TROPICAL LEGUMES

Accelerated breeding and seed delivery of critical legume crops in Africa and Asia

Tanzanian Socioeconomic Survey Data Cube

Dimensions and Measures

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The Tanzanian Socioeconomic Survey Data Cube

Tanzanian Socioeconomic Survey 2016–17

As part of a survey related to groundnut adoption conducted by the Bill & Melinda Gates Foundation-funded Tropical Legumes III project, valuable socioeconomic information was collected, which is now being made available online as a public good.

The survey data were collected in 17 Modules (M01–M17). Each module focuses on a particular theme (e.g. general household information, crop production and livestock production).

The Cube

The survey data is held in a sophisticated cloud-based database called a Cube and the data can be accessed easily through a Microsoft Excel file which is connected directly to the live Cube on the cloud.

The data for each variable in the Cube can quickly and easily be displayed in the Excel file. You can choose whichever variable you would like to see in combination with any other variables in the Cube – simply by ticking boxes. Numerical data ('Measures') can be displayed and summarized using a large range of filters and groupings (called 'Dimensions'). Calculations update automatically when you choose different groupings (e.g. you can see mean values at the village, district, region or country level).

Dimensions and Measures

You can explore datasets in the Cube using 'Dimensions' and 'Measures'.

Dimensions are categories you can use to group or filter data. If you are only interested in exploring data by a certain crop or region of Tanzania, then these Dimensions can be effectively used as filters to only display a subset of the data.

Dimensions always appear at the bottom of the PivotTable Fields list in Excel.

Measures are the variables for which data has been recorded (e.g. crop yield). Measures contain values (e.g. 1000 kg), whereas Dimensions are used to group/filter the data (e.g. you can use the Dimension 'District' to obtain a mean per district for crop yield). Calculated measures are measures not in the original data but ones that Scriptoria have calculated using the survey data and added.

Measures always appear at the top of the PivotTable Fields list in Excel.

Calculations and cleansing

Means

Means are calculated using the 'response' level data (which may be at a level below 'household') unless stated otherwise. The response level definition changes from module to module (e.g. in the demographics module, data is presented per person within that household). So, please check the definition shown in the table for a given module.

Data cleansing

To provide an economically viable approach, the team did not aim to 'scrub' all the data to produce a perfectly clean data set. Rather the aim was to produce a usable 'semi-raw' data set which future researchers can access, review, download, analyse and publish – as future scientists will want to manipulate and clean subsets of such data themselves for specific academic purposes.

The data-cleansing completed to date focused on particular subsets of the data which were most useful to Tropical Legumes researchers. All the data-cleansing procedures used are traceable and transparent and full documentation is available on request.

Further Information

A comprehensive **Tanzanian Socioeconomic Survey Data Cube – User Guide** is available to help you get started exploring the Cube on your own.

Please contact Dr Sandy Williams (s.e.williams[at]scriptoria.co.uk) for further information about the Cube and its data, for additional documentation on data cleansing, or to arrange a one-to-one training Cube session.

Details of Measures and Dimensions, by survey Module

M01 Basic Household Data

Module 01 of the survey covered many **household-level variables**, so these appear in the Cube as sub-modules such as 'M01 Basic Household Data' and 'M01 Crop Grown' (see below). Within 'M01 Basic Household Data,' measures have been grouped into categories such as 'General Info' (which contains measures related to households' access/distance to markets, extension services, etc.) and 'Map' (which contains measures related to household location).

Measure/group of Measures	Description
Crop Grown %	The percentage of households growing a particular crop. There are 23 categories: avocado, bananas, beans, cassava, cowpea, custard apple, finger millet, groundnut, maize, mangoes, millet, oranges, pawpaw, pearl millet, pigeonpea, sesame, sorghum, tomatoes, vegetables, watermelon, other, unaware of type grown and N/A.
Decision-Making %	The percentage of households that regularly make decisions on each of the following: agricultural inputs (which inputs to buy), agricultural production, crop types grown, crop varieties grown, employment opportunities (e.g. salaried employment), livestock raising, major expenditure (e.g. buying a large household appliance), minor expenditure (e.g. buying food for daily consumption), non-farm business activities, and who takes crops to market (and when).
General Info	General information on households and factors affecting them: the household's distance to the nearest cooperative, market, and extension agent's office; the cost of transport to market; the number of months per year during which the road to the market is passable for trucks; the walking distance from the household to the nearest market; the number of years they lived in the village; and the number of years' experience they have growing groundnut. *'Number of households' is a useful measure you can display alongside any other calculated Measures, to show how many households the calculations were based on.
Groundnut DNA fingerprinting	Set of data resulting from DNA analysis of a sample of harvested pods collected from the households. This data determines what groundnut variety the farmers are growing (the genotype identified can be seen as a Dimension: 'Groundnut genotype grown – from DNA fingerprinting' below). The Classification Confidence – Mean: gives the confidence of groundnut genotype assignation. The higher the classification confidence, the higher the chance that the sample is a true representation of the variety it is identified with (a similarity index of sorts).

	The Estimated Purity – Mean: gives the purity of the groundnut sample compared with the 'reference' variety; it indicates whether the sample represents a pure variety or mix of other varieties.
Groundnut Variety %	The percentage of households aware of the existence of a list of groundnut varieties. These varieties are Dodoma Bold, Johari, Kuchele 2013, Mangaka 09, Masasi 09, Mnanje 09, Nachi 15, Nachingwea 09, Naliendele 09, Narinut 13, Nyota, Pendo 98, Red Mwitunde (and 'Local').
Household Assets	The percentage of households that own particular assets, e.g. agricultural or non-agricultural land, cell phones, chickens, fish pond or fishing equipment, large or small consumer durables, large or small livestock, means of transportation, mechanized or non-mechanized farm equipment, non-farm business equipment, other means of producing capital, and their own house.
Income [A group of calculated measures]	Income in Tanzanian shillings (TSh). Separate measures are given for income from different sources (e.g. from other farm-related activities, from other non-farm-related sources, from sale of crops, and from selling livestock and livestock products). Also included are total income per household (the sum of all the above) and per capita income (total household income divided by the number of household members).
Land – Long Rains – Cultivated	The amount of land in acres that was cultivated during long rains (Feb-May 2017), broken down into 9 types of land: owned (A), rented in (B), rented out (C), shared/borrowed in (D), shared/borrowed out (E), total irrigated (owned), total operated (A+B+D), total owned (A+C+E), total rainfed (owned).
Land – Long Rains – Unplanted	Amount of land in acres that remained unplanted during long rains, broken down into 7 different types of land: owned (A), rented in (B), rented out (C), shared/borrowed in (D), shared/borrowed out (E), total operated (A+B+D), total owned (A+C+E).
Land – Short Rains – Cultivated	Amount of land in acres that was cultivated during short rains (Nov 2016-Jan 2017), broken down into 9 types of land: owned (A), rented in (B), rented out (C), shared/borrowed in (D), shared/borrowed out (E), total irrigated (owned), total operated (A+B+D), total owned (A+C+E) and total rainfed (owned).
Land – Short Rains – Unplanted	Amount of land in acres that remained unplanted during short rains (Nov 2016-Jan 2017), broken down into 7 different types of land: owned (A), rented in (B), rented out (C), shared/borrowed in (D), shared/borrowed out (E), total operated (A+B+D), total owned (A+C+E).
Livestock Type %	Percentage of households owning livestock, broken down into different types of livestock: beehives, bulls, calves, camels, exotic milking cows, heifers, improved milking cows, indigenous milking cows, mature chickens, mature donkeys, mature female sheep, mature horses or mules, mature male goats, mature male

	sheep, mature milking goats, other mature female goats, other non-milking cows, ploughing oxen, young donkeys, young goats, young horses or mules, young sheep, and 'other' livestock types.
Map	Geolocation of household: altitude (m), latitude, longitude.
Other income %	Percentage of households that earn income from other farm-related or non-farm related activities (e.g. besides income from crop/livestock production). Other farm-related income: CPR/firewood/charcoal/brick sale, crop residue sale, dung cake sale, land rent, own trees sale, oxen rent. Other non-farm-related income: agribusiness (net income) e.g. grain mill, casual farm labour, casual labour (non-farm), drought relief, land rent, long-term farm labour, marriage gifts, other business (net income) e.g. shops, trade, tailor), oxen rent, pension, permanent labour, remittances, other.
Village Groups %	Percentage of households aware of social groups, such as religious or civic groups, in their village, broken down into different types of group: agricultural/livestock/fisheries producers' group; civic or charitable group, credit or microfinance group, forest users' group, local government group, mutual help or insurance group, other women's group, religious group, trade and business group and water users' group.
Dimension	**Description**
Date	Date on which the survey was carried out. This is displayed in 3 different ways: 'Survey date' (e.g. 2017-05-10); 'Survey month' (e.g. 2017-May); and 'Survey quarter' (e.g. 2017-Q2).
General Questions	The options given here are dimensions you can group, filter and summarise data by: whether there are community groups in the village (Yes/No); the location name of the cooperate; the extension agent office location name; the gender of the head of the household (Male/Female); whether the household has a position of responsibility in the village (Yes/No); whether the household has participated in technology transfer or evaluation activities in the past 2 years (Yes/No); the name of the village market; whether the household participated in money borrowing or lending in the past year (Yes/No); the relationship the respondent has with the household head (Household head/Other family member/Other non-family member/Spouse); and the respondent's gender (Male/Female). *Especially useful is 'Head of Household Gender' (Male/Female)
Geographical	Geographical level at which you can group, filter and summarise data, and display mean values: country, district, household and region and village. *Choosing 'Household' displays data according to Household identification number.

Groundnut DNA fingerprinting	Set of data gathered from harvested pods collected from the households. This data from DNA analyses determines what groundnut variety the farmers are growing. Groundnut Sample ID – from DNA fingerprinting: The sample ID number from the DNA fingerprinting tests. Groundnut genotype grown – from DNA fingerprinting: The genotype of groundnut grown by the household identified through the fingerprinting analysis.
Road	Information on the quality and type of the road leading to the nearest market. The choices for quality were bad; OK; very good or N/A. The choices for type of road were non-paved dirt road; paved asphalt (tarmac); paved dirt road; paved gravel road or N/A
Yes or No Questions	The options given here are dimensions related to household assets which you can group, filter and summarise data by, such as whether (or not) the household has agricultural land, a cellphone, chickens, a fish pond or fishing equipment and a house or other structures. Regarding land, you can choose options which are combinations of all the following: – Cropping season – long rains or short rains – Ownership - land is owned, rented in, rented out, shared or borrowed in, or shared or borrowed out – Use - land is cultivated or fallow. In addition, you can slice data by land irrigated or rainfed during short or long rains. Finally, you can filter according to whether (or not) the household has the following: large consumer durables, large livestock, means of transportation, mechanized farm equipment, non-farm business equipment, non-mechanized farm equipment, other land not used for agricultural purposes, other productive capital, small consumer durables, small livestock, non-agricultural source of income, access to a money lending institution but not to credit, financial savings, representation in a community group, and livestock.

M01 Crop Grown

Measure	Description
Number of Crops [This is a calculated measure]	The number of different types of crops that are grown (this can be summed per household, per district etc., using the relevant 'Geographical' dimension – see the table above).
Dimension	**Description**
Crop Grown	Use this Dimension to see (and filter, group and summarise data by) the names of the crops grown (e.g. avocado, beans, cowpea).

M01 Decision Making

Measure	Description
Number of types of decision made regularly [This is a calculated measure]	The number of types of decision made regularly.
Dimension	**Description**
Decision Making	Use this Dimension to see the different types of decision that are made regularly (e.g. decisions on use of agricultural inputs, on major and minor household expenditures, on livestock raising).

M01 Household Groundnut Variety

Measure	Description
Number of Groundnut Varieties [This is a calculated measure]	The number of groundnut varieties that households are aware of.
Dimension	**Description**
Groundnut Variety	List of the different types of groundnut varieties known by the household (e.g. Dodoma Bold, Johari)

M01 Household Village Groups

Measure	Description
Number of Village Groups [This is a calculated measure]	The number of households aware of a community group in their village.
Dimension	**Description**
Village Groups	List of the different types of community group in the village (e.g. credit or microfinance group, water users group, agricultural/livestock/fisheries group).

M01 Livestock Type

Measure	Description
Number of Livestock Types [This is a calculated measure]	The number of different types of livestock that the household owns.
Dimension	**Description**
Livestock Type	A list of filters for the different types of livestock owned by the household (e.g. beehives, bulls, calves, camels, exotic milking cows, heifers, improved milking cows, indigenous milking cows, mature chickens, mature donkeys, mature female sheep, mature horses or mules, mature male goats, mature male sheep, mature milking goats, other livestock types, other mature female goats; other non-milking cows, ploughing oxen, young donkeys, young goats, young horses or mules, young sheep).

M01 Other Income

Measure	Description
Number of Other Income Sources [This is a calculated measure]	The number of other incomes for the household coming from farm-related or non-farm-related activities (e.g. besides income from crop/livestock production).
Dimension	**Description**
Other Income	A list of filters for the different types of other incomes for the household coming from farm-related or non-farm related activities (e.g. besides income from crop/livestock production). Farm-related income: CPR/firewood/charcoal/brick sale, crop residue sale, dung cake sale, land rent, sale of own trees, oxen rent. Non-farm-related income: net income from agribusiness, casual farm labour, casual labour (non-farm), drought relief, land rent, long-term farm labour, marriage gifts, net income from non-farm-related business, oxen rent, pension, permanent labour, remittances.

M02 Household Members - Demographics

Survey data for Module 02 was collected at the **household member level**. Thus there are over 7000 individual **'Responses'** in Module 02 (each 'Response' corresponds to information on one member of one household).

If you would like to see numerical measures like 'Household member age' for *each person* within a household, tick the Dimension 'Response' for Module 02 under 'Dimensions – M02 Household Members – Demographics'. Untick the 'Response' if you do not want to see data for each person.

If you would like to see the mean of 'Household member age' *at the household level*, tick the Dimension 'Household' under 'Dimensions – M01 Basic Household Data' and 'Geographical'.

Likewise, if you would like to see the mean of 'Household member age' *at the district level*, tick the Dimension 'District' under 'Dimensions – M01 Basic Household Data' and 'Geographical'.

Measure	**Description**
Family Size - Mean	The total number of people in the household (including household head and all children).
Household member age (years) – Mean	The age of a household member in years.
M02 - Number of Household Participated	The number of households who participated in Module 02 of the survey (e.g. answered the Module 02 questions on demographics).
M02 - Number of Responses	The number of individual household members on whom information was collected during the survey.
Time household member has spent on farm in past year (months) – Mean	The number of months that a household member spent working on the farm in the past year.
Education Level [A group of calculated measures]	A count is provided of the number of household members who fell into each of the following specific categories of education level: 'No formal schooling', 'Primary completed' and 'Secondary completed and above'. 1 = Yes; 0 = otherwise.
Plot manager's occupation [This is a calculated measure]	The occupation of the Household Head. 1 = farming, 0 = otherwise.
Dimension	**Description**
Response	'Response' in Module 02 refers to one household member. Tick this box to see information specific to each member of a household. Each household member has an anonymised ID number, e.g. 'M02-Household ID.167-Response-7' (in this example, 'Response 7' refers to the 7th member of Household no. 167, on whom information was collected in Module 02 of the survey).
M02 Demographics	A list of filters that can be used to break down the data according to the household member's gender, education level, farm labour provision, status of school enrolment, main occupation, marital status and relationship to the head of the household.

M03 Household Assets

Survey data for Module 03 was collected at the **household level**. A '**Response'** in this module refers to a category of assets owned by a household (e.g. agricultural land, house, farm equipment). So, there are over 7000 'Responses' in Module 03, as each of the 1208 households interviewed had multiple categories of asset. Each 'Response' corresponds to information (e.g. ownership or value) about one category of assets held by one household.

Means for this module are calculated at the response level. So the category of asset owned by the household. E.g. If you would like to see the mean for the numerical measure 'Number of household assets' *at the household level*, tick the Dimension 'Household' under 'Dimensions – M01 Basic Household Data' and 'Geographical'. The number shown will be the average number of household assets held per category of assets.

Measure	**Description**
M03 – Number of Household Participated	The number of households that responded to questions in Module 03.
M03 – Number of Responses	The number of categories of assets held by households (e.g. agricultural land, house, farm equipment – see the Dimension 'Household assets' below).
Number of household assets – Mean	The number of individual assets held by a household (within each category of assets).
Value of household assets (TSh) – Mean	The value of the assets owned by the household in Tanzanian Shillings (TSh).
Dimension	**Description**
Household assets	A list of filters covering all the categories of assets that households could potentially own. These categories are Agricultural land (pieces/plots); Cell phone; Chickens, ducks, turkeys, pigeons; Farm equipment (mechanized); Farm equipment (non-mechanized); Fishpond or fishing equipment; House (and other structures); Large consumer durables (Large consumer durables (fridge, TV, sofa); Large livestock (oxen, cattle); Means of transportation (bicycle, motorcycle, car); N/A; Nonfarm business equipment; Other land not used for agriculture; Small consumer durables (radio, cookware) and Small livestock (goats, pigs, sheep).
Person owning most of the household assets	A list of filters covering the person/people within the household who own(s) the majority of each category of household assets. The options are Other household member; Partner/Spouse; Partner/Spouse and other household member(s); Partner/Spouse and other outside people; Self; Self and other household member(s); Self and other outside people; Self and partner/spouse jointly; Self, partner/spouse

	and other outside people; Someone (or group of people) outside the household and N/A.
Response	'Response' in Module 03 refers to one category of household assets owned by a particular household, and this has a unique identification code. So, 'M03-Household ID.1205-Response-5' refers to the 5th category of assets mentioned by Household number 1205, when answering the survey questions in Module 03.

M04 Groundnut Variety Adoption

Survey data for Module 04 was collected at the **household level**. A '**Response'** in this module refers to one groundnut variety known by the household. Often there are multiple Responses per household, as households were aware of more than one ground nut variety. Each 'Response' corresponds to knowledge about one groundnut variety known by one household.

Measure	**Description**
M04 – Number of Household Participated	The number of households that responded to questions in Module 04 of the survey.
M04 – Number of Responses	The number of groundnut varieties known by households (e.g. Dodoma Bold, Johari – see Dimension 'Groundnut Variety' below).
Knowledge of Groundnut Variety % - Conditional [A group of calculated measures]	The percentage of households who possess knowledge of a specific groundnut variety out of all the households for that dimension. E.g. if viewing by the dimension for 'Region' under 'Dimensions – M01 Basic Household Data' it will be the number of households who possess knowledge of that groundnut variety out of all the households for that region. These varieties are given in the dimension 'Groundnut Variety' below.
Knowledge of Groundnut Variety % - Unconditional [A group of calculated measures]	The percentage of households who possess knowledge of a specific variety of groundnut out of all the responses for module 4. These varieties are given in the dimension 'Groundnut Variety' below.
Dimension	**Description**
Groundnut Variety	A list of filters covering all groundnut varieties known by a household. These varieties are Dodoma Bold; Johari; Local; Mangaka 09; Masasi 09; Mnanje 09; N/A; Nachingwea 09; Naliendele 09; Nyota; Pendo 98 and Red Mwitunde.
Groundnut variety has been planted before	You can filter by Yes and No answers from the household
Groundnut variety will be planted in the future	You can filter by Yes and No answers from the household

Main source of information on groundnut variety	The list of all the ways the household learnt about a groundnut variety. Options are Another farmer/neighbour; Family; Farmer cooperative/union; Government extension; N/A; NGO; Producer marketing groups (PMGs); Radio/newspaper/TV; Relative; Research centre on-farm trials/demos and Seed/grain stockist.
Reason why groundnut variety has never been planted	This is linked to 'Groundnut variety has been planted before' above – if the household answered 'No', the reason why they had never planted the variety was investigated. Reasons include Cannot get seed at all; Don't know; Lack of cash to buy seed; Low yielding variety; N/A; No market; Poor prices; Requires high skills; Seeds are expensive and Susceptible to diseases and pests
Reason why groundnut variety will not be planted in future	This is linked to 'Groundnut variety will be planted in future' above – if the household answered 'No', the reason why they will not plant that variety in future was investigated. Reasons include Cannot get seed at all; Lack of cash to buy seed; Low yielding variety; N/A; No market; Poor prices; Poor taste; Requires high skills; Seeds are expensive and Susceptible to diseases and pests
Response	'Response' in Module 04 refers to one groundnut variety known by the household, and this has a unique identification code. So, 'M04-Household ID.2-Response-1' refers to the 1st groundnut variety mentioned by Household number 2, when answering the survey questions in Module 04.

M05 Crop Production

This module reports on various aspects of household plots, including the type and quantity of inputs and labour used. The data for module 5 was collected at the **plot** level per household. A '**Response**' in this module refers to a plot of a land owned by the household. Often there are multiple responses per household, as households may have owned more than one plot. Each 'Response' corresponds to information (e.g. crop production or plot size) about one plot held by one household.

Means for this module are calculated at the response level. So, for this module that means at a plot level. E.g. If you would like to see the mean for the numerical measure 'Plot size (acres)' *at the household level*, tick the Dimension 'Household' under 'Dimensions – M01 Basic Household Data' and 'Geographical'. The number shown is the mean plot size in acres for a household for all the plots they owned.

Measure	**Description**
Cost of DAP fertiliser used on plot (TSh) – Mean	The cost in Tanzanian Shillings of diammonium phosphate (DAP) fertiliser used per plot in the past year.
Cost of labour hired and used on plot (TSh) – Mean	The cost in Tanzanian Shillings of the human labour needed per plot in the past year.
Cost of oxen hired and used on plot (TSh) – Mean	The cost in Tanzanian Shillings of oxen hired and used per plot in the past year.
Cost of seed bought and used on plot (TSh) – Mean	The cost in Tanzanian Shillings of seeds purchased per plot for planting crops in the past year.
Cost of urea fertiliser used on plot (TSh) – Mean	The cost in Tanzanian Shillings of urea fertiliser used per plot in the past year.
Distance from household to plot (km) – Mean	The distance in kilometres from the respondent's place of residence to their plot.
Frequency ploughing plot (times per season) – Mean	The number of times per season the plot was ploughed.
Frequency weeding plot (times per season) – Mean	The number of times per season the plot was weeded.
Grows improved variety - % [This is a calculated measure]	The percentage of households who grew an improved variety on at least one of their plots. ***If you want to see data for a particular crop, use the dimension 'Crop type grown on plot' under 'Dimensions – M05 Crop production' and choose the specific crop you are interested in.**
Intercropped - % [This is a calculated measure]	The percentage of respondents who used intercropping. Intercropping refers to growing two or more crops in close proximity in the plot.
M05 - Number of Household Participated	The number of households that responded in this module of the survey.

M05 - Number of Responses	The number of plots described in this module of the survey. One household may have more than one plot, each of which contributes a response.
M05 Crop production (kg) – Mean	The total crop production in kilograms of a plot in the past year. *Although the measure name is similar to Module 6's 'M06 Crop production (kg) – Mean', in Module 5 here, crop production is given per plot (whereas in Module 6 it is given per crop type).
Plot size (acres) – Mean	The size in acres of the plot.
Plot size (hectares) - Mean	The size in hectares of the plot.
Quantity of DAP fertiliser used on plot (kg) – Mean	The amount in kilograms of diammonium phosphate (DAP) fertiliser used per plot in the past year.
Quantity of field chemicals used on plot (kg/litres) – Mean	The amount of field chemicals in kilograms (or litres) used per plot in the past year.
Quantity of household-produced manure used on plot (kg) – Mean	The amount of manure in kilograms produced by the household that was used on their plots in the past year.
Quantity of saved or gift seed used on plot (kg) – Mean	The amount of seeds in kilograms (either received as gifts or saved from previous crops) used per plot for planting crops in the past year.
Quantity of seed bought and used on plot (kg) – Mean	The amount of seeds in kilograms purchased per plot for planting crops in the past year.
Quantity of urea fertiliser used on plot (kg) – Mean	The amount in kilograms of urea fertiliser used per plot in the past year.
Time spent applying chemicals to plot (days) – Mean	The amount of time in days spent applying chemicals to the plot in the past year.
Time spent harvesting plot (days) – Mean	The amount of time in days spent harvesting the plot in the past year.
Time spent ploughing/harrowing/ planting plot (days) – Mean	The amount of time in days spent ploughing, harrowing and/or planting the plot in the past year.
Time spent threshing/shelling plot (days) – Mean	The amount of time in days spent threshing and/or shelling crops from the plot in the past year.
Time spent weeding plot (days) – Mean	The amount of time in days spent weeding the plot in the past year.
Value of all field chemicals used on plot (TSh) – Mean	The value in Tanzanian Shillings of all field chemicals used on the plot in the past year.
Adoption Intensity [This is a calculated measure]	The percentage of cropped land area on which an improved variety is grown. **Note:** The name of the improved variety grown on a plot was not collected during the survey. So, 'Adoption' of an improved variety here is based on a respondent answering 'Yes' to a question that asked whether an improved variety was grown on a specific plot.

	***If you want to see adoption-intensity data for a particular crop, use the dimension 'Crop type grown on plot' under 'Dimensions – M05 Crop production' and choose the specific crop you are interested in.** **Calculation:** The land area on which an improved variety is grown, expressed as a proportion of the total plot area for all the households considered at a particular dimension level (e.g. household, village, district or region level). E.g. if you wanted to compare adoption intensity of improved **groundnut** across **regions** of Tanzania, you would tick the 'Geographical' dimension 'Region' and choose 'Groundnut' in the dimension 'Crop type grown on plot'. The calculation would be as follows: $$= \frac{Land\ area\ on\ which\ an\ improved\ variety\ of\ groundnut\ is\ grown\ in\ a\ region}{Total\ land\ area\ on\ which\ groundnut\ is\ grown\ in\ a\ region} \times 100$$
Adoption Spread [A group of calculated measures]	The percentage of households growing an improved variety. **Note:** As for adoption intensity (above), 'Adoption' of an improved variety here is based on a respondent answering 'Yes' to a question that asked whether an improved variety was grown on a specific plot. The name of the improved variety grown on a plot was not collected during the survey. ***Adoption-spread data is best viewed for a specific crop. Use the dimension 'Crop type grown on plot' under 'Dimensions – M05 Crop production' and choose the specific crop you are interested in.** There are two measures of adoption spread ('Conditional' and 'Unconditional'). **Unconditional spread** is the number of households growing an improved variety, *expressed as a percentage of the total number of households surveyed*. **Conditional spread** (for a specific crop) is the number of households growing an improved variety of that crop, *expressed as a percentage of those households surveyed which actually grew that crop*. **Calculation (Unconditional spread):** if you wanted to compare Unconditional adoption spread of improved **groundnut** across **regions** of Tanzania, you would tick the 'Geographical' dimension 'Region' and choose 'Groundnut' in the dimension 'Crop type grown on plot'. The calculation would be as follows:

	$$= \frac{No.\ of\ households\ in\ a\ region\ that\ grew\ an\ improved\ variety\ on\ at\ least\ one\ of\ their\ groundnut\ plots}{Total\ no.\ of\ households\ surveyed\ in\ that\ region} \times 100$$ **Calculation (Conditional spread):** if you wanted to compare Conditional adoption spread of improved **groundnut** across **regions** of Tanzania, you would tick the 'Geographical' dimension 'Region' and choose 'Groundnut' in the dimension 'Crop type grown on plot'. The calculation would be as follows: $$= \frac{No.\ of\ households\ in\ a\ region\ that\ grew\ an\ improved\ variety\ on\ at\ least\ one\ of\ their\ groundnut\ plots}{No.\ of\ households\ surveyed\ in\ that\ region\ that\ grew\ groundnut} \times 100$$
Per Acre Measures [A group of calculated measures]	All of the below Measures from M05 are calculated on a per acre basis, including the following: Chemicals Application (kg) or Litres Used per Acre - Mean; Fertilizer Used per Acre (kg) - Mean; Labour Cost (shilling) per Acre - Mean; Labour Days per Acre - Mean; Manure Used per Acre - Mean; Ploughing Labour Days per Acre – Mean; Seed Used per Acre (kg) - Mean; Weeding Labour Days per Acre and Yield per Acre (kg) - Mean.
Per Hectare Measures [A group of calculated measures]	All of the below Measures from M05 are calculated on a per hectare basis, including the following: Chemicals Application (kg) or Litres Used per Hectare - Mean; Fertilizer Used per Hectare (kg) - Mean; Labour Cost (Shilling) per Hectare - Mean; Labour Days per Hectare - Mean; Manure Used per Hectare - Mean; Ploughing Labour Days per Hectare – Mean; Seed Used per Hectare (kg) - Mean; Weeding Labour Days per Hectare and Yield per Hectare (kg) - Mean.
Dimension	**Description**
Crop type grown on plot	Indicates the crop type grown by the household on their plot. Choices include Bananas; Beans; Cassava; Cowpea; Finger millet; Groundnut; Maize; N/A; Pearl millet; Pigeonpea; Sesame; Sorghum; Tomatoes; Vegetables or Watermelon.
Improved crop variety grown on plot	Indicates whether the type of crop grown on the plot is an improved variety (Yes) or not (No).
Main source of seed	Indicates how respondents typically get their seed. Choices include Bought from local seed producer; Bought from local trader or agro-dealers; Farmer to farmer seed exchange (relative, friend etc.); Inherited from family; N/A; Own saved seed; PMG/Coops; Provided free by NGOs; Provided free by other government agency; or Research PVS.
Plot contains intercropping	Indicates whether the plot contains intercropping (Yes) or not (No). Intercropping refers to growing two or more crops in close proximity in the plot.
Plot is irrigated	Indicates whether the plot is irrigated (Yes) or not (No). Irrigation means that the plot receives as artificial application of water (e.g. other than rainfall).

Plot manager or decision-maker	Indicates the person in the household responsible for managing/making key decisions about the plot. Choices include Husband and wife jointly; Jointly with someone else inside the household; Main female or wife; Main male or husband; N/A; Someone else in the household (female); Someone else in the household (male); or Someone outside the household/other.
Response	'Response' in Module 05 refers to one plot owned by the household, and this has a unique identification code. So, 'M05-Household ID.2-Response-1' refers to the 1st plot mentioned by Household number 2, when answering the survey questions in Module 05.
Season crop was grown on plot	The season during which the crop was grown on the plot. Choices include Long Rains (Feb–May 2017); N/A; or Short Rains (Nov 2016–Jan 2017).

M06 Crop Utilisation

Survey data for Module 06 was collected at the **household level**. A '**Response'** in this module refers to a type of crop grown by the household. Often there are multiple Responses per household, as households grew more than one type of crop. Each 'Response' corresponds to information about one type of crop grown by one household, such as the quantity of different crops produced and their use in the past year.

Means for this module are calculated at the response level by crop, except for 'Per Capita Consumption (kg)' which is done at the household level. E.g. If you would like to see the mean for the numerical measure 'Quantity of crop sold (kg)' at *the household level*, tick the Dimension 'Household' under 'Dimensions – M01 Basic Household Data' and 'Geographical'. The number shown is the average quantity of crop sold per type of crop grown by the household. Or the average quantity of crop sold taking into account all the different types of crops grown by the household.

Measure	**Description**
M06 - Number of Household Participated	The number of households that responded in this module of the survey
M06 - Number of Responses	The number of types of crops grown by the household (e.g. beans, groundnut maize – see the Dimension 'Crop type grown' below).
Quantity of crop consumed (kg) – Mean	The crop quantity in kilograms consumed per type of crop in the past year.
Quantity of crop given as gifts (kg) – Mean	The crop quantity in kilograms given away as gifts per type of crop in the past year.
Quantity of crop saved for seeds (kg) – Mean	The crop quantity in kilograms saved to use for seeds per type of crop in the past year.
Quantity of crop sold (kg) – Mean	The crop quantity in kilograms sold per type of crop in the past year.
Quantity of crop stored as savings (kg) – Mean	The crop quantity in kilograms stored/saved per type of crop in the past year.
M06 Crop production (kg) – Mean	The total crop quantity in kilograms produced per type of crop in the year. *Although the measure name is similar to Module 5 'M05 Crop production (kg) – Mean' this is per crop type whereas module 5 is per plot.

Per capita consumption (kg) – Mean [This is a calculated measure]	The crop quantity in kilograms consumed per household in the past year.
Dimension	**Description**
Crop type grown	Indicates the crop type grown by the household for the uses listed above Measures). Choices include Bananas; Beans; Cassava; Cowpea; Finger millet; Groundnut; Maize; N/A; Pearl millet; Pigeonpea; Sesame; Sorghum; Tomatoes; Vegetables or Watermelon.
Response	'Response' in Module 06 refers to one crop type grown by the household, and this has a unique identification code. So, 'M06-Household ID.2-Response-1' refers to the 1st crop type mentioned by Household number 2, when answering the survey questions in Module 06.

M07 Crop Marketing

The module provides information on the market conditions around selling crops, including the travel time/cost to market and crop sales and taxes.

Survey data for Module 07 was collected at the **household level**. A '**Response'** in this module refers to a type of crop grown by the household. Often there are multiple Responses per household, as households grew more than one type of crop. Each 'Response' corresponds to information about one type of crop grown by one household.

Measure	**Description**
Cost of transportation from plot to market (TSh) – Mean	The amount of money in Tanzanian Shillings spent per household to travel from their plot to the market.
M07 - Number of Household Participated	The number of households that responded in this module of the survey
M07 - Number of Responses	The number of types of crops grown by the household (e.g. beans, groundnut maize – see the Dimension 'Crop type grown' below).
Quantity sold (kg) – Mean	The crop quantity in kilograms sold per crop type at the market.
Selling price (TSh) – Mean	The amount of money in Tanzanian Shillings earned per crop type for selling the crop.
Time taken to sell produce at market (minutes) – Mean	The amount of time in minutes spent selling the crop type at the market.
Time taken to travel from plot to market (minutes) – Mean	The amount of time in minutes spent per plot to travel to the market.
Time until payment after crop sold (weeks) – Mean	The amount of time in weeks between when the crop was sold and when the payment was received.
Value of crop sales tax paid (TSh) – Mean	The amount of money in Tanzanian Shillings paid as sales taxes per crop type after selling the crop.
Dimension	**Description**
Crop quality	Indicates the relative crop quality. Choices include Above average; Below average; or Fair and average.

Crop type grown	Indicates the crop type grown by the household to sell at the market. Choices include Bambara groundnut; Banana; Bean; Cabbage; Cashew; Cassava; Coffee; Cotton; Cowpea; Finger millet; Green gram; Groundnut; Maize; N/A; Onion; Other; Pearl millet; Pigeonpea; Potato; Pyrethrum; Rice; Sesame; Sorghum; Sunflower; Sweet potato; Tobacco; Tomato; Watermelon or Wheat.
Market type	Indicates the type of market where the crop was sold. Choices include Farm gate; Main/district market; N/A; or Village market.
Mode of transport used from plot to market	Indicates the type of transport used by the respondent to travel from their household to the market. Choices include Back load/Head load; Bicycle; Donkey; Hired truck; Motorbike; N/A; Oxen/horse cart; or Public transport.
Month produce was sold	Indicates the month of the year in which the crop was sold. For example, January; February; … ; December.
Product Buyer	Indicates the type of person that bought the crop at the market. Choices include Broker/middlemen; Consumer or other farmer; Exporter; Farmer group; Farmer union or cooperative; N/A; Rural assembler (vendor); Rural trader; or Urban grain trader.
Response	'Response' in Module 07 refers to one crop type grown by the household, and this has a unique identification code. So, 'M07-Household ID.2-Response-1' refers to the 1st crop type mentioned by Household number 2, when answering the survey questions in Module 07.

M08 Livestock Production

The module provides information on the number of livestock animals in the past year, including those born and weaned, bought, consumed, deceased, given/received as gifts, in current stock or sold.

Survey data for Module 08 was collected at the **household level**. A '**Response'** in this module refers to the type of livestock owned by the household. Often there are multiple Responses per household, as households owned more than one type of livestock. Each 'Response' corresponds to information about one type of livestock owned by one household.

Measure	**Description**
M08 - Number of Household Participated	The number of households that responded in this module of the survey
M08 - Number of Responses	The number of types of livestock owned by the household (e.g. Mature chicken, indigenous milking cows– see the Dimension 'Livestock owned by farmer' below).
Number of animals born/weaned – Mean	The number of livestock animals in the household's stock that were born and weaned per livestock type in the past year.
Number of animals bought – Mean	The number of livestock animals bought per livestock type in the past year.

Number of animals consumed – Mean	The number of livestock animals consumed per livestock type in the past year.
Number of animals deceased – Mean	The number of livestock animals deceased per livestock type in the past year.
Number of animals given as gifts – Mean	The number of livestock animals given away as gifts per livestock type in the past year.
Number of animals in current stock – Mean	The number of livestock animals currently owned per livestock type.
Number of animals received as gifts – Mean	The number of livestock animals received as gifts per livestock type in the past year.
Number of animals sold – Mean	The number of livestock animals sold per livestock type in the past year.
Dimension	**Description**
Livestock manager or decision maker	Indicates the person that makes decisions about/manages the household's livestock. Choices include Husband and wife jointly; Jointly with someone else inside the household; Main female or wife; Main male or husband; N/A; Someone else in the household (female); Someone else in the household (male); or Someone outside the household/other.
Livestock owned by farmer	Indicates the type of livestock animals owned by the household. Choices include Beehives; Bulls; Calves; Camels; Crossbred/improved milking cows; Exotic milking cows; Heifers; Indigenous milking cows; Mature chicken; Mature female sheep; Mature male goats; Mature male sheep; Mature milking goats; Mature trained donkeys; Mature trained horses or mules; N/A; Other mature female goats; Other non-milking cows (mature); Trained oxen for ploughing; Young donkeys; Young goats; or Young sheep.
Response	'Response' in Module 08 refers to one livestock type owned by the household, and this has a unique identification code. So, 'M08-Household ID.2-Response-1' refers to the 1st livestock type mentioned by Household 2, when answering the questions in M08.

M09 Milk Production

This module provides information on milk production for each livestock type owned by the household, including the volume produced and from what number of animals.

Survey data for Module 09 was collected at the **household level**. A '**Response'** in this module refers to the type of livestock (which could produce milk) owned by the household. Often there are multiple Responses per household, as households owned more than one type of livestock. Each 'Response' corresponds to information about one type of livestock owned by one household.

Measure	**Description**
Average amount of milk produced per animal per day (litres) – Mean	The amount of milk in litres produced per animal per day.

M09 - Number of Household Participated	The number of households that responded in this module of the survey
M09 - Number of Responses	The number of types of livestock owned by the household (e.g. Exotic milking cows, indigenous milking cows– see the Dimension 'Livestock owned by farmer' below).
Number of animals producing milk – Mean	The number of animals that contribute to producing milk per livestock type.
Number of times each animal is milked (days) – Mean	The number of times in days each animal is milked per livestock type. *The range of values for this measure is 0 to 360. Note that this question may have been interpreted differently by household and thus this measure may not be reliable.
Milk production (litres) - Mean	The total milk production in litres per livestock type.
Dimension	**Description**
Livestock owned by farmer	Indicates the type of livestock animals owned by the household. Choices include Crossbred/improved milking cows; Exotic milking cows; Heifers; Indigenous milking cows; Mature chickens; Mature male goats; Mature milking goats; N/A; Other non-milking cows (mature); or Trained oxen for ploughing.
Response	'Response' in Module 09 refers to one livestock type owned by the household, and this has a unique identification code. So, 'M09-Household ID.2-Response-1' refers to the 1st livestock type mentioned by Household number 2, when answering the survey questions in Module 09.

M10 Livestock Maintenance

This module gives information on the value of in-house and outsourced livestock maintenance services.

Survey data for Module 10 was collected at the **household level**. A '**Response'** in this module refers to the type of livestock maintenance service required by the household. This encompassed a wide range of services such as Artificial insemination and Veterinary services. Often there are multiple Responses per household, as households required more than one type of livestock maintenance. Each 'Response' corresponds to information about one type of livestock maintenance service required by one household.

Measure	**Description**
M10 - Number of Household Participated	The number of households that responded in this module of the survey
M10 - Number of Responses	The number of types of livestock maintenance required by the household (e.g. Artificial inseminations services, Veterinary services/medicine – see the Dimension 'Type of livestock maintenance service required' below).
Value of in-house livestock maintenance services (TSh) – Mean	The amount of money in Tanzanian Shillings spent on in-house livestock maintenance services e.g. purchase of grazing land.
Value of outsourced livestock maintenance services (TSh) – Mean	The amount of money in Tanzanian Shillings spent on outsourced livestock maintenance services e.g. payments for veterinary services.

Dimension	Description
Response	'Response' in Module 10 refers to one livestock maintenance service required by the household, and this has a unique identification code. So, 'M10-Household ID.2-Response-1' refers to the 1st livestock maintenance service mentioned by Household number 2, when answering the survey questions in Module 10.
Type of livestock maintenance service required	Indicates the type of livestock maintenance service required by the household. Choices include Artificial inseminations services; Concentrates (kg); Green fodder/grazing land (acre); Hay (kg); Herds boy (animal tending); Maize and sorghum residue (kg); N/A; or Veterinary services/medicine.

M11 Livestock Sales

The module provides information on how much money each household earned from livestock and livestock product sales, in addition to the quantity and type of product sold and the time taken to reach the point of sale.

Survey data for Module 11 was collected at the **household level**. A '**Response'** in this module refers to either a livestock or livestock product sold by the household. Often there are multiple Responses per household, as households may have sold more than one type of livestock or livestock product. Each 'Response' corresponds to information about one type of livestock or livestock product sold by one household.

Measure	Description
M11 - Number of Household Participated	The number of households that responded in this module of the survey
M11 - Number of Responses	The number of livestock or livestock products sold by the household (e.g. Meat, Milk – see the Dimension 'Livestock products' below).
Price per unit sold or bought (TSh) – Mean	The selling or buying price in Tanzanian Shillings per livestock or livestock product.
Quantity sold or bought (units) – Mean	The number of animals sold or bought.
Time taken from farm to reach point of sale (minutes) – Mean	The time in minutes to travel from the farm to the point of sale per livestock or livestock product.
Value of livestock sales tax paid (TSh) – Mean	Amount of money in Tanzanian Shillings paid in sales tax when selling livestock or livestock product.
Dimension	**Description**
Livestock market activity	Indicates the type of transaction for the livestock or livestock product. Choices include purchase or sale.
Livestock products	Indicates the different livestock products sold or bought at the market. Choices include meat; milk; or N/A.

Livestock unit of sale or purchase	Indicates the unit of sale or purchase at the market related to the livestock or livestock product. Choices include Kg; Litre; N/A; or No. of animals.
Main livestock or livestock product buyer or seller	Indicates the person buying or selling the livestock or livestock product. Choices include Broker/middlemen; Consumer or other farmer; Farmer group; Farmer union or cooperative; N/A; Rural assembler (vendor); Rural trader; or Urban grain trader.
Response	'Response' in Module 11 refers to one type of livestock or livestock product sold by the household, and this has a unique identification code. So, 'M11-Household ID.2-Response-1' refers to the 1st livestock or livestock product sold by Household number 2, when answering the survey questions in Module 11.

M12 Tech Transfer

The module provides information on the frequency and type of technology transfer activities in which farmers have participated to help them in farming.

Survey data for Module 12 was collected at the **household level**. A '**Response'** in this module refers to the type of crop focused on during the technology transfer activity the household participated in over the past two years. Often there are multiple Responses per household, as households may have participated in technology transfer activities on multiple crops.
Each 'Response' corresponds to information about one type of crop focused on during the technology transfer activity participated in by one household.

Measure	**Description**
M12 - Number of Household Participated	The number of households that responded in this module of the survey.
M12 - Number of Responses	The number of crop types focused on during technology transfer activities participated in by the household (e.g. Finger Millet, Maize– see the Dimension 'Crop type focused on during technology transfer activities (see below).
Number of times farmer participated in technology transfer activities – Mean	The number of times the farmer participated in technology transfer activities in the past two years, per crop type focused on.
Dimension	**Description**
Crop type focused on during technology transfer activities	Indicates the crop that was the focus of the technology transfer activity. Choices include Beans; Cassava; Cowpea; Finger Millet; Groundnut; Maize; Sesame; or Sorghum.
Response	'Response' in Module 12 refers to one crop type focused on during the technology transfer activity participated in by the household, and this has a unique identification code.

	So, 'M12-Household ID.2-Response-1' refers to the 1st crop type focused on during technology transfer activities mentioned by Household number 2, when answering the survey questions in Module 12.
Type of technology transfer activity in which farmer participated	The type of technology transfer activity in which the farmer participated. Choices include farmer field school; invited to field days/farmers' days; learning new farming methods from lead farmers/neighbours; on-farm trials; own plot demonstrations; or seminars.

M13 Other Farm-Related Income

Survey data for Module 13 was collected at the **household level**. A '**Response'** in this module refers to the source of 'other farm-related income'. This module provides information on how much money is earned from any other sources of income related to farming but excluding crops and livestock, which were reported in earlier modules (M07 Crop Marketing and M11 Livestock Sales).

Often there are multiple Responses per household, as households may have had more than one source of other farm-related income. Each 'Response' corresponds to information about one type of source of other farm-related income for one household.

Measure	**Description**
Cash equivalent earned from other farm-related activities (TSh) – Mean	The equivalent amount of money in Tanzanian Shillings earned from sources related to farming but excluding crops and livestock. Note that this measure is reported as the cash equivalent to represent contributions to income that were not in the form of cash (e.g. food, equipment or services).
M13 - Number of Household Participated	The number of households that responded in this module of the survey
M13 - Number of Responses	The number of sources of other farm-related income for the household (e.g. rented out land, rented out oxen for ploughing – see the Dimension 'Source of other farm-related income' below).
Money earned from other farm-related activities (TSh) – Mean	The amount of money in Tanzanian Shillings earned by the source of income coming from activities related to farming but excluding crops and livestock.
Dimension	**Description**
Family member earning other farm-related income	The list of all the family members that earn other household income related to farming but excluding crops and livestock. Choices include grandchild; hired worker; household head; N/A; parent living with son/daughter; son/daughter; or spouse.
Response	'Response' in Module 13 refers to source of other farm-related income the household, and this has a unique identification code.

	So, 'M13-Household ID.2-Response-1' refers to the 1st source of other farm-related income for the household mentioned by Household number 2, when answering the survey questions in Module 13.
Source of other farm-related income	Indicates a source of household income related to farming but excluding crops and livestock. Choices include N/A; rented out land; rented out oxen for ploughing; sale of CPR (firewood, charcoal, bricks etc.); sale of own trees (firewood etc.); or selling of crop residue.

M14 Non-Farm-Related Income

This module provides information on all remaining sources of income for households apart from those related to farming (e.g. the sale of crops, milk or livestock), including how much money is earned from and time spent on these activities.

Survey data for Module 14 was collected at the **household level**. A '**Response'** in this module refers to the source of non-farm-related income. Often there are multiple Responses per household, as households may have had more than one source of non-farm-related income. Each 'Response' corresponds to information about one type of source of non-farm-related income for one household.

Measure	**Description**
M14 - Number of Household Participated	The number of households that responded in this module of the survey
M14 - Number of Responses	The number of sources of non-farm-related income for the household (e.g. casual farm labour, drought relief – see the Dimension 'Source of non-farm-related income' below).
Money earned from non-farm-related activities (TSh) – Mean	The amount of money in Tanzanian Shillings earned from activities that do not relate to farming.
Time spent earning non-farm-related income (months in past year) – Mean	The amount of time in months over the past year during which the household worked to earn income from an activity that does not relate to farming.
Total cash equivalent earned from non-farm-related activities (TSh) – Mean	The amount of money earned by the household from non-farm-related activities in Tanzanian Shillings.
Dimension	**Description**
Family member earning non-farm-related income	Indicates which family member is earning non-farm-related income. Choices include a hired worker; household head; N/A; other relative; parent living with son/daughter; son/daughter; or spouse.
Response	'Response' in Module 14 refers to source of other farm-related income the household, and this has a unique identification code. So, 'M14-Household ID.2-Response-1' refers to the 1st source of non-farm-related income for the household mentioned by Household number 2, when answering the survey questions in Module 14.

Source of non-farm-related income	Indicates a source of household income not related to farming. Choices include casual farm labour; casual non-farm labour; drought relief; marriage gifts (e.g. dowry); non-farm agribusiness NET income (e.g. grain mill); other business NET income (shops, trade, tailor etc.); pension income; permanent non-farm labour; remittances (sent from non-resident family and relatives); or rented out oxen for ploughing.

M15 Borrowing and Lending

This module reports various measures concerning how money is lent and borrowed by households.

Survey data for Module 15 was collected at the **household level**. A '**Response'** in this module refers to if money was borrowed or lent. There can be multiple Responses per household, as households may have both borrowed and lent money. Each 'Response' corresponds to information about money that was either borrowed or lent for one household.

Measure	**Description**
Duration borrowing or lending (months in past year) – Mean	The amount of time (in months) that money was either borrowed or lent in the past year. For example, a value of three months for a household indicates that the money was repaid after this duration.
M15 - Number of Household Participated	The number of households that responded in this module of the survey
M15 - Number of Responses	The number of responses given in this module of the survey. One household may have borrowed and lent money each of which contributes a response.
Money outstanding from borrowing or lending (TSh) – Mean	The amount of money in Tanzanian Shillings that was borrowed or lent in the last year that had yet to be repaid at the time of the survey.
Money paid from borrowing or lending (TSh) – Mean	The amount of money in Tanzanian Shillings that has been repaid at the time of the survey against money borrowed or lent in the past year.
Money used for borrowing/lending (TSh) – Mean	The amount of money in Tanzanian Shillings put towards borrowing or lending in the past year.
Yearly interest from borrowing or lending (%)	The percentage of annual interest paid (if borrowing money) or received (if lending money).
Dimension	**Description**
Borrowing or lending activity	Indicates whether money was borrowed (e.g. received a loan) or lent (e.g. provided a loan). Choices include borrowing or lending.
Main decision maker – amount borrowed or lent	Indicates who primarily makes decisions in the household as to how much money is borrowed or lent. Choices include husband and wife jointly; jointly with someone else inside the household; main female or wife; main male or husband or someone else in the household female.

Main decision maker – spending of amount borrowed or lent	Indicates who primarily makes decisions in the household as to how any money (borrowed or lent) is spent. Choices include husband and wife jointly; main female or wife; main male or husband; or N/A.
Person or group the household is borrowing from or lending to	The types of people or institutions from whom money is borrowed, or to whom money is lent. Choices include a commercial bank; Edir/Ekuub*; farmer group/coop; friend; merry-go-round; money lender; other farmer; relative; or rural microfinance. *Note that an "Edir" is a savings and credit group and an "Ekuub" is a funeral group. A "merry go-round" is a small social organization where members regularly contribute a small sum of money, often every week. Each time money is collected, the full sum is paid out to one of the members[1].
Purpose of borrowing or lending	Indicates the reason for which money was borrowed or lent. Choices include buying food; buying oxen and to improve house; education; farm equipment/implement; fertilizer; health/medical; livestock breeding; N/A; oxen traction; rent land; or social obligations.
Response	'Response' in Module 15 refers to if borrowing or lending took place in the household, and this has a unique identification code. So, 'M15-Household ID.2-Response-1' refers to the 1st borrowing or lending carried out by Household number 2 when answering the survey questions in Module 15.

M16 Household Savings

This module provides information on how much money is saved per household per year and how this is achieved.

Survey data for Module 16 was collected at the **household member level**. A '**Response'** in this module refers to a household member's savings. There can be multiple Responses per household, as households may have had more than one household member who had savings. Each 'Response' corresponds to information about one household member's savings one household.

Measure	**Description**
Contribution to savings in past year (TSh) – Mean	The amount of money saved by a household member in the past year in Tanzanian Shillings.
M16 - Number of Household Participated	The number of households that responded in this module of the survey

[1] https://www.techxlab.org/solutions/one-acre-fund-merry-go-round-savings

M16 - Number of Responses	The number of responses given in this module of the survey. One household may have more than one member with savings, each of whom contributes a response.
Dimension	**Description**
Household financial savings frequency	How often the household member was adding money to their savings. Choices include fortnightly; monthly; N/A; weekly; or yearly.
Household financial savings method	The methods used by the household member to save money. Choices include a commercial bank; merry-go-round (see M15 Borrowing and Lending for definition); money lender; N/A; or rural microfinance.
Response	'Response' in Module 16 refers to the savings of a member of the household, and this has a unique identification code. So, 'M16-Household ID.2-Response-1' refers to the 1st household member who had savings in Household number 2 when answering the survey questions in Module 16.

M17 Household Decision-Making

This module provides information on the main decision-maker of each household, their gender and position in the family. It also reports whether decisions are made collaboratively among family members or if any non-household members help in making the decisions.

Survey data for Module 17 was collected at the **household level**. A '**Response'** in this module refers to activities where decision-making took place. Often there are multiple Responses per household, as households may have had more than one activity that required decision-making. Each 'Response' corresponds to information about one type of activity where decision making took place for one household.

Measure	**Description**
Another female in household makes decisions (%)	The percentage of activities in which a secondary female (not the main female/wife) is the main decision maker. For example, this could be a mother or another relative.
Another male in household makes decisions (%)	The percentage of activities in which a secondary male (not the main male/husband) is the main decision-maker. For example, this could be a father or another relative.
Husband and wife make joint household decisions (%)	The percentage of activities in which the husband and wife make decisions together.
M17 - Number of Household Participated	The number of households that responded in this module of the survey
M17 - Number of Responses	The number of activities where decision making took place for the household (e.g. agricultural production, livestock raising – see the Dimension 'General decisions made in household' below).

Main female/wife in household makes decisions (%)	The percentage of activities in which the main female/wife is the decision-maker.
Main male/husband in household makes decisions (%)	The percentage of activities in which the main male/husband is the decision-maker.
Members in household make joint decisions with individuals from outside (%)	The percentage of activities in which decisions are made jointly by one or more members of the household and one or more individuals from outside of the household.
Multiple members in household make joint decisions (%)	The percentage of activities in which decisions are made jointly by two or more members of the household.
Someone from outside the household makes decisions (%)	The percentage of activities in which decisions are made solely by someone from outside of the household.
Dimension	**Description**
Extent to which the respondent can make independent household decisions	Indicates whether the respondent can independently make decisions for the household. Choices include to a small extent; medium extent; high extent; N/A; or not at all.
Proportion of household decisions into which respondent gives input	Indicates whether the respondent's input is factored into the decisions made by others in the household. Choices include input into most or all decisions; input into some decision; N/A; no input or input in few decisions; or no decisions made.
General decisions made in household	The different types of decisions that are made in the household. Choices include agricultural production; livestock raising; major household expenditures (such as a large appliance for the house); minor household expenditures (such food for daily consumption or other household needs); N/A; non-farm business activity; what inputs to buy for agricultural production; what types of crops to grow for agricultural production; when or who would take crops to the market; whether or not the household is to take loans or borrow cash/in-kind; which [crop] varieties to plant; or your own (singular) wage or salary employment.
Response	'Response' in Module 17 refers to an activity where decision making was required by the household, and this has a unique identification code. So, 'M17-Household ID.2-Response-1' refers to the 1st activity which required decision making by Household number 2 when answering the survey questions in Module 17.

Variety Age

Additional information about groundnut variety age is available that relates to M01 Household Groundnut Variety.

Measure	Description
Variety Age	The time (in years) since a variety was released.
Variety Year of release	The year in which a variety was released. Note that for old varieties (local and Dodoma bold), an estimate of 1960 is used for the year of release.