor Days by Gender of Worker 14

Analysis by Crop of Household Farm Labor Days by Gender of Worker..... 17

Analysis of Household Farm Labor by Gender of Household Head 18

Household Composition of Male- and Female-Headed Households

Proportion of Female-headed Households, Agricultural and Non-agricultural Households*				
Household Category	Estimated Proportion of HHs	95% C.I.	Number of Observations	Wald Test P-value
Agricultural	25%	[23%, 27%]	596 out of 2474	0.053
Non Agricultural	29%	[25%, 33%]	224 out of 791	

*Significantly different from national mean at the 0.1 level

Proportion of Agricultural Households that are Female Headed, by Zone			
Zone	Estimated Proportion	95% C.I.	Number of Observations
Northern	29%	[24%, 35%]	106 out of 367
Southern Highlands	27%	[21%, 32%]	94 out of 348
Southern	27%	[21%, 32%]	122 out of 459
Lake	25%	{19%, 31%}	62 out of 253
Central	24%	[18%, 30%]	33 out of 136
Eastern	24%	[18%, 29%]	68 out of 307
Western	19%	[15%, 23%]	61 out of 323
Zanzibar	17%	[13%, 22%]	50 out of 281

Mean Number of Adults 18 & Older in Household, by Household Category and Gender of Head					
Household Category	Household Head	Mean	95% C.I.	Number of Observations	Wald Test P-value
Agricultural***	Male	2.7	[2.6, 2.8]	1878	0.000
	Female	2.0	[1.9, 2.1]	596	
Non-Agricultural***	Male	2.4	[2.3, 2.6]	567	0.000
	Female	1.9	[1.7, 2.1]	224	

***Significantly different from national mean at the 0.01 level

Proportion of Female-Headed Household with at Least 1 Adult Male Living within the Household***				
Household Category	Estimated Proportion	95% C.I.	Number of Observations	Wald Test P-value
Agricultural	39%	[34%, 43%]	233 out of 596	0.005
Non-Agricultural	24%	[16%, 33%]	64 out of 224	

***Significantly different from national mean at the 0.01 level

Proportion of Male-Headed Households with at Least 1 Adult Female Living within the Household***				
Household Category	Estimated Proportion	95% C.I.	Number of Observations	Wald Test P-value
Agricultural	94%	[93%, 95%]	1768 out of 1878	0.000
Non-Agricultural	82%	[78%, 86%]	487 out of 567	

***Significantly different from national mean at the 0.01 level

Education and Nutrition by Gender of Household Head

Proportion of Household Heads that Did Not Attend School by Gender				
Household Category	Household Head	Estimated Proportion	95% C.I.	Number of Observations
Agricultural	Male	19%	[17%, 22%]	366 out of 1849
	Female	46%	[41%, 51%]	280 out of 593
Non-Agricultural	Male	3%	[1%, 5%]	22 out of 555
	Female	14%	[8%, 20%]	36 out of 223

Mean Number of Years of Completed Education among Household Heads					
Household Category	Household Head	Mean	95% C.I.	Number of Observations	Wald Test P-value
Agricultural***	Male	5.9	[5.6, 6.1]	1763	0.000
	Female	3.7	[3.3, 4.0]	578	
Non-Agricultural***	Male	8.5	[8.2, 8.8]	487	0.000
	Female	7.0	[6.4, 7.6]	199	

***Significantly different from national mean at the 0.01 level

Proportion of Households with at Least One Child Suffering from Moderate to Severe Malnutrition* by Male- and Female-Headed Households in Agricultural Households					
	Household Head	Estimated Proportion	95% C.I.	Number of Observations	Wald test P-value
Any Type of Malnutrition	Male	48%	[45%, 52%]	715 out of 1464	0.1878
	Female	54%	[46%, 61%]	152 out of 291	

*Stunting, underweight, wasting, low BMI for age, and/or underweight

Crop Cultivation and Sales by Gender of Household Head

Basic Farm Characteristics by Gender of Household Head					
	Household Head	Mean	95% C.I.	Number of Observations	Wald test P-value
Number of Plots***	Male	2.4	[2.3, 2.5]	1740	<0.0001
	Female	2.0	[1.9, 2.2]	558	
Household Landholding (acres)***	Male	5.8	[5.3, 6.2]	1738	<0.0001
	Female	3.5	[2.8, 4.3]	557	
Number of Crops Grown***	Male	4.8	[4.6, 5.1]	1740	0.0001
	Female	4.2	[3.9, 4.5]	558	

***Significantly different from national mean at the 0.01 level

Households Cultivating Priority Crops by Gender of Household Head					
	Household Head	Estimated Proportion	95% C.I.	Number of Observations	Wald test P-value
Maize	Male	82%	[80%, 85%]	1282 out of 1740	0.951
	Female	83%	[79%, 86%]	413 out of 558	
Paddy	Male	18%	[14%, 21%]	377 out of 1740	0.250
	Female	15%	[11%, 20%]	104 out of 558	
Beans	Male	34%	[29%, 38%]	483 out of 1740	0.767
	Female	34%	[28%, 41%]	159 out of 558	
Sorghum	Male	12%	[10%, 15%]	220 out of 1740	0.515
	Female	14%	[10%, 18%]	73 out of 558	
Millet***	Male	7%	[5%, 9%]	90 out of 1740	0.002
	Female	4%	[2%, 6%]	15 out of 558	
Sweet Potatoes	Male	15%	[13%, 18%]	226 out of 1740	0.637
	Female	14%	[11%, 18%]	67 out of 558	
Yams	Male	1%	[0%, 1%]	21 out of 1740	0.661
	Female	1%	[0%, 1%]	6 out of 558	
Cowpeas	Male	8%	[6%, 10%]	135 out of 1740	0.802
	Female	9%	[6%, 12%]	34 out of 558	
Groundnut	Male	22%	[19%, 26%]	321 out of 1740	0.475
	Female	20%	[16%, 25%]	101 out of 558	
Cassava**	Male	36%	[32%, 40%]	736 out of 1740	0.016
	Female	30%	[25%, 35%]	193 out of 558	
Mango***	Male	36%	[32%, 39%]	568 out of 1740	<0.0001
	Female	24%	[20%, 29%]	132 out of 558	

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Proportion of Households Selling Crops Produced by Gender of Household Head					
Season	Household Head	Estimated Proportion	95% C.I.	Number of Observations	Wald test P-value
Maize					
Long Rainy Season***	Male	31%	[27%, 34%]	305 out of 1010	0.0011
	Female	21%	[16%, 26%]	69 out of 327	
Short Rainy Season	Male	19%	[13%, 24%]	45 out of 239	0.1304
	Female	11%	[3%, 20%]	9 out of 75	
Paddy					
Long Rainy Season	Male	53%	[45%, 62%]	120 out of 325	0.3923
	Female	48%	[35%, 60%]	37 out of 98	
Short Rainy Season	Male	54%	[36%, 72%]	20 out of 46	0.1127
	Female	28%	[1%, 55%]	2 out of 7	
Beans					
Long Rainy Season	Male	36%	[29%, 43%]	132 out of 350	0.1703
	Female	29%	[19%, 39%]	29 out of 107	
Short Rainy Season	Male	24%	[16%, 32%]	35 out of 139	0.2788
	Female	18%	[6%, 30%]	9 out of 52	
Sorghum					
Long Rainy Season	Male	18%	[12%, 24%]	32 out of 191	0.1135
	Female	9%	[1%, 17%]	5 out of 64	
Short Rainy Season	Male	0%	[0%, 0%]		
	Female	0%	[0%, 0%]		
Millet					
Long Rainy Season	Male	40%	[29%, 50%]	34 out of 83	0.4421
	Female	50%	[25%, 74%]	8 out of 14	
Short Rainy Season	Male	0%	[0%, 0%]		
	Female	0%	[0%, 0%]		
Sweet Potatoes					
Long Rainy Season	Male	25%	[18%, 32%]	41 out of 151	0.702
	Female	28%	[14%, 42%]	12 out of 49	
Short Rainy Season	Male	18%	[7%, 29%]	11 out of 54	0.6388
	Female	23%	[1%, 45%]	3 out of 12	
Yams					
Long Rainy Season	Male	0%	[0%, 0%]		
	Female	0%	[0%, 0%]		
Short Rainy Season	Male	0%	[0%, 0%]		
	Female	0%	[0%, 0%]		

Cowpeas					
Long Rainy Season**	Male	31%	[18%, 43%]	26 out of 94	0.0122
	Female	10%	[0%, 21%]	4 out of 27	
Short Rainy Season	Male	31%	[11%, 50%]	7 out of 29	0.4277
	Female	20%	[-5%, 44%]	2 out of 13	
Groundnut					
Long Rainy Season	Male	48%	[39%, 57%]	116 out of 236	0.2538
	Female	39%	[26%, 53%]	32 out of 79	
Short Rainy Season	Male	25%	[7%, 43%]	12 out of 45	0.7868
	Female	30%	[-5%, 65%]	2 out of 8	
Cassava					
Long Rainy Season	Male	12%	[5%, 19%]	17 out of 153	0.2043
	Female	31%	[3%, 59%]	6 out of 36	
Short Rainy Season	Male	14%	[-3%, 31%]	4 out of 48	0.5291
	Female	7%	[-8%, 21%]	1 out of 9	
Permanent Obs.	Male	25%	[20%, 30%]	111 out of 443	0.8606
	Female	25%	[16%, 33%]	27 out of 123	
Mango					
	Male	22%	[17%, 28%]	102 out of 485	0.6089
	Female	20%	[10%, 29%]	21 out of 114	

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Mean Value of Sales by Gender of Household Head, Long Rainy Season					
Crop	Household Head	Mean (\$US)	95% C.I.	Number of Observations	Wald test P-value
Maize***	Male	\$96.73	[\$78.21, \$115.25]	305	0.0062
	Female	\$55.64	[\$32.62, \$78.66]	69	
Paddy**	Male	\$238.92	[\$160.72, \$317.12]	120	0.0272
	Female	\$111.99	[\$34.12, \$189.86]	37	

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Productivity and Yields by Gender of Household Head

Land Productivity for Male- and Female-Headed Households (USD/ha) †					
	Household Head	Mean (USD/ha)	95% C.I.	Number of Observations	Wald Test P-value
Long Rainy Season	Male	\$133	[\$122, \$144]	1425	0.56
	Female	\$128	[\$111, \$144]	455	
Short Rainy Season	Male	\$93	[\$74, \$112]	463	0.65
	Female	\$104	[\$57, \$152]	125	
Fruit	Male	\$86	[\$68, \$104]	917	0.55
	Female	\$97	[\$63, \$131]	249	
Permanent Crops	Male	\$84	[\$67, \$100]	752	0.56
	Female	\$91	[\$67, \$116]	209	
All Seasons (Crops)	Male	\$237	[\$215, \$259]	1646	0.62
	Female	\$229	[\$198, \$259]	524	
All Seasons (crops & livestock by-products)	Male	\$311	[\$275, \$346]	1648	0.55
	Female	\$291	[\$233, \$349]	522	

†Top 1% of observations were excluded from analysis

Yields for Male and Female Headed Households (Area Harvested)†					
Season	Head of Household	Average Yield (t/ha)	95% C.I.	Number of Observations	Wald test P-value
Maize					
Long Rainy Season*	Male	0.934	[0.875, 0.991]	978	0.072
	Female	0.830	[0.719, 0.939]	306	
Short Rainy Season*	Male	0.751	[0.633, 0.867]	235	0.0617
	Female	0.551	[0.358, 0.746]	76	
Paddy					
Long Rainy Season	Male	1.480	[1.250, 1.710]	312	0.6494
	Female	1.616	[1.082, 2.150]	92	
Short Rainy Season**	Male	2.908	[2.024, 3.793]	37	0.0017
	Female	1.092	[0.400, 1.784]	7	
Beans					
Long Rainy Season	Male	0.324	[0.292, 0.356]	338	0.3362
	Female	0.292	[0.217, 0.363]	104	
Short Rainy Season	Male	0.292	[0.247, 0.336]	149	0.5935
	Female	0.314	[0.230, 0.400]	56	
Sorghum					
Long Rainy Season	Male	0.544	[0.445, 0.640]	184	0.3463
	Female	0.472	[0.339, 0.608]	57	
Short Rainy Season	Male	0.650	[0.284, 1.016]	10	0.1169
	Female	0.324	[0.101, 0.546]	6	

Millet					
Long Rainy Season	Male	0.608	[0.504, 0.709]	77	0.5951
	Female	0.556	[0.381, 0.731]	14	
Sweet Potatoes					
Long Rainy Season	Male	1.863	[1.391, 2.335]	150	0.2494
	Female	1.493	[1.082, 1.905]	50	
Short Rainy Season	Male	1.381	[1.025, 1.737]	58	0.887
	Female	1.327	[0.665, 1.987]	12	
Cowpeas					
Long Rainy Season**	Male	0.272	[0.208, 0.336]	91	0.0497
	Female	0.178	[0.054, 0.301]	24	
Short Rainy Season	Male	0.262	[0.096, 0.427]	25	0.558
	Female	0.200	[0.069, 0.329]	12	
Groundnut					
Long Rainy Season	Male	0.620	[0.514, 0.726]	233	0.1253
	Female	0.489	[0.343, 0.638]	75	
Short Rainy Season	Male	0.492	[0.361, 0.623]	45	0.2659
	Female	0.361	[0.166, 0.558]	7	
Cassava					
Long Rainy Season*	Male	2.031	[1.327, 2.735]	125	0.0827
	Female	1.505	[0.904, 2.105]	29	
Short Rainy Season	Male	1.557	[0.870, 2.241]	34	0.481
	Female	1.228	[0.677, 1.782]	5	
Permanent Obs.	Male	0.818	[0.593, 1.043]	411	0.2485
	Female	1.033	[0.736, 1.332]	112	
Mango					
	Male	0.235	[0.200, 0.267]	452	0.9228
	Female	0.230	[0.151, 0.309]	105	

†Top 1% of observations were excluded from analysis

*Significant at the 0.1 level

**Significant at the 0.05 level

Input Usage Rates by Gender of Household Head

Season	Gender of Head of Household	Input Users (percent of subgroup)	95% C.I.	Number of Observations	Wald test P-value
Organic Fertilizer					
Any Season***	Male	24%	[21%,27%]	351 out of 1678	0.003
	Female	16%	[12%,21%]	80 out of 538	
Long Rainy Season***	Male	21%	[18%, 24%]	292 out of 1586	0.006
	Female	14%	[10%, 18%]	66 out of 510	
Short Rainy Season**	Male	20%	[16%,25%]	122 out of 625	0.019
	Female	13%	[7%,18%]	22 out of 172	
Inorganic Fertilizer					
Any Season	Male	14%	[11%, 16%]	244 out of 1678	0.156
	Female	11%	[7%, 15%]	61 out of 538	
Long Rainy Season	Male	14%	[11%, 17%]	230 out of 1586	0.150
	Female	11%	[7%, 15%]	57 out of 510	
Short Rainy Season	Male	5%	[2%, 8%]	35 out of 625	0.110
	Female	2%	[0%, 4%]	5 out of 172	
Pesticides, Herbicides, or Fungicides					
Any Season***	Male	16%	[13%, 19%]	275 out of 1678	0.001
	Female	10%	[7%, 13%]	54 out of 538	
Long Rainy Season***	Male	16%	[13%, 18%]	252 out of 1586	0.001
	Female	10%	[6%, 13%]	49 out of 510	
Short Rainy Season*	Male	8%	[5%, 11%]	46 out of 625	0.095
	Female	4%	[1%, 8%]	7 out of 172	
Any Input					
Any Season***	Male	39%	[35%, 43%]	633 out of 1678	<0.001
	Female	28%	[23%, 33%]	145 out of 538	
Credit					
Any Season	Male	2.2%	[1.2%, 3.3%]	34 out of 1678	0.417
	Female	1.5%	[0%, 3.1%]	6 out of 538	

*Significant at the 0.1 level

**Significant at the 0.05 level

***Significant at the 0.01 level

Hired Labor by Gender of Household Head

Proportion of Households that Hired Labor, by Gender of Household Head**				
Household Head	Estimated Proportion	95% C.I.	Number of Observations	Wald Test P-value
Male	45%	[42%, 48%]	708 out of 1586	0.044
Female	39%	[34%, 45%]	196 out of 510	

***Significant at the 0.05 level*

Proportion of Households that Hired Unpaid Labor, by Gender of Household Head**				
Household Head	Estimated Proportion	95% C.I.	Number of Observations	Wald Test P-value
Male	15%	[11%, 18%]	90 out of 708	0.042
Female	23%	[15%, 30%]	41 out of 196	

***Significant at the 0.05 level*

Gender of Hired Laborers

Proportion of Households* that Hired Male, Female and Mixed Gender Laborers			
Gender of Worker	Estimated Proportion	95% C.I.	Number of Observations
Exclusively Male	18%	[15%, 21%]	164 out of 904
Exclusively Female	38%	[35%, 42%]	379 out of 904
Male & Female	45%	[41%, 48%]	373 out of 904

**Of households that hired labor on at least one plot*

Proportion of Households that Hired Male and Female Unpaid Laborers on at Least one Plot*			
Gender of Workers	Estimated Proportion	95% C.I.	Number of Observations
Male	17%	[13%, 21%]	84 out of 537
Female	14%	[10%, 17%]	89 out of 752

**Note, numerator only includes plots where none of the workers were paid for their work*

Non-Agricultural and Agricultural Household Labor Allocation

Hours Spent During last Seven Days on Unpaid Non-Agricultural Household Labor				
	Gender	Mean	95% C.I.	Number of Observations
Agricultural	Male	8.5	[7.9, 9.2]	2865
	Female	25.8	[24.9, 26.7]	3248
Non-Agricultural	Male	7.6	[6.5, 8.7]	841
	Female	27.8	[26.2, 29.4]	1035

Hours Spent During Last Seven Days on Agricultural Household Labor***				
Gender	Mean	95% C.I.	Number of Observations	Wald Test P-value
Male	18.4	[17.1, 19.6]	5253	0.000
Female	16.3	[15.1, 17.5]	5645	

***Significant at the 0.01 level

Household Farm Labor Days by Gender of Worker

Number of Farm Labor Days Worked by Men and Women, Long Rainy Season [†]					
	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation***	Male	31	[29, 33]	1404	0.0078
	Female	33	[31, 35]		
Weeding	Male	29	[27, 31]	1382	0.2763
	Female	30	[28, 31]		
Harvesting*	Male	23	[21, 25]	1358	0.0703
	Female	25	[23, 27]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked by Men and Women, Short Rainy Season [†]					
	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation	Male	24	[22, 27]	511	0.3586
	Female	25	[22, 29]		
Weeding	Male	24	[22, 27]	504	0.6478
	Female	24	[21, 26]		
Harvesting	Male	17	[15, 20]	377	0.6901
	Female	17	[14, 20]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Zonal Analysis of Household Farm Labor Days by Gender of Worker

Proportion of Female Workers in Farm Labor Activities per Household by Zone, Long Rainy Season [†]					
	Activity	Average Proportion	95% C.I.	Number of Observations (Households)	Wald Test P-value
Central	Land Preparation	48%	[44%, 52%]	107	0.35
	Weeding	48%	[44%, 52%]	107	0.24
	Harvesting*	48%	[44%, 51%]	107	0.06
Eastern	Land Preparation*	47%	[43%, 50%]	122	0.08
	Weeding***	45%	[42%, 49%]	121	0.01
	Harvesting***	46%	[43%, 50%]	118	0.01
Southern Highlands	Land Preparation	50%	[48%, 52%]	259	0.72
	Weeding	50%	[48%, 52%]	261	0.95
	Harvesting	50%	[48%, 53%]	261	0.68
Lake	Land Preparation***	54%	[50%, 57%]	169	0.01
	Weeding***	55%	[51%, 59%]	167	0.00
	Harvesting***	57%	[53%, 61%]	165	0.00
Northern	Land Preparation	50%	[46%, 53%]	227	0.90
	Weeding	50%	[50%, 53%]	223	0.77
	Harvesting	50%	[47%, 54%]	206	0.71
Southern	Land Preparation*	51%	[49%, 53%]	331	0.07
	Weeding	52%	[50%, 53%]	311	0.20
	Harvesting	52%	[50%, 54%]	310	0.43
Western	Land Preparation	48%	[45%, 50%]	221	0.11
	Weeding	50%	[47%, 53%]	229	0.93
	Harvesting	51%	[48%, 53%]	223	0.99
Zanzibar	Land Preparation***	40%	[36%, 44%]	211	0.00
	Weeding***	43%	[39%, 47%]	211	0.00
	Harvesting***	41%	[38%, 45%]	209	0.00

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked by Zone, Long Rainy Season [†]						
	Activity	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value [‡]
Central	Land Preparation	Male**	42	[34, 51]	104	0.02
		Female	33	[27, 39]	107	0.35
	Weeding	Male**	37	[29, 45]	104	0.02
		Female	31	[24, 38]	106	0.40
	Harvesting	Male	30	[19, 42]	105	0.22
		Female	21	[15, 26]	107	0.37
Eastern	Land Preparation	Male	39	[29, 49]	111	0.18
		Female	34	[25, 42]	111	0.39
	Weeding	Male*	36	[28, 44]	109	0.06
		Female	32	[24, 40]	110	0.30
	Harvesting	Male	25	[16, 34]	105	0.98
		Female	23	[13, 33]	109	0.92
Southern Highlands	Land Preparation	Male	33	[27, 38]	249	0.83
		Female	29	[25, 33]	249	0.49
	Weeding	Male	27	[23, 31]	245	0.25
		Female	26	[22, 29]	254	0.10
	Harvesting	Male	22	[18, 26]	249	0.17
		Female	21	[18, 25]	254	0.30
Lake	Land Preparation	Male***	26	[21, 30]	154	0.00
		Female	27	[22, 32]	163	0.13
	Weeding	Male***	24	[20, 27]	145	0.00
		Female*	25	[21, 29]	162	0.09
	Harvesting	Male***	17	[13, 21]	137	0.00
		Female	21	[16, 26]	157	0.39
Northern	Land Preparation	Male***	24	[18, 30]	203	0.00
		Female***	23	[17, 28]	205	0.00
	Weeding	Male***	23	[19, 27]	202	0.00
		Female***	22	[18, 27]	203	0.00
	Harvesting	Male***	13	[10, 15]	184	0.00
		Female***	14	[11, 16]	188	0.00
Southern	Land Preparation	Male***	40	[35, 44]	312	0.01
		Female***	42	[37, 47]	316	0.00
	Weeding	Male**	35	[29, 41]	292	0.03
		Female***	39	[33, 45]	297	0.00
	Harvesting	Male***	33	[26, 39]	293	0.01
		Female***	34	[28, 40]	296	0.00

Western	Land Preparation	Male	34	[29, 39]	211	0.72
		Female	30	[24, 36]	208	0.93
	Weeding	Male	29	[24, 33]	215	0.71
		Female	28	[23, 32]	218	0.81
	Harvesting	Male***	32	[26, 39]	207	0.01
		Female*	27	[22, 32]	215	0.06
Zanzibar	Land Preparation	Male**	40	[34, 45]	193	0.03
		Female	33	[28, 39]	149	0.33
	Weeding	Male***	38	[32, 44]	187	0.00
		Female***	38	[32, 43]	159	0.00
	Harvesting	Male***	38	[32, 44]	190	0.00
		Female	25	[19, 30]	155	0.47

† Only households with at least one male and one female over the age of 18 were included for analysis

‡ Compared to Tanzania average for that activity and gender

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Analysis by Crop of Household Farm Labor Days by Gender of Worker

Proportion of Female Workers per Household for all Farm Activities Combined by Crop, Long Rainy Season [†]				
Crop	Average Proportion	95% C.I.	Number of Observations (households)	Wald Test P-value
Maize***	48%	[47%, 50%]	1170	0.007
Paddy**	47%	[45%, 50%]	360	0.033
Beans	48%	[45%, 51%]	123	0.139
Sorghum	48%	[46%, 51%]	111	0.185
Millet**	44%	[39%, 49%]	62	0.017
Sweet Potatoes	51%	[47%, 56%]	57	0.515
Groundnut	50%	[47%, 53%]	88	0.989
Cassava	51%	[49%, 53%]	457	0.425

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days by Main Crop on Plot, Long Rainy Season [†]					
Crop	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Maize**	Male	38	[34, 42]	1163	0.019
	Female	36	[32, 39]		
Paddy**	Male	58	[49, 66]	352	0.038
	Female	49	[42, 55]		
Beans	Male	34	[24, 44]	120	0.304
	Female	31	[23, 39]		
Sorghum**	Male	54	[39, 68]	110	0.022
	Female	43	[32, 54]		
Millet***	Male	48	[41, 54]	61	0.003
	Female	39	[33, 45]		
Sweet Potatoes	Male	31	[23, 40]	54	0.141
	Female	43	[28, 59]		
Groundnut	Male	36	[30, 42]	86	0.714
	Female	37	[30, 45]		
Cassava	Male	41	[35, 47]	428	0.757
	Female	42	[35, 48]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Analysis of Household Farm Labor by Gender of Household Head

Proportion of Female Workers in Farm Labor Activities per Household by Male- and Female-Headed Households, Long Rainy Season [†]					
	Household Head	Average Proportion	95% C.I.	Number of Observations (households)	Wald Test P-value
Land Preparation***	Male	48%	[47%, 49%]	1454	0.000
	Female	60%	[56%, 64%]	193	
Weeding***	Male	49%	[48%, 50%]	1441	0.000
	Female	61%	[56%, 65%]	189	
Harvesting***	Male	49%	[48%, 51%]	1416	0.000
	Female	61%	[57%, 65%]	183	

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked, Male Headed Households, Long rainy season [†]					
	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation***	Male	34	[32, 36]	1262	0.000
	Female	31	[29, 33]		
Weeding**	Male	30	[28, 32]	1245	0.032
	Female	29	[27, 30]		
Harvesting**	Male	25	[23, 28]	1220	0.012
	Female	23	[21, 25]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked, Female Headed Households, Long rainy season [†]					
	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation***	Male	26	[22, 30]	142	0.010
	Female	31	[26, 35]		
Weeding**	Male	25	[20, 30]	137	0.032
	Female	31	[25, 37]		
Harvesting**	Male	19	[15, 23]	138	0.019
	Female	24	[19, 29]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Proportion of Female Workers in Farm Labor Activities per Household, by Male- and Female-Headed Households, Short Rainy Season[†]

	Household Head	Average Proportion	95% C.I.	Number of Observations (households)	Wald Test P-value
Land Preparation***	Male	50%	[48%, 52%]	561	0.009
	Female	60%	[53%, 66%]	65	
Weeding**	Male	52%	[50%, 53%]	547	0.032
	Female	59%	[52%, 66%]	65	
Harvesting**	Male	54%	[52%, 57%]	469	0.041
	Female	63%	[55%, 72%]	56	

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked, Male Headed Households, Short Rainy Season[†]

	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation	Male	25	[22, 29]	464	0.136
	Female	24	[21, 26]		
Weeding	Male	24	[21, 26]	457	0.671
	Female	24	[22, 27]		
Harvesting	Male	16	[14, 19]	343	0.591
	Female	17	[14, 20]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level

Number of Farm Labor Days Worked, Female Headed Households, Short Rainy Season[†]

	Gender of Worker	Mean	95% C.I.	Number of Observations	Wald Test P-value
Land Preparation	Male	25	[16, 35]	47	0.235
	Female	31	[22, 39]		
Weeding	Male	25	[12, 38]	47	0.979
	Female	25	[18, 32]		
Harvesting	Male	22	[3, 42]	34	0.822
	Female	21	[11, 32]		

[†] Only households with at least one male and one female over the age of 18 were included for analysis

*Significantly different from national mean at the 0.1 level

**Significantly different from national mean at the 0.05 level

***Significantly different from national mean at the 0.01 level