Evans School of Public Affairs
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LSMS – Integrated Surveys on Agriculture
United Republic of Tanzania:
Median Farming Household

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SECTION B: Profile of the Median Farming Household

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Section Highlights

In this section we present a brief profile of the 'median farmer' in Tanzania, defining median along a number of household and farm characteristics. The median farmer falls in the middle of the distribution for the given characteristic, meaning half the farmers, plots, or farm households fall above this hypothetical person or farm and half below.

The median agricultural household in Tanzania:

- Has five members, two of whom are under 12. Nearly half (44%) of those under five show signs of stunting.
- Is male-headed and cultivates four crops on two plots on a landholding of four acres.
- Is likely to grow maize, with a yield of 270 kg/acre (288 kg/acre for male-headed households and 240 kg/acre for female-headed households).

Among zones:

- Median landholding is highest in Western zone.
- Households in the Lake zone cultivate the largest number of crops.
- Southern Highland farmers have the highest maize and paddy yields.
- Zanzibar farmers have the highest cassava yield.
- Among cattle-owning households, herd size is the largest in the Lake zone.
- Of farming households that apply organic fertilizer, the highest rate of application is in the Northern zone.

Most of the information presented in this section appears elsewhere in the report. It is gathered here to offer a quick snapshot of a typical farming household and to offer median values, which are often more representative of the population than the commonly reported means.

In addition to this Median Farmer brief based solely on LSMS-ISA data, EPAR is preparing "Farmer Profile" briefs that give more detail on farm management practices. These profiles are based on field interviews conducted in Tanzania across several farming systems: the Northern Highlands (Brief #172), Coastal Cassava Regions (Brief #173), and Mixed Maize (Brief #174).

Median Household and Median Farming Household by Gender

Table 1

Median Household Profile (all Tanzania)		
	Agricultural household (n=2474)	Non-Agricultural household (n=791)
Proportion female-headed	25%	29%
Number of family members	5	4
Number of children 12 and under	2	1
Value of food consumed (one week)	$21.61	$22.13
Proportion of children five and under stunting (low height for age)	44%	33%
Proportion of children five and under underweight (low weight for age)	17%	11%
Proportion of children five and under wasting (low weight for height)	3%	3%

Table 2 provides characteristics of the median male-headed farming household and the median female-headed farming household. Proportions of households cultivating certain crops and owning certain livestock are provided, followed by the median yields and number of livestock owned for those households that cultivate the crop or own the livestock.

Table 2

Median Farming Household Profile (Tanzania farming households only)		
	Male-headed (n=1878)*	Female-headed (n=596)*
Median number of plots	2	1
Median total landholding size (acres)	4	2
Median number of crops cultivated by household	4	4
Proportion of households that cultivate maize	82%	83%
Median harvested area maize yield (long rainy season)	288 kg/acre	240 kg/acre
Median area harvested with maize (long rainy season)	1.5 acres	1 acre
Proportion of households that cultivate rice	18%	15%
Median harvested area paddy yield (long rainy season)	450 kg/acre	420 kg/acre
Median area harvested with paddy (long rainy season)	1 acre	0.7 acres
Proportion of households that cultivate cassava	36%	30%
Median harvested area cassava yield (permanent crop)	107 kg/acre	160 kg/acre
Median area harvested with cassava (permanent crop)	2 acres	1 acre
Proportion of households owning cattle	25%	14%
Median number of cattle owned	5	6
Median number of chickens owned	10	6
Proportion of households that apply organic fertilizer	24%	16%
Proportion of households that apply inorganic fertilizer	14%	11%
Median organic fertilizer applied per acre (long rainy season)	100 kg/acre	125 kg/acre
Value of food consumed (one week)	$22.81	$17.98
Proportion of under-5-year-olds suffering from stunting	42%	46%

*Number of observations varies for each question depending on whether or not there is missing data, but this is the overall number of male-headed and female-headed agricultural households.

Median Farming Household by Administrative Zone

The median farming household across all eight administrative zones in Tanzania farmed a median of two plots. However, the median landholding size for those households that owned or cultivated at least one plot varies across zones, as shown in *Figure 1*. Median landholding size was highest in the Western zone and lowest in Zanzibar.

Figure 1: **Median Household Landholding Size (acres)**

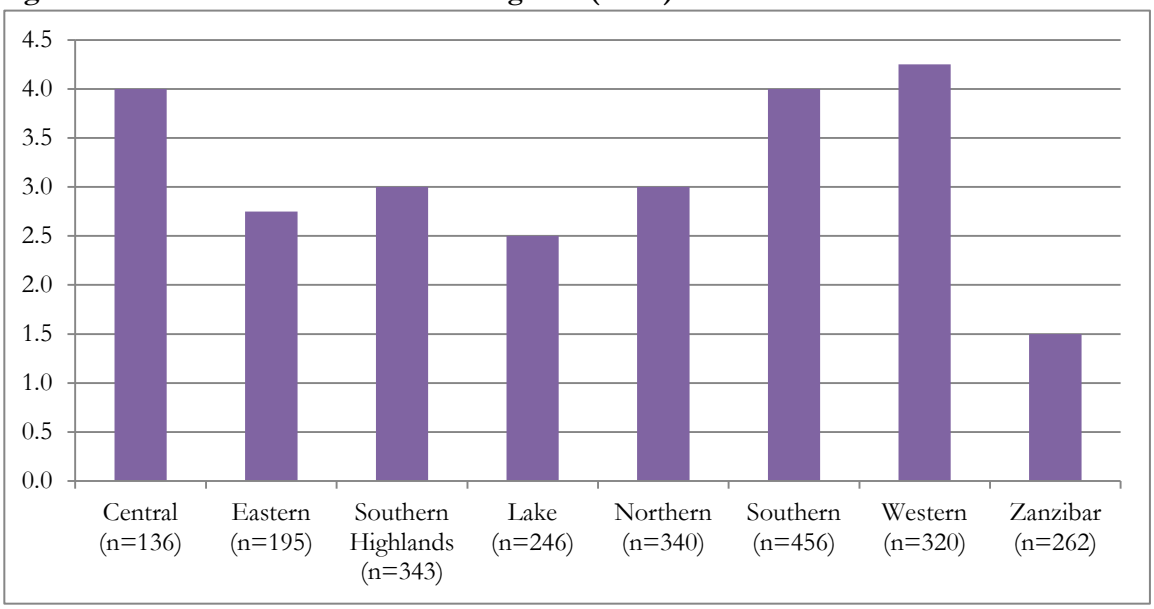


Figure 2 shows the median number of crops grown per household, of households that owned or cultivated at least one plot, including crops grown in the short and long rainy seasons, and permanent and fruit crops.

Figure 2: **Median Number of Crops Grown per Household**

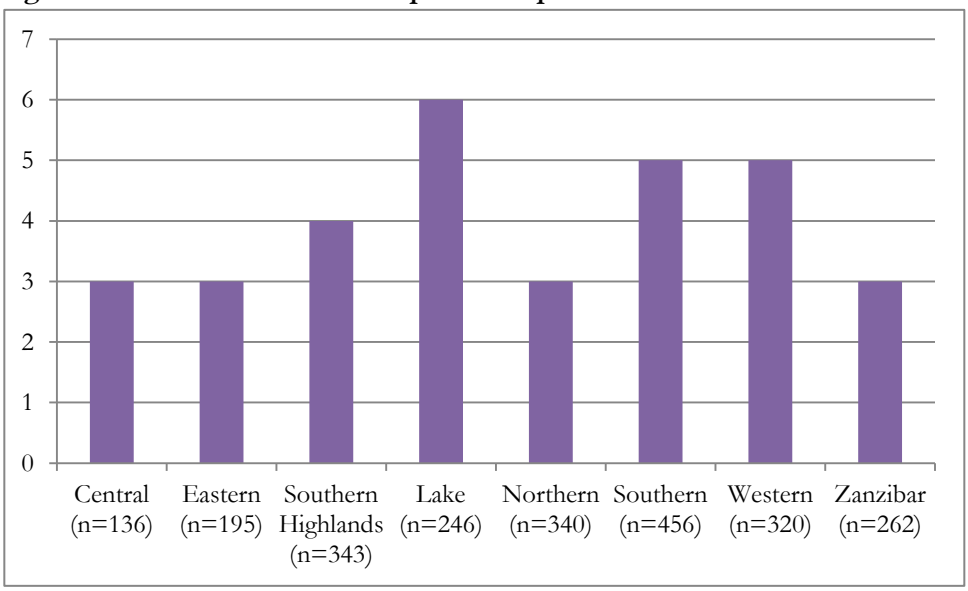


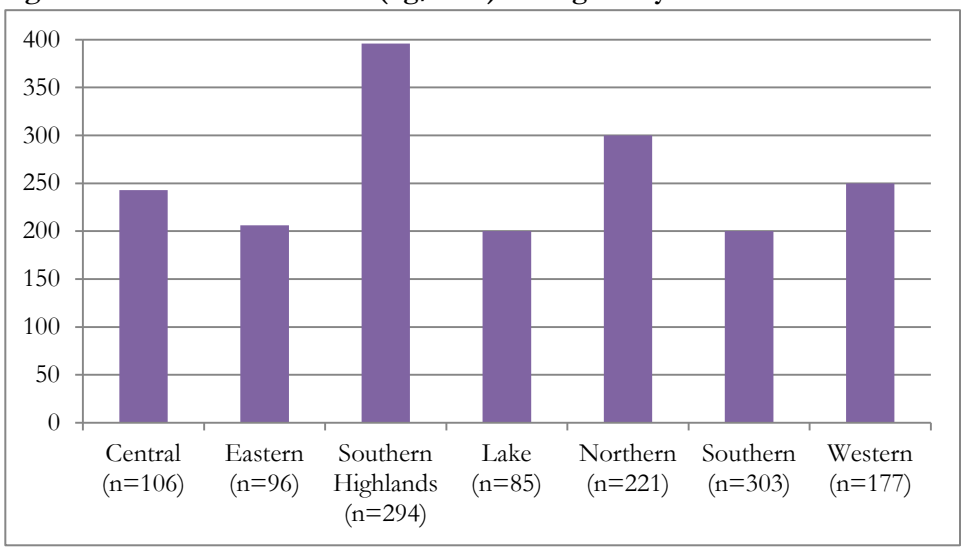
Table 3 shows the proportion of households within each zone that grow maize, paddy, and cassava. The table also shows the proportion of households in each zone that own cattle and the proportion of households that apply organic and inorganic fertilizer.

Table 3

Proportions of Farming Households by Administrative Zone								
	Central	Eastern	Southern Highlands	Lake	Northern	Southern	Western	Zanzibar
Proportion of households that cultivate maize	79%	69%	93%	80%	88%	74%	95%	6%
Proportion of households that cultivate paddy	8%	38%	9%	19%	5%	27%	18%	51%
Proportion of households that cultivate cassava	2%	27%	12%	69%	20%	57%	41%	82%
Proportion of households owning cattle	21%	2%	23%	19%	47%	3%	28%	25%
Proportion of households that apply organic fertilizer	33%	5%	24%	22%	34%	8%	22%	11%
Proportion of households that apply inorganic fertilizer	6%	5%	34%	1%	15%	18%	7%	8%

Figure 3 shows the median maize yield for households within each zone that reported growing maize. The highest median reported was in the Southern Highlands, 396kg/acre, which also had one of the highest proportions of households growing maize, 93%, as shown in *Table 3*.

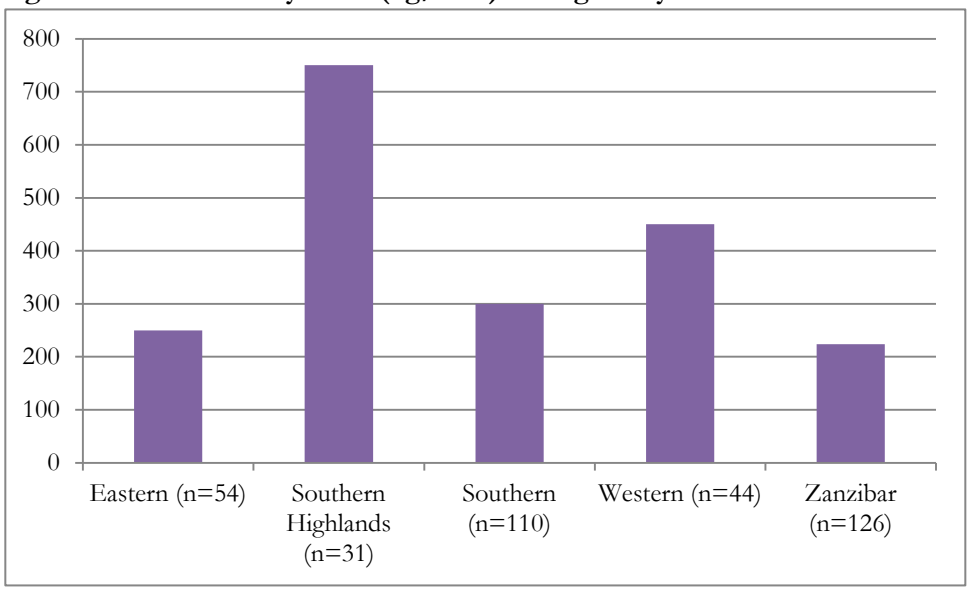
Figure 3: **Median Maize Yield (kg/acre) - Long Rainy Season**



*Zanzibar was removed due to low number of observations (less than 30).
Note: Yields calculated using area harvested.

Similarly, *Figure 4* shows the median paddy yield for households in each zone that reported growing paddy. Southern Highlands had the highest median paddy yield, at 750 kg/acre. However, the Southern Highlands had one of the lowest proportions of households that grow paddy (9%). With the exception of the Central and Northern zones, all other zones had a higher proportion of households cultivating paddy (*Table 3*).

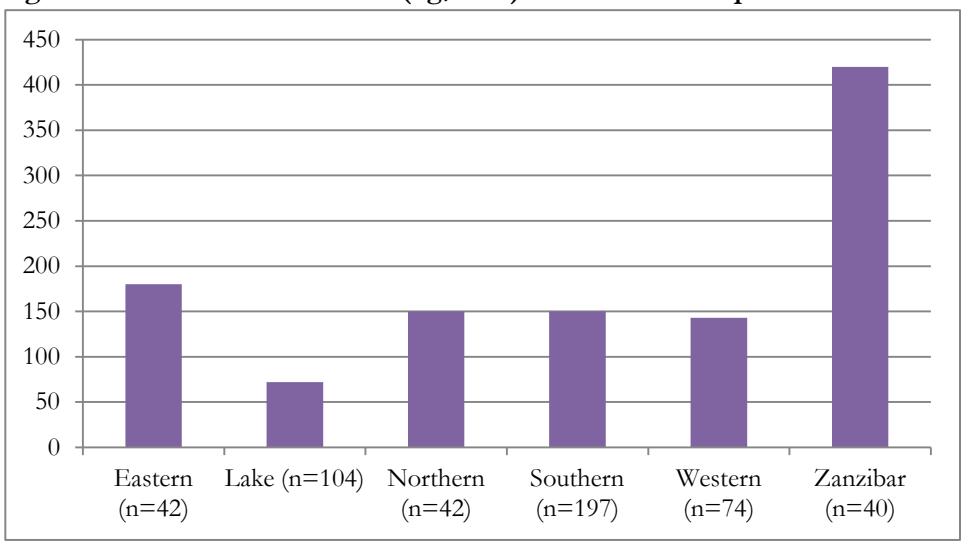
Figure 4: **Median Paddy Yield (kg/acre) - Long Rainy Season**



*Central, Lake, and Northern zones were removed due to low number of observations (less than 30).
Note: Yields calculated using area harvested.

As shown in *Table 3*, Zanzibar had the highest proportion of households cultivating cassava (82%), followed by the Lake zone (69%). Zanzibar also reported the highest median cassava yield, while the Lake zone reported the lowest (*Figure 5*).

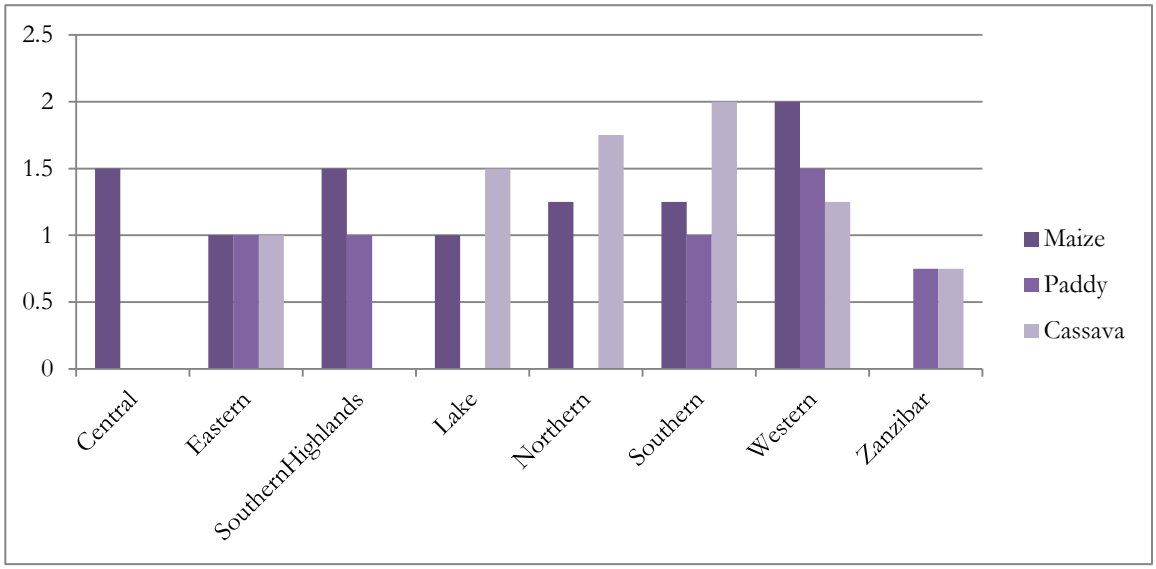
Figure 5: **Median Cassava Yield (kg/acre) - Permanent Crop**



*Central and Southern Highlands zones were removed due to low number of observations (less than 30).
Note: Yields calculated using area harvested.
Note: There were a total of 529 observations of cassava as a permanent crop at the household level (captured in the graph above). However, there were an additional 156 observations that were incorrectly coded as long rainy season crops, and are therefore unaccounted for in the graph above.

Figure 6 shows the median area harvested for maize, paddy, and cassava. Western zone had the highest median area harvested for maize and paddy, but Southern zone had the highest area harvested for cassava.

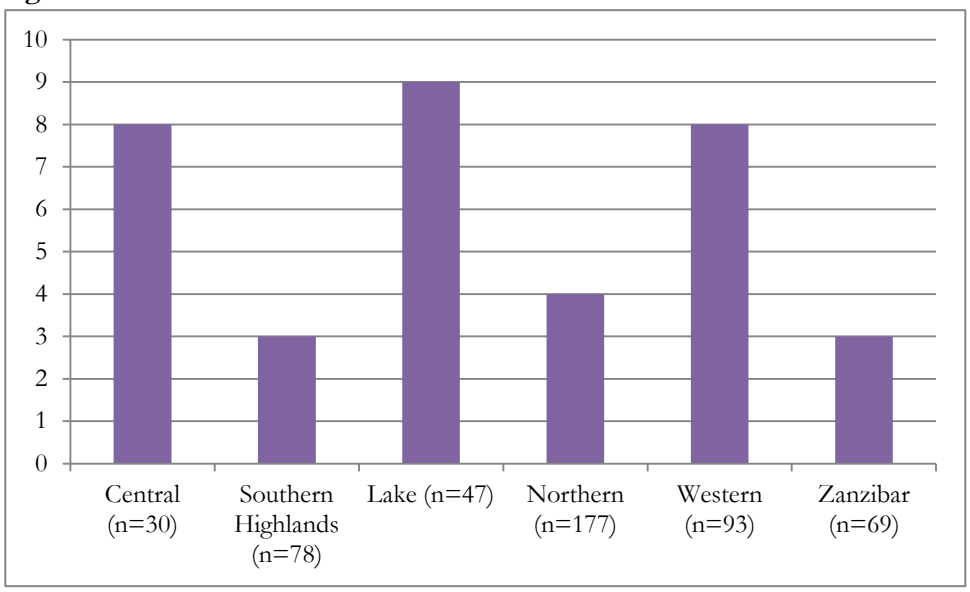
Figure 6: **Median Area Harvested by Major Crop (acres)**



*Insufficient observations (less than 30) for Central zone paddy and cassava, Southern Highlands zone cassava, Lake zone paddy, Northern zone paddy, and Zanzibar maize.
Note: Maize and paddy area harvested during the long rainy season; cassava area harvested as permanent crop.

Table 3 shows the Northern zone had the highest proportion of households owning cattle (47%), but households that owned cattle owned a median of four cattle. However, in the Lake zone, where only 19% of households owned any cattle, those that did own cattle owned a median of nine cattle.

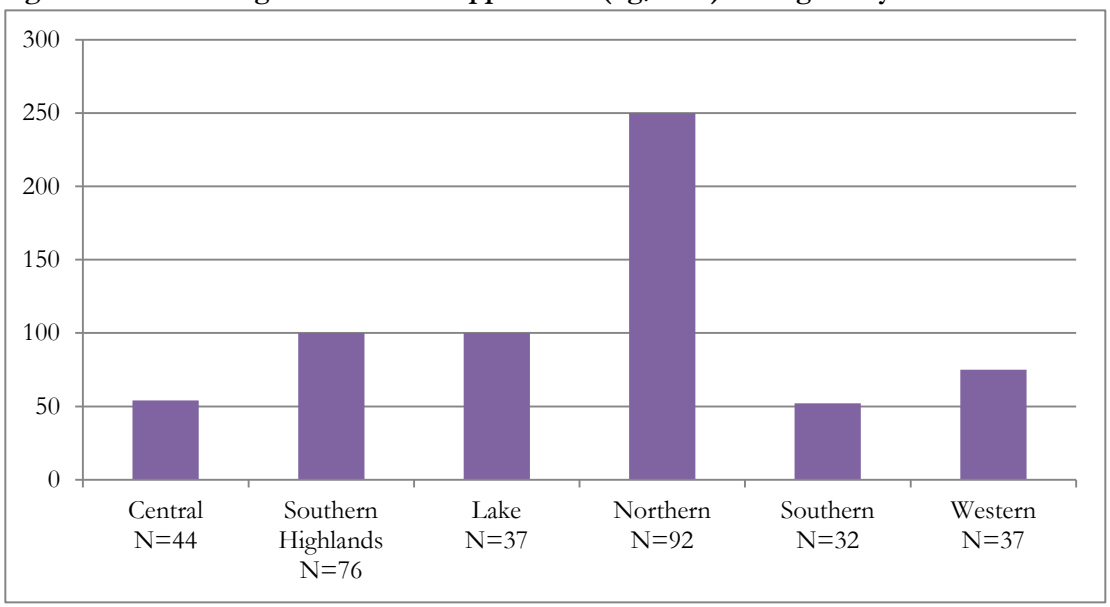
Figure 7: **Median Number of Cattle Owned**



*Eastern and Southern zones were removed due to low number of observations (less than 30).
Note: The cattle category includes bulls, cows, steers, heifers, male calves, and female calves.

Figure 8 shows the median amount (kilograms) of organic fertilizer applied per acre during the long rainy season, for those households that applied any organic fertilizer to one or more plots. Northern zone had the highest proportion of users, 34% (*Table 3*), and the highest application rate, shown below.

Figure 8: **Median Organic Fertilizer Application (kg/acre) - Long Rainy Season**



*Eastern zone and Zanzibar were removed due to low number of observations (less than 30).

Figure 9 shows the median value of food consumed in one week by agricultural households in each of the eight administrative zones. Agricultural households in the Northern zone consume the most, $25.00 in one week, while agricultural households in the Central zone consume the least, $17.66 in one week.

Figure 9: **Median Value of Food Consumed in One Week (US Dollars)**