The Revolutionary Government of Zanzibar

Annual Agriculture Sample Survey 2022/23

Zanzibar Report

July, 2024

Food and Agriculture Organization of the United Nations

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Foreword

The Annual Agriculture Sample Survey (AASS) for the 2022/23 agricultural year marks a significant milestone for Tanzania, being the first under the 50x2030 Initiative. This initiative aims to address the crucial need for timely and accurate agricultural data, essential for evidence-based decision-making and policy formulation. Implemented jointly by the National Bureau of Statistics (NBS) and the Office of the Chief Government Statistician, Zanzibar (OCGS), in collaboration with Agricultural Sector Lead Ministries (ASLMs), the survey received support from the World Bank's TSMP II project.

In line with global and regional development agendas, including the Sustainable Development Goals (SDGs), the Comprehensive Africa Agriculture Development Programme (CAADP), Zanzibar Development Planning (ZADEP) 2021/22 – 2025/26, the Agricultural Sector Development Programme (ASDP), and the Agriculture Statistics Strategic Plan 2022/23 - 2026/27 (ASSP), this report provides a detailed overview of agricultural statistics. It includes data for various crops production by seasons, aiming to improve policy development and enhance stakeholder capacity within the agricultural data value chain.

The data collected will support national development goals and provide a basis for further research while informing government policies, plans, and programs. By addressing the agricultural data gap, this initiative aids in regional alignment, dissemination, and utilization of essential economic and social.

Overall, the AASS 2022/23 report is expected to play a crucial role in providing essential information on the agricultural sector to government, policymakers, and various stakeholders, facilitating informed decision-making and sustainable development in Tanzania.

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Hon. Shamata Shaame Khamis, (MBM)
Minister for Agriculture, Irrigation and Livestock,
Zanzibar.

Acknowledgement

It is with great pleasure and anticipation that I introduce to all those who have played a crucial role in the successful writing this report of the Annual Agricultural Sample Survey (AASS) for the 2022/23 agricultural year. This achievement marks a significant milestone in our collaborative efforts under the 50x2030 Initiative. I extend my sincere gratitude to the Revolutionary Government of Zanzibar for their steadfast support in implementing the AASS program. Additionally, I would like to thank the World Bank, FAO, and IFAD for their invaluable financial and technical assistance, which has greatly enhanced the quality and timeliness of our agricultural survey data.

Special acknowledgment goes to the technical committee, comprised of experts from the National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS) Zanzibar, and the Ministry of Agriculture, Irrigation, Natural Resources and Livestock. Their contributions were instrumental in compiling a comprehensive dataset and producing our inaugural AASS 2022/23 national report, the first module under the 50x2030 initiative's agriculture round approach.

This report provides essential agricultural data from both agricultural households and large-scale commercial farms, crucial for informing government policies, plans, and programs at both national and regional levels. These frameworks aim to drive sustainable development and prosperity in the agriculture sector with robust factual insights.

As we embark on this journey, I extend my appreciation to all stakeholders involved in every stage of the value chain from survey preparation, data collection, data cleaning, to analysis exercises. Your unwavering commitment and support have been crucial in ensuring the successful completion of the final report. Together, we are committed to producing and promoting the use of agricultural statistics to advance our national development objectives and foster prosperity for all Tanzanians.

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Salum A. Kassim,
Chief Government Statistician,
OCGS, Zanzibar

Key Findings

1.0 Agricultural Households By Sex and Activities, Zanzibar

Agricultural Households

155,450

81.3%

Male-Headed Households

18.7%

Female-Headed Households

152,126 (97.9%)

Households Engaged in Crop Production

98,550 (63.4%)

Households Engaged in Livestock Keeping

8,220 (5.3%)

Households Engaged in Aquaculture

2.0 Area Cultivated (Hectares), Zanzibar

Total Area Planted

372,014 Ha.

18,339 Ha.
Cereal Crops

15,767Ha.
Paddy (picture)

77,121 Ha.
Roots and Tuber Crops

41,332 Ha.
Cassava

3.0 Production of Selected Crops (Tons), Zanzibar

Crop Production

108,577 Tons
Selected Roots and Tubers

4.0 Land Ownership

44.4%

Total cultivated land owned with "Customary Right of Occupancy", by households

5.0 Planted Area Irrigated

15,905 Ha.

(11.5%)
Total planted area with crops irrigated

8.0 Climatic and Non-Climatic Shocks, Zanzibar

(3,800 ha; 11.6 %)
Planted area fully affected in the short rainy season

(16,414 ha; 36.5 %)
Planted area fully affected in the long rainy season

(2,575 ha; 7.8%)
Planted area partially affected in the short rainy season

(3,206 ha; 7.1%)
Planted area partially affected in the long rainy season

8.0 Seed Use

18.9%

Households used **Improved seeds**

66.6%

Households used Local **Seeds**

7.0 Fertilizer Use

83.7%

Households used **Organic Fertilizers**

36.1%

Households used **Inorganic Fertilizer**

9.0 Agricultural Loans

0.7%

Agricultural households accessed loans for agricultural purposes

Source: 2022/23 AASS Tables

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Definition of Key Terms

Agricultural Holding

Is any economic unit of agricultural production (like a garden of temporary and/or permanent crops or cattle rearing/plantation) under single management, without regard to title, legal form or size.

Cropping Household

A household is referred to be an exclusively cropping household if it has cultivated a piece of land equal to or exceeding 25 square meters, but had no livestock, or it rears a number of animals below the established thresholds (i.e., no cattle or less than 5 goats/sheep/pigs or less than 50 chickens/turkeys/ducks).

Livestock Household

A household is referred to be an exclusively livestock household if it reared at least 1 cattle or at least 5 between goats, sheep and pigs or at least 50 between chickens, turkeys and ducks during the reference agricultural year and it cultivated no land or less than 25 square meters.

Large Scale Farms

These are farms with at least 20 hectares of cultivated land or at least 50 herds of cattle or at least 100 between goats, sheep and pigs or at least 1,000 chickens. In addition to this, they should fulfill all of the four listed conditions:

i) Greater part of the produce should go to the market;

ii) Operation of farm should be continuous;

iii) There should be an application of machinery/implements on the farm; and

iv) Should have at least one permanent employee.

Reference Period

The Annual Agriculture Sample Survey (AASS) covered the agricultural year 2022/23. The agricultural year is a twelve - month cycle in which production of crops takes place. In Tanzania, agricultural year commences on 1st October and ends 30th September of the following year

Short Rainy Season

The short rainy season in Tanzania begins in October up to January of the following year.

Long Rainy Season

The long rainy season in Tanzania begins in March up to May of the same year.

Acronym and Definition

AASS	Annual Agriculture Sample Survey
ASDP	Agricultural Sector Development Programme
ASLM	Agriculture Sector Lead Ministries
CAADP	Comprehensive Africa Agriculture Development Programme
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
OCGS	Office of the Chief Government Statistician Zanzibar
EA	Enumeration Area
GSARS	Global Strategy for Agricultural and Rural Statistics
NBS	National Bureau of Statistics
MBM	Mjumbe wa Baraza la Mapinduzi
PHC	Population and Housing Census
PPS	Probability Proportion to Size
ZADEP	Zanzibar Development Planning

Chapter 1: Background

1.0 Introduction

Agriculture is an important economic sector of the Zanzibar Economy and contributes about 22.9 percent of Gross Domestic Product (GDP) (The Economic Survey 2023). It is the main source of food, employment, raw materials for industries and foreign exchange earnings. Since Zanzibar has different climatic and geographical zones, farmers grow a variety of annual and permanent crops. Crops grown includes cereals; pulses; root and tubers; fruits and vegetables. Moreover, farmers practice livestock farming by keeping animals like cattle, goats, sheep and chicken.

The importance of accurate and reliable agricultural statistics for planning and evidence-based decision making cannot be overemphasized. In addition, agricultural statistics are required to determine the growth of the sector, measure employment and reduction of poverty of the population in the rural areas, as well as to stimulate the investment in the agro based industry to support the establishment of industrialized economy, the National Bureau of Statistics (NBS) and Office of Chief Government Statistician (OCGS) with technical support from the Food and Agriculture Organization of the United Nations (FAO) conducted the Annual Agriculture Sample Survey (AASS) for the Agricultural Year 2022/23. From the beginning and at all stages, NBS and OCGS worked together with Agriculture Sector Lead Ministries (ASLMs) in order to ensure that the survey considered national policies and other frameworks in the development of the agriculture sector in the country.

The Annual Agriculture Sample Survey (AASS 2022/23) report focuses on agricultural households, land use, crop production, input use and acquisition (fertilizers and pesticides), seed and seedling acquisition, agro-processing, irrigation use, livestock product and production and aquaculture production. Nonetheless, the survey collected also data on access to credit, labor and other economics. In addition, the report describes the agricultural activities at National and Regional level that took place in both sides of Zanzibar during the 2022/23 Agricultural year.

The report is divided in five chapters: Background Information, Agricultural Households and Holdings Characteristics, Area, Production and Use of Major Crops, Irrigation and inputs; and Access to financial services (credit).

1.1 Survey Objectives

The main objective of the Annual Agriculture Sample Survey (AASS-2022/23) was to generate up-to-date and precise data on the acreage and production of major crops, livestock numbers, livestock products, and aquaculture. Accurate crop production figures are essential for a wide

range of stakeholders in the agriculture sector. The data from this survey provides critical insights for farmers, agricultural businesses, government policymakers, and other key players to inform their decisions in both the short and long term.

The specific objectives of the AASS 2022/23:

i. To collect timely data on agricultural production and productivity at both national and regional levels;

ii. To gather core data to assist in the development and review of agricultural policies and to guide the implementation of agricultural plans at national and regional levels between agricultural census periods;

iii. To compile fundamental statistics that facilitate comparisons in the development of the agriculture sector across the country.

1.2 Methodology

1.2.1 Scope and Coverage

The Annual Agricultural Sample Survey 2022/23 was conducted for both agricultural households and large scale farms. This report covers information on agricultural households with summary data from large scale farms to provide complete national estimates for some variables such as households rearing livestock, crop production, and households practicing aquaculture.

The main topics covered during the survey were household members and holder identification; field roster; short and long rainy plot roster; short and long rainy crop roster; permanent crop production; crop harvest use; seed and seedling acquisition; input use and acquisition (fertilizer and pesticides); labour; other economics; and arm registration.

1.2.2 Sample Design

The frame used to extract the sample for the Annual Agricultural Sample Survey (AASS-2022/23 was the Population and Housing Census (PHC-2022) frame that lists all the Enumeration Areas - EAs/Hamlets of the country. The AASS-2022/23 used a stratified two-stage sampling design which allows to produce accurate estimates at regional level. In each domain (region), the EAs (primary sampling units) have been first stratified into two or three strata [1]and then selected by using a systematic sampling procedure with probability proportional to size (PPS) where the measure of size is the number of agricultural households in the EA. Before the selection, within each stratum and domain (region), the Enumeration Areas (EAs) were ordered according to the codes of District and Council, which reflect the geographical proximity, then ordered according to the codes of Constituency, Division, Wards,

[1] Strata were determined by the following variables: the number of households growing crops, the number of households rearing livestock and the number of households practicing aquaculture as reported in the PHC-2022 frame.

and Village. An implicit stratification was also performed, ordering by Urban/Rural type at Ward level.

The second stage sampling selection was conducted by using a simple random sampling. Agricultural households were drawn from the PHC 2022 list with a simple random sampling without replacement procedure in each sampled hamlet and agricultural households were selected with a simple random sampling without replacement procedure in each sampled hamlet after a listing operation. A total of 118 PSUs (EAs) were selected from the PHC 2022 Population and Housing Census (PHC) frame, a total number of 1,416 agricultural households were sampled, and 12 households were selected per EA.

1.2.3 Survey Organization

The Annual Agricultural Sample Survey (AASS-2022/23) was a comprehensive initiative to collect agricultural data across various aspects of the sector. This survey was conducted by the National Bureau of Statistics (NBS) and the Office of the Chief Government Statistician (OCGS). The National Team was responsible for overseeing the operational aspects of the survey and consisted of staff from the Department of Agricultural Statistics at NBS and OCGS, as well as representatives from the Ministries responsible for agriculture, livestock, and fisheries from both Tanzania Mainland and Zanzibar. Furthermore, the regional statistical officers from NBS and OCGS, in collaboration with staff responsible for agricultural statistics from the regional secretariats, supervised the implementation of the survey activities at regional level.

The data collection process was dynamic, with teams traveling from one Enumeration Area to another to gather information. To maintain accuracy and consistency, Quality Control teams were deployed, each overseeing the data collection in assigned regions. This ensured that the survey maintained high standards while capturing a comprehensive view of agricultural practices and trends across the country.

Chapter 2: Agricultural Households and Holdings Characteristics

2.0 Introduction

This chapter provides information of the agricultural activities that performed by agricultural households including crop production, livestock keeping and aquaculture farming. The chapter further presents details on the land ownership as well as, the crop land use by agricultural households and large-scale farms in short and long-rainy seasons during the 2022/23 agricultural year.

2.1 Households Engaged in Agriculture

Households engaged in agriculture refers to those households involved in crop production, and livestock keeping and aquaculture during 2022/23 agricultural year.

The results show that, the total number of agricultural households in Zanzibar was 155,450, of which 152,126 (97.9 percent) households were engaged in crop production, 98,550 (63.4 percent) livestock keeping and 8,220 (5.3 percent) were involved in aquaculture (Table 2.1).

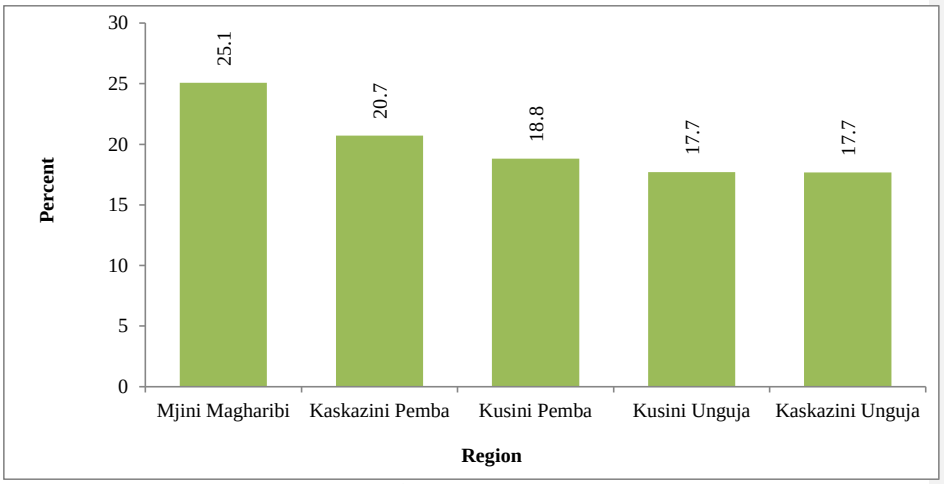
Table 2.1: Number and Percentage of Agricultural Households by Activity During 2022/23 Agricultural Year, Zanzibar

Coverage	Total Agricultural Households	Households Involved in Crop Production		Households Involved in Livestock keeping		Households Involved in Aquaculture	
		Number	Percent	Number	Percent	Number	Percent
Zanzibar	155,450	152,126	97.9	98,550	63.4	8,220	5.3

Source: Annex Table (2-1) in Statistical Tables of AASS 2022/23

The results across regions show that, Mjini Magharibi had the highest number of households engaged in agriculture (38,983; 25.1 percent), followed by Kaskazini Pemba (32,207; 20.7 percent). In contrast, Kusini Unguja and Kaskazini Unguja were reported the lowest number of agricultural households each was 27,489 (17.7 percent) (Figure 2.1).

Figure 2.1: Percentage Distribution of Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (2-1) in Statistical Tables of AASS 2022/23

2.2 Agricultural Households Engaged in Crop Production

During the short rainy season results show that, a total of 139,734 agricultural households were engaged in crop production in Zanzibar. Mjini Magharibi region had the highest number of households involved in crop production was 34,288 (24.5 percent) households, followed by Kusini Pemba with 27,659 (19.8 percent) households, whereas Kaskazini Unguja reported the lowest number with 24,890 (17.8 percent) households.

In the long rainy season was 145,598 households involved in crop production. Mjini Magharibi region reported the highest number of households (34,976; 24.0 percent), followed by Kaskazini Pemba (31,476 households; 21.6 percent), whereas Kaskazini Unguja recorded the lowest number (24,065 households; 16.5 percent) (Table 2.2).

Table 2.2: Number and Percentage of Agricultural Households Engaged in Crop Production by Season and Region During 2022/23 Agricultural Year, Zanzibar

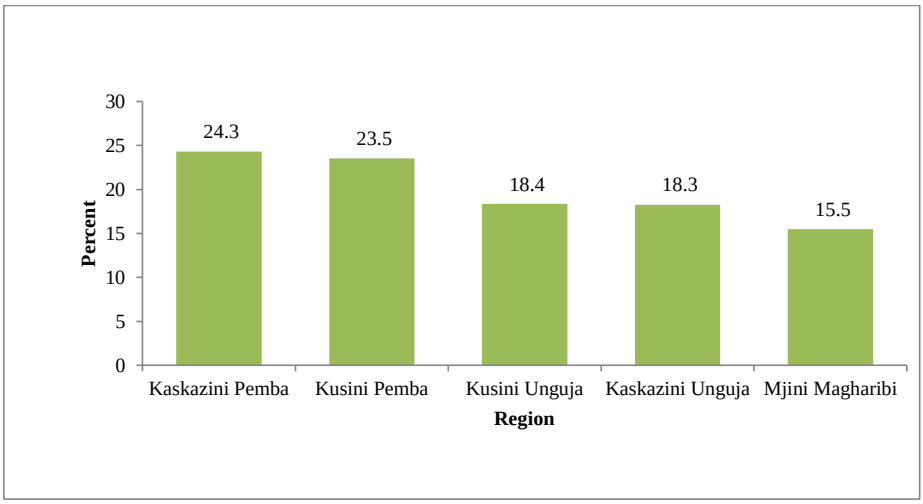
Region	Short Rainy Season		Long Rainy Season	
	Number	Percent	Number	Percent
Kaskazini Unguja	24,890	17.8	24,065	16.5
Kusini Unguja	25,249	18.1	26,598	18.3
Mjini Magharibi	34,288	24.5	34,976	24.0
Kaskazini Pemba	27,648	19.8	31,476	21.6
Kusini Pemba	27,659	19.8	28,482	19.6
Total	**139,734**	**100**	**145,598**	**100**

Source: Annex Table (2-1) in Statistical Tables of AASS2022/23

2.3 Agricultural Households Engaged in Livestock keeping

The results show that, a total of 98,550 households were involved in livestock keeping. Across regions, Kaskazini Pemba had the highest number of households keeping livestock 23,960; 24.3 percent), followed by Kusini Pemba (23,208; 23.5 percent), while the lowest number of 15,257 (15.5 percent) households was reported in Mjini Magharibi (Figure 2.2).

Figure 2.2: Percentage Distribution of Agricultural Households engaged in Livestock keeping by Region During 2022/23 Agricultural Year, Zanzibar

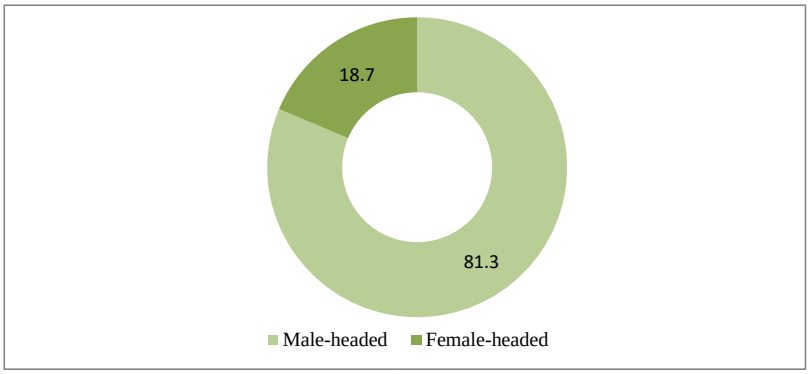


Source: Annex Table (2-1) in Statistical Tables of AASS 2022/23

2.4 Agricultural Households by Sex of Head of Household and Type of Agricultural Activities

The results show that the total number of agricultural households in Zanzibar was 155,450, out of which 126,399 (81.3 percent) households were headed by males and 29,051 (18.7 percent) were headed by females. These results indicate that more than three-quarters of the agricultural households were males headed (Figure 2.3).

Figure 2.3: Percentage Distribution of Agricultural Households by Sex of Household Head, During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (3-1) in Statistical Tables of AASS 2022/23

Moreover, the findings reveal that, a total of 123,930 (98.0 percent) agricultural households engaged in crop production were headed by males and 28,195 (97.1 percent) were headed by females. Regardless of the sex of the household head in crop production, the statistically findings were not significant different across all regions, (Table 2.3).

Table 2.3: Number and Percentage of Agriculture Households Engaged in Crop Production by Sex of Head During 2022/23 Agricultural Year, Zanzibar

Region	Total Agricultural Households by Sex-Headed			Number of Headed Households Engaged in Crop Production			Percent of Headed Households Engaged in Crop Production		
	Male-headed	Female-headed	Total	Male-headed	Female-headed	Total	Male-headed	Female-headed	Total
Kaskazini Unguja	22,888	4,601	27,489	22,699	4,469	27,167	99.2	97.1	98.8
Kusini Unguja	22,443	5,063	27,506	21,809	5,063	26,872	97.2	100.0	97.7
Mjini Magharibi	32,200	6,783	38,983	30,901	6,362	37,264	96.0	93.8	95.6
Kaskazini Pemba	25,422	6,785	32,207	25,212	6,785	31,997	99.2	100.0	99.3
Kusini Pemba	23,447	5,818	29,265	23,309	5,516	28,825	99.4	94.8	98.5
Total	**126,399**	**29,051**	**155,450**	**123,930**	**28,195**	**152,126**	**98.0**	**97.1**	**97.9**

Source: Annex Tables (2-1 & 3-1) in Statistical Tables of AASS 2022/23

In the livestock production, the results show that, 98,550 (63.4 percent) of agricultural households were involved in rearing livestock. However, 81,758 (64.7 percent) were male-headed households and 16,792 (57.8 percent) were female-headed households (Table 2.4). The findings within region show that, Kusini Pemba had the highest of male-headed and female-headed households with 81.3 and 71.1 percent respectively, followed by Kaskazini Pemba with 76.6 percent were male-headed households and 66.2 percent were female-headed households. The lowest percentage was recorded in Mjini Magharibi with 39.1 percent for male-headed households and 39.4 percentage for female-headed households.

Table 2.4: Number and Percentage of Agriculture Households Engaged in Rearing Livestock, by Sex of Head During 2022/23 Agricultural Year, Zanzibar

Region	Total Agricultural Households			Number of Household Rearing Livestock			Percent of Household Rearing Livestock		
	Male Headed	Female Headed	All	Male Headed	Female Headed	All	Male Headed	Female Headed	All
Kaskazini Unguja	22,888	4,601	27,489	15,442	2,571	18,013	67.5	55.9	65.5
Kusini Unguja	22,443	5,063	27,506	15,186	2,926	18,112	67.7	57.8	65.8
Mjini Magharibi	32,200	6,783	38,983	12,587	2,671	15,257	39.1	39.4	39.1
Kaskazini Pemba	25,422	6,785	32,207	19,469	4,490	23,960	76.6	66.2	74.4
Kusini Pemba	23,447	5,818	29,265	19,073	4,135	23,208	81.3	71.1	79.3
Total	**126,399**	**29,051**	**155,450**	**81,758**	**16,792**	**98,550**	**64.7**	**57.8**	**63.4**

Source: Annex Tables (3-1) in Statistical Tables of AASS 2022/23

For aquaculture production findings reveal that, 8,220 (5.3 percent) of agricultural households were involved in aquaculture farming in Zanzibar, whereby 6,367 (5.0 percent) households were male-headed and 1,854 (6.4 percent) households were female-headed (Table 2.5).

Table 2.5: Number and Percentage of Agriculture Households Engaged in Aquaculture, by Sex of Head During 2022/23 Agricultural Year, Zanzibar

Region	Total Agricultural Households			Number of Aquaculture Households			Percent of Aquaculture Households		
	Male-headed	Female-headed	All	Male-headed	Female-headed	All	Male-headed	Female-headed	All
Kaskazini Unguja	22,888	4,601	27,489	423	196	620	1.8	4.3	2.3
Kusini Unguja	22,443	5,063	27,506	1,843	558	2,401	8.2	11.0	8.7
Mjini Magharibi	32,200	6,783	38,983	-	-	-	-	-	-
Kaskazini Pemba	25,422	6,785	32,207	3,684	1,099	4,783	14.5	16.2	14.9
Kusini Pemba	23,447	5,818	29,265	417	-	417	1.8	-	1.4
Total	**126,399**	**29,051**	**155,450**	**6,367**	**1,854**	**8,220**	**5.0**	**6.4**	**5.3**

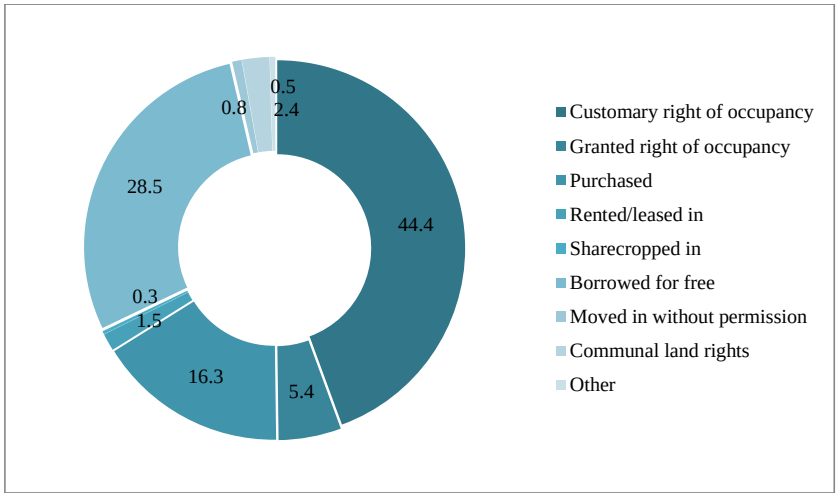
Source: Annex Table (3-1) in Statistical Tables of AASS 2022/23

"-"Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

2.5 Land Ownership

Land ownership for agricultural production was categorized as granted right of occupancy, customary right of occupancy, purchased, rented/leased in, borrowed, shared cropped, communal land right, moved without permission and land under other forms of tenure. During 2022/23 agricultural year, the most common land tenure rights owned by agricultural household was customary right of occupancy (44.4 percent), followed by borrowed for free (28.5 percent) and the least common was land rights owned by shared cropped in (0.3 percent) (Figure 2.4)

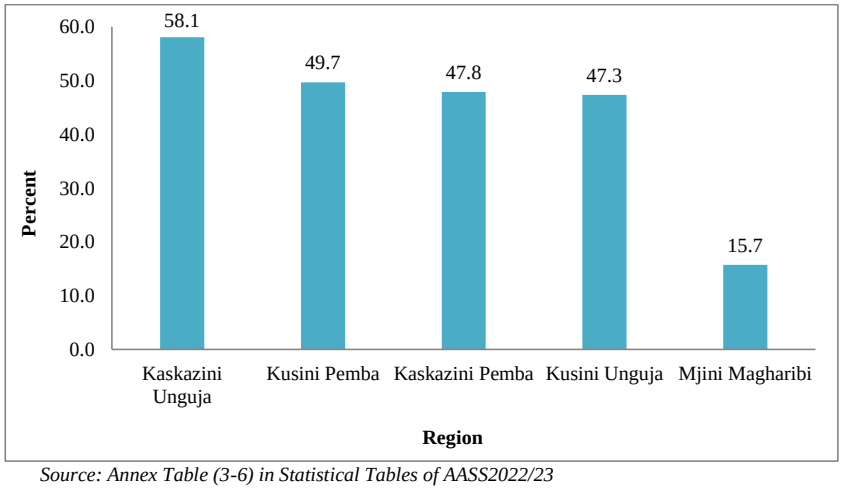
Figure 2.4: Proportion of Land Ownership Status by Agricultural Households During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (3-6) in Statistical Tables of AASS2022/23

Based on the proportion of customary land ownership by region, Kaskazini Unguja region had the highest proportion (58.1 percent) followed by Kusini Pemba (49.7 percent) and Kaskazini Pemba (47.8 percent). On the contrary, Mjini Magharibi reported the lowest proportion of customary land ownership with 15.7 percent (Figure 2.5).

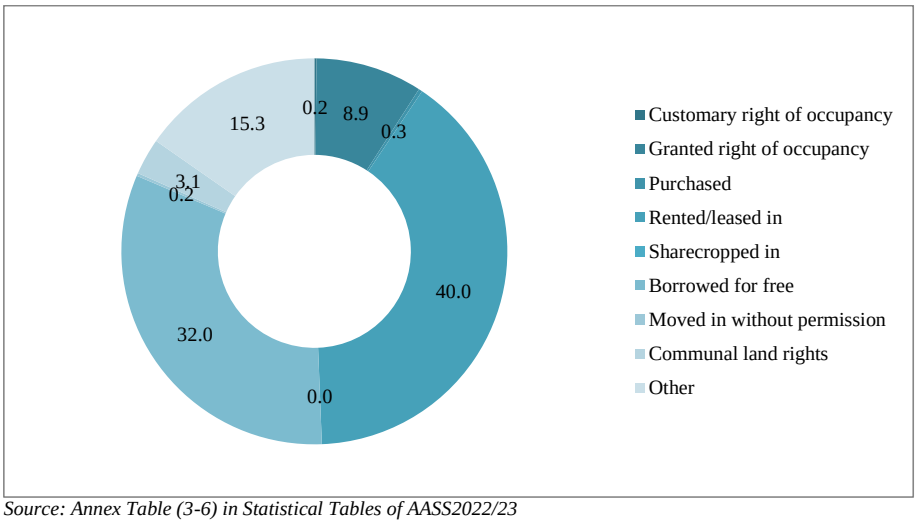
Figure 2.5: Proportion of Customary Land Ownership by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (3-6) in Statistical Tables of AASS2022/23

On the other hand, the most common tenure rights for large scale farms was rented/leased (40.0 percent), followed by Borrowed for free (32.0 percent) and the least proportion reported customary right of occupancy with 0.2 (Figure 2.6).

Figure 2.6: Proportion of Land Ownership Status by Large Scale Farms During 2022/23 Agricultural year, Zanzibar



Source: Annex Table (3-6) in Statistical Tables of AASS2022/23

2.6 Land Use

This section outlines land use patterns during both the short and long rainy seasons for the 2022/23 agricultural year. It presents detailed information for both agricultural households and large-scale farms, providing insights into various agricultural practices and their prevalence in different land use types. These types include temporary monocrops, temporary mixed crops, fallow land, permanent/temporary mixed crops, permanent monocrops, and permanent mixed crops.

2.6.1 Agricultural Household Land Use

Differences in land use practices were observed during both the short and long rainy seasons. The findings reveal that temporary monocropping was the most common land use practice among households, predominant land use practice among households. Specifically, 56.8 percent of households practiced temporary monocropping during the short rainy season, with an average of 0.2 hectares per household, while the long rainy season was relative high of 62.4 percent with an average land area of 0.2 hectares per household. Likewise, permanent mixed

cropping was the second most common practice, adopted by 44.0 percent of crop-growing households with an average of 0.1 hectares per household in the short rainy season, while temporary mixed cropping was second most common practice adopted by 45.6 percent (0.3 hectares per household) in the long rainy season. In contrast, the findings indicate that fewer households practiced land fallow, accounting for 0.8 percent in the short rainy season with an estimated land area of less than 0.1 percent hectares per household, and 0.4 percent in the long rainy season, covering an area of less than 0.1 hectares per household. (Table 2.6).

Table 2.6: Uses of Land by Households for Short and Long-Rainy Seasons in Zanzibar, During 2022/23 Agricultural Year

Land Use	Short Rainy Season				Long Rainy Season			
	Average Area (Ha)	Total Area (Ha)	Percent of Crop Growing Households	Crop Growing Households	Average Area (Ha)	Total Area (Ha)	Percent of Crop Growing Households	Crop Growing Households
Temporary Mono Cropping	0.2	23,817	56.8	79,483	0.2	33,554	62.4	90,841
Temporary Mixed Cropping	0.1	12,428	43.0	60,201	0.1	13,711	45.6	66,355
Fallow	0.0	303	0.8	1,077	0.0	106	0.4	552
Permanent /Temporary mix	0.1	18,606	35.3	49,392	0.1	18,346	33.8	49,174
Permanent Mono Cropping	0.1	9,635	36.9	51,638	0.1	8,581	33.6	48,980
Permanent Mixed Cropping	0.1	16,007	44.0	61,564	0.1	16,290	41.8	60,825

Source: Annex Table (3-4) in Statistical Tables of AASS 2022/23

2.6.2 Large Scale Farms Land Use

During the 2022/23 agricultural year, most of the large scale farms used their land area to cultivate either Temporary mono crops or permanent mono crops. Statistics depict that 60.7 percent of large scale farms were planted with permanent mono crops in the short rainy season, occupying an average land area of 84.6 ha per farm. The area under temporary mono crop was average of 5.2 ha per farm is equivalent of 60.7 percent of the total planted area during long rainy season.

On the other hand, temporary and permanent mixed cropping was infrequently practiced, with only 3.6 percent of large-scale farms reporting this method, using an average land area of less than 0.1 hectares per farm during the short rainy season. Similarly, land fallow and permanent mixed crops were also less common during the long rainy season, with 3.6 percent of farms practicing land fallow (28.4 hectares) and 3.6 percent practicing permanent mixed crops (0.04 hectares) (Table 2.7).

Table 2.7: Large scale Farms Land Use in Short and Long Rainy Seasons During 2022/23 Agricultural Year, Zanzibar

Land Use	Short-Rainy Season				Long-Rainy Season			
	Average Area (Ha)	Total Area (Ha)	Percent of Large Scale Farms	Total Large Scale Farms	Average Area (Ha)	Total Area (Ha)	Percent of Large Scale Farms	Total Large Scale Farms
Temporary Mono Cropping	3.6	100	57.1	16	5.2	145	60.7	17
Temporary Mixed Cropping	0.0	0	3.6	-	0.0	0	0.0	-
Fallow	1.5	42	7.1	-	28.4	796	3.6	-
Permanent/Temporary mix	0.0	0	3.6	-	0.0	0	0.0	-
Permanent Mono Cropping	84.6	2,368	60.7	17	19.1	535	39.3	11
Permanent Mixed Cropping	0.0	1	7.1	-	0.0	1	3.6	-

Source: Annex Table (3-4) in Statistical Tables of AASS 2022/23

Chapter 3: Area, Production and Use of Major Crops

3.0 Introduction

This chapter provides a detailed discussion of the survey findings on crop production, covering both annual and permanent (or perennial) crops. The findings on annual crop production are presented by considering different crop groups namely cereals, roots and tubers, pulses, oil seeds, fruits and vegetables. Apart from crop production, the chapter also provides the results on crop harvest use.

3.1 Cereal Crops Production

Cereal crops are annual crops grown to produce grains which are mainly used as food and animal feeds. The major cereal crops produced in Zanzibar are paddy, maize, sorghum, and bulrush millet.

The findings show that, 18,339 ha of the selected cereal crops were planted across in Zanzibar, of which 18,215 ha of the total planted area recorded from agricultural households and 123 ha from large scale farms.

Among the selected cereals, paddy had the largest planted area of 15,767 ha, followed by maize 2,116 ha and sorghum 339 ha, while bulrush millet had the least planted area with 117 ha. However, out of the total area planted with cereals, 14,067 ha equivalent to 76.7 percent was harvested.

The total production of cereal crops was 11,193 tons, whereby 11,154 tons were from agricultural households and only 4 tons large-scale farms. Paddy had the largest production (9,486 tons), followed by maize (1,447 tons), whereas bulrush millet had the lowest production with 86 tons (Table 3.1).

Table 3.1: Area Planted, Harvested, Production, Percent of Area Harvested of Selected Cereals Crops During 2022/23 Agricultural Year, Zanzibar

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Holding Category	Crop	Planted (ha)	Area Harvested		Production (tons)	Yield (tons/ha)
			Area (ha)	Percent		
Agricultural Households	Maize	2,105	1,493	70.9	1,444	1
	Paddy	15,670	12,220	78	9,451	0.8
	Sorghum	323	186	57.6	173	0.9
	Bulrush Millet	117	54	46.2	86	1.6
	Total	**18,215**	**13,953**	**76.6**	**11,154**	
Large Scale Farms	Maize	11	6	54.5	3	0.5
	Paddy	96	91	94.8	34	0.4
	Sorghum	-	-	-	-	-
	Bulrush Millet	-	-	-	-	-
	Total	**123**	**97**	**17.9**	**37**	
All Holdings	Maize	2,116	1,499	70.8	1,447	1
	Paddy	15,767	12,311	78.1	9,486	0.8
	Sorghum	339	203	59.9	174	0.9
	Bulrush Millet	117	54	46.2	86	1.6
	Total	**18,339**	**14,067**	**76.7**	**11,193**	

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

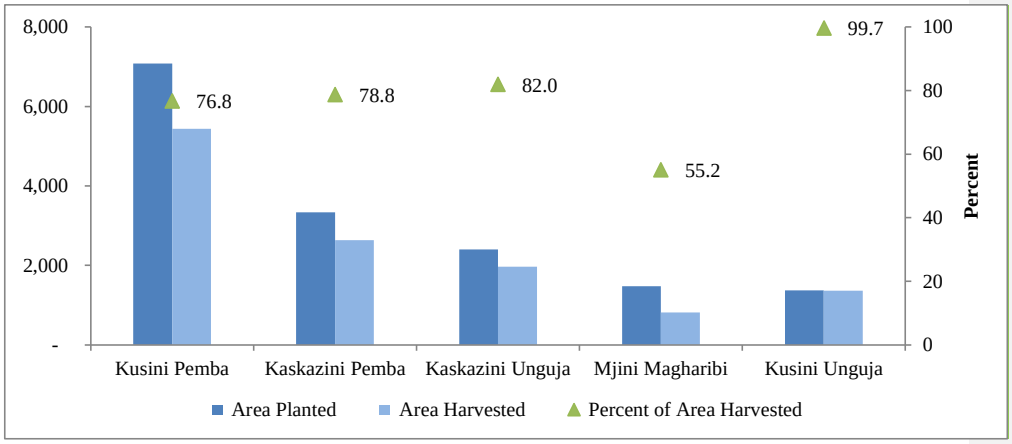
"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.1.1 Paddy

The results show that, paddy remains the dominant cereal crop planted in Zanzibar. A total of 42,708 households were engaged in growing paddy during 2022/23 agricultural year. The total area planted with paddy was 15,767 ha, of which 15,670 ha were planted by agricultural households and 96 ha by large scale farms. Moreover, a total of 12,311 ha equivalent to 78.1 percent were harvested.

Furthermore, the agricultural households harvested 12,220 ha (78.0 percent). Kusini Unguja had the highest percentage of paddy harvested with 99.7 percent, followed by Kaskazini Unguja 82.0 percent, whereas Mjini Magharibi was recorded the lowest percentage of paddy harvested with 55.2 percent (Figure 3.1).

Figure 3.1: Area Planted and Percentage of Area Harvested with Paddy by Region During 2022/23 Agricultural Year, Zanzibar

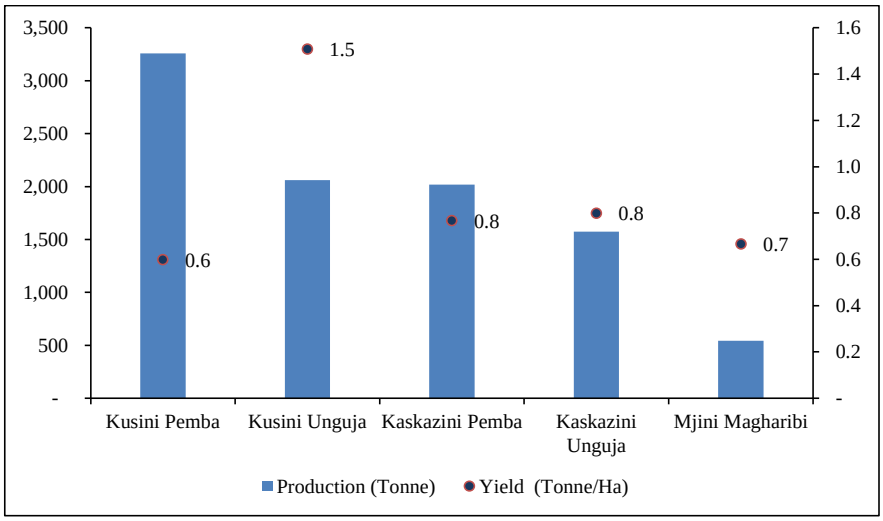


Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

The total production of paddy was 9,486 tons, of which 9,451 tons were from agricultural households and 34 tons from large scale farms. Regionally, Kusini Pemba region had the highest production of paddy with 3,257 tons, followed by Kusini Unguja 2,060 tons and Mjini Magharibi reported the lowest production of paddy 542 tons.

The average national yield of paddy was 0.8 tons/ha, whereby, Kusini Unguja reported the highest yield of 1.5 tons/ha and the lowest yield was reported in Kusini Pemba (0.6 tons/ha) (Figure 3.2).

Figure 3.2: Production and Yield of Paddy by Region During 2022/23 Agricultural Year, Zanzibar

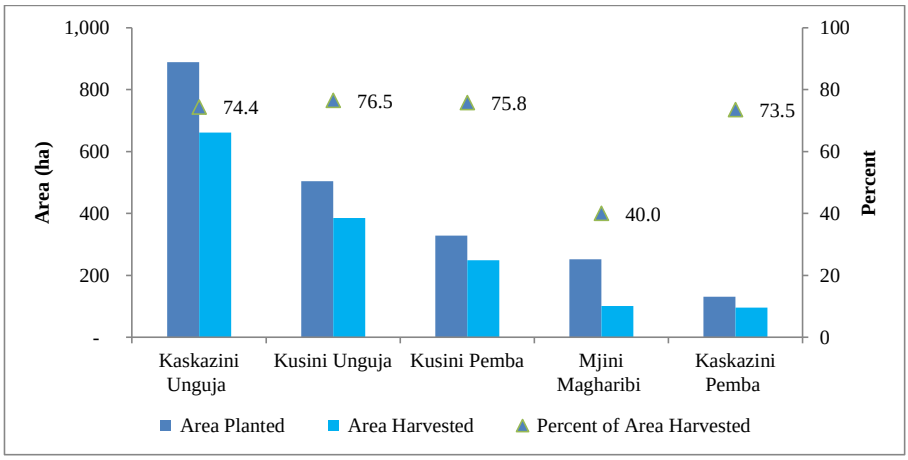


Source: Table (5-1) in Statistical Tables of AASS 2022/23

3.1.2 Maize

Maize was another cereal crop grown in Zanzibar, a total of 12,716 agricultural households were engaged in growing maize during 2022/23 agricultural year. The total planted area with maize was 2,116 ha, whereby 2,105 ha were planted by agricultural households and 11 ha planted by large scale farms. Moreover, 1,499 ha equivalent to 70.8 percent were harvested, of which 1,493 ha (70.9 percent) were harvested by agricultural households and 6 ha were harvested by large scale farms. In regional wise, the proportion of area harvested of maize was 76.5 percent reported in Kusini Unguja, 75.8 percent in Kusini Pemba, 74.4 percent in Kaskazini Unguja and the least proportion reported in Mjini Magharibi with 40.0 percent. (Figure 3.3).

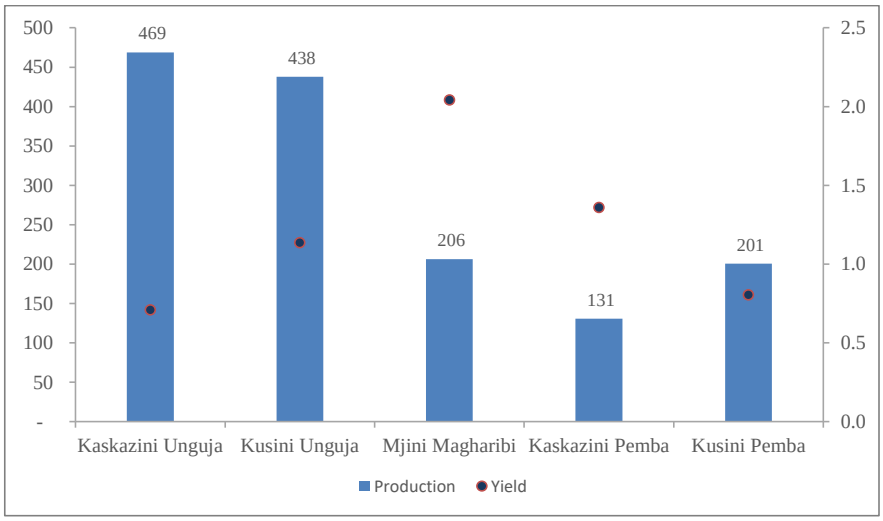
Figure 3.3: Planted Area and Percentage of Harvested Area with Maize by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

The total production of maize was 1,447 tons, of which 1,444 tons were from agricultural households and only 3 tons from large scale farms. Kaskazini Unguja had the largest production of maize with 469 tons, followed by Kusini Unguja 438 tons, while Kaskazini Pemba reported the lowest with 131 tons. The average yield of maize was 1.0 tons/ha, whereby Mjini Magharibi region had the highest yield of 2.0 tons/ha and Kaskazini Unguja reported the lowest yield of 0.7 tons/ha (Figure 3.4).

Figure 3.4: Production and Yield of Maize by Region, During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.1.3 Sorghum

The results show that, 2,031 of agricultural households were engaged in growing sorghum. A total of 339 ha was area planted with sorghum. However, a total of 203 ha (59.8 percent) of the area planted with sorghum was harvested. The results within regions show that, Kaskazini Pemba was harvested 65.4 percent of the planted area and Kaskazini Unguja was 48.8 percent.

The total sorghum production was 174 tons, Kaskazini Pemba reported 115 tons of sorghum and Kaskazini Unguja was 59 tons. Moreover, findings show that, the average yield of sorghum was 0.9 tons/ha. Kaskazini Pemba was reported yield of 1.0 tons/ha and Kusini Unguja reported 0.8 tons/ha (Table 3.5).

Table 3.2: Area Planted, Area Harvested, Production and Yield of Sorghum by Agricultural Households and Large Scale Farms During 2022/23 Agricultural Year, Zanzibar

Commented [MM2]: Table line tubadilishe

Holding Category	Region	Area Planted (Ha)	Area Harvested (Ha)	Percent of Area Harvested	Production (Tons)	Yield (tons/ha)
Agricultural Household	Kaskazini Unguja	149	72	48.8	59	0.8
	Kusini Unguja	-	-		-	-
	Mjini Magharibi	-	-		-	-
	Kaskazini Pemba	174	114	65.4	115	1
	Kusini Pemba	-	-		-	-
	Total	**323**	**186**	**57.7**	**173**	**0.9**
Large Scale Farms		-	-	-	-	-
All Holdings		**339**	**203**	**59.8**	**174**	**0.9**

Source: Table (5-1) in Statistical Tables of AASS 2022/23

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.1.4 Bulrush Millet

During the 2022/23 agricultural year, a total of 548 households engaged in growing bulrush millet in Zanzibar, whereas 117 ha was planted and the harvested area was 54 ha. The total production was 86 tons of bulrush millet, while the yield of bulrush millet was 1.6 tons/ha. (Table 3.6).

Table 3.3: Area Planted, Area Harvested, Production and Yield of Bulrush Millet by Agricultural Households During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Area Planted (Ha)	Area Harvested (Ha)	Percent of Area Harvested (%)	Production (Tons)	Yield (tons/ha)
Agricultural Household	Kaskazini Unguja	-	-	-	-	-
	Kusini Unguja	-	-	-	-	-
	Mjini Magharibi	-	-	-	-	-
	Kaskazini Pemba	117	54	45.9	86	1.6
	Kusini Pemba	-	-	-	-	-
	Total	**117**	**54**	**45.9**	**86**	**1.6**

Source: Table (5-1) in Statistical Tables of AASS 2022/23

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.2 Roots and Tuber Crops Production

The main roots and tuber crops grown in Zanzibar by agricultural households and large-scale farms are cassava, sweet potatoes and cocoyam. In the 2022/23 agricultural year, a total of 48,862 ha was planted with roots and tubers, of which agricultural households occupied 48,754 ha and 108 ha occupied by large scale farms.

Out of the total area planted with roots and tuber, 29,471 ha (60.3 percent) were harvested. Agricultural households harvested a total of 29,405 ha while large scale farms harvested 65 ha. A total of 83,204 tons of roots and tubers were produced; of which, agricultural households accounted for 83,025 tons of the overall production, while 179 tons were produced by large scale farms. (Table 3.7).

Table 3.4: Area Planted, Area Harvested, Production, Yield and Percentage of Roots and Tubers During 2022/23 Agricultural Year, Zanzibar

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Holding Category	Crops	Area Planted (Ha)	Area Harvested (Ha)	Production (Tons)	Yield on Area Harvested (Tons/Ha)
Agricultural Households	Cassava	41,307	24,471	66,985	2.7
	Sweet potatoes	6,215	4,689	15,778	3.4
	Cocoyam	1232	246	262	1.1
	Total	**48,754**	**29,406**	**83,025**	
Large Scale Farms	Cassava	25	4	3	0.8
	Sweet potatoes	83	62	176	2.9
	Cocoyam	-	-	-	-
	Total	**108**	**65**	**179**	
All Holdings	Cassava	41,332	24,475	66,988	2.7
	Sweet potatoes	6,298	4,750	15,954	3.4
	Cocoyam	1,232	246	262	1.1
	Total	**48,862**	**29471**	**83,204**	

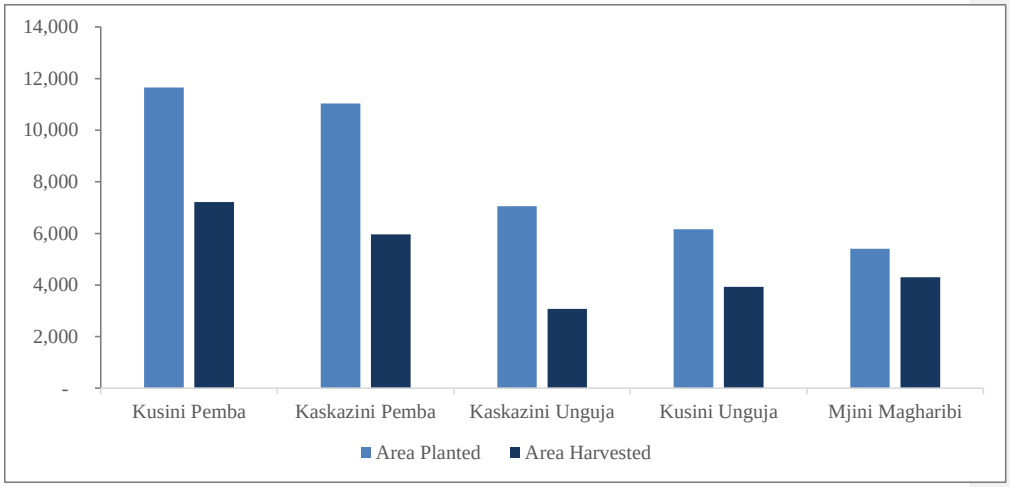
Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.2.1 Cassava

Cassava is among the roots and tuber crop grown by both agricultural households and large scale farms. A total of 110,955 households engaged in growing cassava during the 2022/23 agricultural year in Zanzibar. The total area planted with cassava was 41,332 ha, of which 41,307 ha occupied by agricultural households and 25 ha by large scale farms. Moreover, 59.2 percent of the total area planted with cassava was harvested. Mjini Magharibi harvested 79.6 percent of the planted area, followed by Kusini Unguja (63.8 percent), while Kaskazini Unguja reported the lowest (43.5 percent) (Figure 3.5).

Figure 3.5: Planted and Harvested Area with Cassava by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar

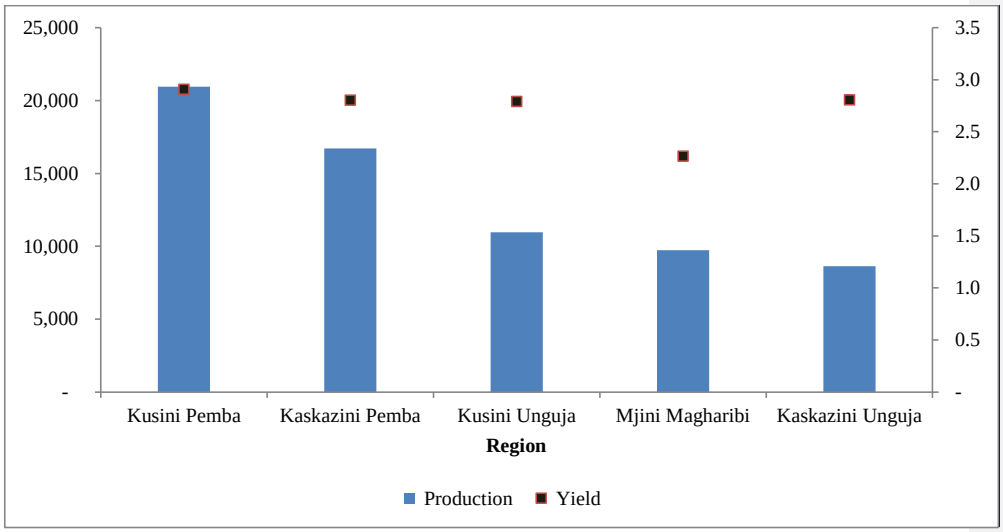


Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

Regarding production, a total of 66,988 tons of cassava was produced, out of which 66,985 tons were from agricultural households and 3 tons were from large scale farms. The highest cassava production was reported in Kusini Pemba (20,953 tons; 31.3 percent), followed by Kaskazini Pemba (16,716 tons; 25.0 percent) while the lowest cassava production was recorded in Kaskazini Unguja (8,626 tons; 12.9 percent).

Furthermore, the average yield of cassava was 2.7 tons/ha, whereby the highest yield was reported in Kusini Pemba region with 2.9 tons/ha and Mjini Magharibi was reported the lowest yield of 2.3 tons/ha. (Figure 3.6).

Figure 3.6: Production and Yield of Cassava by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



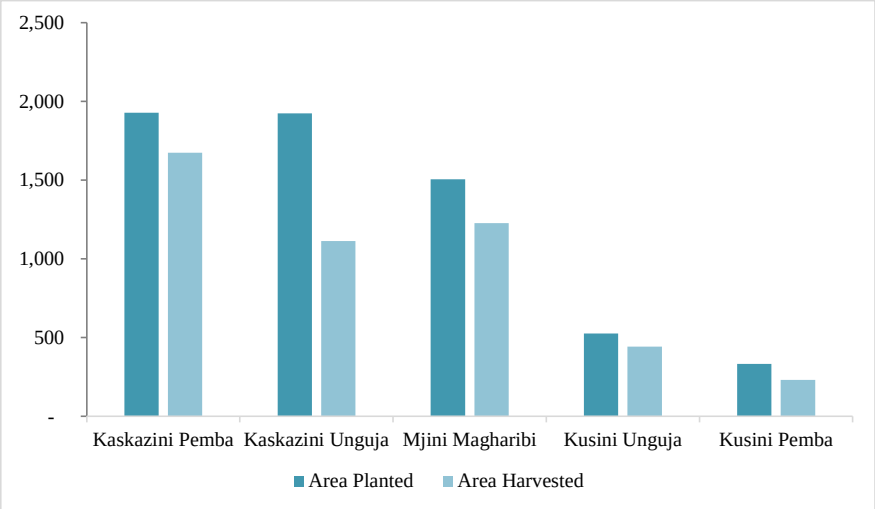
Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.2.3 Sweet Potatoes

The results show that, a total of 29,142 households engaged in growing sweet potatoes. A total area of 6,298 ha was planted with sweet potatoes, of which 6,215 ha were occupied by agricultural households and 83 ha by large scale farms.

On the other hand, 75.4 percent of the total planted area with sweet potatoes was harvested. Kaskazini Pemba harvested with 86.8 percent of the area planted with sweet potatoes, followed by Kusini Unguja (84.3 percent), while Kaskazini Unguja had the lowest (57.9 percent) (Figure 3.7).

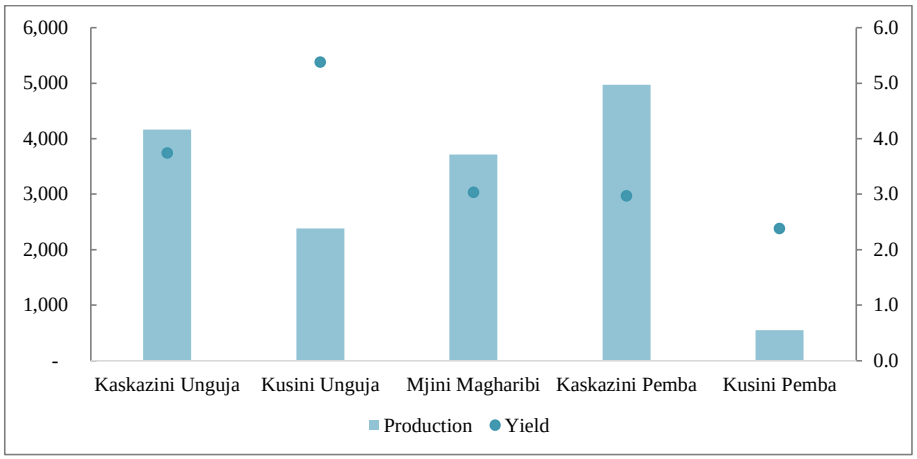
Figure 3.7: Area Planted, Area Harvested of Sweet Potatoes by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

The total production of sweet potatoes was 15,954 tons, whereby 15,778 tons (98.9 percent) were from agricultural households and 176 tons (1.1 percent) from large scale farms. The largest production of sweet potatoes was reported in Kaskazini Pemba (4,971 tons; 31.2 percent), followed by Kaskazini Unguja (4,162 tons; 26.1 percent), while Kusini Pemba region reported the smallest (550 tons; 3.4 percent). Furthermore, results show that, the average yield of sweet potatoes was 3.4 tons/ha, whereby the highest yield was reported in Kusini Unguja region with 5.4 tons/ha whereas Kusini Pemba reported the lowest yield of 2.4 tons/ha (Figure 3.8).

Figure 3.8: Production and Yield of Sweet Potatoes by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.2.4 Cocoyam

The results show that, a total of 7,769 agricultural households engaged in growing cocoyam during the 2022/23 agricultural year in Zanzibar, whereas the planted area was 1,232 ha and the harvested area was 246 ha. Additionally, 262 tons of cocoyam were produced, while the average yield of was 1.1 tons/ha. Kusini Unguja was leading region (134 tons; 51.1 percent) in the production of cocoyam with yield of 3.7 ton/ha (Table 3.7).

Table 3.5: Area Planted, Area Harvested, Production and Yield of Cocoyam During 2022/23 Agricultural Year, Zanzibar

Region	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Kaskazini Unguja	177	28	38	1.3
Kusini Unguja	413	36	134	3.7
Mjini Magharibi	629	176	82	0.5
Kaskazini Pemba	-	-	-	-
Kusini Pemba	-	-	-	-
Total	**1,232**	**246**	**262**	**1.1**

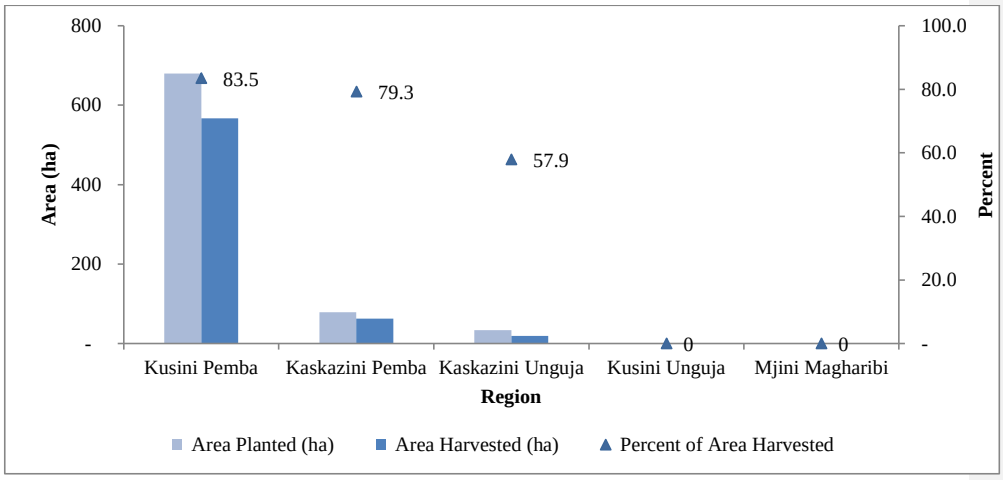
Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.3 Oil Seeds and Nuts

During 2022/23 agricultural year, groundnuts are only the oil seed and nuts crop grown in Zanzibar with a total of 3,918 agricultural households were involved in growing groundnuts, whereas 854 ha was planted. The results indicate that, 80.4 percent of the planted area was harvested. In regional variation, area harvested was reported in Kusini Pemba 83.5 percent, Kaskazini Pemba 79.3 percent and Kaskazini Unguja 57.9 percent (Figure 3.9).

Figure 3.9: Planted, Harvested Area and Percent of Area Harvested with Groundnuts by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

Moreover, 984 tons of groundnuts were produced in Zanzibar, Kusini Pemba produced 890 tons (90.4 percent), Kaskazini Pemba (31 tons; 3.1 percent) and Kaskazini Unguja (10 tons; 1.0 percent). The average yield aggregated to 1.4 tons/ha. Regionally Kusini Pemba had a yield of 1.6 tons/ha while both Kaskazini Pemba and Kaskazini Unguja had a yield of 0.5 tons/ha (Table 3.8).

Table 3.6: Production and Yield of Groundnuts by Region During 2022/23 Agricultural Year, Zanzibar

Region	Production (tons)	Yield (tons/ha)
Kaskazini Unguja	10	0.5
Kusini Unguja	-	-
Mjini Magharibi	-	-
Kaskazini Pemba	31	0.5
Kusini Pemba	890	1.6
Total	**984**	**1.4**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"– "Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

3.4 Pulses

During 2022/23 agricultural year, the results show that, the common pulses grown in Zanzibar are pigeon peas, and cowpeas, whereby 3,133 ha was planted and 1,364 ha of the total planted area were harvested, while the production of the pulses was reported 1,248 tons; (Table 3.9).

Table 3.7: Area Planted, Area Harvested, Production, Yield and Percentage of Pulses During 2022/23 Agricultural Year, Zanzibar

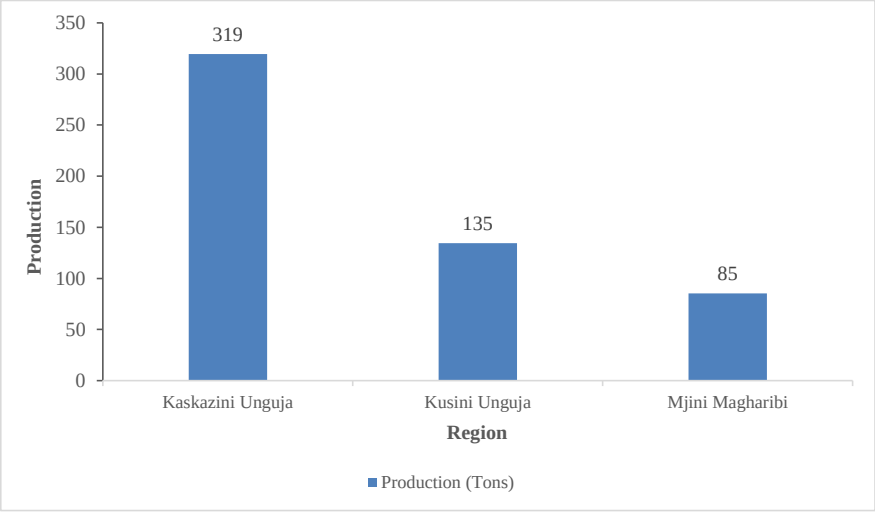
Holding Category	Crop	Area Planted (Ha)	Area Harvested (Ha)	Production (Tons)	Yield on Area Harvested (Tons /Ha)
Agricultural Households	Cowpeas	2,131	1,364	709	0.5
	Pigeon peas	1,002	-	539	0.5
	Total	**3,133**	**1,364**	**1,248**	

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.4.2 Pigeon Peas

The results reveal that, 6,678 agricultural households cultivated pigeon peas in Zanzibar, covering a total area of 1,002 hectares, whereas the total production of pigeon peas accounted with 539 tons. Regionally, Kaskazini Unguja produced 319 tons (59.3 percent), Kusini Unguja 135 tons (24.9 percent), and Mjini Magharibi reported 85 tons (15.8 percent) (Figure 3.10).

Figure 3.10: Production of Pigeon Peas by Region During 2022/23 Agricultural Year, Zanzibar

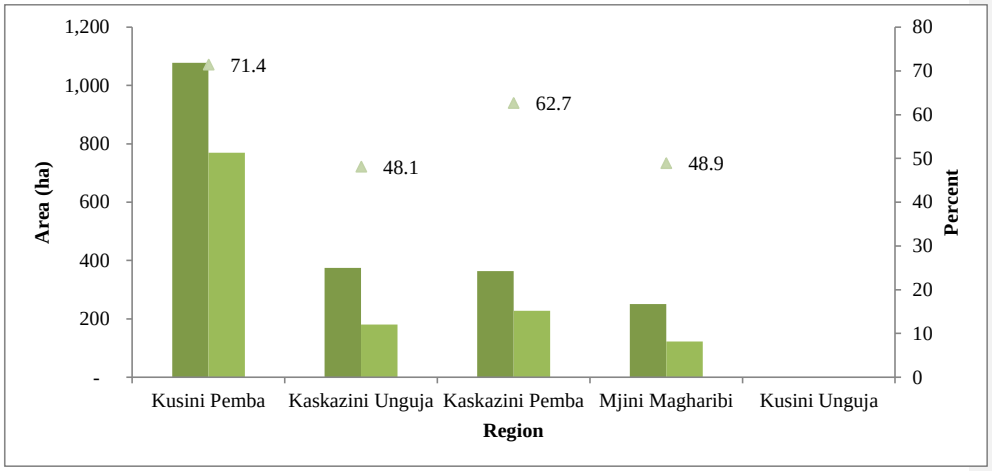


Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.4.3 Cowpeas

The findings on cowpeas production shows that, 10,675 agricultural households were involved in growing cowpeas in Zanzibar, with a total planted area of 2,131 ha, out of this, 1,364 ha (64.0 percent) were harvested. Kusini Pemba region was recorded 71.4 percent of the planted area was harvested, Kaskazini Pemba 62.7 percent, and Kaskazini Unguja 41.8 percent (Figure 3.11).

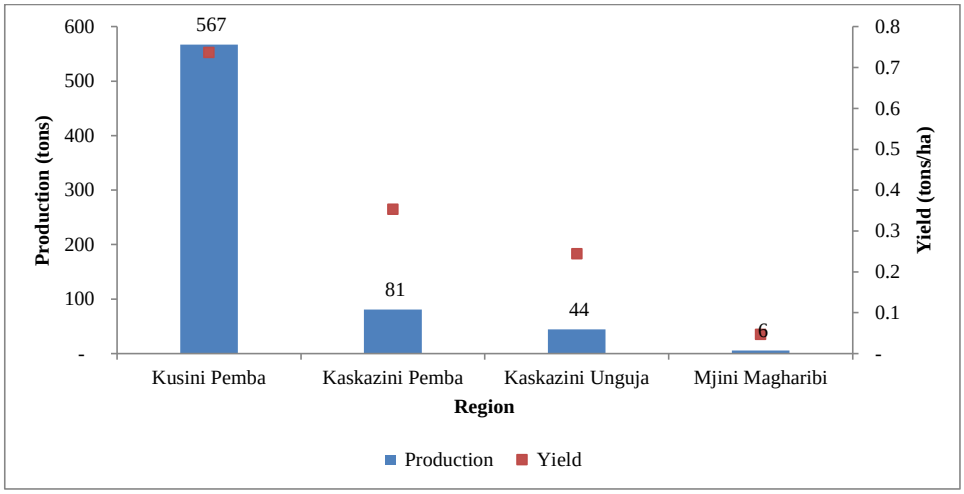
Figure 3.11: Area Planted and Area Harvested of Cowpeas by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

Production of cowpeas in the 2022/23 agricultural year aggregated to 709 tons. Kusini Pemba produced 567 tons, Kaskazini Pemba with 81 tons, Kaskazini Unguja 44 tons and Mjini Magharibi reported production only 6 tons (0.8 percent), whereas the average yield was recorded 0.5 (Figure 3.12).

Figure 3.12: Production and Yield of Cowpeas by Agricultural Households by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.5 Cash Crop Production

Cash crops are primarily for sale and export rather than for personal consumption. These crops are vital to the country's economy, generating significant revenue and employment opportunities. Cash crops were clove and sugarcane.

3.5.1 Cloves

A total of 4,687 agricultural households engaged in clove production in Zanzibar. The total area planted with clove was 3,721 ha, whereas 2,925 ha were from agricultural households. On the other hand, 1,642 tons of cloves were produced, while the average yield was 0.4 tons/ha. Regional estimate showed that, Kaskazini Pemba had the highest production of clove with 1,074 tons (65.4 percent), followed by Kusini Pemba (462 tons; 28.1 percent), whereas Kaskazini Unguja reported the lowest production with 37 tons (2.2 percent). This distribution highlights the significant role of the Pemba regions, particularly Kaskazini Pemba, in clove production in Zanzibar (Table 3.10).

Table 3.8: Number of Agricultural Households, Area, Production, and Yields of Cloves by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Agricultural Holdings	Planted Area (ha)	Production (Tons)	Yield (Tons/ha)
Agricultural Holdings	Kaskazini Unguja	614	166	37	0.2
	Kusini Unguja	1,159	316	69	0.2
	Mjini Magharibi	-	-	-	-
	Kaskazini Pemba	1,623	1,522	1,074	0.7
	Kusini Pemba	1,292	922	462	0.5
	Total	**4,687**	**2,925**	**1,642**	**0.6**
	All	[redacted]	**3,721**	**1,642**	**0.4**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6. Fruits and Vegetables

3.6.1 Banana

A total of 83,338 agricultural households engaged in banana production, whereas 23,036 ha were area planted with bananas, out of which 23,633 ha were from agricultural households and only 3 ha were from large scale farms. Kusini Pemba had the largest planted area of banana (9,158 ha; 39.8 percent), followed by Mjini Magharibi (3,900 ha; 16.9 percent); while Kaskazini Pemba reported the least planted area 2,738 ha (11.9 percent).

Production of banana was 57,517 tons, whereby agricultural households produced 57,516 tons and large scale farms produced only 1 ton. Kusini Pemba had the largest production (14,441 tons; 25.1 percent), followed by Kusini Unguja (13,945 tons; 24.2 percent), whereas Kaskazini Pemba had the least production (5,508 tons; 9.6 percent) (Table 3.11).

Table 3.9: Number of Households, Area and Production of Banana by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of households	Planted Area (ha)	Production (tons)
Agricultural Holdings	Kaskazini Unguja	10,881	3,617	12,291
	Kusini Unguja	15,544	3,620	13,945
	Mjini Magharibi	22,784	3,900	11,331
	Kaskazini Pemba	12,266	2,738	5,508
	Kusini Pemba	21,863	9,158	14,441
	Total	**83,338**	**23,033**	**57,516**
Large Scale farms		4	3	1
All Holding		[redacted]	**23,036**	**57,517**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.2 Avocado

The findings on avocado production reveal that, 2,403 agricultural households engaged in avocado production, with a total of 216 ha planted area. The largest planted area with avocado production was reported in Kusini Unguja (186 ha; 86.1 percent) and Kaskazini Pemba planted 20 ha (9.3 percent).

Moreover, the production of avocado was 718 tons produced by agricultural households. Kusini Unguja had produced (694 tons; 96.7 percent) and Kaskazini Pemba produced 8 tons (1.2 percent) (Table 3.12).

Table 3.10: Number of Households, Area, Production, and Yields of Avocado by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Agricultural Holdings	Planted Area (ha)	Production (tons)	Yield (tons/ha)
Agricultural Holdings	Kaskazini Unguja	-	-	-	-
	Kusini Unguja	1,724	186	694	3.7
	Mjini Magharibi	-	-	-	-
	Kaskazini Pemba	352	20	8	0.4
	Kusini Pemba	-	-	-	-
	Total	**2,403**	**216**	**718**	**3.3**
Large Scale Farms		-	-	-	-
All Holding		[redacted]	**216**	**718**	**3.3**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6.3 Mango

Mango production involved 10,835 agricultural households with the total area planted of 2,329 ha. The total production of mango was 26,961 tons produced by agricultural households, while average yield was 11.6 tons/ha. Kusini Unguja had the largest production (23,303 tons; 86.4 percent), followed by Kaskazini Unguja (1,765; 6.5 percent), whereas Kaskazini Pemba reported the smallest production (10; 0.1 percent) (Table 3.13). This data highlights the dominance of Kusini Unguja in mango production, contributing the vast majority of the total output.

Table 3.11: Number of Households, Area, Production, and Yields of Mango by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Agricultural Holdings	Planted Area (Ha)	Production (Tons)	Yield (Tons/Ha)
Agricultural Holdings	Kaskazini Unguja	2,500	828	1,765	2.1
	Kusini Unguja	4,818	590	23,303	39.5
	Mjini Magharibi	1,485	326	867	2.7
	Kaskazini Pemba	481	43	10	0.2
	Kusini Pemba	1,552	541	1,016	1.9
	Total	**10,835**	**2,328**	**26,961**	**11.6**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.4 Orange

The results show that, a total of 6,885 agricultural households involved in orange production with a total planted area was 1330 ha. Kusini Unguja was planted area (762 ha; 57.3 percent), Mjini Magharibi (306 ha; 23.0 percent) and Kaskazini Unguja (213 ha; 16.0 percent).

A total production of oranges was 3,675 tons, whereby 3,668 tons were from agricultural households. Regionally, Kusini Unguja had produced (2,537 tons; 69.2 percent), Kaskazini Unguja (627 tons; 17.1 percent) and Mjini Magharibi (404 tons; 11.0 percent) (Table 3.14).

Table 3.12:Number of Households, Area, Production, and Yields of Orange by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Agricultural Holdings	Planted Area (ha)	Production (Tons)	Yield (Tons/Ha)
Agricultural Holdings	Kaskazini Unguja	1,323	213	627	2.9
	Kusini Unguja	4,113	762	2,537	3.3
	Mjini Magharibi	1,102	306	404	1.3
	Kaskazini Pemba	-	-	-	-
	Kusini Pemba	-	-	-	-
	Total	**6,885**	**1,330**	**3,668**	**2.8**
Large Scale Farms		-	-	-	-
All Holding		[redacted]	**1,331**	**3,675**	**2.8**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6.5 Pineapple

A total of 5,199 agricultural households engaged in pineapple production with the total planted area of 1,301 ha, whereas the total production of pineapples was 561 tons. Regional distribution of pineapple, Mjini Magharibi had the largest production of 150 tons (26.7 percent), followed by Kusini Unguja (125 tons, 22.2 percent) while Kaskazini Pemba reported the least production of (57 tons; 10.2 percent) (Table 3.15).

Table 3.13: Number of Households, Area, Production, and Yields of Pineapple by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Agricultural Holdings	Planted Area (ha)	Production (tons)	Yield (tons/ha)
Agricultural Holdings	Kaskazini Unguja	795	127	108	0.9
	Kusini Unguja	720	266	125	0.5
	Mjini Magharibi	2,045	498	150	0.3
	Kaskazini Pemba	754	171	57	0.3
	Kusini Pemba	886	239	121	0.5
	Total	**5,199**	**1,301**	**561**	**0.4**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.6 Tomato

A total of 10,291 agricultural households were involved in tomato production in Zanzibar, whereas 3,155 ha were planted area with tomato, of which 3,153 ha were planted area recorded by agricultural households and 2 ha by large scale farms.

However, a total planted area with tomatoes, 2,815 ha (89.2 percent) were harvested, whereby 2,813 ha (89.2 percent) harvested by agricultural households and 2 ha harvested by large scale farms. The results within region, Kusini Unguja had harvested (245 ha; 96.5 percent), Kusini Pemba (1,039 ha; 96.0 percent), Mjini Magharibi (689 ha; 89.3 percent) and Kaskazini Pemba harvested 516 ha (79.6 percent).

Furthermore, the production of tomato was 34,520 tons, of which 34,498 tons were produced by agricultural households and 22 tons by large scale farms. Regional production shows that, Kusini Pemba had the highest production (20,828 tons; 60.4 percent), followed by Kaskazini Pemba (5,573 tons; 16.2 percent), while Kusini Unguja recorded the lowest production, with 1,741 tons (5.0 percent). The average yield for tomato was 12.3 tons/ha (Table 3.16).

Table 3,14: Number of Households, Area Production and Harvested, and Yields of Tomato by Region During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Region	Number Households	of Area (Ha)	Planted Area (Ha)	Harvested Production (Ton)		Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja		2,271	398	325	2,985	9.2
	Kusini Unguja		3,223	254	245	1,741	7.1
	Mjini Magharibi		1,287	771	689	3,371	4.9
	Kaskazini Pemba		1,816	648	516	5,573	10.8
	Kusini Pemba		1,693	1,082	1,039	20,828	20.1
	Total		**10,291**	**3,153**	**2,813**	**34,498**	12.3
Large Scale Farm			4	2	2	22	12.3
All Holdings		[redacted]		**3,155**	**2,815**	**34,520**	**12.3**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.7 Okra

During the 2022/23 agricultural year, a total of 4,288 agricultural households engaged in okra production; evidence depicts that, 618 ha was planted area with okra, whereby 616 ha were planted by agricultural household and 2 ha by large scale farms.

On the other hand, 507 ha 82.0 percent were harvested, of which 505 ha (82.0 percent) were harvested area from agricultural households and 2 ha were from large scale farms. The total production of okra was 865 tons, whereby 862 tons (99.6 percent) were from agricultural households and 3 tons (0.4 percent) were from large scale farms.

Regional estimates, Kusini Unguja led in okra production with 401 tons (46.5 percent), followed by Kaskazini Unguja (226 tons; 26.3 percent), while Mjini Magharibi recorded the lowest production with 36 tons (4.2 percent). The average yield of okra was 1.7 tons per hectare (ha) (Table 3.17).

Table 3.15: Number of Households, Area, Production, and Yields of Okra by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Holdings	Planted Area (ha)	Harvested Area	Production (tons)	Yield (tons/ha)
Agricultural Holdings	Kaskazini Unguja	1,066	134	126	226	1.8
	Kusini Unguja	755	277	218	401	1.8
	Mjini Magharibi	1,253	78	37	36	1.0
	Kaskazini Pemba	628	54	50	128	2.5
	Kusini Pemba	586	73	73	71	1.0
	Total	**4,288**	**616**	**505**	**862**	**1.7**
Large Scale Farms		3	2	2	3	1.5
All Holding		[redacted]	**618**	**507**	**865**	**1.7**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.8: Water melon

A total of 1,801 agricultural households were involved in water melon production, with planted area was 820 ha, while 449 ha (54.6 percent) were harvested. Kusini Unguja harvested the largest portion of the area planted (175 ha; 83.9 percent), followed by Kaskazini Unguja (66 ha; 54.9percent), while Mjini Magharibi had least area harvested (93 ha; 41.2 percent).

Addition, the total production of watermelon was 8,409 tons, whereby 8,380 tons were produced by agricultural households. Regional estimate, Kusini Unguja had the highest production (3,309 tons; 39.4 percent) followed by Kaskazini Unguja (1,781 tons; 21.2 percent), while Kaskazini Pemba recorded the least production with 1,593 tons (18.9 percent). The average yield of watermelon was 18.7 tons/ha (Table 3.18).

Table 3.16: Number of Households, Area Harvested and Production, and Yields of Watermelon by Region During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Region	Number of Households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja	190	120	66	1781	27.0
	Kusini Unguja	422	208	175	3309	18.9
	Mjini Magharibi	486	225	93	1697	18.3
	Kaskazini Pemba	703	265	114	1593	14.0
	Kusini Pemba	-	-	-	-	-
	Total	**1,801**	**819**	**447**	**8,380**	18.7
Large Scale Farm		-	-	-	-	-
All Holdings		[redacted]	**820**	**449**	**8,409**	**18.7**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6.9: Bitter tomato

During the 2022/23 agricultural year, 2,693 agricultural households were involved in bitter tomato production in Zanzibar. A total of 791 ha were planted and 525 ha (66.3 percent) were harvested. The total production accounted with 1,247 tons, while Kaskazini Unguja had the largest production with (591 tons; 47.4 percent), followed by Kusini Unguja (281 tons; 22.5 percent), whereas Mjini Magharibi had the smallest production (104 tons; 8.3 percent), while the average yield of bitter tomato was 2.4 tons per hectare (Table 3.19).

Table 3.17: Number of Households, Area Harvested and Production, and Yields of Bitter tomato by Region During 2022/23 Agricultural Year, Zanzibar

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Holdings Category	Region	Number of Households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja	787	281	239	591	2.5
	Kusini Unguja	829	413	192	281	1.5
	Mjini Magharibi	479	18	18	104	5.8
	Kaskazini Pemba	412	40	39	259	6.6
	Kusini Pemba	-	-	-	-	-
	Total	**2,693**	**790**	**524**	**1,246**	2.4
Large Scale Farm		-	-	-	-	-
All Holdings		[redacted]	**791**	**525**	**1,247**	**2.4**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6.10: Sweet-bell Pepper

The results show that, production of sweet bell pepper was 3,023 produced by agricultural households. The total area planted with sweet bell pepper was 1,025 ha, whereas 881 ha were harvested, Kusini Unguja harvested 100 percent of its planted area, followed by Kaskazini Pemba with 87.2 percent and Mjini Magharibi with 78.9 percent.

A total of 1,913 tons were produced, while Kusini Unguja had produced (668 tons; 34.9 percent), Mjini Magharibi (438 tons; 22.9 percent), and Kaskazini Pemba (72 tons; 3.7 percent) (Table 3.20).

Table 3.18:Number of Households, Area Harvested and Production, and Yields of Sweet-bell Pepper by Region During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Region	Number of Households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja	-	-	-	-	-
	Kusini Unguja	970	241	241	668	2.8
	Mjini Magharibi	1,530	671	530	438	0.8
	Kaskazini Pemba	297	19	17	72	4.3
	Kusini Pemba	-	-	-	-	-
	Total	**3,023**	**1,024**	**880**	**1,912**	2.2
Large Scale Farm		-	-	-	-	-
All Holdings		[redacted]	**1,025**	**881**	**1,913**	**2.2**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

3.6.11: Amaranth

A total of 10,101 agricultural households were involved in amaranth production, whereas 646 ha were planted with amaranth, of which 644 ha were planted by agricultural households and 2 ha by large-scale farms.

Additionally, 581 ha (89.9 percent) of the planted area were harvested, whereby 579 ha (89.8 percent) were from by agricultural households and 2 ha by large-scale farms. Results within region show that, Kusini Pemba harvested 100 percent of the planted area, Kaskazini Pemba harvested 97.2 percent, Kusini Unguja harvested 95.4 percent, Kaskazini Unguja harvested 93.3 percent, and Mjini Magharibi harvested 68.5 percent.

Furthermore, a total of 1,320 tons were produced, of which 1,314 tons were from agricultural households and 6 tons by large-scale farms. Regionally, Kusini Unguja had the highest production (885 tons; 67.1 percent), followed by Mjini Magharibi (203 tons; 15.4 percent), while Kusini Pemba recorded the lowest production (43 tons; 3.2 percent) and the average yield was 2.3 tons per ha (Table: 3.21).

Table 3.19: Number of Households, Area Planted, Production, and Yields of Amaranth by Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Number of Holdings	Planted Area (ha)	Harvested Area	Production (tons)	Yield (tons/ha)
Agricultural Holdings	Kaskazini Unguja	1,138	103	96	74	0.8
	Kusini Unguja	2,606	248	236	885	3.7
	Mjini Magharibi	4,520	142	97	203	2.1
	Kaskazini Pemba	1,211	88	85	109	1.3
	Kusini Pemba	626	64	64	43	0.7
	Total	**10,101**	**644**	**579**	**1,314**	**2.3**
Large Scale Farms		4	2	2	6	2.6
All Holding		[redacted]	**646**	**581**	**1,320**	**2.3**

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

3.6.12: Cucumber

The findings show that, a total of 2,152 agricultural households engaged in growing cucumbers in Zanzibar, with the total planted area was 600 ha and 494 ha were harvested. In regional wise,

Kaskazini Unguja had harvested area (199 ha; 97.3 percent), Kaskazini Pemba (31 ha; 79.2 percent), and Kusini Unguja (90 ha; 65.8 percent).

The total production of cucumbers were 876 tons produced by agricultural households. The results across regions, Kaskazini Unguja led with a production of (420 tons; 47.9 percent), followed by Kusini Unguja (144 tons; 16.4 percent), while Kaskazini Pemba had the least production (67 tons; 7.7 percent) (Table 3.22).

Table 3.20: Number of Households, Area Planted, Production, and Yields of Cucumber by Region During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Region	Number of Households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja	631	205	199	420	2.1
	Kusini Unguja	524	137	90	144	1.6
	Mjini Magharibi	-	-	-	-	-
	Kaskazini Pemba	237	39	31	67	2.2
	Kusini Pemba	-	-	-	-	-
	Total	**2,152**	**600**	**494**	**876**	1.8

Source: Annex Table (5-1) in Statistical Tables of AASS 2022/23

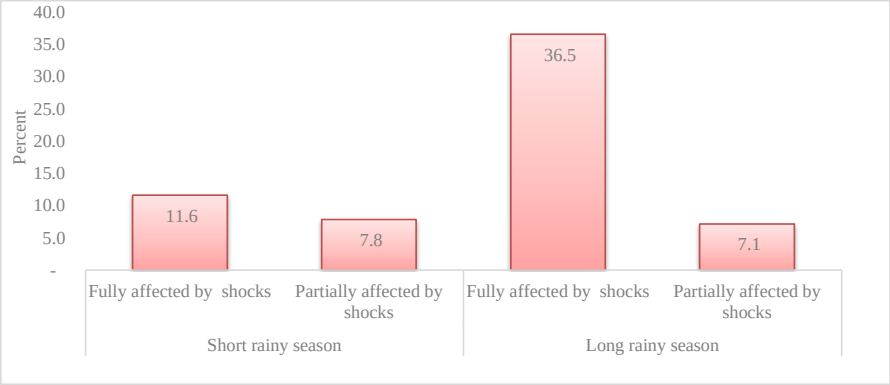
3.7 Shocks on Area Planted

Shock is a sudden and disruptive change in conditions that negatively affects crop growth, yield, or quality. Among others, climate related shocks lead to drought and water scarcity, flooding and excess rain, extreme temperatures, disrupted growing seasons, and reduced nutritional value of crops. On the other hand, none climatic shocks include crop theft, plant pests and diseases, fires, animal, and bird damage. A shock, or a combination of shocks, may have a devastating impact on crop production and farm economy, particularly among the agricultural households. Furthermore, depending on their magnitude, climate-related shocks can affect the production either fully or partially. In this regard, a fully affected area is associated with getting zero harvests out of the total planted area, while a partially affected area is related to losing a portion of the harvested area. In the context of AASS 2022/23, fully affected and partially affected areas were the result of climatic shocks, non-climatic shocks, or a combination of the two.

During the 2022/23 agricultural year, shocks in agricultural production were reported in both short and long rainy seasons. In the short rainy season, 3,800 ha equivalent to 11.6 percent of the total

planted area by agricultural households was fully affected by shocks, whereas 2,575 ha (7.8 percent) were partially affected. In the long rainy season, out of the total area planted by planted by agricultural households, 16,414 ha (36.5 percent) were fully affected and 3,206 ha (7.1 percent) were partially affected. In the both season, out of the total area planted there was no area reported to be affected by shock in large scale farms. (Figure 2.23).

Figure 3.13: Percentage of the Area Planted Affected by Shocks During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (5-3) in Statistical Tables of AASS 2022/23

3.8 Crop Harvest Uses

This subsection presents information on how the agricultural households used their harvested crops during 2022/23 agricultural year. The results presented in this section are based on the agricultural household and large scale farms. In this report, crop use was categorized into eight (8) groups; sold unprocessed, households' consumption, given to others, used to pay for inputs, animal feeds, seeds, processed and other uses.

3.8.1 Cereals

The findings indicate that most of the produced cereals were consumed by households of at least 88.0 percent for each crop, whereas the rest of the uses for each crop was less than 11.0 percent. Among the cereals, crops that had the largest proportion consumed by households were bulrush

millet (89.4 percent), sorghum (84.6 percent), and paddy (78.1 percent), whereas maize had the highest percentage sold unprocessed (61.2 percent). For large scale farms, most of the harvests were sold unprocessed and paddy had the 74.8 percent (Table 3.22).

Table 3.21: Percentage Distribution of Crop Harvest Uses for Cereals During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Crops	Sold unprocessed	Household consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Agricultural Household	Maize	61.2	31.4	6.3	0.4	0.0	0.7	0.0	0.0	100
	Paddy	3.2	78.1	11.4	0.1	0.0	7.2	0.0	0.0	100
	Sorghum	0.0	84.6	11.2	0.0	0.0	4.3	0.0	0.0	100
	Bulrush Millet	0.0	89.4	3.2	0.0	0.0	7.3	0.0	0.0	100
Large Scale Farms	Maize	-	-	-	-	-	-	-	-	-
	Paddy	74.8	0.0	0.0	0.0	0.0	3.2	6.7	15.3	100.0
	Sorghum	-	-	-	-	-	-	-	-	-

Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.2 Roots and Tuber Crops

Among the roots and tubers, most of the crops produced by agricultural households were used for household consumption (sweet potatoes 46.4 percent, cassava 61.6 percent and cocoyam 71.8 percent). For large scale farms, all of the harvested cassava were sold unprocessed (Figure 3.23).

Table 3.22: Percentage Distribution of Crop Harvest Uses for Roots and Tuber During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Crops	Sold unprocessed	Household consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed
Agricultural Household	Cassava	23.4	61.6	14.1	0.1	0.0	0.8	0.0
	Sweet potatoes	40.6	46.4	12.6	0.0	0.0	0.3	0.0
	Cocoyam	11.3	71.8	16.9	0.0	0.0	0.0	0.0
Large Scale Farms	Cassava	-	-	-	-	-	-	-
	Sweet potatoes	100.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.3 Pulses

Major uses of pulses as reported by agricultural households were for household consumption and selling unprocessed. Cowpeas was the leading pulse crop consumed by households (61.9 percent), while pigeon peas were mostly sold unprocessed (71.4 percent). For large scale farms, at least 85

percent of the pulses were sold unprocessed, while the remaining portion had other uses (Table 3.24).

Table 3.23: Percentage Distribution of Crop Harvest Uses for Pulses During 2022/23 Agricultural Year, Zanzibar

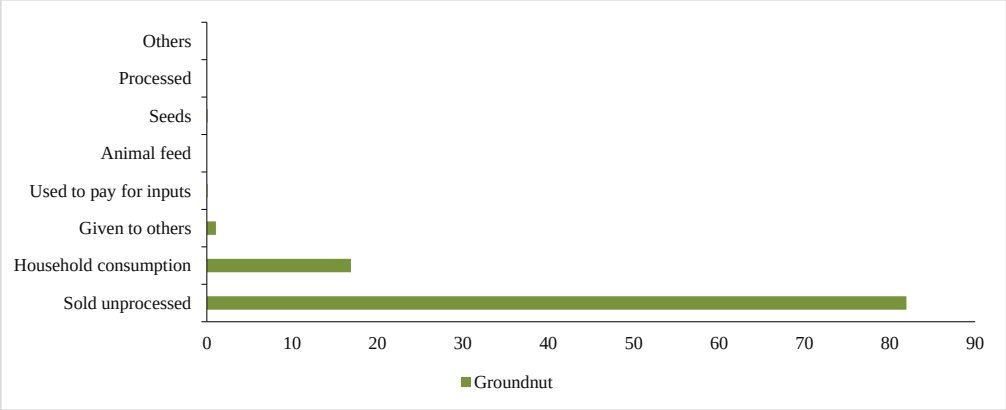
Holdings Category	Crops	Sold unprocessed	Household consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Agricultural Household	Beans	-	-	-	-	-	-	-	-	-
	Cowpeas	49.4	45.3	4.5	0.0	0.0	0.7	0.0	0.0	100
	Pigeon pea	1.4	71.6	26.1	0.0	0.0	0.0	0.0	0.9	100
Large Scale Farms	Cowpeas	-	-	-	-	-	-	-	-	-

Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.4 Oil Seed and Nuts

The findings indicate that, groundnut (81.9 percent) were most of the produced oil seeds and nuts by agricultural households used as sold unprocessed; household consumption emerged as the second-best use of oil seeds. A relatively small proportion of groundnuts were used for seeds (1.0 percent), given to other and used to pay for inputs were 0.1 percent (Figure 3.35).

Figure 3.14: Percentage Distribution of Crop Harvest Uses for Oil Seeds and Nuts During 2022/23 Agricultural Year, Zanzibar

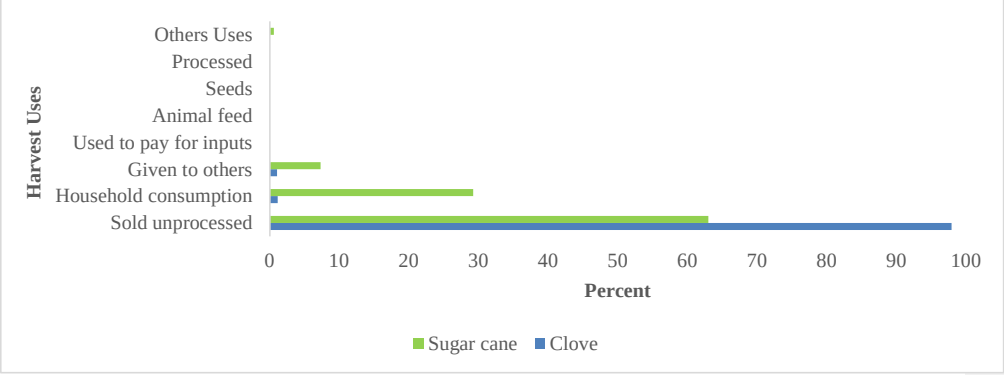


Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.5 Cash Crops

Majority of cash crops harvested in Zanzibar were sold unprocessed. Clove was the leading cash crop with 97.9 percent of its harvest sold unprocessed, followed by sugarcane (62.9 percent). The second used of cash crops were household consumption (1.1 and 29.2 percent) and given to other with (1.0 and 7.3 percent).

Figure 3.15: Percentage Distribution of Crop Harvest Uses for Cash Crops During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.6 Fruits

During the 2022/23 agricultural year, fruits harvested by agricultural households were mainly sold unprocessed, consumed by household or given to others. Among the fruits with high proportion sold unprocessed were avocado (67.4 percent), mango (65.0 percent) and pineapple (60.5 percent). Banana was the fruit which was mostly used for household consumption (50.5 percent), followed by pineapple (28.7 percent) the least were avocado and mango accounted for (19.6 and 19.4 percent) for the same use. Each of the fruits produced was given to others in the form of gifts, with banana and mango recording 16.8 percent and 15.6 percent of the respective harvests. (Figure 3.37).

Table 3.24: Percentage Distribution of Crop Harvest Uses for Fruits During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Crop	Sold unprocessed	Household consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Agricultural household	Banana	33.0	50.2	16.8	0.0	0.0	0.0	0.0	0.0	100
	Avocado	67.4	19.6	13.0	0.0	0.0	0.0	0.0	0.0	100
	Mango	65.0	19.4	15.6	0.0	0.0	0.0	0.0	0.0	100
	Pineapple	60.5	28.7	10.8	0.0	0.0	0.0	0.0	0.0	100
	Orange	41.0	26.1	11.1	0.0	0.0	0.0	0.0	21.8	100
Large Scale Farms	Banana	-	-	-	-	-	-	-	-	-
	Mango	-	-	-	-	-	-	-	-	-
	Orange	-	-	-	-	-	-	-	-	-

Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

3.8.7 Vegetables

For the selected vegetables, a large proportion of the harvest was sold unprocessed followed by household consumption. In agricultural households, watermelon had the largest share of its harvest sold unprocessed (90.4 percent), followed by sweet/bell pepper (85.0 percent) and Cucumber (81.5 percent). Household consumption for amaranths was 27.9 percent of the harvests, okra 25.2 percent while watermelon had 6.6 percent. The proportion of vegetables directed to given to other was minimal. For large scale farms, harvests were all mainly sold unprocessed, including amaranths, okra and tomatoes. (Table 3.26).

Table 3.25: Percentage Distribution of Crop Harvest Uses for Vegetables During 2022/23 Agricultural Year, Zanzibar

Holdings Category	Crop	Sold unprocessed	Household consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Agricultural Household	Amaranths	63.8	27.9	7.9	0.3	0.0	0.0	0.0	0.0	100
	Cucumber	81.5	13.0	5.3	0.0	0.0	0.2	0.0	0.0	100
	Water melon	90.4	6.6	3.0	0.0	0.0	0.0	0.0	0.0	100
	Okra	66.6	25.2	7.9	0.0	0.0	0.3	0.0	0.0	100
	Tomatoes	77.5	15.4	7.0	0.0	0.0	0.1	0.0	0.0	100
	Bitter tomato	75.3	18.0	6.6	0.0	0.0	0.1	0.0	0.0	100
	Sweet/bell pepper	85.0	12.2	2.7	0.1	0.0	0.1	0.0	0.0	100
Large Scale Farms	Amaranths	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	Water melon	-	-	-	-	-	-	-	-	-
	Okra	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	Tomatoes	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	Bitter tomato	-	-	-	-	-	-	-	-	-
	Sweet/bell pepper	-	-	-	-	-	-	-	-	-

Source: Annex Table 5-4 in Statistical Tables of AASS 2022/23

Chapter 4: Irrigation and Input Use

4.0 Introduction

Irrigation and input use are among the challenges facing the agricultural sector, thus hindering agricultural productivity and sustainability. Irrigation practices in Zanzibar are predominantly rain-fed, limiting crop yields and making agriculture vulnerable to climate variability. Additionally, limited access to quality inputs such as fertilizers, pesticides, and improved seeds further hampers agricultural productivity. Addressing these challenges is crucial for ensuring food security, improving farmers' livelihoods, and driving economic development in Zanzibar. This section, therefore, presents survey findings on Irrigation and Input use as reported during the AASS 2022/2023.

4.1 Irrigation

Irrigation plays a crucial role in supporting agricultural production, ensuring food security, and enhancing rural livelihoods. In response to government initiatives advocating the adoption and use of climate-smart agricultural technologies, farmers have been using various irrigation methods, notably, watering cane, flooding, sprinkler and drip irrigation.

4.1.1 Agricultural Households Practiced Irrigation

The results reveal that, majority of agricultural households (59.1 percent) used watering cane/bucket, followed by flooding/surface (18.4 percent). All regions reported watering cane as the dominant irrigation method except Kusini Pemba where flooding is the most common used by 64.5 percent of the agricultural households.

Irrigation by using watering cane/bucket was highly reported in Kaskazini Pemba in (77.8 percent), followed by Mjini Magharibi (66.0 percent) and Kaskazini Unguja (64.0 percent). The situation is similar with the large-scale farms, whereas about 37.5 percent uses watering cane as the main irrigation method, followed by Drip method which is occupied by 31.3 percent of the large-scale farms.

The results further show that, parity in the percentage distribution of agricultural households practicing sprinkler and drip irrigation, whereas 10.9 percent and 10.6 percent of the agricultural households reported to have applied the respective methods. However, while Sprinkler irrigation was common in Kaskazini Unguja (16.8 percent) and less practiced in Kaskazini Pemba (4.1 percent), adoption of drip irrigation was on the other hand prevalent in Kusini Unguja region (28.0 percent) and lower in Kusini Pemba (3.1 percent) (Table 4.1).

Table 4.1: Number and Percentage of Agricultural Households Practiced Irrigation by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Agricultural Households Engaged in Crop Production	Household Irrigated		Method of irrigation									
					Watering cans		Sprinkler		Drip		Flooding		Others	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Holdings	Kaskazini Unguja	27,167	5,160	19	17,383	64	4,576	16.8	1,536	5.7	4,767	17.5	0	0
	Kusini Unguja	26,872	6,707	25	12,035	44.8	3,389	12.6	7,526	28	6,267	23.3	0	0
	Mjini Magharibi	37,264	18,760	50.3	24,596	66	4,668	12.5	3,230	8.7	2,843	7.6	3,351	9
	Kaskazini Pemba	31,997	4,701	14.7	24,880	77.8	1,309	4.1	1,561	4.9	6,100	19.1	550	1.7
	Kusini Pemba	28,825	3,715	12.9	5,589	19.4	-	-	900	3.1	18,604	64.5	3,732	12.9
	Total	**152,126**	**39,043**	**25.7**	**89,865**	**59.1**	**16,589**	**10.9**	**16,137**	**10.6**	**28,033**	**18.4**	**8,762**	**5.8**
Large Scale Farms		30	16	53.3	11	37.5	2	6.3	9	31.3	8	25	0	0
All Holdings		**152,156**	**39,059**	**25.7**	**89,869**	**59.1**	**16,589**	**10.9**	**16,153**	**10.6**	**28,043**	**18.4**	**8,760**	**5.8**

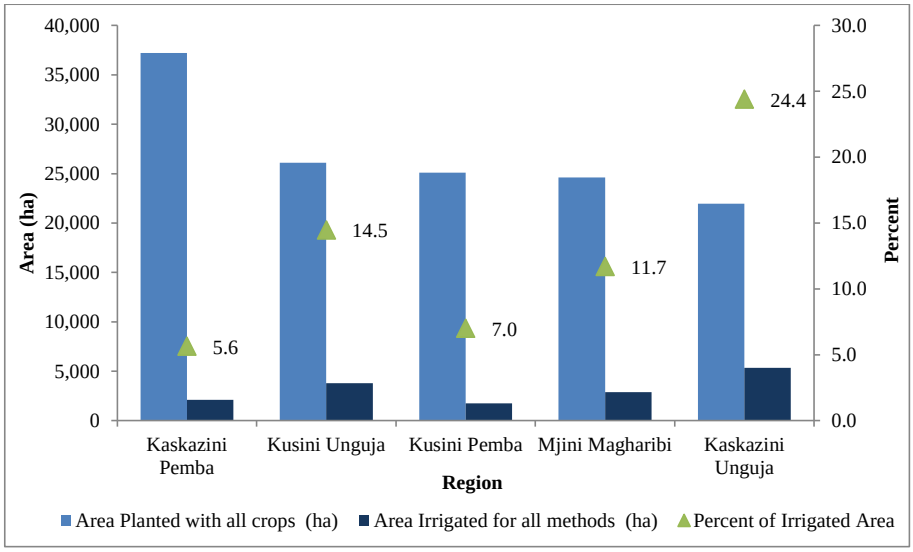
Source: Annex Table (4-2) in the Statistical Tables of AASS 2022/23

"- "Withheld to avoid disclosing data for individual holdings or insufficient data available from the survey (Total includes withheld data)

4.1.2 Planted Area under Irrigation

During 2022/23 agricultural year, a total of 15,905 ha planted were irrigated. Considering irrigation by holding type, 15,870 ha were irrigated by agricultural households and 35 ha by large scale farms. Regional distribution shows that, the largest planted area irrigated by agricultural households was reported in Mjini Magharibi region (5,358 ha; 24.4 percent), followed by Kusini Unguja (3,778 ha; 14.5 percent), while Kusini Pemba reported 2,101 ha (5.6 percent) (Figure 4.1).

Figure 4.1: Planted Area Irrigated (ha) by Region During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (4-2) in the Statistical Tables of AASS 2022/23

4.2 Inputs Use

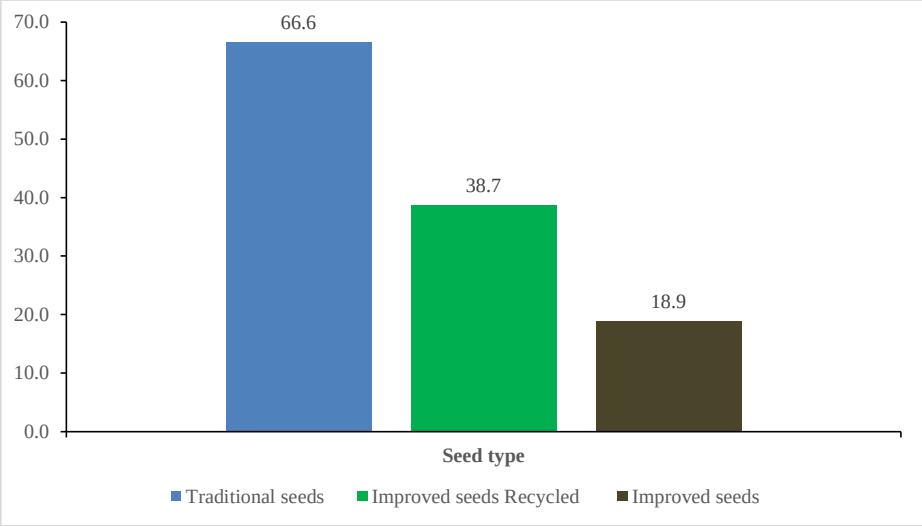
This sub section highlights the results on the use of inputs by both agricultural households and large scale farms. The analysis focuses on area applied with fertilizers (organic and/or inorganic), seeds (traditional and improved), and pesticides (insecticides, herbicides, rodenticides and fungicides) during 2022/23 agricultural year.

4.2.1 Seed Use

4.2.1.1 Household Using Seeds by Type and Region

During the 2022/23 agricultural year, agricultural households reported using improved seeds, traditional seeds, or improved recycled seeds. Seed usage among these households was dynamic, as they could use either one type or a combination of various seed types for the same crop. The findings showed that most agricultural households used traditional seeds (93,440 households; 66.6 percent), followed by those that used improved recycled seeds (54,368 households; 38.7 percent). The least used seed type was improved seeds, with 26,480 households (18.9 percent) (Figure 4.2).

Figure 4.2: Percentage Distribution of Households Used Seeds by Type During 2022/23 Agricultural Year, Zanzibar



Source: Annex Table (4-3) in the Statistical Tables of AASS 2022/23

The usage of improved seed was mostly reported in Kusini Unguja region (7,884 households; 31.0 percent), followed by Mjini Magharibi (6,737 households; 22.1 percent), while the least was reported in Kusini Pemba (1,469 households; 5.4 percent).

In addition, for improved seeds recycled, Kusini Unguja region had the highest proportion of agricultural households (16,030; 63.1 percent), followed by Kusini Pemba (12,007; 43.7 percent), whereas Mjini Magharibi reported the least percent (8,999; 29.5 percent)

On the other hand, in traditional seeds, Kaskazini Unguja had the highest percent of agricultural households (20,605; 79.4 percent), followed by Kaskazini Pemba (23,640; 76.1 percent), whereas Kusini Unguja recorded the lowest (10,295; 40.5 percent). (Table 4.2).

Table 4.2: Percentage Distribution of Agricultural Households by Type of Seeds Used and Region During 2022/23 Agricultural Year, Zanzibar

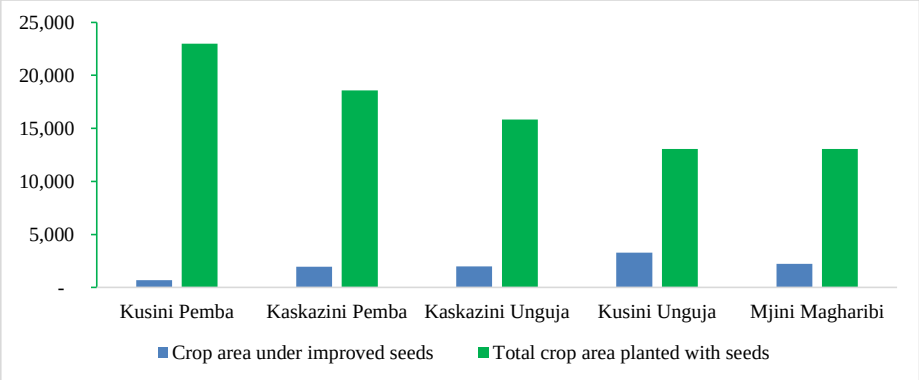
Region	Agricultural Households Used Seeds	Types of Seeds		
		Improved seeds (percent)	Traditional seeds (percent)	Improved seeds, Recycled (percent)
Kaskazini Unguja	25,948	19.8	79.4	30.6
Kusini Unguja	25,424	31.0	40.5	63.1
Mjini Magharibi	30,500	22.1	71.6	29.5
Kaskazini Pemba	31,069	16.9	76.1	30.3
Kusini Pemba	27,446	5.4	62.2	43.7
Total	**140,387**	**18.9**	**66.6**	**38.7**

Source: Annex Table (4-3) in the Statistical Tables of AASS 2022/23

4.2.1.2 Area Planted with Improved Seeds

The findings show that, a total of 10,143 ha was planted using improved seeds. Regional distribution shows that, Kusini Unguja region had the largest percent of the land area planted with improved seeds (3,296 ha; 25.2 percent), followed by Mjini Magharibi (2,219 ha; 17.0 percent), while Kusini Pemba reported the lowest percent (685 ha; 3.0 percent) (Figure 4.3).

Figure 4.3: Area Planted with Improved Seeds by Region, During AASS 2022/23, Zanzibar



Source: Annex Table (4.4) in the Statistical Tables of AASS 2022/23

4.2.2 Fertilizer Use

4.2.2.1 Agricultural Households using Fertilizer

Out of 152,126 agricultural households engaged in crop production, 75,357 households (49.5 percent) used fertilizers. Mjini Magharibi led with 67.8 percent of households using fertilizer, followed by Kusini Unguja (53.5 percent), while Kaskazini Pemba recorded the lowest percentage (38.2 percent).

The use of organic fertilizer was dominant among agricultural households, with 127,384 households (83.7 percent) reporting its use. Regional estimates show that Mjini Magharibi had the largest number of agricultural households using organic fertilizer (95.3 percent), followed by Kusini Unguja (87.1 percent), while Kusini Pemba had the least number (64.2 percent).

In terms, inorganic fertilizer usage was reported by 54,887 agricultural households, equivalent to 36.1 percent. In regional wise, Kusini Pemba had mostly reported use inorganic fertilizer (69.4 percent), followed by Kaskazini Unguja (40.8 percent), while Mjini Magharibi reported the least number of households (19.4 percent) (Table 4.3).

Table 4.3: Number and Percentage of Agricultural Households Applied Fertilizers by Type and Region, During 2022/23 Agricultural year, Zanzibar

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Region	Agricultural Households Engaged in crop production	Type of Fertilizers				Household Applied Fertilizers	
		Organic Fertilizers		Inorganic Fertilizers			
		Number	Percent	Number	Percent	Number	Percent
Kaskazini Unguja	27,167	21,191	78	11,086	40.8	12,446	45.8
Kusini Unguja	26,872	23,411	87.1	9,724	36.2	14,386	53.5
Mjini Magharibi	37,264	35,517	95.3	7,223	19.4	25,252	67.8
Kaskazini Pemba	31,997	25,383	79.3	11,365	35.5	12,231	38.2
Kusini Pemba	28,825	18,505	64.2	20,011	69.4	11,042	38.3
Total	**152,126**	**127,384**	**83.7**	**54,888**	**36.1**	**75,357**	**49.5**

Source: Annex Table (4-8) in the Statistical Tables of AASS 2022/23

4.2.2.2 Area Applied with Fertilizer

The results show that, total area applied with fertilizer was 45,622 ha (33.0 percent) of the total area planted. Area applied with fertilizer by agricultural households was 43,886 ha (96.2 percent) while large scale farms had 1,737 ha (3.8 percent).

Furthermore, Evidence shows that agricultural households and large scale farms reported using organic, inorganic fertilizer or combination of the two. Standalone analysis of fertilizer uses by type showed that 36,715 ha (80.5 percent) was applied with organic fertilizer and 17,688 ha (38.8 percent) with inorganic fertilizer (Table 4.4).

Table 4.4: Area Applied with Fertilizer by Type, During 2022/23 Agricultural Year, Zanzibar

Coverage	Holding Category	Total Area Applied with Fertilizer (ha)	Percent	Fertilizer Type			
				Organic Fertilizer		Inorganic Fertilizer	
				Area (ha)	Percent	Area (ha)	Percent
Zanzibar	Agricultural Households	43,886	96.2	36,371	99.1	15,972	90.3
	Large scale farms	1,737	3.8	344	0.9	1,716	9.7
	All holdings	**45,622**	**100.0**	**36,715**	**80.5**	**17,688**	**38.8**

Source: Annex Table (4-18) in the Statistical Tables of AASS 2022/23

Among regions that used fertilizer, Mjini Magharibi had the highest proportion of the area applied with fertilizer (55.2 percent), followed by Kusini Unguja (41.9 percent), while Kusini Pemba recorded the lowest proportion (17.5 percent).

The results further show that, Mjini Magharibi led in the application of organic fertilizer (92.3 percent), followed by Kusini Unguja (88.1 percent) and Kaskazini Unguja (79.9 percent), while Kusini Pemba had the lowest proportion (67.8 percent).

On the other hand, Kusini Pemba led in the application of inorganic fertilizer (56.2 percent), followed by Kaskazini Pemba (37.4 percent) and Kusini Unguja (34.5 percent), while Mjini Magharibi had the lowest application rate (29.0 percent) (Table 4.5).

Table 4.5: Area Applied with Fertilizer by Type and Region, during 2022/23 Agricultural Year, Zanzibar

Holdings Category	Region	Number of Households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)
Agricultural Household	Kaskazini Unguja	-	-	-	-	-
	Kusini Unguja	970	241	241	668	2.8
	Mjini Magharibi	1,530	671	530	438	0.8
	Kaskazini Pemba	297	19	17	72	4.3
	Kusini Pemba	-	-	-	-	-
	Total	**3,023**	**1,024**	**880**	**1,912**	**2.2**
Large Scale Farm		-	-	-	-	-
All Holdings		[redacted]	**1,025**	**881**	**1,913**	**2.2**

Source: Annex Table (4-18) in the Statistical Tables of AASS 2022/23

4.2.3 Pesticides Use

Pesticides are chemicals intended to kill or control pests such as insects, weeds, fungi etc. This sub-section presents the use of these chemicals by agricultural households and planted area applied with pesticides.

4.2.3.1 Agricultural Households Applied Pesticides

The results reveal that, a total of 29,105 agricultural households (19.1 percent) practicing crop production applied pesticides during the 2022/23 agricultural year. Regional distribution shows that, Kaskazini Unguja reported the highest use of pesticides, (6,972 households; 25.7 percent), followed by Kusini Unguja (6,229 households; 23.2 percent), while Mjini Magharibi had the lowest (5,375 households; 14.4 percent) (Table 4.6).

Table 4.6: Number and Percentage of Agricultural Households Applied Pesticides by Region, During 2022/23 Agricultural Year, Zanzibar

Region	Agricultural Households Engaged in Crop Production	Agricultural Households Applied Pesticides	
		Number	Percent
Kaskazini Unguja	27,167	6,972	25.7
Kusini Unguja	26,872	6,229	23.2
Mjini Magharibi	37,264	5,375	14.4
Kaskazini Pemba	31,997	4,638	14.5
Kusini Pemba	28,825	5,890	20.4
Total	**152,126**	**29,105**	**19.1**

Source: Annex Table (4-19) in the Statistical Tables of AASS 2022/23

Among the pesticides applied by agricultural households, insecticides were the most used (18,555 households; 63.8 percent), followed by herbicides (14,801 households; 50.9 percent), fungicides (1,922 households; 6.6 percent) and rodenticides (155 households; 0.5 percent). Regionally, Mjini Magharibi had higher usage pesticides (4,276 households; 79.5 percent), followed by Kaskazini Pemba (3,372 households; 72.7 percent). In contrast, the lowest proportion of application was recorded in Kusini Pemba (2,956 households; 50.2 percent) (Table 4.7).

Table 4.7: Number and Percentage of Agricultural Households Engaged in Crop Production Applied Pesticides by Types and Region, During 2022/23 Agricultural Year, Zanzibar

Region	Households Applied Pesticides	Type of Pesticides									
		Insecticide		Herbicide		Fungicide		Rodenticide		Other Pesticide	
		Households	Percent	Households	Percent	Households	Percent	Households	Percent	Households	Percent
Kaskazini Unguja	6,972	4,136	59.3	3,316	47.6	334	4.8	-	-	49	0.7
Kusini Unguja	6,229	3,816	61.3	4,247	68.2	1,066	17.1	155	2.5	168	2.7
Mjini Magharibi	5,375	4,276	79.5	1,945	36.2	168	3.1	-	-	-	-
Kaskazini Pemba	4,638	3,372	72.7	1,783	38.4	127	2.7	-	-	-	-
Kusini Pemba	5,890	2,956	50.2	3,510	59.6	227	3.9	-	-	-	-
Total	**29,105**	**18,555**	**63.8**	**14,801**	**50.9**	**1,922**	**6.6**	**155**	**0.5**	**217**	**0.7**

Source: Annex Table (4-19) in the Statistical Tables of AASS 2022/23,

4.2.3.2 Area applied with Pesticides

The results show that, out of the total planted area, 19,188 ha (13.9 percent) was applied with pesticides, whereby 17,511 ha were from agricultural households and 1,677 ha were from large scale farms. Among regions that applied pesticides Kaskazini Unguja had the highest percentage of the planted area applied with pesticides (4,188; 17.0 percent), followed by Kusini Unguja (4,157; 15.9 percent), while Kaskazini Pemba region recorded the lowest (2,260; 9.0 percent) (Table 4.8).

Table 4.8: Area Applied with Pesticides by Region, During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Area Planted with Crops (ha)	Area Applied with Pesticides	
			Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	24,612	4,188	17.0
	Kusini Unguja	26,110	4,157	15.9
	Mjini Magharibi	21,963	3,181	14.5
	Kaskazini Pemba	25,110	2,260	9.0
	Kusini Pemba	37,202	3,726	10.0
	Total	**134,997**	**17,511**	**13.0**
Large Scale Farms		3,149	1,677	53.2
All Holdings		**138,146**	**19,188**	**13.9**

Source: Annex Table (4-20) in the Statistical Tables of AASS 2022/23

4.2.3.3 Area Applied with Pesticides by Type

Pesticide application by type covered the following areas: insecticides were used on 10,213 ha (53.2 percent), herbicides on 11,022 ha (54.7 percent), fungicides on 1,318 ha (6.9 percent) (Table 4.9).

4.2.3.3.1 Insecticides

The findings show that, total of 10,213 ha applied with insecticides, of which 9,963 ha applied by agricultural households and 251 ha by large scale farms. In region wise, Kaskazini Unguja had the largest use of insecticides (2,782ha; 66.4 percent), followed by Kusini Unguja (2,673ha; 64.3 percent), while the smallest area was reported in Kusini Pemba (1,152ha; 30.9 percent) (Table 4.9).

4.2.3.3.2 Herbicides

Total area applied with herbicides during 2022/23 agricultural year in Zanzibar was 11,022 ha, whereby 9,389 ha were applied by agricultural households and 1,633 ha by large scale farms. Kusini Unguja was higher reported used herbicides (2,999 ha; 72.1 percent), followed by Kusini Pemba (2,817 ha; 70.8 percent), whereas Kaskazini Unguja reported the least (1,078 ha; 25.7 percent) (Table 4.9).

4.2.3.3.3 Fungicides

During the 2022/23 agricultural year, a total of 1,318 ha were applied with fungicides, of which 1,305 ha were applied by agricultural households and 13 ha by large scale farms. Out of the total area applied with pesticides, Fungicide usage was reported only in Kaskazini Unguja region (595 ha; 14.2 percent) and Kusini Unguja (480 ha; 11.5 percent) (Table 4.9).

Table 4.9: Area Applied with Pesticides by Type and Region, During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Total Area Planted with Crops (ha)	Planted Area Applied with Pesticides (ha)	Type of Pesticides			
				Insecticides	Herbicides	Fungicides	Other pesticides
Agricultural Households	Kaskazini Unguja	23,068	4,188	2,782	1,078	595	-
	Kusini Unguja	21,864	4,157	2,673	2,999	480	-
	Mjini Magharibi	19,016	3,181	1,989	1,235	-	-
	Kaskazini Pemba	24,126	2,260	1,366	1,261	-	-
	Kusini Pemba	33,066	3,726	1,152	2,817	-	-
	Total	**121,140**	**17,511**	**9,963**	**9,389**	**1,305**	**167**
Large Scale Farms		3,062	1,677	251	1,633	13	-
All Holdings		**124,202**	**19,188**	**10,213**	**11,022**	**1,318**	**167**

Source: Annex Table (4-20) in the Statistical Tables of AASS 2022/23

"– "Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Chapter 5: Access to Financial Services (Credit)

5.1 Introduction

Access to financial services, particularly credit plays a critical role in advancing agricultural production. Farmers, who form the backbone of the country's economy, often require capital to invest in improved seeds and breeds, fertilizers, machinery, livestock and aquaculture production and inputs etc. Efforts to improve this access through micro-finance institutions, government-backed programs, and innovative financial technology solutions are essential to empower farmers, boost productivity, and enhance food security in the country, ultimately contributing to Zanzibar economic growth.

5.2. Access to Loans

The results show that, 0.7 percent of agricultural households and 9.0 percent of large scale farms accessed loans for various agricultural purposes. The most common loan providers to agricultural households were micro-finance institutions (29.3 percent) and NGOs (21.0 percent). However, Private money lender contributed a smaller share (1.0 percent).

On other hand large scale farms depended more on public banks and private money lenders each with 33.3 percent, followed by Commercial banks (22.2 percent) while Microfinance institutions had smallest share (11.1 percent) (Table 5.1).

Table 5.1: Number and Percentages of Agricultural Households with Agricultural Loans, by Region and Type of Lender, During 2022/23 Agricultural year, Zanzibar

Holding Category	Contracted a Loan for Agricultural purposes		Main Loan Provider							
	Number of holdings	Percentage of Holdings	Public Banks or Other Government Institutions	Commercial banks	Insurance Companies	Microfinance Institutions	NGOs	Production Cooperatives	Private Money Lender	Friends or family-Living in the country
Agricultural Household	1,099	0.7	15.6	11.8	0	29.3	21	14.5	1	6.9
Large Scale farms	9	9	33.3	22.2	0	11.1	0	0	33.3	0

Source: Annex Table (9-2) in the Statistical Tables of AASS 2022/23

5.3. Reasons for not borrowing Money

Result shows 88.0 percent of agricultural households that did not borrow money for agricultural purposes. The main reason mentioned was they didn't request for loans, the next notable reason was not having enough income (5.1 percent), while 0.3 percent mentioned that they had no access to borrowing (1.1percent) and high interest rates (0.3 percent).

For the large scale farmers, majority (61.5 percent) has mentioned that, they didn't need agricultural loans, as well as "Other" reasons, which have a notably high proportion (22.0 percent). Other key reasons include not enough income affecting 4.4 percent. While Refusals was reported by 9.9 percent of the farms (Table 5.2)

Table 5.2: Main Reason for not Borrowing Money, by Region, During 2022/23 Agricultural year, Zanzibar

Reasons	Agricultural Household	Large Scale farms	All
Did not request	88	61.5	88
Request was refused	1.9	9.9	1.9
Impossible to request, no access	0.3	0	0.3
Investment activity not accepted	0	0	0
Not enough income	5.1	4.4	5.1
Bad credit history	0.1	0	0.1
Inadequate collateral	0.1	0	0.1
Interest rate too high	0.3	2.2	0.3
Other Reasons	4.2	22	4.2

Source: Annex Table (9-3) in Statistical Table of AASS 2022/23

SURVEY METHODOLOGY

Sampling Design of the Annual Agricultural Sample Survey 2022/23

This design took into account 5 domains (regions) from Zanzibar includes Kaskazini Unguja, Kusini Unguja, Mjini Magharibi, Kaskazini Pemba, Kusini Pemba.

Frame: list of 118 EAs created from the Population and Housing Census 2022 (PHC 2022). Available information for each EA: Region, District, Council, Constituency, Division, Ward, Village, EA, Hamlet, Rural/Urban type, number of households, number of agricultural households, number of households growing crops, number of households rearing livestock, number of households practicing aquaculture.

***Frame Limitations**: in the frame provided by NBS (National Bureau of Statistics of Tanzania) the EAs coincide with the Hamlets, hence some of them are highly populated (17.3% of EAs have more than 200 households, hitting the top of 11,660 households). Highly populated hamlets have a higher probability to be extracted in the sample, causing an intense listing operation.*
*Since the GIS experts of NBS mentioned that partitioning the large hamlets into smaller EAs by using cartographic material was too time-consuming considering the survey work plan and deadlines, first it was proposed an artificial partition of the larger hamlets before the selection of the sample – i.e. that the hamlets with more than 200/150 households could be split into smaller EAs, with the assumption that both the number of households and the number of agricultural households must be distributed equally among the EAs. If these EAs were extracted in the sample, they would have been demarcated from the main hamlet by using cartographic material, paying attention to split the agricultural households equally between EAs. Albeit sub-optimal, this procedure was considered helpful since the demarcation operation would be conducted just on the sampled high-populated hamlets, not on **all** the large hamlets. However, the procedure could have generated discrepancy between the number of households (and agricultural households) artificially allocated from the hamlet to each EA before the sample extraction and the number found in the field after the demarcation of the hamlet with cartographic material (causing a bias in the sampling weights). In addition, the demarcation based on cartographic material seemed to be difficult for the NBS cartographers.*

Considering the drawbacks of this approach, NBS proposed a dual approach – i.e., to conduct the listing operation in the hamlets with less than 200 households and to use the list of agricultural households as identified during the PHC 2022 in the large hamlets (with more than 200 households), without performing a new listing operation. NBS believes that the PHC 2022 household lists are still updated and they were used also for other surveys conducted in 2023; the sample attrition seems to be quite low and the holdings' contacts seem to be reliable.

*However, household lists generally become outdated quickly as people migrate or change their engagement in agriculture. Therefore, it is not advisable to use the same approach for the AASS 2024. **For the next survey cycles it is fundamental that NBS develops a frame with EAs completely demarcated and usable for statistical operations** (all the EAs must contain at most 200 households). Splitting the large EAs in smaller pieces by using cartographic material and ground truth may seem a costly investment, but it is crucial to produce more reliable and precise results from the next surveys, including household and individual surveys. The institutions of Tanzania working on data production and data use can really benefit from it.*

Source: AASS 2022/23 Sampling Technical Note

Sampling units

First stage: Enumeration Areas (Hamlets)

second stage: agricultural households, i.e. households growing crops and/or rearing livestock; aquaculture and bee-keeping activities are considered complementary to the first two primary activities. Therefore, households practicing just aquaculture or beekeeping are not considered to be part of the sampling units (the reason leading to this decision is that no previous information is available to consider in the computation of the sample size precision requirements of the estimates of these two sectors). A household is considered agricultural only if it has at least 25 square meters of planted land and/or one cattle and/or 5 goats/sheep/pigs and/or 50 chickens/ducks/turkeys.

Strata

Two to three strata of EAs in each domain were created considering three variables: the number of households growing crops, the number of households rearing livestock and the number of households practicing aquaculture as reported in the frame obtained from the PHC2022. This multivariate stratification has been conducted by the k-means algorithm with the R function *kmeans*. The means of the stratifying variables computed in each stratum and domain are given in Table 1. In general, on average, stratum one is the most populated and contains EAs less involved in agriculture, stratum three is the least populated and its EAs include a lot of households involved in crop cultivation, livestock rearing and aquaculture. In some domains the sample size is low, hence just two strata have been identified. The stratification procedure applied in Dodoma is shown in Annex 2.

First Stage Sampling Selection

Systematic selection with probability proportional to size (PPS). Within each stratum and domain, the EAs are ordered according to District's and Council's Codes which reflect the geographical proximity, then ordered according to Constituency's, Division's, Ward's, Village's codes. An implicit stratification is also performed, ordering by Urban/Rural type at Ward level. The EAs are selected with probability proportional to size where the measure of size is the number of agricultural households in the EA.

Second Stage Sampling Selection

Simple random sampling. In hamlets with more than 200 households, twelve (12) agricultural households are drawn from the PHC 2022 list with a simple random sampling without replacement procedure in each sampled hamlet. In hamlets with 200 households or less, twelve (12) agricultural

households will be selected with a simple random sampling without replacement procedure in each sampled hamlet after listing operation.

Table 1. Means of the stratifying variables in each stratum and domain.

Region	Mean HH Crops (Stratum 1)	Mean HH Livestock(Stratum 1)	Mean HH Aquac (Stratum 1)	Mean HH Crops (Stratum 2)	Mean HH Livestock(Stratum 2)	Mean HH Aquac (Stratum 2)	Mean HH Crops (Stratum 3)	Mean HH Livestock (Stratum 3)	Mean HH Aquac (Stratum 3)
Kaskazini Unguja	21.92	4.39	0.19	47.25	8.29	0.16	77.89	18.05	0.41
Kusini Unguja	42.31	12.24	0.24	88.73	26.79	0.65	NaN	NaN	NaN
Mjini Magharibi	9.27	1.64	0.08	36.09	8.16	0.26	NaN	NaN	NaN
Kaskazini Pemba	33.05	9.02	0.14	61.12	20.43	0.27	90.68	33.85	0.43
Kusini Pemba	32.53	8.54	0.16	61.21	16.71	0.47	NaN	NaN	NaN

Sample size: The total sample size is calculated considering precision requirements of the estimates within each domain. The reference variables used to calculate the sample size are the planted area and the number of Tropical Livestock Units (TLUs) as collected in the Agricultural Sample Census 2019/2020[2] (AC20). Details on the choice of these variables are given in Annex 1.

Variables related to aquaculture and beekeeping have not been considered for the sample size calculation because very few sampling units of the AC20 reported information on these sectors, with the consequence that for some domains they cannot be computed because the holdings sampled in them did not practice aquaculture or beekeeping; for other domains the CVs of these variables are too high, increasing too much cv_{ACd}^2 in Formula (1) and, consequently, the sample size required for these domains. Therefore, the survey does not aim at producing reliable estimates for the aquaculture and beekeeping sectors. However, the questionnaire of AASS 2023 will contain a module on aquaculture and beekeeping to collect some information on these sectors and allow to compute a sample size for AASS

In each domain the required sample size is computed according to the following formula:

$$\tilde{n}_d = \frac{1}{g_d} n_{ACd} \frac{cv_{ACd}^2}{cv_d^{*2}} \quad , \quad (1)$$

[2] In the parameters' computation using AC20 data the agricultural households that don't respect the minimum thresholds (0.00617763 for area planted or 1 for cattle or 5 for small ruminants or 50 for small animals) and those presenting outliers for the variables of interest have been excluded.

where g_d is the expected response rate in domain *d* (it varies from 0.8 to 0.9), n_{ACd} is the sample size used in domain *d* in AC20, cv_{ACd} is usually the maximum between the CV of the average planted area (cv_{PAd}) and the CV of the average number of TLUs (cv_{TLUd}) as estimated using AC20 data and cv_d^* is the maximum acceptable CV for agricultural estimates in domain *d* for the AASS23. The latter term is set equal to 10% for the regions that contribute most to the agricultural sector in terms of planted area and TLUs. In some regions it is set equal to 15%, 20% or 25% according to the contribution of the domain to the agricultural sector. The value of cv_{ACd} in some regions can be equal to cv_{PAd} or cv_{TLUd} or also to their average, depending on the contribution of crop cultivation or livestock production to the agricultural sector within the domain. The sample sizes as obtained through this procedure are domain are shown in Table 2. In order to find the number of EAs to sample in each region, it is enough to take the upper integer part of the ratio between the domain sample size and the number of agricultural households that will be selected in each EA and that is set equal to 12. The total number of EAs is then calculated to be equal to 1,277. After a careful revision of these theoretical sample sizes which implied also simulations conducted from the AC20 data and after consultations with NBS and OCGS, it was decided to decrease the EAs upper bound to 80 (instead of 120) and to increase the lower bound to 20 (instead of 4) in Mainland and 13 in Zanzibar, for which a separate budget is available, so that it was possible to increase the overall sample size in its 5 Regions (Kaskazini Unguja, Kusini Unguja, Mjini Magharibi, Kaskazini Pemba, Kusini Pemba). The total sample size was then adjusted to be 1,416 agricultural holdings in 118 EAs.

Table 2. Sample size computed by domain.

Region	Area Planted (%)	TLU(%)	Average Contribution Area &TLU	CV (%) Area Planted	CV(%)*TLU	Realized Sample	max CV (%)	CV*(%)	Response rate	Sample Size (Agr. Household)	Sample Seze (EA)	Sample Size (EA) Adjusted	Sample Size (Agr. Household)
Kaskazini Unguja	0.2%	0.1%	0.2%	5.2	14.1	427	14.1	25.0	0.90	152	13	35	420
Kusini Unguja	0.1%	0.1%	0.2%	5.2	12.3	275	12.3	25.0	0.90	75	6	17	204
Mjini Magharibi	0.2%	0.2%	0.2%	5.4	12.1	271	12.1	25.0	0.90	71	6	16	192
Kaskazini Pemba	0.3%	0.2%	0.3%	5.1	16.1	342	16.1	25.0	0.90	159	13	37	444
Kusini Pemba	0.5%	0.2%		4.2	9.4	345	9.4	20.0	0.90	86	7	13	156
Zanzibar										**543**	**45**	**118**	**1,416**

Sample allocations to strata: the EAs allocations to the strata are computed according to a multivariate criterion which follows the formula below:

$$m_{hd} = m_d \frac{\frac{M_{hd}}{M_d} V_{hd}}{\sum_{g=1}^{H} \frac{M_{gd}}{M_d} V_{gd}}, \qquad (2)$$

where m_{hd} is the sample size allocated to stratum h in domain d, m_d is the sample size in domain d as computed in the last column of Table 1, M_{hd} is the number of EAs in stratum h in domain d, M_d is the number of EAs in domain d, H is the total number of strata and V_{hd} is a convex combination of the single variables' variances in stratum h and domain d, i.e. $V_{hd}^2 = \sum_{k=1}^{K} q_{kd} S_{hkd}^2$, with S_{hkd}^2, q_{kd} and K indicating respectively the variance of variable k in stratum h and domain d, the coefficient of importance of the variable k and the total number of variables considered in the allocation procedure. In our case K is equal to three and the stratifying variables are the number of households growing crops ($k = 1$), number of households rearing livestock ($k = 2$) and number of households practicing aquaculture ($k = 3$), whose coefficients qs are respectively 0.4, 0.4 and 0.2 in each domain and stratum. In some domains the number of strata is set equal to two because of the low sample size. The final EAs allocations by domain are shown in Table 3. An example of strata allocations in Dodoma is given in Annex 2.

Table 3. EAs allocations to sampling strata in each domain.

Region	Stratum 1	Stratum 2	Stratum 3	Total Sample Size
Kaskazini Unguja	11	15	9	35
Kusini Unguja	10	7	NA	17
Mjini Magharibi	11	5	NA	16
Kaskazini Pemba	12	15	10	37
Kusini Pemba	7	6	NA	13

Calculation of sampling weights. The sampling weight assigned to the agricultural households' *j* in EA *i* in domain *d* and stratum *h* is calculated as follows:

$$w_{jihd} = 1/[\left(m_{hd}\frac{F_{ihd}}{F_{hd}}\right) * \left(\frac{n_{ihd}}{N_{ihd}}\right)], \quad (3)$$

where m_{hd} is the number of EAs selected in stratum *h* in domain *d*, F_{ihd} is the total number of agricultural households in the *i-th* EA and stratum *h* in domain *d* as listed in the sampling frame, F_{hd} is the total number of agricultural households in stratum *h* and domain *d* as listed in the sampling frame, n_{ihd} and N_{ihd} are respectively the number of agricultural households sampled and found after the listing operation in the *i-th* EA in stratum *h* and domain *d*.

Estimation. In order to estimate the total $\hat{Y}$ of a variable Y, it's enough to apply the following formula:

$$\sum_{d=1}^{31}\sum_{h=1}^{H}\sum_{i=1}^{m_{hd}}\sum_{j=1}^{n_{ihd}} w_{jihd}y_{jihd}, \quad (4)$$

Where y_{jihd} is the value of the variable *Y* for unit *j* in the *i-th EA* in stratum *h* and domain *d* and *H* is the total number of strata in domain *d*.

An approximation of the variance of the total $\hat{Y}$ considering only the PSU component is given by:

$$V(\hat{Y}) = \sum_{d=1}^{25}\sum_{h=1}^{H} \frac{{M_{hd}}^2}{m_{hd}(m_{hd}-1)}\sum_{i=1}^{m_{hd}}\left(\hat{Y}_{ihd} - \frac{1}{m_{hd}}\sum_{i=1}^{m_{hd}}\hat{Y}_{ihd}\right)^2, \quad (5)$$

where M_{hd} is the total number of EAs found in stratum *h* and domain *d* and $\hat{Y}_{ihd}$ is the estimate of the total amount of *Y* in the *i-th* PSU in stratum *h* and domain *d.*

Annex 1. Key variables for the calculation of the sample size.

In order to compute the sample size for the Annual Agricultural Sample Survey 2023, we need to consider the targeted and realized precision of few key variables correlated to the overall set of variables that are going to be estimated using AASS23 data. It's not easy to select few representative variables for all the hundreds estimates that are usually produced through a survey. For the agricultural surveys, the choice usually falls on the *planted area* for the crop-related estimates and on the *number of TLUs* for the livestock-related estimates. The derivative variables *crop production* and *livestock production* are sometimes used, even though their variability (e.g. CV) is usually higher because they are obtained through quite complex operations on several original variables. It is also preferable to focus on the planted area than on the harvested area because the latter is usually collected on less holdings and, consequently, it may be less representative. If the agricultural survey aims at producing important estimates on fishery and aquaculture, it is necessary to include key variables for these sectors in the computation of the sample size, such as the area devoted to aquaculture activities or the number of fishes harvested. For the household surveys, the choice of the key variables usually falls on the household's income

or on variables related to poverty indexes usually identified by the analyst, such as the access to electricity.

For the Annual Agricultural Sample Survey 2023 the key variables selected for the computation of the sample size were the *planted area* and the *number of TLUs.* With *planted area* is intended the operated land under temporary, permanent crops, planted trees and fallow (categories 5.1.1., 5.1.2., 5.1.3., 5.1.4., 5.1.5., 5.1.8 and 5.1.10 of Question 5.1. in the AC20 questionnaire). Since the planted area by crop is collected both for the short rainy season and the long rainy season it was preferred to choose the variable generated by the more general Question 5.1. as reference for the calculation of the sample size. Using the AC20 data, it has been shown that the holding's planted area (computed summing up the planted area by crop) is extremely correlated with the holding's harvested area (computed summing up the harvested area by crop), with a correlation greater than 90%.

Annex 2. Example: calculation of sample size and strata allocations in Dodoma.

During the Agricultural Sample Census 2019/2020, 1,209 agricultural households were sampled in Dodoma ($n_{ACdodoma} = 1{,}209$) whose contribution to the national agricultural sector is 10% in terms of area planted and 6.7% in terms of TLUs. Given the high contribution both in terms of crop cultivation and livestock, cv_d^* is set equal to 10% and $cv_{ACdodoma}$ is the maximum between $cv_{PAdodoma}$ (=4%) and $cv_{TLUdodoma}$ (=7.49%), i.e. $cv_{ACdodoma}$=7.49%.

Hence, from Formula (1) the sample size in Dodoma is calculated to be:

$$\tilde{n}_d = \frac{1}{g_{dodoma}} n_{ACdodoma} \frac{cv_{ACdodoma}^2}{cv_{dodoma}^{*2}} = \tilde{n}_d = \frac{1}{0.9} 1{,}209 \frac{7.49^2}{10^2} = 755$$

To compute the number of EAs to be sampled in Dodoma (m_{dodoma}), it is enough to divide $\tilde{n}_{dodoma}$ by 12 and take the integer part, i.e.:

$$m_{dodoma} = \left\lfloor \frac{\tilde{n}_{dodoma}}{12} \right\rfloor = \left\lfloor \frac{755}{12} \right\rfloor = 63$$

The EAs in Dodoma have been stratified in three strata according to the number of households growing crops, rearing livestock and practicing aquaculture. From Table 1 and Figure 1 it is possible to see that the third stratum is composed by EAs which includes on average 341.95

households cultivating crops, 98.56 households rearing livestock, 0.11 households practicing aquaculture. In the other two strata EAs contain on average less agricultural households, particularly stratum one is formed by EAs where households are less intensively engaged in crop cultivation, livestock rearing and aquaculture.

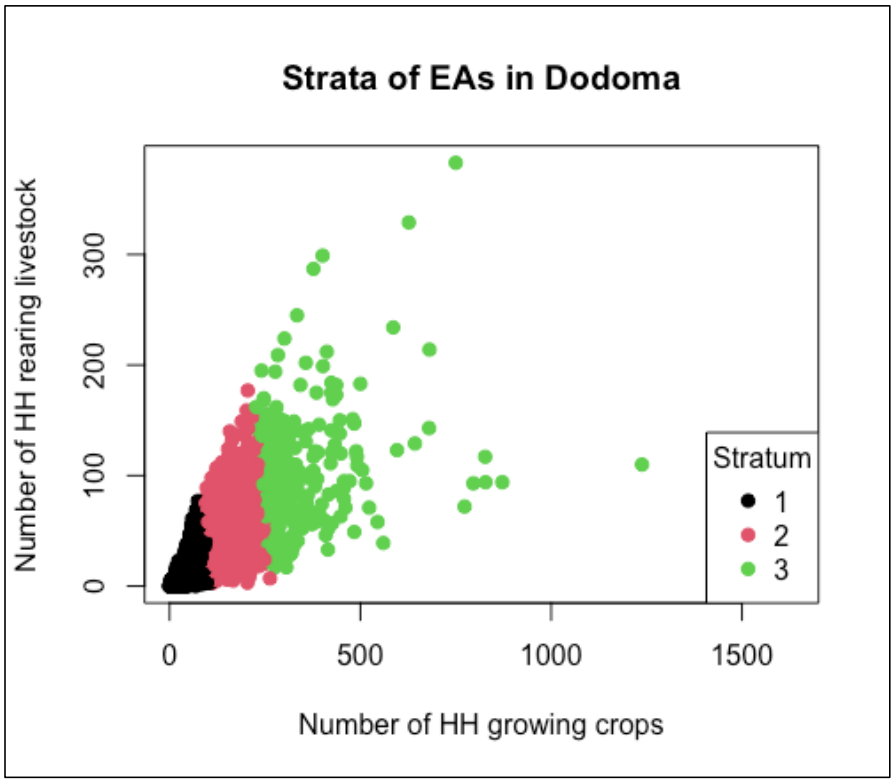

Figure 3. Enumeration Areas stratified according to the number of households growing crops and rearing livestock.

Formula 2 allows to take into consideration both the numerosity of the strata in Dodoma ($M_{1dodoma} = 2755, M_{2dodoma} = 1679, M_{3dodoma} = 291$), the variances of the three stratifying variables in stratum one ($S^2_{11dodoma}$=853.71, $S^2_{12dodoma}$=211.66, $S^2_{13dodoma}$=0.065), in stratum two ($S^2_{21dodoma}$=1525.71, $S^2_{22dodoma}$=585, $S^2_{23dodoma}$=0.055), in stratum three ($S^2_{31dodoma}$=20059.31, $S^2_{32dodoma}$=2257.48, $S^2_{33dodoma}$=0.123) and the coefficients q_1, q_1 and q_3 set respectively to 0.4, 0.4 and 0.2 in all the domains and strata.

According to Formula 2 and considering $V_{1dodoma}^2 = \sum_{k=1}^3 q_k S_{1kdodoma}^2 = 426.163$, $V_{2dodoma}^2 = \sum_{k=1}^3 q_k S_{2kdodoma}^2 = 844.32$, $V_{3dodoma}^2 = \sum_{k=1}^3 q_k S_{3kdodoma}^2 = 9046.728$, the allocations to stratum 1, stratum 2, stratum 3 are calculated to be:

$$m_{1dodoma} = m_{dodoma} \frac{\frac{M_{1dodoma}}{M_{dodoma}} V_{1dodoma}}{\sum_{g=1}^{H} \frac{M_{gdodoma}}{M_{dodoma}} V_{gdodoma}}$$

$$= 63 * \frac{\frac{2755}{4725} * 20.64}{\frac{2755}{4725} * 20.64 + \frac{1679}{4725} * 29 + \frac{291}{4725} * 95.11} = 26.88,$$

$$m_{2dodoma} = m_{dodoma} \frac{\frac{M_{2dodoma}}{M_{dodoma}} V_{2dodoma}}{\sum_{g=1}^{H} \frac{M_{gdodoma}}{M_{dodoma}} V_{gdodoma}}$$

$$= 63 * \frac{\frac{1679}{4725} * 29}{\frac{2755}{4725} * 20.64 + \frac{1679}{4725} * 29 + \frac{291}{4725} * 95.11} = 23.02,$$

$$m_{3dodoma} = m_{dodoma} \frac{\frac{M_{3dodoma}}{M_{dodoma}} V_{3dodoma}}{\sum_{g=1}^{H} \frac{M_{gdodoma}}{M_{dodoma}} V_{gdodoma}}$$

$$= 63 * \frac{\frac{291}{4725} * 95.11}{\frac{2755}{4725} * 20.64 + \frac{1679}{4725} * 29 + \frac{291}{4725} * 95.11} = 13.08,$$

Rounding the three values to the nearest integer we get exactly the allocations given in Table 3, i.e. 27, 23, 13.

ANNEX TABLES

Table 2-1: Number and Percentage of Agricultural Households by Season and Region in Zanzibar for 2022/23 Agricultural Year

Holding Category	Region	Short Rainy Season		Long Rainy Season		Agricultural year					
		Number of Cropping Households	Percent of Cropping Households*	Number of Cropping Households	Percent of Cropping Households*	Number of Cropping Households	Percent of Cropping Households*	Number of Livestock Households	Percent of Livestock Households*	Number of Agricultural Households	Percent of Agricultural Households*
Agricultural Household	Kaskazini Unguja	24,890	17.8	24,065	16.5	27,167	17.9	18,013	18.3	27,489	17.7
	Kusini Unguja	25,249	18.1	26,598	18.3	26,872	17.7	18,112	18.4	27,506	17.7
	Mjini Magharibi	34,288	24.5	34,976	24	37,264	24.5	15,257	15.5	38,983	25.1
	Kaskazini Pemba	27,648	19.8	31,476	21.6	31,997	21	23,960	24.3	32,207	20.7
	Kusini Pemba	27,659	19.8	28,482	19.6	28,825	18.9	23,208	23.5	29,265	18.8
	Total	**139,734**	**100**	**145,598**	**100**	**152,126**	**100**	**98,550**	**100**	**155,450**	**100**
Large Scale Farms		27	5.2	27	3.1	30	3.3	52	7.6	71	6.4

Table 3-1: Number and Percentage of Agricultural Households, by Type of Farm Activities and Sex of Head in Zanzibar for 2022/23 Agricultural Year

Region	Agricultural Households Engaged in Crop Production			Agricultural Households Engaged in Livestock Production Out of Total			Agricultural Households Engaged in Aquaculture Production Out of Total Agricultural Households			Total		
	Male-Headed	Female-Headed	All	Male-Headed	Female-Headed	All	Male-Headed	Female-Headed	All	Male-Headed	Female-Headed	All
Kaskazini Unguja	99.2	97.1	98.8	67.5	55.9	65.5	1.8	4.3	2.3	22,888	4,601	27,489
Kusini Unguja	97.2	100	97.7	67.7	57.8	65.8	8.2	11	8.7	22,443	5,063	27,506
Mjini Magharibi	96	93.8	95.6	39.1	39.4	39.1	0	0	0	32,200	6,783	38,983
Kaskazini Pemba	99.2	100	99.3	76.6	66.2	74.4	14.5	16.2	14.9	25,422	6,785	32,207
Kusini Pemba	99.4	94.8	98.5	81.3	71.1	79.3	1.8	0	1.4	23,447	5,818	29,265
Total	**98**	**97.1**	**97.9**	**64.7**	**57.8**	**63.4**	**5**	**6.4**	**5.3**	**126,399**	**29,051**	**155,450**

Table 3-4: Land Area by Use for Short and Long Rainy Seasons in Zanzibar for 2022/23 Agriculture Year

Holding Category	Land Use	Short Rainy Season				Long Rainy Season			
		Average (Ha)	Total (Ha)	Percent of Agricultural Households	Total Households	Average (Ha)	Total (Ha)	Percent of Agricultural Households	Total Households
Agricultural Households	Area under Temporary Mono Crop	0.2	23,817	56.8	79,483	0.2	33,554	62.4	90,841
	Area under Temporary Mixed Crops	0.1	12,428	43	60,201	0.1	13,711	45.6	66,355
	Area under Fallow	0	303	0.8	1,077	0	106	0.4	552
	Area under Permanent /Temporary mix	0.1	18,606	35.3	49,392	0.1	18,346	33.8	49,174
	Area under Permanent Mono Crops	0.1	9,635	36.9	51,638	0.1	8,581	33.6	48,980
	Area under Permanent Mixed Crops	0.1	16,007	44	61,564	0.1	16,290	41.8	60,825
Large Scale Farms	Area under Temporary Mono Crop	3.6	100	57.1	16	5.2	145	60.7	17
	Area under Temporary Mixed Crops	0	0	3.6	1	0	0	0	-
	Area under Fallow	1.5	42	7.1	2	28.4	796	3.6	1
	Area under Permanent /Temporary mix	0	0	3.6	1	0	0	0	-
	Area under Permanent Mono Crops	84.6	2,368	60.7	17	19.1	535	39.3	11
	Area under Permanent Mixed Crops	0	1	7.1	2	0	1	3.6	1

Table 3-6: Proportion of Land by Ownership Status within Region in Zanzibar for 2022/23 Agricultural Year

Holdings Category	Region	Customary right of occupancy	Granted right of occupancy	Purchased	Rented/ Leased in	Share cropped in	Borrowed for free	Moved in without permission	Communal land rights	Other	Total
Agricultural Households	Kaskazini Unguja	58.1	2.6	5.4	3.2	0	27.1	0.4	3.2	0	100
	Kusini Unguja	47.3	1.5	36.1	2.1	0.5	10.7	0.9	0.7	0.2	100
	Mjini Magharibi	15.7	24.7	23.8	0.5	0.6	25.4	3.1	6.1	0	100
	Kaskazini Pemba	47.8	1.8	6.8	0.4	0.1	37.7	0	2.9	2.4	100
	Kusini Pemba	49.7	0.2	7.1	1.2	0.1	41.4	0	0.4	0	100
	Total	**44.4**	**5.4**	**16.3**	**1.5**	**0.3**	**28.5**	**0.8**	**2.4**	**0.5**	**100**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		**44.4**	**5.4**	**16.3**	**1.5**	**0.3**	**28.5**	**0.8**	**2.4**	**0.5**	**100**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 4-2: Number and Percentage of Agricultural Holdings with an Irrigation System and Total Area Irrigated by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holding Category	Region	Number of Holding	Number of Holdings Irrigated		Method of irrigation									
					Watering cans method		Sprinkler method		Drip method		Flooding method		Other methods	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Households	Kaskazini Unguja	24,890	4,202	16.9	15,603	62.7	4,699	18.9	849	3.4	4,108	16.5	0	0
	Kusini Unguja	25,249	5,070	20.1	7,281	28.8	3,739	14.8	7,818	31	7,789	30.8	0	0
	Mjini Magharibi	34,288	11,296	32.9	21,903	63.9	4,667	13.6	4,936	14.4	2,359	6.9	1,028	3
	Kaskazini Pemba	27,648	3,484	12.6	19,908	72	1,526	5.5	1,820	6.6	5,116	18.5	0	0
	Kusini Pemba	27,659	2,054	7.4	7,205	26	0	0	1,562	5.6	15,836	57.3	3,056	11
	Total	**139,734**	**26,106**	**18.7**	**76,838**	**55**	**17,524**	**12.5**	**19,722**	**14.1**	**25,990**	**18.6**	**3,027**	**2.2**
Large Scale Farms		27	15	55.6	11	40	2	6.7	9	33.3	5	20	0	0

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont.....**Table 4-2: Number and Percentage of Agricultural Holdings with an Irrigation System and total Area Irrigated by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar - Long Rainy Season**

Holding Category	Region	Number of Holding Engaged in Crop Production	Number of Holdings Irrigated	Percent	Method of irrigation									
					Watering cans buckets	Percent	Sprinkler	Percent	Drip Number	Percent	Flooding	Percent	Other	Percent
Agricultural Households	Kaskazini Unguja	24,065	2,950	12.3	16,763	69.7	3,571	14.8	1,771	7.4	3,149	13.1	0	0
	Kusini Unguja	26,598	6,043	22.7	11,981	45	3,188	12	6,586	24.8	5,380	20.2	0	0
	Mjini Magharibi	34,976	16,595	47.4	20,824	59.5	4,697	13.4	3,427	9.8	3,017	8.6	3,556	10.2
	Kaskazini Pemba	31,476	3,374	10.7	22,433	71.3	946	3	1,386	4.4	6,733	21.4	754	2.4
	Kusini Pemba	28,482	3,031	10.6	6,769	23.8	0	0	0	0	19,327	67.9	2,386	8.4
	Total	**145,598**	**31,992**	**22**	**80,926**	**55.6**	**15,893**	**10.9**	**15,873**	**10.9**	**26,477**	**18.2**	**9,202**	**6.3**
Large Scale Farms		27	11	40.7	7	27.3	2	9.1	12.0	45.5	5.0	18.2	0.0	0.0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-2: Number and Percentage of Agricultural Holdings with an Irrigation System and total Area Irrigated by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar – (Short and Long Rainy Season)

Holding Category	Region	Number of Holdings Engaged in Crop Production	Number of Holdings Irrigated		Method of irrigation									
					Watering cans buckets		Sprinkler		Drip		Flooding		Other	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Households	Kaskazini Unguja	27,167	5,160	19	17,383	64	4,576	16.8	1,536	5.7	4,767	17.5	0	0
	Kusini Unguja	26,872	6,707	25	12,035	44.8	3,389	12.6	7,526	28	6,267	23.3	0	0
	Mjini Magharibi	37,264	18,760	50.3	24,596	66	4,668	12.5	3,230	8.7	2,843	7.6	3,351	9
	Kaskazini Pemba	31,997	4,701	14.7	24,880	77.8	1,309	4.1	1,561	4.9	6,100	19.1	550	1.7
	Kusini Pemba	28,825	3,715	12.9	5,589	19.4	0	0	900	3.1	18,604	64.5	3,732	12.9
	Total	**152,126**	**39,043**	**25.7**	**89,865**	**59.1**	**16,589**	**10.9**	**16,137**	**10.6**	**28,033**	**18.4**	**8,762**	**5.8**
Large Scale Farms		30	16	53.3	11	37.5	2	6.3	9	31.3	8	25	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont.....Table 4-2: Number and Percentage of Agricultural Holdings with an Irrigation System and total Area Irrigated by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Number of Holding Engaged in Crop Production	Number of Holdings Irrigated		Method of irrigation									
					Watering cans buckets		Sprinkler		Drip		Flooding		Other	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Households	Kaskazini Unguja	24,065	2,950	12.3	16,763	69.7	3,571	14.8	1,771	7.4	3,149	13.1	0	0
	Kusini Unguja	26,598	6,043	22.7	11,981	45	3,188	12	6,586	24.8	5,380	20.2	0	0
	Mjini Magharibi	34,976	16,595	47.4	20,824	59.5	4,697	13.4	3,427	9.8	3,017	8.6	3,556	10.2
	Kaskazini Pemba	31,476	3,374	10.7	22,433	71.3	946	3	1,386	4.4	6,733	21.4	754	2.4
	Kusini Pemba	28,482	3,031	10.6	6,769	23.8	0	0	0	0	19,327	67.9	2,386	8.4
	Total	**145,598**	**31,992**	**22**	**80,926**	**55.6**	**15,893**	**10.9**	**15,873**	**10.9**	**26,477**	**18.2**	**9,202**	**6.3**
Large Scale Farms		27	11	40.7	7	27.3	2	9.1	12	45.5	5	18.2	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-2: Number and Percentage of Agricultural Holdings with an Irrigation System and total Area Irrigated by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar – (Short and Long Rainy Season)

Holding Category	Region	Number of Holdings Engaged in Crop Production	Number of Holdings Irrigated		Method of irrigation									
					Watering cans buckets		Sprinkler		Drip		Flooding		Other	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Households	Kaskazini Unguja	27,167	5,160	19	17,383	64	4,576	16.8	1,536	5.7	4,767	17.5	0	0
	Kusini Unguja	26,872	6,707	25	12,035	44.8	3,389	12.6	7,526	28	6,267	23.3	0	0
	Mjini Magharibi	37,264	18,760	50.3	24,596	66	4,668	12.5	3,230	8.7	2,843	7.6	3,351	9
	Kaskazini Pemba	31,997	4,701	14.7	24,880	77.8	1,309	4.1	1,561	4.9	6,100	19.1	550	1.7
	Kusini Pemba	28,825	3,715	12.9	5,589	19.4	0	0	900	3.1	18,604	64.5	3,732	12.9
	Total	**152,126**	**39,043**	**25.7**	**89,865**	**59.1**	**16,589**	**10.9**	**16,137**	**10.6**	**28,033**	**18.4**	**8,762**	**5.8**
Large Scale Farms		30	16	53.3	11	37.5	2	6.3	9	31.3	8	25	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-2: Area Planted under Irrigation by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holdings	Region	Total Area Planted with all Crops (ha)	Total Area Irrigated for all methods		Watering cans or buckets		Sprinkler		Drip		Flooding/ surface		Others	
			Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	12,501	1,705	13.6	839	49.2	579	34	-	-	139	8.2	-	-
	Kusini Unguja	13,346	2,078	15.6	353	17	88	4.3	1,205	58	431	20.7	-	-
	Mjini Magharibi	10,192	1,831	18	615	33.6	404	22	626	34.2	185	10.1	-	-
	Kaskazini Pemba	10,698	873	8.2	296	33.9	72	8.3	167	19.1	338	38.7	-	-
	Kusini Pemba	15,800	1,053	6.7	184	17.4	-	-	-	-	731	69.4	-	-
	Total	**62,538**	**7,539**	**12.1**	**2,286**	**30.3**	**1,143**	**15.2**	**2,193**	**29.1**	**1,823**	**24.2**	**94**	**1.2**
Large Scale Farms		2,468	19	0.8	7	37.2	-	-	6	32.2	5	28.5	-	-
All Holdings		**65,006**	**7,559**	**11.6**	**2,294**	**30.3**	**1,144**	**15.1**	**2,199**	**29.1**	**1,829**	**24.2**	**94**	**1.2**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-2: Area planted under Irrigation by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Total Area Planted with all Crops (ha)	Total Area Irrigated for all methods (ha)		Watering cans or buckets		Sprinkler		Drip		Flooding/ surface		Others	
			Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	12,111	1,170	9.7	558	47.7	334	28.5	155	13.2	124	10.6	-	-
	Kusini Unguja	12,764	1,701	13.3	218	12.8	110	6.4	1,022	60.1	350	20.6	-	-
	Mjini Magharibi	11,771	3,527	30	904	25.6	555	15.7	1,002	28.4	345	9.8	721	20.5
	Kaskazini Pemba	14,412	886	6.1	311	35.1	-	-	-	-	358	40.5	-	-
	Kusini Pemba	21,402	1,048	4.9	221	21.1	-	-	-	-	801	76.5	-	-
	Total	**72,459**	**8,331**	**11.5**	**2,212**	**26.5**	**1,056**	**12.7**	**2,304**	**27.7**	**1,979**	**23.8**	**780**	**9.4**
Large Scale Farms		681	16	2.3	4	22.8	-	-	8	49.4	-	-	-	-
All Holdings		**73,141**	**8,347**	**11.4**	**2,215**	**26.5**	**1,056**	**12.7**	**2,312**	**27.7**	**1,983**	**23.8**	**780**	**9.3**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-2: Area planted under Irrigation by Method of Irrigation and Region During 2022/23 Agricultural Year, Zanzibar – (Short and Long Rainy Season)

Holding	Region	Total Area Planted with all Crops (ha)	Total Area Irrigated for all methods (ha)		Watering cans or buckets		Sprinkler		Drip		Flooding/ surface		Others	
			Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	24,612	2,875	11.7	1,397	48.6	913	31.7	303	10.5	263	9.1	-	-
	Kusini Unguja	26,110	3,778	14.5	572	15.1	198	5.2	2,227	59	781	20.7	-	-
	Mjini Magharibi	21,963	5,358	24.4	1,519	28.4	958	17.9	1,628	30.4	530	9.9	723	13.5
	Kaskazini Pemba	25,110	1,758	7	606	34.5	130	7.4	292	16.6	696	39.6	-	-
	Kusini Pemba	37,202	2,101	5.6	405	19.3	-	-	-	-	1,531	72.9	-	-
	Total	**134,997**	**15,870**	**11.8**	**4,498**	**28.3**	**2,199**	**13.9**	**4,497**	**28.3**	**3,802**	**24**	**873**	**5.5**
Large Scale Farms		3,149	35	1.1	11	30.6	-	-	14	40	10	27.1	-	-
All Holdings		**138,146**	**15,905**	**11.5**	**4,509**	**28.3**	**2,200**	**13.8**	**4,511**	**28.4**	**3,812**	**24**	**873**	**5.5**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 4-3: Percentage Distribution of Agricultural Households, by Type of Seeds Used in Short Rainy Season During 2022/23 Agricultural Year, Zanzibar

Regions	Total Number of Agricultural Households Practicing Cropping	Agricultural Households that used seeds	Type of Seeds		
			Improved (%)	Traditional (%)	Improved, Recycled (%)
Kaskazini Unguja	24,890	22,031	16.6	70.5	29.8
Kusini Unguja	25,249	23,253	26.4	35.6	59
Mjini Magharibi	34,288	25,681	16.2	68.6	25.5
Kaskazini Pemba	27,648	26,024	14.6	73.1	26.2
Kusini Pemba	27,659	24,439	4	59.4	40.3
Total	**139,734**	**121,428**	**15.4**	**61.8**	**35.9**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-3: Percentage Distribution of Agricultural Households, by Type of Seeds Used in Long Rainy Season During 2022/23 Agricultural Year, Zanzibar

Regions	Agricultural Households Practicing Cropping	Agricultural Households that used seeds	Type of Seeds		
			Improved (%)	Traditional (%)	Improved, Recycled (%)
Kaskazini Unguja	24,890	21,861	15.2	76.5	29.2
Kusini Unguja	25,249	24,487	26.1	26.8	58.6
Mjini Magharibi	34,288	27,876	16.7	71.8	25.7
Kaskazini Pemba	27,648	30,418	12.9	74.4	28.3
Kusini Pemba	27,659	26,957	4.6	59.5	42.9
Total	**139,734**	**131,599**	**14.8**	**62.3**	**36.5**

Cont..... Table 4-3: Percentage Distribution of Agricultural Households, by Type of Seeds Used During 2022/23 Agricultural Year, Zanzibar

Region	Agricultural Households Practicing Cropping	Agricultural Households that used seeds	Type of Seed Used		
			Percentage of Improved seeds	Percentage of Traditional seeds	Percentage of Improved seeds, Recycled
Kaskazini Unguja	24,890	25,948	19.8	79.4	30.6
Kusini Unguja	25,249	25,425	31	40.5	63.1
Mjini Magharibi	34,288	30,500	22.1	71.6	29.5
Kaskazini Pemba	27,648	31,069	16.9	76.1	30.3
Kusini Pemba	27,659	27,446	5.4	62.2	43.7
Total	**139,734**	**140,387**	**18.9**	**66.6**	**38.7**

Table 4-4: Cropped Area Planted with Improved Seeds in Short and Long Rainy Season During 2022/23 Agricultural Year, Zanzibar

Region	Short Rainy Season		Long Rainy Season	
	Crop area planted with seeds	Crop area under improved seeds	Crop area planted with seeds	Crop area under improved seeds
Kaskazini Unguja	7,514	1,103	8,309	893
Kusini Unguja	6,694	1,590	6,372	1,706
Mjini Magharibi	5,829	963	7,219	1,256
Kaskazini Pemba	7,423	887	11,168	1,059
Kusini Pemba	8,785	318	14,196	366
Total	**36,245**	**4,862**	**47,265**	**5,281**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-4: Cropped Area Planted with Improved Seeds During 2022/23 Agricultural Year During 2022/23 Agricultural Year, Zanzibar

Region	Total crop area planted with seeds	Crop area under improved seeds
Kaskazini Unguja	15,824	1,997
Kusini Unguja	13,066	3,296
Mjini Magharibi	13,048	2,219
Kaskazini Pemba	18,591	1,946
Kusini Pemba	22,981	685
Total	**83,510**	**10,143**

Table 4-8: Percentage of Agricultural Households using Fertilizers (Organic and Inorganic) in Short Rainy Season During 2022/23 Agricultural Year, Zanzibar

Holding Categories	Region	Agricultural Households with Crop Production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	24,890	44.1	78.8	39.8
	Kusini Unguja	25,249	53.3	84.4	35.4
	Mjini Magharibi	34,288	64.3	97.5	16
	Kaskazini Pemba	27,648	29.1	88	21.6
	Kusini Pemba	27,659	22.7	85.7	40.5
	Total	**139,734**	**43.5**	**88.7**	**27.8**
Large Scale Farms		27	85.2	73.9	69.6
All Holdings		[redacted]	**43.5**	**88.7**	**27.8**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data

Cont..... Table 4-8: Percentage of Agricultural Households using Fertilizers (Organic and Inorganic) in Long Rainy Season During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Agricultural Households with Crop Production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	24,065	31.2	84.9	26.8
	Kusini Unguja	26,598	42.3	87.2	32.3
	Mjini Magharibi	34,976	61.5	94.2	20.7
	Kaskazini Pemba	31,476	34.1	76.4	37
	Kusini Pemba	28,482	34.9	61.6	69.1
	Total	**145,598**	**41.8**	**83.3**	**34.4**
Large Scale Farms		27	74.1	60	80
All Holdings		[redacted]	**41.9**	**83.3**	**34.4**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data

Cont..... Table 4-8: Percentage of Agricultural Households using Fertilizers (Organic and Inorganic) During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Total number of Ag. HHs with crop production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	27,167	78	40.8	45.8
	Kusini Unguja	26,872	87.1	36.2	53.5
	Mjini Magharibi	37,264	95.3	19.4	67.8
	Kaskazini Pemba	31,997	79.3	35.5	38.2
	Kusini Pemba	28,825	64.2	69.4	38.3
	Total	**152,126**	**83.7**	**36.1**	**49.5**
Large Scale Farms		30	73.1	76.9	86.7
All Holdings		[redacted]	**83.7**	**36.1**	**49.5**

Cont..... Table 4-8: Percentage of Agricultural Households using Fertilizers (Organic and Inorganic) in Short Rainy Season During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Agricultural Households with Crop Production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	24,890	44.1	78.8	39.8
	Kusini Unguja	25,249	53.3	84.4	35.4
	Mjini Magharibi	34,288	64.3	97.5	16
	Kaskazini Pemba	27,648	29.1	88	21.6
	Kusini Pemba	27,659	22.7	85.7	40.5
	Total	**139,734**	**43.5**	**88.7**	**27.8**
Large Scale Farms		27	85.2	73.9	69.6
All Holdings		[redacted]	**43.5**	**88.7**	**27.8**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data

Cont..... Table 4-8: Percentage of Agricultural Households using fertilizers (Organic and Inorganic) in Long Rainy Season During 2022/23 Agricultural Year, Zanzibar

Holding Category	Region	Agricultural Households with Crop Production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	24,065	31.2	84.9	26.8
	Kusini Unguja	26,598	42.3	87.2	32.3
	Mjini Magharibi	34,976	61.5	94.2	20.7
	Kaskazini Pemba	31,476	34.1	76.4	37
	Kusini Pemba	28,482	34.9	61.6	69.1
	Total	**145,598**	**41.8**	**83.3**	**34.4**
Large Scale Farms		27	74.1	60	80
All Holdings		[redacted]	**41.9**	**83.3**	**34.4**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data

Cont..... Table 4-8: Percentage of Agricultural Households using fertilizers (Organic and Inorganic) During 2022/23 Agricultural Year – Zanzibar

Holding Category	Region	Total number of Ag. HHs with crop production	Percent of Agricultural Households with Crop Production Applying Fertilizers	Type of Fertilizer	
				Organic Fertilizers	Inorganic Fertilizer
Agricultural Households	Kaskazini Unguja	27,167	78	40.8	45.8
	Kusini Unguja	26,872	87.1	36.2	53.5
	Mjini Magharibi	37,264	95.3	19.4	67.8
	Kaskazini Pemba	31,997	79.3	35.5	38.2
	Kusini Pemba	28,825	64.2	69.4	38.3
	Total	**152,126**	**83.7**	**36.1**	**49.5**
Large Scale Farms		30	73.1	76.9	86.7
All Holdings		[redacted]	**83.7**	**36.1**	**49.5**

Table 4-18: Area Planted with Use of Fertilizer by Fertilizer and Region During 2022/23 Agricultural Year, Zanzibar Type, Season

Holding Category	Region	Short Rainy Season			Long Rainy Season			Agricultural year		
		Total Area Applied with Fertilizer (ha)	Area Applied with Organic Fertilizer (ha)	Area Applied with Inorganic Fertilizer (ha)	Total Area Applied with Fertilizer (ha)	Area Applied with Organic Fertilizer (ha)	Area Applied with Inorganic Fertilizer (ha)	Total Area Applied with Fertilizer (ha)	Area Applied with Organic Fertilizer (ha)	Area Applied with Inorganic Fertilizer (ha)
Agricultural Households	Kaskazini Unguja	4,680	3,531	1,691	3,032	2,628	857	7,712	6,159	2,549
	Kusini Unguja	5,992	5,187	2,168	4,956	4,457	1,612	10,948	9,643	3,780
	Mjini Magharibi	5,775	5,570	1,265	6,348	5,617	2,256	12,123	11,187	3,521
	Kaskazini Pemba	2,599	2,018	914	3,978	2,938	1,543	6,576	4,956	2,457
	Kusini Pemba	2,683	2,292	1,207	3,843	2,134	2,459	6,526	4,425	3,665
	Total	**21,729**	**18,597**	**7,245**	**22,157**	**17,774**	**8,727**	**43,886**	**36,371**	**15,972**
Large Scale Farms		1,358	103	1,348	379	241	368	1,737	344	1,716
All Holdings		**23,087**	**18,700**	**8,592**	**22,536**	**18,015**	**9,096**	**45,622**	**36,715**	**17,688**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 4-19: Percentage of Agricultural Holding using Pesticides by Pesticides Type and Region During 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holding Category	Region	Number of Holdings Engaged in Crop Production	Number of Holdings Applied Any Pesticides		Number of Holdings by Type of Pesticides									
					Insecticides		Herbicides		Fungicide		Rodenticide		Other Pesticides	
			Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent
Agricultural Households	Kaskazini Unguja	24,890	5,549	22.3	3,180	57.3	2,615	47.1	185	3.3	0	0	49	0.9
	Kusini Unguja	25,249	5,646	22.4	3,436	60.9	3,731	66.1	1,066	18.9	155	2.7	122	2.2
	Mjini Magharibi	34,288	4,350	12.7	2,997	68.9	1,521	35	168	3.9	0	0	0	0
	Kaskazini Pemba	27,648	2,703	9.8	2,216	82	668	24.7	127	4.7	0	0	0	0
	Kusini Pemba	27,659	3,800	13.7	2,729	71.8	1,036	27.3	227	6	0	0	0	0
	Total	**139,734**	**22,048**	**15.8**	**14,558**	**66**	**9,571**	**43.4**	**1,773**	**8**	**155**	**0.7**	**171**	**0.8**
Large Scale Farms		27	18	66.7	17	94.4	6	33.3	3	16.7	0	0	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 4-19: Percentage of Agricultural Holding using Pesticides by Pesticides Type and Region During 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Number of Holdings Engaged in Crop Production	Number of Holdings Applied Any Pesticides		Number of Holdings by Type of Pesticides									
					Insecticides		Herbicides		Fungicide		Rodenticide		Other Pesticides	
			Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent
Agricultural Households	Kaskazini Unguja	24,065	3,369	14	2,390	70.9	1,093	32.4	188	5.6	0	0	0	0
	Kusini Unguja	26,598	4,735	17.8	3,237	68.4	3,151	66.5	1,020	21.5	0	0	46	1
	Mjini Magharibi	34,976	3,592	10.3	3,012	83.9	1,068	29.7	0	0	0	0	0	0
	Kaskazini Pemba	31,476	3,722	11.8	2,387	64.1	1,686	45.3	0	0	0	0	0	0
	Kusini Pemba	28,482	4,482	15.7	1,481	33	3,194	71.3	0	0	0	0	0	0
	Total	**145,598**	**19,901**	**13.7**	**12,507**	**62.8**	**10,192**	**51.2**	**1,207**	**6.1**	**0**	**0**	**46**	**0.2**
Large Scale Farms		27	15	55.6	13	86.7	5	33.3	3	20	0	0	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 4-19: Percentage of Agricultural Holding using Pesticides by Pesticides Type and Region During 2022/23 Agricultural Year, Zanzibar - (Short and Long Rainy Season)

Holding Category	Region	Number of Holdings Engaged in Crop Production	Number of Holdings Applied Any Pesticides		Number of Holdings by Type of Pesticides									
					Insecticides		Herbicides		Fungicide		Rodenticide		Other Pesticides	
			Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent	Holdings	Percent
Agricultural Households	Kaskazini Unguja	27,167	6,972	25.7	4,136	59.3	3,316	47.6	334	4.8	0	0	49	0.7
	Kusini Unguja	26,872	6,229	23.2	3,816	61.3	4,247	68.2	1,066	17.1	155	2.5	168	2.7
	Mjini Magharibi	37,264	5,375	14.4	4,276	79.5	1,945	36.2	168	3.1	0	0	0	0
	Kaskazini Pemba	31,997	4,638	14.5	3,372	72.7	1,783	38.4	127	2.7	0	0	0	0
	Kusini Pemba	28,825	5,890	20.4	2,956	50.2	3,510	59.6	227	3.9	0	0	0	0
	Total	**152,126**	**29,105**	**19.1**	**18,555**	**63.8**	**14,801**	**50.9**	**1,922**	**6.6**	**155**	**0.5**	**217**	**0.7**
Large Scale Farms		30	20	66.7	18	90	7	35	5	25	0	0	0	0

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 4-20: Area Planted with Use of Pesticides, by Pesticide Type and Region in Short Rainy Season During 2022/23 Agricultural Year - Zanzibar

Holding Category	Region	Total Area Planted with Crops (ha)	Planted Area Applied with Pesticides		Type of Pesticide									
					Insecticides		Herbicides		Fungicides		Rodenticides		Other pesticides	
			Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	12,501	2,752	22	1,543	56.1	877	31.9	431	15.7	-	-	-	-
	Kusini Unguja	13,346	2,209	16.6	1,246	56.4	1,637	74.1	185	8.4	-	-	-	-
	Mjini Magharibi	10,192	1,672	16.4	1,034	61.9	663	39.7	-	-	-	-	-	-
	Kaskazini Pemba	10,698	862	8.1	594	68.9	241	27.9	-	-	-	-	-	-
	Kusini Pemba	15,800	1,584	10	653	41.2	878	55.4	-	-	-	-	-	-
	Total	**62,538**	**9,080**	**14.5**	**5,071**	**55.9**	**4,296**	**47.3**	**846**	**9.3**	**-**	**-**	**-**	**-**
Large Scale Farms		2,468	1,351	54.7	137	10.1	1,331	98.5	3	0.2	-	-	-	-
All Holdings		**65,006**	**10,430**	**16**	**5,208**	**49.9**	**5,626**	**53.9**	**849**	**8.1**	**-**	**-**	**-**	**-**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont.....Table 4-20: Area planted with Use of Pesticides, by Pesticide Type and Region in Long Rainy Season During 2022/23 Agricultural Year – Zanzibar

Holding Category	Region	Total Area Planted with Crops (ha)	Planted Area Applied with Pesticides		Type of Pesticide									
					Insecticides		Herbicides		Fungicides		Rodenticides		Other pesticides	
		Number	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	12,111	1,436	11.9	1,239	86.3	201	14	164	11.4	-	-	-	-
	Kusini Unguja	12,764	1,947	15.3	1,427	73.3	1,361	69.9	295	15.2	-	-	-	-
	Mjini Magharibi	11,771	1,509	12.8	954	63.3	572	37.9	-	-	-	-	-	-
	Kaskazini Pemba	14,412	1,398	9.7	772	55.2	678	48.5	-	-	-	-	-	-
	Kusini Pemba	21,402	2,142	10	498	23.3	1,762	82.3	-	-	-	-	-	-
	Total	**72,459**	**8,431**	**11.6**	**4,891**	**58**	**4,574**	**54.2**	**459**	**5.4**	**-**	**-**	**-**	**-**
Large Scale Farms		681	326	47.9	114	35	302	92.6	10	3.2	-	-	-	-
All Holdings		**73,141**	**8,757**	**12**	**5,006**	**57.2**	**4,876**	**55.7**	**469**	**5.4**	**-**	**-**	**-**	**-**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont..... Table 4-20: Area Planted with Use of Pesticides, by Pesticide Type and Region in Short and Long Rainy Season During 2022/23 Agricultural Year – Zanzibar

Holding Category	Region	Total Area Planted with Crops (ha)	Planted Area Applied with Pesticides		Type of Pesticide									
					Insecticides		Herbicides		Fungicides		Rodenticides		Other pesticides	
			Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Agricultural Households	Kaskazini Unguja	24,612	4,188	17	2,782	66.4	1,078	25.7	595	14.2	-	-	-	-
	Kusini Unguja	26,110	4,157	15.9	2,673	64.3	2,999	72.1	480	11.5	-	-	-	-
	Mjini Magharibi	21,963	3,181	14.5	1,989	62.5	1,235	38.8	-	-	-	-	-	-
	Kaskazini Pemba	25,110	2,260	9	1,366	60.5	918	40.6	-	-	-	-	-	-
	Kusini Pemba	37,202	3,726	10	1,152	30.9	2,640	70.8	-	-	-	-	-	-
	Total	**134,997**	**17,511**	**13**	**9,963**	**56.9**	**8,870**	**50.7**	**1,305**	**7.5**	**-**	**-**	**167**	**1**
Large Scale Farms		3,149	1,677	53.2	251	15	1,633	97.4	13	0.8	-	-	-	-
All Holdings		**138,146**	**19,188**	**13.9**	**10,213**	**53.2**	**10,502**	**54.7**	**1,318**	**6.9**	**-**	**-**	**167**	**0.9**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 5.1: Number of Agricultural Households, Planted and Harvested Area, Production, Yield by Crop During the 2022/23 Agricultural Year, Short Rainy Seasons –Zanzibar

Holdings Category	Region	Maize					Paddy				
		Number of Holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)	Number of Holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	2,477	439	320	175	0.5	5,654	1757	1444	1164	0.8
	Kusini Unguja	1,130	145	145	178	1.2	2,918	922	922	1249	1.4
	Mjini Magharibi	1,376	184	82	177	2.2	1,821	487	229	168	0.7
	Kaskazini Pemba	237	38	32	63	2	1,180	200	152	89	0.6
	Kusini Pemba	867	122	104	41	0.4	464	141	122	93	0.8
	Total	**6,087**	**929**	**684**	**635**	**0.9**	**12,037**	**3,506**	**2,868**	**2,763**	**1**
Large Scale Farms		3	5	1	1	0.6	3	28	28	12	0.4
All Holdings		[redacted]	**935**	**685**	**636**	**0.9**	[redacted]	**3,534**	**2,895**	**2,775**	**1**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holdings Category	Region	Sorghum					Bulrush Millet				
		Number of holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)	Number of holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	169	15	14	19	1.4	-	-	-	-	-
	Kusini Unguja	-	-	-	-	-	-	-	-	-	-
	Mjini Magharibi	-	-	-	-	-	-	-	-	-	-
	Kaskazini Pemba	541	60	36	38	1.1	327.1	60.1	33.7	53.3	1.6
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**710**	**75**	**49**	**57**	**1.2**	**327**	**60**	**34**	**53**	**1.6**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**91**	**66**	**58**	**0.9**	[redacted]	**60**	**34**	**53**	**1.6**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holdings Category	Region	Cassava					Sweet Potatoes				
		Number of holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)	Number of holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	15,017	3,159	2,251	6,825	3	3,119	444	379	1,527	4
	Kusini Unguja	19,096	2,995	2,657	6,844	2.6	1,933	246	231	1,572	6.8
	Mjini Magharibi	16,444	2,738	2,479	7,035	2.8	3,246	362	324	1,648	5.1
	Kaskazini Pemba	22,865	5,546	4,414	12,895	2.9	1,925	436	372	1,074	2.9
	Kusini Pemba	21,585	5,583	4,410	14,728	3.3	1,382	222	187	424	2.3
	Total	**95,007**	**20,021**	**16,210**	**48,327**	**3**	**11,606**	**1,710**	**1,493**	**6,245**	**4.2**
Large Scale Farms		5	13	2	0	0	-	-	-	-	-
All Holdings		[redacted]	**20,034**	**16,212**	**48,328**	**3**	[redacted]	**1,738**	**1,515**	**6,287**	**4.2**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Maize					Paddy				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	3,426	450	341	293	0.9	2,226	644	525	409	0.8
	Kusini Unguja	3,020	359	240	259	1.1	1,785	449	445	811	1.8
	Mjini Magharibi	1,502	68	19	29	1.5	2,570	987	584	374	0.6
	Kaskazini Pemba	573	92	64	67	1	12,508	3,140	2,481	1,929	0.8
	Kusini Pemba	1,411	207	145	159	1.1	17,021	6,945	5,319	3,165	0.6
	Total	**9,932**	**1,176**	**809**	**809**	**1**	**36,109**	**12,164**	**9,352**	**6,688**	**0.7**
Large Scale Farms		3	6	5	2	0.4	6	69	64	22	0.4
All Holdings		[redacted]	**1,182**	**814**	**811**	**1**	[redacted]	**12,233**	**9,416**	**6,710**	**0.7**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Water Mellon					Bulrush Millet				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
	Kaskazini Unguja	494	134	59	39	0.7	-	-	-	-	-
	Kusini Unguja	-	-	-	-	-	-	-	-	-	-
Agricultural	Mjini Magharibi	-	-	-	-	-	-	-	-	-	-
Households	Kaskazini Pemba	1,012	114	78	77	1	405	57	20	32	1.6
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**1,505**	**248**	**137**	**116**	**0.8**	**405**	**57**	**20**	**32**	**1.6**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]		**137**	**116**	**0.8**	[redacted]	**57**	**20**	**32**	**1.6**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Cassava					Sweet Potatoes				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
	Kaskazini Unguja	16,124	3,899	823	1,801	2.2	7,702	1,479	734	2,635	3.6
	Kusini Unguja	19,947	3,165	1,271	4,116	3.2	2,360	280	211	809	3.8
Agricultural	Mjini Magharibi	17,327	2,664	1,819	2,696	1.5	4,579	1,143	903	2,067	2.3
Households	Kaskazini Pemba	25,253	5,490	1,548	3,821	2.5	8,530	1,492	1,302	3,897	3
	Kusini Pemba	22,803	6,068	2,801	6,225	2.2	964	111	44	126	2.8
	Total	**101,454**	**21,285**	**8,261**	**18,657**	**2.3**	**24,136**	**4,506**	**3,195**	**9,534**	**3**
Large Scale Farms		5	12	2	3	1.4	4	54	40	133	3.3
All Holdings		[redacted]	**21,297**	**8,263**	**18,660**	**2.3**	[redacted]	**4,560**	**3,236**	**9,667**	**3**

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holding Category	Region	Maize					Paddy				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
	Kaskazini Unguja	5,029	889	661	469	0.7	6,530	2,401	1,968	1,574	0.8
	Kusini Unguja	3,142	504	385	438	1.1	3,073	1,370	1,366	2,060	1.5
Agricultural	Mjini Magharibi	2,079	253	101	206	2	3,241	1,473	813	542	0.7
Households	Kaskazini Pemba	724	131	96	131	1.4	12,843	3,340	2,632	2,018	0.8
	Kusini Pemba	1,743	329	249	201	0.8	17,021	7,086	5,441	3,257	0.6
	Total	**12,716**	**2,105**	**1,493**	**1,444**	**1**	**42,708**	**15,670**	**12,220**	**9,451**	**0.8**
Large Scale Farms		4	11	6	3	0.5	6	96	91	34	0.4
All Holdings		[redacted]	**2,116**	**1,499**	**1,447**	**1**	[redacted]	**15,767**	**12,311**	**9,486**	**0.8**

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holdings Category	Region	Sorghum					Bulrush Millet				
		Number of households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)	Number of households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)
	Kaskazini Unguja	606	149	72	59	0.8	-	-	-	-	-
	Kusini Unguja	-	-	-	-	-	-	-	-	-	-
Agricultural	Mjini Magharibi	-	-	-	-	-	-	-	-	-	-
Households	Kaskazini Pemba	1,425	174	114	115	1	548	117	54	86	1.6
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**2,031**	**323**	**186**	**173**	**0.9**	**548**	**117**	**54**	**86**	**1.6**
Large scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**339**	**203**	**174**	**0.9**	[redacted]	**117**	**54**	**86**	**1.6**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holdings Category	Region	Cassava					Sweet Potato				
		Number of households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)	Number of households	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	19,625	7058	3073	8626	2.8	8,494	1,923	1,113	4,162	3.7
	Kusini Unguja	20,989	6160	3927	10960	2.8	3,264	525	443	2,381	5.4
	Mjini Magharibi	20,301	5402	4298	9730	2.3	6,054	1,505	1,227	3,715	3
	Kaskazini Pemba	26578	11036	5962	16716	2.8	9,270	1,928	1,674	4,971	3
	Kusini Pemba	23461	11651	7210	20953	2.9	2,059	334	231	550	2.4
	Total	**110,955**	**41307**	**24,471**	**66,985**	**2.7**	**29,142**	**6,215**	**4,689**	**15,778**	**3.4**
Large scale Farms		6	25	4	3	0.8	4	83	62	176	2.9
All Holdings		[redacted]	**41,332**	**24,475**	**66,988**	**2.7**	[redacted]	**6,298**	**4,750**	**15,954**	**3.4**

" - " Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont …Table 5-1: Number of Agricultural Holdings, Planted and Harvested Area, Production and Yield by Crop and Region During 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holding Category	Region	Irish Potatoes					Cocoyam				
		Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield on Area harvested (tons/ha)	Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield on Area harvested (tons/ha)
Agricultural Households	Kaskazini Unguja	-	-	-	-	-	1,596	91	26	31	1.2
	Kusini Unguja	-	-	-	-	-	2,144	146	27	115	4.2
	Mjini Magharibi	-	-	-	-	-	2,056	322	99	61	0.6
	Kaskazini Pemba	-	-	-	-	-	-	-	-	-	-
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**-**	**-**	**-**	**-**	**-**	**6,148**	**566**	**152**	**207**	**1.4**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**-**	**-**	**-**	**-**	[redacted]	**566**	**152**	**207**	**1.4**

- Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont …Table 5-1: Number of Agricultural Holdings, Planted and Harvested Area, Production and Yield by Crop and Region During 2022/23 Agricultural Year, Zanzibar – Long Rain Season

Holding Category	Region	Cocoyam				
		Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield on Area harvested (tons/ha)
Agricultural Households	Kaskazini Unguja	1,124	86	3	7	2.4
	Kusini Unguja	2,652	267	9	19	2.1
	Mjini Magharibi	2,256	307	77	22	0.3
	Kaskazini Pemba	-	-	-	-	-
	Kusini Pemba	-	-	-	-	-
	Total	**6,348**	**666**	**93**	**55**	**0.6**
Large Scale Farms		-	-	-	-	-
All Holdings		[redacted]	**666**	**93**	**55**	**0.6**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont …Table 5-1: Number of Agricultural Holdings, Planted and Harvested Area, Production and Yield by Crop and Region During 2022/23 Agricultural Year, Zanzibar - Agricultural Year Season

Holding Category	Region	Cocoyam					Onions				
		Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield on Area harvested (tons/ha)	Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield on Area harvested (tons/ha)
Agricultural Households	Kaskazini Unguja	1,872	177	28	38	1.3	-	-	-	-	-
	Kusini Unguja	3,121	413	36	134	3.7	-	-	-	-	-
	Mjini Magharibi	2,423	629	176	82	0.5	-	-	-	-	-
	Kaskazini Pemba	-	-	-	-	-	-	-	-	-	-
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**7,769**	**1,232**	**246**	**262**	**1.1**	**373**	**39**	**-**	**-**	**-**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**1,232**	**246**	**262**	**1.1**	[redacted]	**39**			

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…….Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production , Yield by Groundnuts During the Agricultural Year, Zanzibar –Short and Long Rainy Season

Holding Category	Region	Short Rainy Season					Long Rainy Season				
		Number of households	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of households	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	-	-	-	-	-	-	-	-	-	-
	Kusini Unguja	-	-	-	-	-	-	-	-	-	-
	Mjini Magharibi	-	-	-	-	-	-	-	-	-	-
	Kaskazini Pemba	-	-	-	-	-	-	-	-	-	-
	Kusini Pemba	2,106	501	465	776	1.7	1,343	178	102	114	1.1
	Total	**2,647**	**586**	**540**	**826**	**1.5**	**1,992**	**269**	**147**	**158**	**1.1**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont……Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the Agricultural Year, Zanzibar

Holding Category	Region	Pigeon Pea				Groundnut				
		Number of households	Area Planted (ha)	Production (tons)	Yield (tons/ha)	Number of households	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	3,118	566	319	0.6	214	33	19	10	0.5
	Kusini Unguja	2,913	290	135	0.5	-	-	-	-	-
	Mjini Magharibi	647	146	85	0.6	-	-	-	-	-
	Kaskazini Pemba	-	-	-	-	239	79	62	31	0.5
	Kusini Pemba	-	-	-	-	2,811	679	567	890	1.6
	Total	**6,678**	**1,002**	**539**	**0.5**	**3,918**	**854**	**687**	**984**	**1.4**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1 Number of Agricultural Holding, Planted Area, Production and Yield by Crops During the 2022/2023 Agricultural Year, Zanzibar

Holding Category	Region	Groundnut					Sugarcane		
		Number of households	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of households	Area Planted (Ha)	Production (tons)
	Kaskazini Unguja	214	33	19	10	0.5	705	312	8,158
	Kusini Unguja	-	-	-	-	-	565	138	850
Agricultural	Mjini Magharibi	-	-	-	-	-	3,053	1,202	12,512
Households	Kaskazini Pemba	239	79	62	31	0.5	-	-	-
	Kusini Pemba	2,811	679	567	890	1.6	-	-	-
	Total	**3,918**	**854**	**687**	**984**	**1.4**	**4,695**	**1,987**	**22,634**

"_" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1 Number of Agricultural Holding, Planted Area, Production and Yield by Crops During the 2022/2023 Agricultural Year, Zanzibar

Holdings Category	Regions	Cinnamon			Cloves		
		Number of Holding	Area Planted (ha)	Production (tons)	Number of Holding	Area Planted (ha)	Production (tons)
	Kaskazini Unguja	-	-	-	614	166	37
	Kusini Unguja	-	-	-	1,159	316	69
Agricultural	Mjini Magharibi	-	-	-	-	-	-
Households	Kaskazini Pemba	236	93	61	1,623	1,522	1,074
	Kusini Pemba	-	-	-	1,292	922	462
	Total	**236**	**93**	**61**	**4,687**	**2,925**	**1,642**
Large Scale Farms		**-**	**-**	**-**	-	-	-
All Holdings		**236**	**93**	**61**	[redacted]	3,721	1,642

"_" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Short Rainy Season

Holding Category	Region	Tomatoes				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
	Kaskazini Unguja	1,326	204	193	2,526	13.1
	Kusini Unguja	2,410	163	162	1,478	9.1
Agricultural	Mjini Magharibi	596	328	325	947	2.9
Households	Kaskazini Pemba	838	245	217	3,088	14.2
	Kusini Pemba	1,338	668	634	11,963	18.9
	Total	**6,508**	**1,607**	**1,531**	**20,002**	**13.1**
Large Scale Farms		4	1	1	17	14.2
All Holdings		[redacted]	**1,608**	**1,533**	**20,020**	**13.1**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Short Rainy Season

Holding Category	Region	Bitter tomato					Sweet bell pepper				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	637	73	62	322	5.2	-	-	-	-	-
	Kusini Unguja	505	194	140	225	1.6	712	146	146	502	3.4
	Mjini Magharibi	479	15	15	64	4.2	1,530	242	237	283	1.2
	Kaskazini Pemba	412	22	21	159	7.5	216	6	6	18	3
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**2,219**	**323**	**256**	**774**	**3**	**2,685**	**485**	**481**	**1,538**	**3.2**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**324**	**257**	**774**	**3**	[redacted]	**486**	**481**	**1,539**	**3.2**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Long Rainy Season

Holding Category	Region	Tomatoes				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	1,809	194	131	459	3.5
	Kusini Unguja	2,333	92	83	263	3.2
	Mjini Magharibi	1,287	443	363	2,424	6.7
	Kaskazini Pemba	1,375	404	299	2,485	8.3
	Kusini Pemba	1,191	414	405	8,864	21.9
	Total	**7,995**	**1,546**	**1,282**	**14,495**	**11.3**
Large Scale Farms		-	-	-	-	-
All Holdings		[redacted]	**1,547**	**1,282**	**14,501**	**11.3**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Long Rainy Season

Holding Category	Region	Bitter tomato					Sweet bell pepper				
		Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of Holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	486	208	178	269	1.5	-	-	-	-	-
	Kusini Unguja	829	218	52	56	1.1	587	96	96	166	1.7
	Mjini Magharibi	-	-	-	-	-	1,530	430	293	155	0.5
	Kaskazini Pemba	188	18	18	100	5.5	216	13	11	54	5
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**2,046**	**467**	**268**	**473**	**1.8**	**2,333**	**538**	**399**	**374**	**0.9**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**467**	**268**	**473**	**1.8**	[redacted]	**539**	**400**	**374**	**0.9**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holding Category	Region	Avocado				Mango			
		Number of holdings	Area Planted (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	-	-	-	-	2,500	828	1,765	2.1
	Kusini Unguja	1,724	186	694	3.7	4,818	590	23,303	39.5
	Mjini Magharibi	-	-	-	-	1,485	326	867	2.7
	Kaskazini Pemba	352	20	8	0.4	481	43	10	0.2
	Kusini Pemba	-	-	-	-	1,552	541	1,016	1.9
	Total	**2,403**	**216**	**718**	**3.3**	**10,835**	**2,328**	**26,961**	**11.6**

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holding Category	Region	Pineapple			Orange		
		Number of holdings	Area Planted (ha)	Production (tons)	Number of holdings	Area Planted (ha)	Production (tons)
	Kaskazini Unguja	795	127	108	1,323	213	627
	Kusini Unguja	720	266	125	4,113	762	2,537
Agricultural	Mjini Magharibi	2,045	498	150	1,102	306	404
Households	Kaskazini Pemba	754	171	57	-	-	-
	Kusini Pemba	886	239	121	-	-	-
	Total	**5,199**	**1,301**	**561**	**6,885**	**1,330**	**3,668**
Large Scale Farms		-	-	-	-	-	-
All Holdings			**1,301**	**561**		**1,331**	**3,675**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…. Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holding Category	Region	Tomatoes					Bitter tomato				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	2,271	398	325	2,985	9.2	787	281	239	591	2.5
	Kusini Unguja	3,223	254	245	1,741	7.1	829	413	192	281	1.5
	Mjini Magharibi	1,287	771	689	3,371	4.9	479	18	18	104	5.8
	Kaskazini Pemba	1,816	648	516	5,573	10.8	412	40	39	259	6.6
	Kusini Pemba	1,693	1,082	1,039	20,828	20.1	-	-	-	-	-
	Total	**10,291**	**3,153**	**2,813**	**34,498**	**12.3**	**2,693**	**790**	**524**	**1,246**	**2.4**
Large Scale Farms		4	2	2	22	12.3	-	-	-	-	-
All Holding		[redacted]	**3,155**	**2,815**	**34,520**	**12.3**	[redacted]	**791**	**525**	**1,247**	**2.4**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar – Agricultural Year

Holding Category	Region	Banana			Sweet bell pepper				
		Number of Holding	Area Planted (ha)	Production (tons)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	10,881	3,617	12,291	-	-	-	-	-
	Kusini Unguja	15,544	3,620	13,945	970	241	241	668	2.8
	Mjini Magharibi	22,784	3,900	11,331	1,530	671	530	438	0.8
	Kaskazini Pemba	12,266	2,738	5,508	297	19	17	72	4.3
	Kusini Pemba	21,863	9,158	14,441	-	-	-	-	-
	Total	**83,338**	**23,033**	**57,516**	**3,023**	**1,024**	**880**	**1,912**	**2.2**
Large Scale Farms		4	3	1	-	-	-	-	-
All Holdings		[redacted]	**23,036**	**57,517**	[redacted]	**1,025**	**881**	**1,913**	**2.2**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar– Short Rainy Season

Holding Category	Region	Amaranths					Cucumber				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	862	48	47	31	0.7	326	85	80	233	2.9
	Kusini Unguja	1,860	145	145	594	4.1	-	-	-	-	-
	Mjini Magharibi	2,653	46	45	79	1.8	-	-	-	-	-
	Kaskazini Pemba	852	68	68	52	0.8	-	-	-	-	-
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**6,412**	**325**	**323**	**760**	**2.4**	**861**	**159**	**153**	**463**	**3**
Large Scale Farms		4	1	1	3	2.3	-	-	-	-	-
All Holdings		[redacted]	**326**	**325**	**763**	**2.4**	[redacted]	**159**	**153**	**463**	**3**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Short Rainy Season

Holding Category	Region	Water Melon					Okra				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	-	-	-	-	-	536	47	39	116	3
	Kusini Unguja	376	110	95	1,772	18.7	755	143	143	269	1.9
	Mjini Magharibi	486	83	78	1,289	16.4	765	24	22	23	1
	Kaskazini Pemba	606	185	55	383	6.9	511	37	34	105	3.1
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**1,508**	**417**	**259**	**4,297**	**16.6**	**2,900**	**294**	**282**	**574**	**2**
Large Scale Farms		-	-	-	-	-	3	2	2	2	1.1
All Holdings		[redacted]	**418**	**260**	**4,326**	**16.7**	[redacted]	**296**	**284**	**576**	**2**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Amaranths					Cucumber				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	879	55	49	43	1	879	55	49	43	0.9
	Kusini Unguja	2,135	103	92	291	3	2,135	103	92	291	3.2
	Mjini Magharibi	3,880	96	52	124	2	3,880	96	52	124	2.4
	Kaskazini Pemba	808	20	18	57	3	808	20	18	57	3.2
	Kusini Pemba	626	45	45	39	1	626	45	45	39	0.9
	Total	**8,328**	**320**	**255**	**554**	**2**	**8,328**	**320**	**255**	**554**	**2.2**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**320**	**256**	**557**	**2**	[redacted]	**320**	**256**	**557**	**2.2**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Long Rainy Season

Holding Category	Region	Water Melon					Okra				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	190	80	36	928	25.7	831	87	87	110	1.3
	Kusini Unguja	275	99	80	1,537	19.2	447	134	75	131	1.8
	Mjini Magharibi	-	-	-	-	-	1,086	54	15	13	0.9
	Kaskazini Pemba	-	-	-	-	-	449	17	16	23	1.4
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-
	Total	**949**	**402**	**189**	**4,083**	**21.6**	**3,252**	**322**	**222**	**288**	**1.3**
Large Scale Farms		-	-	-	-	-	-	-	-	-	-
All Holdings		[redacted]	**402**	**189**	**4,083**	**21.6**	[redacted]	**322**	**223**	**289**	**1.3**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Agricultural Year

Holding Category	Region	Okra					Spinach				
		Number of holdings	Area Planted (Ha)	Area Harvested (Ha)	Production (Ton)	Yield (Ton/Ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	1,066	134	126	226	1.8	-	-	-	-	-
	Kusini Unguja	755	277	218	401	1.8	-	-	-	-	-
	Mjini Magharibi	1,253	78	37	36	1.0	-	-	-	-	-
	Kaskazini Pemba	628	54	50	128	2.5	-	-	-	-	-
	Kusini Pemba	586	73	73	71	1.0	-	-	-	-	-
	Total	**4,288**	**616**	**505**	**862**	**1.7**	**-**	**-**	**-**	**-**	**-**
Large Scale Farms		3	2	2	3	1.5	-	-	-	-	-
All Holdings		[redacted]	**618**	**507**	**865**	**1.7**	[redacted]	**23**	**4**	**1**	**0.3**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield by Crop During the 2022/23 Agricultural Year, Zanzibar - Agricultural Year

Holding Category	Region	Amaranths					Cucumber				
		Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
Agricultural Households	Kaskazini Unguja	**1,137.90**	**102.5**	**95.6**	**73.8**	**0.9**	**631**	**205**	**199**	**420**	**2.1**
	Kusini Unguja	2,606.40	247.6	236.2	885.1	3.2	524	137	90	144	1.6
	Mjini Magharibi	4,520.20	141.9	97.2	203.3	2.4	-	-	-	-	-
	Kaskazini Pemba	1,210.70	88	85.5	109.5	3.2	237	39	31	67	2.2
	Kusini Pemba	625.9	64.2	64.2	42.7	0.9	-	-	-	-	-
	Total	**10,101**	**644**	**578.6**	**1,314**	**2.3**	**2,152**	**600**	**494**	**876**	**1.8**
Large Scale Farms	Zanzibar	4	2	2	6	3.0	-	-	-	-	-
All Holdings	**Zanzibar**	[redacted]	**646**	**581**	**1,320**	**2.3**	[redacted]	**600**	**494**	**876**	**1.8**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont…Table 5-1: Number of Agricultural Holdings, Planted and Harvested Areas, Production, Yield of Watermelon During the 2022/23 Agricultural Year, Zanzibar - Agricultural Year

Holding Category	Region	Number of holdings	Area Planted (ha)	Area Harvested (ha)	Production (tons)	Yield (tons/ha)
	Kaskazini Unguja	190	120	66	1,781	27.0
	Kusini Unguja	422	208	175	3,309	18.9
Agricultural	Mjini Magharibi	486	225	93	1,697	18.3
Households	Kaskazini Pemba	703	265	114	1,593	14.0
	Kusini Pemba	-	-	-	-	-
	Total	**1,801**	**819**	**447**	**8,380**	**18.7**
Large Scale Farms		-	-	-	-	-
All Holdings		**1802**	**820**	**449**	**8,409**	**18.7**

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 5-3: Total Agricultural Household Area Affected by Shocks in Selected Crops in Short and Long Rainy Seasons During the 2022/23 Agricultural Year, Zanzibar

Crop	Total area Planted	Fully Affected by Climate Shocks	Fully Affected by Non-climate Shocks	Partially Affected by Climate Shocks	Partially Affected by Non-climate Shocks	Partially Affected by both Climate and Non-Climate Shocks	Total Area Planted	Fully Affected by Climate Shocks	Fully Affected by Non-climate Shocks	Partially Affected by Climate Shocks	Partially Affected by Non-climate Shocks	Partially Affected by both Climate and Non-Climate Shocks
Maize	929	6	104	24	112	0	1176	70	189	14	64	30
Paddy	3506	219	170	70	173	7	12164	384	783	673	802	170
Sorghum	75	0	0	10	15	0	248	21	16	0	70	3
Bulrush Millet	60	0	0	3	24	0	57	0	30	4	3	0
Cassava	20,021	429	1811	428	1026	116	21285	218	12178	57	544	27
Sweet potatoes	1710	51	45	26	68	26	4506	346	665	87	177	35
Cocoyam	566	52	324	0	37	0	666	0	566	0	7	0
Onion	-	-	-	-	-	-	-	-	-	-	-	-
Ginger	-	-	-	-	-	-	-	-	-	-	-	-
Beans	-	-	-	-	-	-	-	-	-	-	-	-
Cowpeas	1712	169	247	27	161	7	419	20	114	1	12	9
Groundnut	586	0	10	1	35	0	269	25	58	9	30	0
Cabbage	-	-	-	-	-	-	-	-	-	-	-	-
Spinach	-	-	-	-	-	-	-	-	-	-	-	-
Amaranths	325	0	0	1	0	0	320	20	31	11	2	0
Cucumber	159	0	0	0	6	0	441	8	37	0	55	0
Water melon	417	100	29	15	14	0	402	35	143	19	16	0
Okra	294	0	0	2	10	0	322	0	98	0	1	0
Tomatoes	1607	18	1	51	6	0	1546	15	118	18	106	7
Bitter tomato	323	0	0	56	11	0	467	0	162	5	33	0
Sweet/bell pepper	485	0	0	0	4	0	538	0	38	90	2	9

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 5-3 Cont…: Total Large Scale Farms Area Affected by Shocks in Selected Crops in Short and Long Rainy Seasons During the 2022/23 Agricultural Year, Zanzibar

Crop	Total area Planted	Fully Affected by Climate Shocks	Fully Affected by Non-climate Shocks	Partially Affected by Climate Shocks	Partially Affected by Non-climate Shocks	Partially Affected by both Climate and Non-Climate Shocks	Total Area Planted	Fully Affected by Climate Shocks	Fully Affected by Non-climate Shocks	Partially Affected by Climate Shocks	Partially Affected by Non-climate Shocks	Partially Affected by both Climate and Non-Climate Shocks
Maize	5	1	3	0	0	0	6	1	0	0	0	0
Paddy	28	0	0	0	0	0	69	0	0	4	1	0
Sorghum	-	-	-	-	-	-	-	-	-	-	-	-
Cassava	13	0	11	0	0	0	12	0	10	0	0	0
Sweet potatoes	-	-	-	-	-	-	54	0	14	0	0	0
Cowpeas	-	-	-	-	-	-	-	-	-	-	-	-
Spinach	-	-	-	-	-	-	-	-	-	-	-	-
Amaranths	1	0	0	0	0	0	-	-	-	-	-	-
Water melon	-	-	-	-	-	-	-	-	-	-	-	-
Okra	2	0	0	0	0	0	-	-	-	-	-	-
Tomatoes	1	0	0	0	0	0	-	-	-	-	-	-
Bitter tomato	-	-	-	-	-	-	-	-	-	-	-	-
Sweet/bell pepper	-	-	-	-	-	-	-	-	-	-	-	-

"-" Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 5.4 Agricultural Households Harvest Uses by Crop During 2022/23 Agricultural Year, Zanzibar

Crops	Disposition (total production uses in %)								
	Sold unprocessed	HH consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Maize	61.2	31.4	6.3	0.4	0.0	0.7	0.0	0.0	100
Paddy	3.2	78.1	11.4	0.1	0.0	7.2	0.0	0.0	100
Sorghum	0.0	84.6	11.2	0.0	0.0	4.3	0.0	0.0	100
Bulrush Millet	0.0	89.4	3.2	0.0	0.0	7.3	0.0	0.0	100
Cassava	23.4	61.6	14.1	0.1	0.0	0.8	0.0	0.0	100
Sweet potatoes	40.6	46.4	12.6	0.0	0.0	0.3	0.0	0.0	100
Cocoyam	11.3	71.8	16.9	0.0	0.0	0.0	0.0	0.0	100
Beans	-	-	-	-	-	-	-	-	-
Cowpeas	49.4	45.3	4.5	0.0	0.0	0.7	0.0	0.0	100
Pigeon pea	1.4	71.6	26.1	0.0	0.0	0.0	0.0	0.9	100
Groundnut	81.9	16.9	1.0	0.1	0.0	0.1	0.0	0.0	100
Cashew nut	-	-	-	-	-	-	-	-	-
Sugar cane	62.9	29.2	7.3	0.0	0.0	0.0	0.0	0.6	100
Cardamom	-	-	-	-	-	-	-	-	-
Cinnamon	83.6	14.9	1.5	0.0	0.0	0.0	0.0	0.0	100
Clove	97.9	1.1	1.0	0.0	0.0	0.0	0.0	0.0	100
Banana	33.0	50.2	16.8	0.0	0.0	0.0	0.0	0.0	100
Avocado	67.4	19.6	13.0	0.0	0.0	0.0	0.0	0.0	100
Mango	65.0	19.4	15.6	0.0	0.0	0.0	0.0	0.0	100
Pineapple	60.5	28.7	10.8	0.0	0.0	0.0	0.0	0.0	100
Orange	41.0	26.1	11.1	0.0	0.0	0.0	0.0	21.8	100
Cabbage	-	-	-	-	-	-	-	-	-
Spinach	-	-	-	-	-	-	-	-	-
Amaranths	63.8	27.9	7.9	0.3	0.0	0.0	0.0	0.0	100
Cucumber	81.5	13.0	5.3	0.0	0.0	0.2	0.0	0.0	100
Water melon	90.4	6.6	3.0	0.0	0.0	0.0	0.0	0.0	100
Okra	66.6	25.2	7.9	0.0	0.0	0.3	0.0	0.0	100
Tomatoes	77.5	15.4	7.0	0.0	0.0	0.1	0.0	0.0	100
Bitter tomato	75.3	18.0	6.6	0.0	0.0	0.1	0.0	0.0	100
Sweet/bell pepper	85.0	12.2	2.7	0.1	0.0	0.1	0.0	0.0	100

‘’-‘’ Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Cont… Table 5.4 Large Scale Farms Harvest Uses by Crop During 2022/23 Agricultural Year – Zanzibar

Crops	Sold unprocessed	HH consumption	Given to others	Used to pay for inputs	Animal feed	Seeds	Processed	Others	Total
Maize	-	-	-	-	-	-	-	-	-
Paddy	74.8	0.0	0.0	0.0	0.0	3.2	6.7	15.3	100.0
Sorghum	-	-	-	-	-	-	-	-	-
Cassava	-	-	-	-	-	-	-	-	-
Sweet potatoes	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Cowpeas	-	-	-	-	-	-	-	-	-
Sugar cane	-	-	-	-	-	-	-	-	-
Banana	-	-	-	-	-	-	-	-	-
Mango	-	-	-	-	-	-	-	-	-
Orange	-	-	-	-	-	-	-	-	-
Spinach	-	-	-	-	-	-	-	-	-
Amaranths	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Water melon	-	-	-	-	-	-	-	-	-
Okra	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Tomatoes	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Bitter tomato	-	-	-	-	-	-	-	-	-
Sweet/bell pepper	-	-	-	-	-	-	-	-	-

‘’-‘’ Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 9-2: Number and Percentages of Agricultural Households with Agricultural Loans, by Region and Type of Lender During 2022/23 Agricultural Year – Zanzibar

Holdings Category	Region	Contracted a Loan for Agricultural Purposes		Main Loan Provider										
		Number of Holdings	Percentage of Holdings	Public Banks or Other Government Institutions	Commercial Banks	Insurance Companies	Microfinance Institutions	NGOs	Production Cooperatives	Private Money Lender	Friends or Family-living in the Country	Friends or Family-living Abroad	Other	
Agricultural Household	Kaskazini Unguja	-	0.3	-	-	-	-	-	-	-	-	-	-	
	Kusini Unguja	382	1.4	-	34	-	40.6	-	25.5	-	-	-	-	
	Mjini Magharibi	569	1.5	30	-	-	29.4	40.5	-	-	-	-	-	
	Kaskazini Pemba	-	0.2	-	-	-	-	-	-	-	-	-	-	
	Kusini Pemba	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	**1,099**	**0.7**	**15.6**	**11.8**	**-**	**29.3**	**21**	**14.5**	**1**	**6.9**	**-**	**-**	
Large scale Farms		9	9	33.3	22.2	-	11.1	-	-	33.3	-	-	-	
All holdings		**1,108**	**0.7**	**15.7**	**11.9**	**-**	**29.2**	**20.8**	**14.3**	**1.3**	**6.8**	**-**	**-**	

''-'' Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

Table 9-3: Number and Percentage of Holdings with Main Reason for not Borrowing Money by Region During 2022/23 Agricultural Year – Zanzibar

Holdings Category	Region	Numbers of Holdings that did not Borrow Money for Agricultural Purpose	Main Reason for not Borrowing Money								
			Did not request	Request was refused	Impossible tor request, no access	Investment activity not accepted	Not enough income	Bad credit history	Inadequate collateral	Interest rate too high	Other
Agricultural Household	Kaskazini Unguja	27,402.5	90.2	2.5	0.7	-	3.9	-	-	-	2.6
	Kusini Unguja	27,123.9	63.8	2.4	-	-	17.4	-	0.4	-	16.0
	Mjini Magharibi	38,413.8	94.7	2.3	-	-	0.7	-	-	1.0	1.4
	Kaskazini Pemba	32,145.5	89.3	1.4	-	-	5.9	0.3	0.1	0.2	2.9
	Kusini Pemba	29,265.0	98.1	0.8	1.1	-	-	-	-	-	-
	Total	**154,350.6**	**88.0**	**1.9**	**0.3**	**-**	**5.1**	**0.1**	**0.1**	**0.3**	**4.2**
Large scale Farms		91.0	61.5	9.9	-	-	4.4	-	-	2.2	22.0
All holdings		**154,441.6**	**88.0**	**1.9**	**0.3**	**-**	**5.1**	**0.1**	**0.1**	**0.3**	**4.2**

''-'' Withheld to avoid disclosing data for individual holdings or insufficient data available from survey (Total includes withheld data)

ANNEX: QUESTIONNAIRE

United Republic of Tanzania

ANNUAL AGRICULTURAL SAMPLE SURVEY 2022/23

(This information is collected under the Statistics Act, [Cap 351 R.E 2019])

THIS INFORMATION IS STRICTLY CONFIDENTIAL AND IS TO BE USED FOR STATISTICAL PURPOSES ONLY

REGION:		____	____	.	____
DISTRICT:		____	____	.	____
COUNCIL:		____	____	.	____
WARD/SHEHIA		____	____	.	____
VILLAGE/MTAA		____	____	.	____
EA/ENUMERATION AREA:		____	____	.	____
HEADNAME/FARM ADMINISTRATOR	Headname:				
PHONE/SIMU	Phone:	____	____	.	____

SECTION 0: SCREENING

ENUM_ID_SCREEN ENUM_ID_SCREEN. Enumerator enter his/her code.

SUP_ID_SCREEN SUP_ID. Enumerator enter his/her team supervisor's code.

CONFIRM CONFIRM. DO NOT READ OUT LOUD: Do you confirm that the household you are about to list is located in %REGION% region, %DISTRICT% district, %WARD% ward/shehia, %VILLAGE% village, and in the EA number %EA%?

- ❍ 0 No
- ❍ 1 Yes

If CONFIRM==1

INSTRUCTION: Go to the household now and attempt to start the interview. To start the interview, seek out a competent respondent. A competent respondent must be 15 years of age or older and must have knowledge of the household agricultural activities. The respondent is preferably the household head.

Should no competent respondent be available at the time of your visit, you can set a maximum of two additional appointments to identify and interview a competent respondent.

If CONFIRM==1

INTVW_START INTVW_START. Record the date and time the interview started.

If CONFIRM==1

INFORMED CONSENT:

Hello, my name is _____. I am working with _____. The Ministry of Agriculture and the National Bureau of Statistics are preparing for an agriculture survey and I need to ask you a few questions to assess your agricultural activity. The data will be used to select farms for the survey. This will take only 5 minutes. If you have any questions related to this survey, please contact _____ at the National Bureau of Statistics on _____. Do you have any questions for me?

If IsAnswered(INTVW_START)

CONSENT CONSENT. Can I start asking questions now?

- ❍ 0 No
- ❍ 1 Yes

If CONSENT==1

SUB-SECTION - HOUSEHOLD AGRICULTURAL ACTIVITY - *Start*

ADDRESS ADDRESS. Enumerator record any information that could help locate the household: street, house number, identifiable characteristics, etc.

HEAD_NAME HEAD_NAME. What is the name of the household head?

*** Record the three names of the household head**

Q00 Q00. Is %HEAD_NAME% the respondent?

- ❍ 0 No
- ❍ 1 Yes

If Q00==0

RESPNAME RESPNAME. What is the respondent's name?

*** Record the three names of the respondent**

If IsAnswered(RESPNAME)

Q01 Q01. What is %RESPNAME%'s relationship to %HEAD_NAME%?

- ❍ 1 Wife/husband of the head
- ❍ 2 Son/daughter of the head
- ❍ 3 Father/mother of the head
- ❍ 4 Grandson/granddaughter of the head
- ❍ 5 Other relative
- ❍ 6 Other

If (IsAnswered(Q01) && Q01!=4) || Q00==1

Q02 Q02. Did any member of %HEAD_NAME%'s household engage in own account crop cultivation activity during the 2022/23 agricultural year?

*** Do not consider crop cultivation activities performed as paid employees or unpaid workers**

- ❍ 0 No
- ❍ 1 Yes

Q03 Q03. What was the total area currently cultivated by %HEAD_NAME%'s household during the2022/23? agricultural year?

*** Include plots cultivated under temporary or permanent crops**

If IsAnswered(Q03)

Q03_unit Q03_unit. DO NOT READ OUT LOUD: Unit mentioned by the respondent.

- ❍ 1 Hectares
- ❍ 2 Acres
- ❍ 3 Square meters

Q04 Q04. Did any member of %HEAD_NAME%'s household engage in own account livestock, rabbit or poultry raising activity during the 2022/23 agricultural year?

*** Do not include pets, racing horses, fighting chicken or cattle raised for cattle judging**

- ❍ 0 No
- ❍ 1 Yes

If Q04==1

Q05

Q05. During the 2022/23 agricultural year, what type of animals were raised by %HEAD_NAME%'s household?

*** Select all that apply**

- □ 1 Cattle

□ 2 Goats
□ 3 Sheep
□ 4 Pigs
□ 5 Poultry (including chicken, ducks, turkeys)
□ 6 Rabbits
□ 7 Other animals not listed above

If Q05.ContainsAny(1,2,3,4,5)

***INSTRUCTION**: The following inventory questions only apply to livestock and poultry that are kept on that particular household holding.*

If Q05.Contains(1)

Q05_cattle Q05_cattle. How many cattle does %HEAD_NAME%'s household rear as of today?

If Q05.Contains(2)

Q05_goat Q05_goat. How many goats does %HEAD_NAME%'s household rear as of today?

If Q05.Contains(3)

Q05_sheep Q05_sheep. How many sheep does %HEAD_NAME%'s household rear as of today?

If Q05.Contains(4)

Q05_pig Q05_pig. How many pigs does %HEAD_NAME%'s household rear as of today?

If Q05.Contains(5)

Q05_poultry Q05_poultry. How many poultry does %HEAD_NAME%'s household rear as of today?

*** Poultry includes chicken, ducks and turkeys**

If Q05.Contains(6)

Q05_rabbit Q05_rabbit. How many rabbits does %HEAD_NAME%'s household rear as of today?

Q06 Q06. Did any member of %HEAD_NAME%'s household engage in own account bee-keeping activity during the 2022/23 agricultural year?

*** Do not consider activities performed as paid employees or unpaid workers**

◯ 0 No
◯ 1 Yes

Q07 Q07. Did any member of %HEAD_NAME%'s household engage in own account aquaculture activity during the 2022/23 agricultural year?

*** Do not consider aquaculture activities performed as paid employees or unpaid workers**

◯ 0 No
◯ 1 Yes

If Q02==1 || Q04==1 || Q07==1

CONTACT_SCREEN_1 CONTACT_SCREEN_1. What is %HEAD_NAME%'s phone number?

*** If no phone number, enter 0000000000**

If IsAnswered(CONTACT_SCREEN_1) && CONTACT_SCREEN_1!="0000000000"

CONTACT_SCREEN_2 CONTACT_SCREEN_2. What is %HEAD_NAME%'s second phone number?

*** If no second phone number, enter 0000000000**

If CONTACT_SCREEN_1 == "0000000000" || CONTACT_SCREEN_2 == "0000000000"

CONTACT_SCREEN_3 CONTACT_SCREEN_3. Please give me the phone number of a close relative or neighbor of %HEAD_NAME% whom I can call to get back in touch with you?

Holding_TYPE CAPI-COMPUTED VARIABLE: 1 if this is a small-scale holding and 2 if large-scale holding.

Scope: Hidden

AGRI CAPI-COMPUTED VARIABLE: 1 if this is an agricultural household (Q02 or Q04 equal to 1) and 0 if it is a non-agricultural household (Q02 AND Q04 = 0).

ELIGIBLE_SMALLSCALE CAPI-COMPUTED VARIABLE: 1 if this is a small holding (at least 25m2 cultivated OR 1 cattle OR 5 goats/pigs/sheep OR 50 chicken/ducks) and 99 otherwise.

ELIGIBLE CAPI-COMPUTED VARIABLE: 1 if ELIGIBLE_SMALLSCALE == 1 and Holding TYPE == 1

INTVW_END INTVW_END. Record the date and time the interview ended.

SUB-SECTION 1 - HOUSEHOLD AGRICULTURAL ACTIVITY - *End*

If ELIGIBLE==1

GPS GPS. Please record the household GPS coordinates in front of the main dwelling.

*** Make sure you are outside, with a clear view of the sky.**

RESULT_SCREEN RESULT_SCREEN. DO NOT READ OUT LOUD: Please select the screening result.

- ○ 1 Complete
- ○ 2 Incomplete - respondent termination
- ○ 3 Refusal
- ○ 4 Absent at 2nd appointment
- ○ 5 Cannot interview (respondent sick, in quarantine, cannot speak, etc.)

COMMENT_SCREEN COMMENT_SCREEN. Insert any general comments on this screening

If Q02==1 || Q04==1

SELECT_SURVEY SELECT_SURVEY. DO NOT READ OUT LOUD: Has this holding been selected for the main survey?

Scope: Supervisor

- ○ 0 No
- ○ 1 Yes

ANNEX TABLES

NEX TABLES

INSTRUCTION: GO TO THE HOUSEHOLD/FARM NOW AND ATTEMPT TO START THE INTERVIEW.
TO START THE INTERVIEW, SEEK OUT A COMPETENT RESPONDENT - I.E., AN INDIVIDUAL OF 15 YEARS OR ABOVE WHO KNOWS THE HOUSEHOLD/FARM'S AGRICULTURAL ACTIVITIES. THE RESPONDENT FOR THIS HOUSEHOLD/FARM WILL PREFERABLY BE %HEADNAME%.

If Holding_TYPE==1

1. DO NOT READ OUT LOUD: Does this household still live in %REGION% region, %DISTRICT% district, %WARD% ward/shehia, %VILLAGE% village, and in the EA number %EA%?

If Q1==1 || Holding_TYPE==2

INTVW_STARTa. INTERVIEW START DATE AND TIME (1st attempt).

If Q1==1 || Holding_TYPE==2

2a. Is %HEADNAME% available for the interview?

If Q2a==0

3a. Is there any other competent respondent to answer questions on the agricultural activities of the household/farm? (eg., area planted, production, input use, etc.)

If Q3a==0

INSTRUCTION: SET UP AN APPOINTMENT AND COME BACK LATER TO INTERVIEW A COMPETENT RESPONDENT. YOU MAY CONTACT %HEADNAME% AT %PHONE% TO SET A 1ST APPOINTMENT.

If Q3a==0

INTVW_STARTb. INTERVIEW START DATE AND TIME (2nd attempt).

If Q3a==0

2b. Is %HEADNAME% available for the interview?

If Q2b==0

3b. Is there any other competent respondent to answer questions on the agricultural activities of the household/farm? (eg., area planted, production, input use, etc.)

If Q3b==0

INSTRUCTION: SET UP AN APPOINTMENT AND COME BACK LATER TO INTERVIEW A COMPETENT RESPONDENT. YOU MAY CONTACT %HEADNAME% AT %PHONE% TO SET A 2ND APPOINTMENT.

If Q3b==0

INTVW_STARTc. INTERVIEW START DATE AND TIME (3rd attempt).

If Q3b==0

2c. Is %HEADNAME% available for the interview?

If Q2c==0

3c. Is there any other competent respondent to answer questions on the agricultural activities of the household/farm? (eg., area planted, production, input use, etc.)

If (Q2a==1 || Q3a==1||Q2b==1||Q3b==1||Q2c==1||Q3c==1)

4. Is %HEADNAME% the respondent?

If Q4==0

5. What is the name of the respondent? * Record the three names of the respondent

CAPI RESPNAME: Stores the respondent name, %HEADNAME% if Q4==1 or %Q5% if Q4==0.

If (Q2a==1 || Q3a==1||Q2b==1||Q3b==1||Q2c==1||Q3c==1)

Hello, I am (name) from the National Bureau of Statistics (NBS)/Office of Chief Government Statistician (OCGS).
We are conducting an annual agricultural survey in Tanzania. Your household/farm has been randomly chosen to participate in this survey. Your cooperation and answers would be extremely important since they reflect the status of many of our farmers who live in similar conditions. I would greatly appreciate if your household/farm participated in this survey, answering questions on the agricultural activities it has undertaken. The information you provide will assist all levels of government and other organizations to better understand the agricultural sector. Please be aware that all information collected in this survey will be kept strictly confidential. If you are not comfortable to respond to specific questions please inform me. Please let me know if I can go ahead with the interview.

CONSENT. Can I start asking questions now?

If CONSENT==1

CONTACT_2023_1. What is %RESPNAME%'s phone number?

*** If no phone number, enter 000**

If IsAnswered(CONTACT_2023_1) && CONTACT_2023_1!="000"

CONTACT_2023_2. What is %RESPNAME%'s second phone number?

*** If no phone number, enter 000**

If Holding_TYPE==1 && (CONTACT_2023_1 == "000" || CONTACT_2023_2 == "000")

CONTACT_2023_3. Please give me the phone number of a close relative or neighbor of %RESPNAME% whom I can call to get back in touch with you?

If CONSENT==1

ENUMERATOR: I am going to ask you questions about the past short-rains season, also known as VULI SEASON and the long-rains season, also called MASIKA. When asking about the MASIKA season, we will also include the dry season. The past VULI SEASON started in October 2022 and ended in February 2023, while the MASIKA and DRY SEASON started in March 2023 and ended in September 2023.

6. Did you or any member of your household/farm engage in own-account crop cultivation during the Vuli or Masika or dry seasons of the past 2022/2023 agricultural year?

*** Do not consider crop cultivation activities performed as paid employees or unpaid workers**

7. Did you or any member of your household/farm engage in own-account livestock or poultry rearing from October 2022 to September 2023?

*** Do not include pets, racing horses, fighting chicken or cattle raised for cattle judging**

8. Did you or any member of your household/farm engage in own-account bee-keeping from October 2022 to September 2023?
(Yes.....1 No.....0) ☐

9. Did you or any member of your household/farm engage in own-account aquaculture activity from October 2022 to September 2023?
(Yes.....1 No.....0) ☐

*** Do not consider aquaculture activities performed as paid employees or unpaid workers**

IF VAR0==true && Holding_TYPE==1

IF VAR0==true && Holding_TYPE==1

SECTION 2: HOUSEHOLD MEMBERS AND HOLDER IDENTIFICATION

IN ORDER TO MAKE A COMPREHENSIVE LIST OF INDIVIDUALS CONNECTED TO THE HOUSEHOLD, USE THE FOLLOWING PROBE QUESTIONS:
First, give me the names of all the members of your immediate family who normally live and eat their meals together here.
WRITE DOWN NAMES, SEX, AND RELATIONSHIP TO HH HEAD. LIST HOUSEHOLD HEAD ON LINE 1.
Then, give me the names of any other persons related to you or other household members who normally live and eat their meals together here.
Then, give me the names of other persons who are not present now but normally live and eat their meals here. For example, household members studying elsewhere or travelling.
Finally, give me the names of any other persons not related to you or other household members, but who normally live and eat their meals together here, such as servants, lodgers, or other who are not relatives.
DO NOT LIST SERVANTS WHO HAVE A HOUSEHOLD ELSEWHERE, AND GUESTS WHO ARE VISITING TEMPORARILY AND HAVE A HOUSEHOLD ELSEWHERE.

If s2q04>=5

	1.	2.	3.	4.	5.
ID CODE	NAME MAKE A COMPLETE LIST OF ALL INDIVIDUALS WHO NORMALLY LIVED AND ATE THEIR MEALS TOGETHER IN THIS HOUSEHOLD IN THE PAST 6 MONTHS, STARTING WITH THE HEAD OF HOUSEHOLD. (CONFIRM THAT HOUSEHOLD HEAD HERE IS SAME AS HOUSEHOLD HEAD LISTED ON COVER.)	What is the sex of [NAME]? MALE....1 FEMALE... 0	In this household, what is [NAME]'s relationship to the head? HEAD OF HOUSEHOLD.....1 SPOUSE.....2 SON/DAUGHTER.....3 FATHER/MOTHER.....4 GRAND SON/DAUGHTER.....5 OTHER RELATIVE .....6 OTHER NOT RELATIVE.....7	How old is [NAME]? IF LESS THAN 1 YEAR OF AGE, TYPE ZERO	Did [NAME] work on any agricultural activities in the past 2022/2023 agricultural year? YES..1 NO...0
	LIST	CODE	CODE	YEAR	CODE
1					
2					
3					
4					
5					
6					

7					
8					
9					
10					

SECTION 3. FIELD ROSTER

List all the fields accessed or used by the farm in the past 2022/2023 agricultural year. Include fields that were used partially or entirely for crop cultivation (including vegs and fruit trees and kitchen gardens), farm buildings, farmyards, temporary or permanent pastures, forests and other wooded land, aquaculture. Include also fields that were left temporarily fallow or unused.

A FIELD IS ANY PIECE OF LAND OF ONE LAND TENURE TYPE ENTIRELY SURROUNDED BY OTHER LAND, WATER, ROAD, FOREST OR OTHER FEATURES NOT FORMING PART OF THE farm, OR FORMING PART OF THE farm UNDER A DIFFERENT LAND TENURE TYPE.

		If Q2a==0	If Q2a==0		-								If Q3A.ContainsAny(1,3)
FIELD ID	1.	2a	2b	2c	3.	4A							5A
	FIELD NAME	Is the [FIELD] field located in [DISTRICT] district? YES...1 NO....0	In which region is [FIELD] field located?	In which district is [FIELD] field located?	Did you use this [FIELD] field in the past 2022/23 VULI SEASON, MASIKA and DRY SEASON, or both? VULI.....1 MASIKA and DRY SEASON.....2 BOTH.....3	What is the area of this [FIELD] field? INSTRUCTION: THE AREA IS **DECLARED** BY THE RESPONDENT. IF THE AREA IS REPORTED ON THE FIELD DOCUMENT, ASK TO SEE THE DOCUMENT **CODES FOR UNIT OF MEASUREMENT:** HECTARE.....1 ACRE.....2 SQUARE METERS.....3							How did the household/farm use this [FIELD] field during the past 2022/23 VULI SEASON? SELECT ALL THAT APPLY RESIDENTIAL.....1 KITCHEN GARDEN/FARMYARD.....2 CROP PRODUCTION.....3 TEMPORARY GRAZING (LIVESTOCK/POULTRY) ....4 PERMANENT GRAZING (LIVESTOCK/POULTRY) .....5 TEMPORARILY FALLOW (LIVESTOCK/POULTRY) ...6 FARM BUILDINGS.....7 AQUACULTURE.....8 FOREST/WOODED LAND.....9 BUSINESS/COMMERCIAL.....10 UNUSED.....11 RENTED OUT/SHARECROPPED OUT FOR AGRICULTURE.....12 RENTED OUT FOR NON-AGRICULTURE.....13 GAVE OUT FOR FREE.....14. OTHER(SPECIFY).....99
	TEXT	TEXT	CODE	CODE	CODE	NUMBER						UNIT	CODE
1						__	__	__	__	.	__		
2						__	__	__	__	.	__		
3						__	__	__	__	.	__		
4						__	__	__	__	.	__		

	If IsAnswered(Q5A)				If Q3A.Contains(2,3)	If Is Answered(Q5B)				if VAR 2 == 1 OR VAR3 == 1 OR Q5a.Contains(6) OR q5b.Contains(6)
1.	Q5A_			**CAPI-VAR2**	5B	Q5B_			**CAPI-VAR3**	**CAPI-VAR4**
FIELD NAME	What percentage of this [FIELD] field was dedicated to each use?			**PROGRAMMED IN CAPI: Was [FIELD] used for growing crops in the past 2022/23 VULI SEASON?** YES...1 NO....0	How did the household/farm use this [FIELD] field during the past 2022/23 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY RESIDENTIAL.....1 KITCHEN GARDEN/FARMYARD.....2 CROP PRODUCTION.....3 TEMPORARY GRAZING (LIVESTOCK/POULTRY) ....4 PERMANENT GRAZING (LIVESTOCK/POULTRY) .....5 TEMPORARILY FALLOW (LIVESTOCK/POULTRY) ...6 FARM BUILDINGS.....7 AQUACULTURE.....8 FOREST/WOODED LAND.....9 BUSINESS/COMMERCIAL.....10 UNUSED.....11 RENTED OUT/SHARECROPPED OUT FOR AGRICULTURE.....12 RENTED OUT FOR NON-AGRICULTURE.....13 GAVE OUT FOR FREE.....14 OTHER(SPECIFY).....99	What percentage of this [FIELD] field was dedicated to each use?			**PROGRAMMED IN CAPI**: Is [FIELD] used for growing crops in the 2022/2023 MASIKA SEASON and DRY SEASON? YES...1 NO....0	**PROGRAMMED IN CAPI**: Was [FIELD] used for growing crops either in VULI or in MASIKA and DRY SEASON? YES...1 NO....0
TEXT	1st%	2nd%	3rd%			1st%	2nd%	3rd%		

If Any.Q05A.Contains(12) ||Any.Q05B.Contains(12)

6. What is the total amount earned from renting out /sharecropping out your land in the past 2022/2023 agricultural year?

***If sharecropped out, estimate the cash value**

***TZS**

Ask if VAR2_ALLFIELDS == true || FIELD.Any(x=>x. s3q05a contains (6))

SECTION 4. VULI PLOT ROSTER

FIELD ID	I am about to ask you questions about the plots in [FIELD] field in the past 2022/2023 VULI SEASON. Please list all plots cultivated with crops, used as kitchen gardens/backyards or left fallow during the past 2022/2023 VULI SEASON. A PLOT IS DEFINED AS A CONTINUOUS PIECE OF LAND ON WHICH A SPECIFIC CROP OR A MIXTURE OF CROPS IS GROWN OR WHICH IS FALLOW OR WAITING TO BE PLANTED.	PLOT ID	1. PLOT NAME	2. During the past 2022/23 VULI SEASON, how was this [PLOT] plot used? READ ANSWERS A KITCHEN GARDEN/BACKYARD....1 CULTIVATED WITH CROPS.....2 TEMPORARILY LEFT FALLOW.....3	3. What was the area of this [PLOT] plot? INSTRUCTION: FARMER DECLARES PLOT AREA (NO MEASUREMENT **CODES FOR UNIT:** HECTARE.....1 ACRE.....2 SQUARE METERS....3									If s4q02.InList(1,2) 4. Was this [PLOT] plot in pure stand or mixed during the past 2022/23 VULI SEASON? PURE STAND.....1 MIXED/INTERCROPPED....2	If s4q02.InList(1,2) 5a. Was there any irrigation infrastructure on this [PLOT] plot during the past 2022/23 VULI SEASON? INSTRUCTION: INCLUDES FULLY CONTROLLED IRRIGATION AND PARTIALLY CONTROLLED IRRIGATION. YES.....1 NO.....0
			TEXT	CODE	NUMBER							UNIT	CODE	CODE
1		1			__	__	__	__	.	__	__			
1		2			__	__	__	__	.	__	__			
1		3			__	__	__	__	.	__	__			
1		4			__	__	__	__	.	__	__			
1		⋮			__	__	__	__	.	__	__			
2		1			__	__	__	__	.	__	__			
2		2			__	__	__	__	.	__	__			

Ask if VAR2_ALLFIELDS == true || IELD.Any(x=>x.s3q05a contains(6))

SECTION 4. VULI PLOT ROSTER

FIELD ID	I am about to ask you questions about the plots in [FIELD] field in the past 2022/2023 VULI SEASON. Please list all plots cultivated with crops, used as kitchen gardens/backyards or left fallow during the past 2022/2023 VULI SEASON. A PLOT IS DEFINED AS A CONTINUOUS PIECE OF LAND ON WHICH A SPECIFIC CROP OR A MIXTURE OF CROPS IS GROWN OR WHICH IS FALLOW OR WAITING TO BE PLANTED.	PLOT ID	1. PLOT NAME	If s4q05a==1 5b. Approximately what percentage or proportion of [PLOT] plot was irrigated during the past 2022/23 VULI SEASON?	If s4q05a==1 6. What was the main method of irrigating plants/pouring water on the plants on this [PLOT] plot during the past 2022/23 VULI SEASON? READ ANSWERS IRRIGATION BY USING WATERING CANS OR BUCKETS.....1 SPRINKLER IRRIGATION.....2 DRIP IRRIGATION.....3 FLOODING/SURFACE IRRIGATION.....4	If s4q02.InList(1,2) 7. Did you apply any organic fertilizer on this [PLOT] plot during the past 2022/2023 VULI SEASON? YES...1 NO....0	If s4q07==1 8. Which organic fertilizers were applied on this [PLOT] plot during the past 2022/23 VULI SEASON? SELECT ALL THAT APPLY SOLID MANURE/FARM YARD MANURE.....1 LIQUID MANURE/SLURRY....2 GREEN MANURE (CROP RESIDUES) .....3 COMPOST.....4 STABILISED SEWAGE SLUDGE.....5 BIOFERTILIZERS.....6
			TEXT	%	CODE	CODE	CODE
1		1			-		
1		2			-		
1		3			-		
1		4			-		
1		⋮			-		
2		1			-		
2		2			-		

Ask if VAR2_ALLFIELDS == true || FIELD.Any(x=>x.s3q05a contains(6))

SECTION 4. VULI PLOT ROSTER

				If s4q02.InList (1,2)	If s4q09==1	If s4q02.InList(1,2)	If s4q11==1
FIELD ID	I am about to ask you questions about the plots in [FIELD] field in the past 2022/2023 VULI SEASON. Please list all plots cultivated with crops, used as kitchen gardens/backyards or left fallow during the past 2022/2023 VULI SEASON. A PLOT IS DEFINED AS A CONTINUOUS PIECE OF LAND ON WHICH A SPECIFIC CROP OR A MIXTURE OF CROPS IS GROWN OR WHICH IS FALLOW OR WAITING TO BE PLANTED.	PLOT ID	1. PLOT NAME	9. Did you apply any inorganic fertilizer on this [PLOT] plot during the past 2022/2023 VULI SEASON? YES...1 NO...0	10. Which inorganic (chemical) fertilizers were applied on this [PLOT] plot during the past 2022/23 VULI SEASON? SELECT ALL THAT APPLY UREA........................8 DIAMMONIUM PHOSPHATE (DAP)...9 CALCIUM AMMONIUM NITRATE (CAN).......................10 AMMONIUM SULPHATE (SA).......11 NITROGEN, PHOSPHORUS, POTASSIUM (NPKs)...........12 MINJINGU NAFAKA PLUS.......13 NPS ZINC...................14 OTHER(SPECIFY).............15	11. Did you apply any pesticide on this [PLOT] plot during the past 2022/2023 VULI SEASON? YES...1 NO....0	12. Which pesticides were applied on this [PLOT] plot during the past 2022/2023 VULI SEASON? SELECT ALL THAT APPLY INSECTICIDES.........16 HERBICIDE (SOLID)....17 HERBICIDE (LIQUID)...18 FUNGICIDE............19 RODENTICIDE..........20 OTHER (SPECIFY)......21
			TEXT	CODE	CODE	CODE	CODE
1		1					
1		2					
1		3					
1		4					
1		⋮					
2		1					
2		2					

Ask IF VAR2_ALLFIELDS == true

SECTION 5. VULI CROP ROSTER

IF sect 4-Q4 ==2 IF CAPI-VAR5==1 IF CAPI-VAR5==1 IF CAPI-VAR5==1

FIELD ID	PLOT ID	1.	CROP ID	CAPI-VAR5	2	3		TEMPORARY CROPS 4	5.
		I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 VULI SEASON.		**PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY...1 PERMANENT...2	During the past 2022/23 VULI SEASON, approximately what percent of [PLOT] was planted with [CROP]?	When was [CROP] planted on [PLOT] during the past 2022/23 VULI SEASON? OCTOBER 2022....10 NOVEMBER 2022...11 DECEMBER 2022...12 JANUARY 2023....01 FEBRUARY 2023...02		Which [CROP] seeds did you use during the past 2022/23 VULI SEASON? SELECT ALL THAT APPLY IF RESPONDENT DOES NOT KNOW, ASK TO SEE PACKAGING IMPROVED.....1 TRADITIONAL.....2 IMPROVED, RECYCLED....3	Did you harvest any of the [CROP] on this [PLOT] during the past 2022/2023 VULI SEASON? YES...1 NO.....0
		CROP NAME		CODE	PERCENTAGE	MONTH	YEAR	CODE	CODE
1	1		1						
1	1		2						
1	1		3						
1	2		1						
1	2		2						
1	2		3						
1	3		1						
1	3		2						
2	1		1						
2	1		1						
2	1		1						
2	1		2						

2	1		3						

Ask IF VAR2_ALLFIELDS == true

SECTION 5. VULI CROP ROSTER

IF Q5==1 IF Q5==1

FIELD ID	PLOT ID	1.	CROP ID	CAPI-VAR5	TEMPORARY CROPS				
					6	7.	8a.	8b.	8b_unit
		I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 VULI SEASON.		**PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY..1 PERMANENT..2 ► NEXT	Why did not you harvest [CROP] from [PLOT] during the past 2022/2023 MASIKA SEASON? TOO LITTLE RAIN/DROUGHT.....1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE..... .... .3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 CROP STILL ON THE FIELD....9	When did you start harvesting [CROP] from this [PLOT] during the past 2022/2023 VULI SEASON? SELECT ALL THAT APPLY * For continuous harvest, indicate the date when the harvest first began. JANUARY.....01 FEBRUARY....02 MARCH.....03 APRIL.....04 MAY.....05 JUNE.....06 JULY.....07 AUGUST.....08 SEPTEMBER...09 OCTOBER.....10	In which states/conditions did you harvest [CROP] on [PLOT] plot during the past 2022/2023 VULI SEASON? SELECT ALL THAT APPLY (Max 2 answers)	How much [CROP] in total did you harvest from [PLOT] plot under [STATE/CONDITION] state/condition during the past 2022/2023 VULI season?	
		CROP NAME		CODE			CODE	NUMBER	UNIT
1	1		1						
1	1		2						
1	1		3						
1	2		1						
1	2		2						
1	2		3						
1	3		1						

1	3		2						
2	3		1						
2	1		1						
2	1		1						
2	1		2						
2	1		3						

SECTION 5. VULI CROP ROSTER

Ask IF VAR2_ALLFIELDS == true

					IF Q5==1	**IF Q5==1**		**IF CAPI-VAR5==2**	**IF CAPI-VAR5==2**	**IF CAPI-VAR5==2**	**IF CAPI-VAR5==2**
FIELD ID	**PLOT ID**	1.	**CROP ID**	**CAPI-VAR5**	TEMPORARY CROPS			PERMANENT CROPS			
					9.	10.		11.	12.	13.	14.
		I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 VULI SEASON.		**PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY..1 PERMANENT..2	During the past 2022/23 VULI SEASON, approximately what percentage of [PLOT] area planted with [CROP] was harvested?	Why not harvesting all the area planted with [CROP] on this [PLOT] plot? SELECT THE MAIN TWO REASONS. TOO LITTLE RAIN/DROUGHT.....1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE.....3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 ► NEXT CROP		Was the [CROP] on this [PLOT] plot cultivated in a compact or scattered planting? COMPACT.....1 SCATTERED....2	How many [CROP] plants/trees were on this [PLOT] plot during the past 2022/23 VULI SEASON? IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99.	How many [CROP] were in the production age during the past 2022/23 VULI SEASON? *PRODUCTION AGE IS THE AGE AT WHICH THE TREE OR PLANT IS READY TO PRODUCE THE PRODUCT OF INTEREST IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99	Have you planted any [CROP] during the past 2022/23 VULI SEASON? YES...1 NO...0
		CROP NAME		CODE	PERCENT (%) OF HARVESTED PLOT AREA	1st REASON	2nd REASON	CODE	NUMBER	NUMBER	CODE
1	1		1								

1	1		2								
1	1		3								
1	2		1								
1	2		2								
1	2		3								
1	3		1								
1	3		2								
2	1		1								
2	1		1								
2	1		1								

Ask IF VAR2_ALLFIELDS == true

SECTION 5. VULI CROP ROSTER

					IF Q5==1	IF Q5==1		IF CAPI-VAR5==2	IF CAPI-VAR5==2	IF CAPI-VAR5==2	IF CAPI-VAR5==2
FIELD ID	PLOT ID	1.	CROP ID	CAPI-VAR5	TEMPORARY CROPS			PERMANENT CROPS			
					9.	10.		11.	12.	13.	14.
		I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 VULI SEASON.		**PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY..1 PERMANENT..2	During the past 2022/23 VULI SEASON, approximately what percentage of [PLOT] area planted with [CROP] was harvested?	Why not harvesting all the area planted with [CROP] on this [PLOT] plot? SELECT THE MAIN TWO REASONS. TOO LITTLE RAIN/DROUGHT.....1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE.....3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 ► NEXT CROP		Was the [CROP] on this [PLOT] plot cultivated in a compact or scattered planting? COMPACT.....1 SCATTERED....2	How many [CROP] plants/trees were on this [PLOT] plot during the past 2022/23 VULI SEASON? IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99.	How many [CROP] were in the production age during the past 2022/23 VULI SEASON? *PRODUCTION AGE IS THE AGE AT WHICH THE TREE OR PLANT IS READY TO PRODUCE THE PRODUCT OF INTEREST IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99	Have you planted any [CROP] during the past 2022/23 VULI SEASON? YES...1 NO...0
		CROP NAME		CODE	PERCENT (%) OF HARVESTED PLOT AREA	1st REASON	2nd REASON	CODE	NUMBER	NUMBER	CODE
1	1		1								
1	1		2								
1	1		3								
1	2		1								

1	2		2								
1	2		3								
1	3		1								
1	3		2								
2	1		1								
2	1		1								
2	1		1								

Ask if VAR3_ALLFIELDS == true || FIELD.Any(x=>(x.s3q05b.Contains(6) || (x.s3q05b.Contains(0) && x.s3q05a.Contains(6))))

SECTION 6. MASIKA AND DRY SEASON PLOT ROSTER

				If s7q05a==1	**If s7q05a==1**	**If s7q02.InList(1,2)**	**If s7q07==1**
FIELD ID		**PLOT ID**	1.	5b.	6.	7.	8
	I am about to ask you questions about the plots in [FIELD] field in the past 2022/2023 MASIKA SEASON and DRY SEASON. These questions will therefore cover the period between March 2023 and September 2023. Please list all plots cultivated with crops, used as kitchen gardens/backyards or left fallow during the past 2022/2023 MASIKA SEASON and DRY SEASON. A PLOT IS DEFINED AS A CONTINUOUS PIECE OF LAND ON WHICH A SPECIFIC CROP OR A MIXTURE OF CROPS IS GROWN OR WHICH IS FALLOW OR WAITING TO BE PLANTED.		PLOT NAME	Approximately what percentage or proportion of [PLOT] plot was irrigated during the past 2022/23 MASIKA SEASON and DRY SEASON?	What was the main method of irrigating plants/pouring water on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? READ ANSWERS IRRIGATION BY USING WATERING CANS OR BUCKETS.....1 SPRINKLER IRRIGATION...2 DRIP IRRIGATION.....3 FLOODING/SURFACE IRRIGATION.....4	Did you apply any organic fertilizer on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? YES...1 NO....0	Which organic fertilizers were applied on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY SOLID MANURE/FARM YARD MANURE.....1 LIQUID MANURE/SLURRY....2 GREEN MANURE (CROP RESIDUES) .....3 COMPOST.....4 STABILISED SEWAGE SLUDGE.....5 BIOFERTILIZERS.....6 OTHER (SPECIFY).....7

			TEXT	%	CODE	CODE	CODE
1		1			-	-	
1		2			-	-	
1		3			-	-	
1		4			-	-	
1		⋮			-	-	
2		1			-	-	
2		2			-	-	

Ask if VAR3_ALLFIELDS == true || FIELD.Any(x=>(x.s3q05b.Contains(6) || (x.s3q05b.Contains(0) && x.s3q05a.Contains(6))))

SECTION 6. MASIKA AND DRY SEASON PLOT ROSTER

				If s7q02.InList(1,2)	**If s7q09==1**	**If s7q02.InList(1,2)**	**If s7q11==1**
FIELD ID		**PLOT ID**	1.	9	10	11	12
	I am about to ask you questions about the plots in [FIELD] field in the past 2022/2023 MASIKA SEASON and DRY SEASON. These questions will therefore cover the period between March 2023 and September 2023. Please list all plots cultivated with crops, used as kitchen gardens/backyards or left fallow during the past 2022/2023 MASIKA SEASON and DRY SEASON. A PLOT IS DEFINED AS A CONTINUOUS PIECE OF LAND ON WHICH A SPECIFIC CROP OR A MIXTURE OF CROPS IS GROWN		PLOT NAME	Did you apply any inorganic fertilizer on this [PLOT] plot? YES...1 NO...0	Which inorganic (chemical) fertilizers were applied on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY UREA.....8 DIAMMONIUM PHOSPHATE (DAP)...9 CALCIUM AMMONIUM NITRATE (CAN).....10 AMMONIUM SULPHATE (SA).....11 NITROGEN, PHOSPHORUS, POTASSIUM (NPKs).....12 MINJINGU NAFAKA PLUS.....13 NPS Zinc.....14 OTHER(SPECIFY).....15	Did you apply any pesticide on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? YES...1 NO...0	Which pesticides were applied on this [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY INSECTICIDES.....16 HERBICIDE (SOLID)....17 HERBICIDE (LIQUID)...18 FUNGICIDE.....19 RODENTICIDE.....20 OTHER (SPECIFY).....21

	OR WHICH IS FALLOW OR WAITING TO BE PLANTED.						
			TEXT	CODE	CODE	CODE	CODE
1		1					
1		2					
1		3					
1		4					
1		⋮					
2		1					
2		2					

Ask if VAR3_ALLFIELDS == true

SECTION 7. MASIKA AND DRY SEASON CROP ROSTER

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IF sect 12-Q7 ==2 **IF CAPI-VAR5_3==1** **IF CAPI-VAR5_3==1** **IF CAPI-VAR5_3==1**

FIELD ID	PLOT ID	1. I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 MASIKA SEASON and DRY SEASON.	CROP ID	**CAPI-VAR5_3** **PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY..1 PERMANENT..2	2 During the past 2022/2023 MASIKA SEASON and DRY SEASON, approximately what percent of [PLOT] was planted with [CROP]?	2a. Was this [CROP] under a greenhouse or a high shelter during the past 2022/23 MASIKA SEASON and DRY SEASON? YES...1 NO....0	TEMPORARY CROPS 3. When was [CROP] planted on [PLOT] plot during the past 2022/23 MASIKA SEASON and DRY SEASON? DECEMBER 2022.. 12 JANUARY 2023....1 FEBRUARY 2023...2 MARCH 2023.....3 APRIL 2023.....4 MAY 2023.....5 JUNE 2023.....6 JULY 2023.....7 AUGUST 2023.....8 SEPTEMBER 2023..9	4. Which [CROP] seeds did you use during the past 2022/23 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY IF RESPONDENT DOES NOT KNOW, ASK TO SEE PACKAGING PACKAGING.....1 TRADITIONAL.....2 IMPROVED, RECYCLED.....3	5. Did you harvest any of the [CROP] on this [PLOT] during the past 2022/2023 MASIKA SEASON and DRY SEASON? YES..1 NO...0
		CROP NAME		CODE	NUMBER	CODE	CODE	CODE	CODE
1	1		1						
1	1		2						
1	1		3						
1	2		1						
1	2		2						
1	2		3						
1	3		1						
1	3		2						
2	1		2						
2	1		3						
2	1		4						
2	1		5						
2	1		6						

Ask if VAR3_ALLFIELDS == true

SECTION 7. MASIKA AND DRY SEASON CROP ROSTER

					IF Q5==0	IF Q5==1	IF Q5==1	ROSTER based on s5q08a	IF Q8b>0
FIELD ID	PLOT ID	1. I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 MASIKA SEASON and DRY SEASON.	CROP ID	**CAPI-VAR5_3 PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT? TEMPORARY..1 PERMANENT..2	6.. Why did not you harvest [CROP] from [PLOT] during the past 2022/2023 MASIKA SEASON and DRY SEASON? TOO LITTLE RAIN/DROUGHT...1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE.....3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 ANIMAL/BIRDS DAMAGE....9 OTHER (SPECIFY).....99 ► NEXT CROP	7. When did you start harvesting [CROP] from this [PLOT] during the past 2022/2023 MASIKA SEASON and DRY SEASON? * For continuous harvest, indicate the date when the harvest first began. FEBRUARY 2023....02 MARCH 2023.....03 APRIL 2023.....04 MAY 2023.....05 JUNE 2023.....06 JULY 2023.....07 AUGUST 2023.....08 SEPTEMBER 2023...09 OCTOBER 2022.....10 ~~NOVEMBER 2022....11~~ DECEMBER 2022....12	8a. In which states/conditions did you harvest [CROP] on [PLOT] plot during the past 2022/2023 MASIKA SEASON and DRY SEASON? SELECT ALL THAT APPLY (Max 2 answers)	8b. How much [CROP] in total did you harvest from [PLOT] plot under [STATE/CONDITION] state/condition during the past 2022/2023 MASIKA SEASON and DRY SEASON?	8b_unit
		CROP NAME		CODE	CODE		CODE	NUMBER	UNIT
1	1		1						
1	1		2						
1	1		3						
1	2		1						
1	2		2						
1	2		3						
1	3		1						
1	3		2						
2	1		2						
2	1		3						
2	1		4						
2	1		5						
2	1		6						

Ask if VAR3_ALLFIELDS == true

SECTION 7. MASIKA AND DRY SEASON CROP ROSTER

					IF Q5==1	IF Q5==1				IF q10b > 0
FIELD ID	PLOT ID	1. I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 MASIKA SEASON and DRY SEASON.	CROP ID	**CAPI-VAR5_3** **PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT?	9. During the past 2022/23 MASIKA SEASON and DRY SEASON, approximately what percentage of [PLOT] planted with [CROP] was harvested?	10. Why not harvesting all the area planted with [CROP] on this [PLOT]? SELECT THE MAIN TWO REASONS. TOO LITTLE RAIN/DROUGHT...1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE.....3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 ANIMAL/BIRDS DAMAGE.....9 OTHER (SPECIFY).....99		10a How much [CROP] do you think you could have harvested from [PLOT] under [STATE/CONDITION] if no losses had been suffered prior to the harvest? *Report %s7q08b_unit% -999 = same harvest as reported previously	10b How much [CROP] do you think you have lost during the past 2022/2023 MASIKA SEASON and DRY SEASON harvest of [PLOT], under [STATE/CONDITION]? *Report %s7q08b_unit%	10c What was, according to you, the main reason why losses of [CROP] under [STATE/CONDITION] were experienced during the 2022/2023 MASIKA SEASON and DRY SEASON harvesting of [PLOT]? Improper handling of the harvest.....1 Use of inappropriate tools, equipment or machinery..2 Bad weather during harvest.....3 Lack of resources for labour.....4 Inappropriate harvesting period.....5 Too lengthy harvesting duration.....6 Other (specify).....99
		CROP NAME		CODE	PERCENT (%) OF PLANTED PLOT AREA	1st REASON	2nd REASON	NUMBER	NUMBER	**CODE**
1	1		1							
1	1		2							
1	1		3							
1	2		1							
1	2		2							

1	2		3							
1	3		1							
1	3		2							
2	1		2							
2	1		3							
2	1		4							
2	1		5							

Ask if VAR3_ALLFIELDS == true

SECTION 7. MASIKA AND DRY SEASON CROP ROSTER

					IF CAPI-VAR5_3==2	IF CAPI-VAR5_3==2	IF CAPI-VAR5_3==2	IF CAPI-VAR5_3==2
FIELD ID	PLOT ID	1.	CROP ID	**CAPI-VAR5_3**	PERMANENT CROPS			
					11.	12.	13.	14.
		I am about to ask you about crops on [FIELD] field, [PLOT]. List all the temporary and permanent crops, including fruit trees on [PLOT] in the past 2022/23 MASIKA SEASON and DRY SEASON.		**PROGRAMMED IN CAPI**: IS [CROP] TEMPORARY OR PERMANENT?	Is the [CROP] on this [PLOT] cultivated in a compact or scattered planting? COMPACT .....1 SCATTERED....2	How many [CROP] plants/trees are on this [PLOT]? IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99.	How many of them are in the production age? *PRODUCTION AGE IS THE AGE AT WHICH THE TREE OR PLANT IS READY TO PRODUCE THE PRODUCT OF INTEREST IF THE FARMER IS UNABLE TO QUANTIFY, RECORD -99	Have you planted any [CROP] during the past 2022/23 MASIKA SEASON and DRY SEASON? YES..1 NO...0
		CROP NAME		CODE	CODE	NUMBER	NUMBER	CODE
1	1		1					

1	1		2					
1	1		3					
1	2		1					
1	2		2					
1	2		3					
1	3		1					
1	3		2					
2	1		2					
2	1		3					
2	1		4					
2	1		5					
2	1		6					

Ask if any perm culture in Vuli or Masika sections (plot VULI or plot MASIKA)

SECTION 8. PERMANENT CROP PRODUCTION

-	-	-		IF Q1==0	IF Q1==1	IF Q1==1					IF q6 < q4b
FIE	QR		1.	2.	3.	4a.	4b.	4c	5.	6.	7.

		PROGRAMMED IN CAPI: PREFILL ALL FIELD-PLOT-CROP INFORMATION FROM THE CROP ROSTER	Did you harvest any of the [CROP] on this [FIELD] field during the past 2022/2023 agricultural year? YES..1 NO...0	Why did not you harvest [CROP] from this [FIELD] field during the past 2022/2023 agricultural year? TOO LITTLE RAIN/DROUGHT...1 RAIN/FLOOD DAMAGE.....2 RAIN CAME TOO EARLY OT TOO LATE.3 WIND/FROST DAMAGE.....4 PLANT PEST/DISEASE.....5 FIRE DAMAGE.....6 CROP THEFT.....7 NO AVAILABLE LABOR.....8 CROPS STILL ON THE FIELD...9 ANIMAL/BIRD DAMAGE.....10 ► NEXT CROP	In which months did you harvest harvest [CROP] from this [FIELD] field during the past 2022/2023 agricultural year? SELECT ALL THAT APPLY JANUARY.....01 FEBRUARY....02 MARCH.....03 APRIL.....04 MAY.....05 JUNE.....06 JULY.....07 AUGUST.....08 SEPTEMBER...09 OCTOBER.....10 NOVEMBER.....11		In which states/conditions did you harvest [CROP] on [PLOT] plot during the past 2022/2023 agricultural year? SELECT ALL THAT APPLY (Max 2 answers)	How much [CROP] in total did you harvest from [PLOT] plot under [STATE/CONDITION] state/condition during the past 2022/2023 agrciultural year?		How much [CROP] do you think you could have harvested from [FIELD] if no losses had been suffered <u>prior to the harvest</u>? * Report in %s8q04a% condition and %s8q04c% unit -999 = same harvest as reported in q4	How much [CROP] do you think you have lost <u>during the harvest</u> of [FIELD]? * Report in %s8q04a% condition and %s8q04c% unit -999 = same harvest as reported in q8	What was, according to you, the <u>main reason</u> why losses of [CROP] were experienced during the harvesting of [FIELD]? Improper handling of the harvest..1 Use of inappropriate tools, equipment or machinery.....2 Bad weather during harvest.....3 Lack of resources or labour.....4 Inappropriate harvesting period...5 Too lengthy harvesting duration...6 Other (specify).....99
		CODE	**CODE**	**CODE**	**MONTH**	**YEAR**	CODE	NUMBER	UNIT	NUMBER	NUMBER	**CODE**
-												
-												
-												
-												
-												
-												

Ask if s5q05==1 || s7q05==1||s8q01==1

SECTION 9: CROP USE HARVEST USE

IF Q1==1

CROP ID		1.	1.a	1. b		1. c		1.d	Instorage
	PROGRAMMED IN CAPI: LIST ALL HARVESTED CROPS FROM SECTION 6 (ie., if sect 6 Q4==1) AND SECTION 9 9ie., if sect 9 Q4==1)	Did you store any of the [CROP] harvested in the past 2022/23 agricultural year? YES..1 NO...0	In which type of facility was most of [CROP] stored ? Traditional granary...1 Metal silo...2 Storage room (simple)...3 Storage room (with controlled temperature and/or humidity)...4 Unprotected storage (e.g. heaped on the ground)...5 Other(specify)..99	What quantity of [CROP] did you store after the harvest(s) of the past 2022/23 agricultural year?		How much [CROP] stored from the past 2022/2023 agricultural season do you think you have lost?		What was, according to you, the main reason why losses were suffered during the storage? Inappropriate storage facility (e.g. unprotected) ...1 Inappropriate storage container (e.g. unsealed bags) ...2 Insufficient drying of crop prior to harvest...3 Excess humidity and/or temperature variations...4 Excessive storage duration...5 No/too little or inappropriate use of pesticides...6 Other (specify)..99	**PROGRAMMED IN CAPI:** Takes a blank string value if s1q01==0 and takes the string value ", including the quantity in storage?" if s7q01==1
	CROP NAME	CODE	CODE	QTY 1	UNIT 1	QTY 1	UNIT 1	CODE	
1									
2									
3									
4									
5									
6									
7									
8									
9									

Ask if s5q05==1 || s7q05==1||s8q01==1

SECTION 9: CROP HARVEST USE

CROP ID			IF Q2.Contains(1)	if Q3>0	IF Q2.Contains(2)	IF Q2.Contains(3)	IF Q2.Contains(4)	IF Q2.Contains(5)
		2.	3.	4.	5.	6.	7.	8.
	PROGRAMMED IN CAPI: LIST ALL HARVESTED CROPS FROM SECTION 6 (ie., if sect 6 Q4==1) AND SECTION 9 9ie., if sect 9 Q4==1)	Did your household/farm use , or intended to use the [CROP] produce [instorage] for any of the following purposes? *READ ANSWERS *SELECT ALL THAT APPLY FOR SALE.....1 FOR SELF CONSUMPTION..2 FOR GIVING OUT AS GIFT TO OTHER HOUSEHOLDS...3 FOR PAYING FOR LAND, LABOUR OR INPUTS.....4 FOR ANIMAL FEED.....5 FOR SEEDS FOR NEXT SEASON.....6 FOR PROCESSING AND SALE 7	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was sold, or intended to be sold in unprocessed form [instorage]?	What was the total value of all **unprocessed** [CROP] sales or intended sales [instorage]? ESTIMATE THE VALUE OF IN-KIND PAYMENTS . ESTIMATE THE VALUE OF SALES NOT YET DONE	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was consumed or intended to be consumed by household members either in processed or unprocessed form [instorage]? IF PROCESSED FOR CONSUMPTION, INCLUDE IT HERE AS PART OF THE RAW PRODUCT	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was given out as gift or intended to be given out as gift to other households [instorage]? IF PROCESSED BEFORE GIVING OUT AS GIFT, INCLUDE IT HERE AS PART OF THE RAW PRODUCT	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was used or intended to be used to pay for land, labour or inputs [instorage]? IF PROCESSED BEFORE GIVING OUT AS REIMBURSEMENT, INCLUDE IT HERE AS PART OF THE RAW PRODUCT	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was used or intended to be used for animal feed [instorage]? EXCLUDE THE QUANTITY OF CROP USED AS ANIMAL FEED DUE TO PEST DAMAGE.
	CROP NAME	CODE	%	TZS	%	%	%	%
1								
2								
3								
4								

5								
6								
7								
8								
9								

Ask if s5q05==1 || s7q05==1||s8q01==1

SECTION 9: CROP HARVEST USE

		If CAPI-VAR5==1 && Q2.Contains(6)	IF Q2.Contains(7)	IF Q2.Contains(99)	IF Q2.Contains(7)		IF Q12>0
CROP ID		9.	10.	11.	12.		13.
	PROGRAMMED IN CAPI: LIST ALL HARVESTED CROPS FROM SECTION 6 (ie., if sect 6 Q4==1) AND SECTION 9 9ie., if sect 9 Q4==1)	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was used or intended to be used for seeds in the following season [instorage]?	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was processed or intended to be processed for sale [instorage]?	What percentage or proportion of the [CROP] harvested in the past 2022/23 agricultural year was used or intended to be used for any other purposes not mentioned before [instorage]?	What quantity of [CROP] do you think you have lost during all the processing operations conducted for [CROP] in the past 2022/23 agricultural year? Note 1: *By processing we mean any transformation conducted to the crop after its harvest, including drying, cleaning/winnowing, milling, crushing, peeling, cutting/slicing etc.* Note 2: *Please express the losses in terms of the end product. For example, if maize was threshed, express the losses during threshing in grain terms, e.g. half a bag of grain, 10kg of grain, etc.*		What was, according to you, the main reason for the losses of [CROP] during processing? Inappropriate handling of product.....1 Use of inappropriate tools, equipment or machinery.....2 Inappropriate processing facility (e.g.on bare floor).....3 Other(specify).....99
	CROP NAME	%	%	%	QTY 1	UNIT 1	CODE

1							
2							
3							
4							
5							
6							
7							
8							
9							

Ask if permanent or temp crop was planted: - (VULI) VAR5==1||s5q15==1- (MASIKA) VAR5_3==1||s7q15==1

SECTION 10. SEED AND SEEDLINGS ACQUISITION

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	IF VAR2_ALLFIELDS == true		IF VAR3_ALLFIELDS == true			IF Q3. ContainsAny(5,6,7)	IF Q4.InList(2,3,98)		IF Q4.InList(1,2)		IF Q4.InList(2,3,98)	IF Q4.InList(1,2)
PROGRAMMED IN CAPI: LIST HERE ALL THE TEMPORARY AND PERMANENT CROPS THAT HAVE BEEN PLANTED IN THE VULI OR IN THE MASIKA SEASON	1. What was the total quantity of [CROP] seeds, seedlings or cuttings planted during the past 2022/23 VULI SEASON? IF RESPONDENT DOES NOT KNOW, ASK TO SEE PACKAGING KILOGRAM...1 SEEDLINGS...2 CUTTINGS....3		2. What was the total quantity of [CROP] seeds, seedlins or cuttings planted during the past 2022/23 MASIKA SEASON? IF RESPONDENT DOES NOT KNOW, ASK TO SEE PACKAGING KILOGRAM...1 SEEDLINGS..2 CUTTINGS...3		3. What was the source of [CROP] seeds, seedlings or cuttings that was used during this past 2022/2023 agricultural year? SELECT ALL THAT APPLY FROM PREVIOUS HOLDING'S HARVEST.....1 GIFT FROM NEIGHBORS, FRIENDS, RELATIVES.....2 DONATIONS FROM GOVERNMENTAL INSTITUTIONS.....3 DONATIONS FROM NON GOV ORGANIZATIONS.....4 PURCHASE FROM LOCAL MERCHANT/GROCERY.....5 PURCHASE FROM GOVERNMENT AGENCY.....6 PURCHASE FROM FARMER	4. Were the [CROP] seeds, seedlings or cuttings that you purchased in the past 2022/2023 agricultural year all subsidized, partly subsidized or non-subsidized? ALL PURCHASES WERE SUBSIDIZED....1 SOME PURCHASES WERE SUBSIDIZED ...2 NO PURCHASE WAS SUBSIDIZED....3 DON'T KNOW.....98	5a. What was the total **quantity** of non-subsidized [CROP] seeds, seedlings or cuttings that you purchased for the past 2022/2023 agricultural year? KILOGRAM...1 SEEDLINGS..2 CUTTINGS...3		5b. What was the total **quantity** of subsidized [CROP] seeds, seedlings or cuttings that you purchased for the past 2022/2023 agricultural year? KILOGRAM.....1 SEEDLINGS....2		6a. What was the **average unit price** of the non-subsidized [CROP] seeds, seedlings or cuttings that you purchased for the past 2022/2023 agricultural year?	6b. What was the **average unit price** of the subsidized [CROP] seeds, seedlings or cuttings that you purchased for the past 2022/2023 agricultural year?
CROP ID	QTY	UNIT	QTY	UNIT	CODE	**CODE**	QTY	UNIT	QTY	UNIT	TZS per unit	TZS per unit
						-						
						-						
						-						
						-						
						-						

						-						
						-						
						-						

Ask if (s4q05==1 || s4q07==1 || s4q09==1) || (s6q05==1 || s6q07==1 || s6q09==1)

SECTION 11. INPUT USE AND ACQUISITION (FERTILIZERS AND PESTICIDES)

IF Q02.ContainsAny(4,5,6) && @rowcode.InList(8,21)

INPUT CODE	PROGRAMMED IN CAPI: LIST ALL FERTILIZERS AND PESTICIDES THAT HAVE BEEN USED IN THE PAST 2022/23 AGRICULTURAL YEAR (see sect 6 and sect 9, Q1B, 2B, 3B)	1 What was the quantity of [INPUT TYPE] that your farm used during the past 2022/23 agricultural year? REPORT NOT DILUTED QTY CODES FOR UNIT: GRAM.....1 KILOGRAM.....2 MILLILITER...3 LITER.....4 OTHER(SPEC).99		2 How did you obtain the [INPUT TYPE] that were used during the past 2022/23 agricultural year? SELECT ALL THAT APPLY GIFT FROM NEIGHBORS, FRIENDS, RELATIVES.....1 DONATIONS FROM GOVERNMENTAL INSTITUTIONS....2 DONATIONS FROM NON GOV ORGANIZATIONS.....3 PURCHASE FROM LOCAL MERCHANT/GROCERY.....4 PURCHASE FROM GOVERNMENT AGENCY.....5 PURCHASE FROM FARMER ASSOCIATION 6	3. Were the [INPUT TYPE] that you purchased in the past 2022/2023 agricultural year all subsidized, partly subsidized or non-subsidized? ALL PURCHASES WERE SUBSIDIZED.....1 SOME PURCHASES WERE SUBSIDIZED .....2 NO PURCHASE WAS SUBSIDIZED.....3 DON'T KNOW.....98
	INPUT TYPE	QTY	UNIT	CODE	CODE
1	SOLID MANURE / FARM YARD MANURE				
2	LIQUID MANURE / SLURRY				
3	GREEN MANURE (CROP RESIDUES)				
4	COMPOST				
5	STABILIZED SEWAGE SLUDGE				
6	BIOFERTILIZERS				
7	OTHER ORGANIC FERTILIZER				
8	UREA				
9	DIAMMONIUM PHOSPHATE (DAP)				
10	CALCIUM AMMONIUM NITRATE (CAN)				
11	AMMONIUM SULPHATE (SA)				
12	NITROGEN, PHOSPHORUS, POTASSIUM (NPK)				
13	MINJINGU NAFAKA PLUS				
14	NPS Zinc				
15	OTHER INORGANIC FERTILIZER				
16	INSECTICIDES				
17	HERBICIDES (SOLID)				
18	HERBICIDES (LIQUID)				
19	FUNGICIDES				
20	RODENTICIDES				
21	OTHER (SPECIFY)				

Ask if (s4q05==1 || s4q07==1 || s4q09==1) || (s6q05==1 || s6q07==1 || s6q09==1)

SECTION 11. INPUT USE AND ACQUISITION (FERTILIZERS AND PESTICIDES)

INPUT CODE	PROGRAMMED IN CAPI: LIST ALL FERTILIZERS AND PESTICIDES THAT HAVE BEEN USED IN THE PAST 2022/23 AGRICULTURAL YEAR (see sect 6 and sect 9, Q1B, 2B, 3B)	IF Q03.InList(2,3,98) || (Q02.ContainsAny(4,5,6) && @rowcode.InList(1,7))	IF Q03.InList(1,2)	IF Q02.ContainsAny(4,5,6)
		4a	4b	5.
		In total, how much non-subsidized [INPUT TYPE] has your household/farm purchased for the past 2022/23 agricultural year? REPORT NOT DILUTED QTY REPORT in %s11q1_unit%	In total, how much subsidized [INPUT TYPE] has your household/farm purchased for the past 2022/23 agricultural year? REPORT NOT DILUTED QTY REPORT in %s11q1_unit%	ENUMERATOR: ASKS IF RESPONDENT PREFERS GIVING THE TOTAL VALUE OF THE [INPUT TYPE] PURCHASED OR THE UNIT PRICE TOTAL VALUE...1 UNIT PRICE....2
	INPUT TYPE	QTY	QTY	CODE
1	SOLID MANURE / FARM YARD MANURE			
2	LIQUID MANURE / SLURRY			
3	GREEN MANURE (CROP RESIDUES)			
4	COMPOST			
5	STABILIZED SEWAGE SLUDGE			
6	BIOFERTILIZERS			
7	OTHER ORGANIC FERTILIZER			
8	UREA			
9	DIAMMONIUM PHOSPHATE (DAP)			
10	CALCIUM AMMONIUM NITRATE (CAN)			
11	AMMONIUM SULPHATE (SA)			
12	NITROGEN, PHOSPHORUS, POTASSIUM (NPK)			
13	MINJINGU NAFAKA PLUS			
14	NPS Zinc			
15	OTHER INORGANIC FERTILIZER			
16	INSECTICIDES			
17	HERBICIDES (SOLID)			
18	HERBICIDES (LIQUID)			
19	FUNGICIDES			
20	RODENTICIDES			
21	OTHER (SPECIFY)			

Ask if (s4q05==1 || s4q07==1 || s4q09==1) || (s6q05==1 || s6q07==1 || s6q09==1)

SECTION 11. INPUT USE AND ACQUISITION (FERTILIZERS AND PESTICIDES)

INPUT CODE	PROGRAMMED IN CAPI: LIST ALL FERTILIZERS AND PESTICIDES THAT HAVE BEEN USED IN THE PAST 2022/23 AGRICULTURAL YEAR (see sect 6 and sect 9, Q1B, 2B, 3B)	IF IsAnswered(Q04 a) && Q05==1 6a. What was the total non-subsidized value of the [INPUT TYPE] that you purchased for the past 2022/23 agricultural year?	IF IsAnswered(Q04 b) && Q05==1 6b What was the total subsidized value of the [INPUT TYPE] that you purchased for the past 2022/23 agricultural year?	IF IsAnswered(Q04 a) && Q05==2 7a What was the average non-subsidized unit price of the [INPUT TYPE] that you purchased for the past 2022/23 agricultural year?	IF IsAnswered(Q04 b) && Q05==2 7b What was the average subsidized unit price of the [INPUT TYPE] that you purchased for the past 2022/23 agricultural year?
	INPUT TYPE	TZS	TZS	TZS	TZS
1	SOLID MANURE / FARM YARD MANURE				
2	LIQUID MANURE / SLURRY				
3	GREEN MANURE (CROP RESIDUES)				
4	COMPOST				
5	STABILIZED SEWAGE SLUDGE				
6	BIOFERTILIZERS				
7	OTHER ORGANIC FERTILIZER				
8	UREA				
9	DIAMMONIUM PHOSPHATE (DAP)				
10	CALCIUM AMMONIUM NITRATE (CAN)				
11	AMMONIUM SULPHATE (SA)				
12	NITROGEN, PHOSPHORUS, POTASSIUM (NPK)				
13	MINJINGU NAFAKA PLUS				
14	NPS Zinc				
15	OTHER INORGANIC FERTILIZER				
16	INSECTICIDES				
17	HERBICIDES (SOLID)				
18	HERBICIDES (LIQUID)				
19	FUNGICIDES				
20	RODENTICIDES				
21	OTHER (SPECIFY)				

Ask if s1q07==1

SECTION 12. LIVESTOCK IN STOCK AND CHANGE IN STOCK

ENUMERATOR READ: In the next sections, I will ask you about the livestock you raised in the agricultural year 2022/23, from October 2022 to September 2023.

1a. From October 2022 to September 2023, did the household/farm keep any of the following livestock or poultry, irrespective of who the owner is?

*READ ANSWERS

*SELECT ALL THAT APPLY

INDIGENOUS CATTLE.....1
IMPROVED CATTLE.....2
GOATS.....3
SHEEP.....4
PIGS.....5
INDIGENOUS CHICKEN.....6
IMPROVED CHICKEN.....7
DUCKS.....8
DONKEYS.....9

Ask if s1q07==1

SECTION 12. LIVESTOCK IN STOCK AND CHANGE IN STOCK

					IF Holding_TYPE==1 && s12q01b>0	IF Holding_TYPE==1 && s12q01b>0	IF Holding_TYPE==2	IF Q2a==1	BORN
CODE LS GROUP	LIVESTOCK GROUP	CODE LS NAME	LIVESTOCK/POULTRY TYPE	1b.	1c.	1d.	2a.	2b.	3
				How many [LIVESTOCK/POULTRY TYPE] did this household/farm keep as of 1st October 2023? IF 0 ► **NEXT ROW** number	How many [LIVESTOCK/POULTRY TYPE] did this household/farm keep last year at the same period, as of 1st October 2022? number	Does your household own all of the [LIVESTOCK/POULTRY TYPE] it keeps on the farm as of 1st October 2023? 1 = Yes 0 = No	Does the farm have a production and/or marketing contract for [LIVESTOCK/POULTRY TYPE] being raised? 1 = Yes 0 = No	Does the contract cover 100% of the [LIVESTOCK/POULTRY TYPE] grown by the farm (exclusive contract)? 1 = Yes 0 = No	How many [LIVESTOCK/POULTRY TYPE] were born in the agricultural year from October 2022 to September 2023? number
1	Large ruminants	1	Indigenous cattle						
		2	Improved cattle						
2	Small ruminants	3	Goats						
		4	Sheep						
3	Pigs	5	Pigs						
4	Poultry	6	Indigenous chicken						
		7	Improved chicken						
		8	Ducks						
5	Donkeys	9	Donkeys						
6	Dogs	10	Dogs						

SECTION 12. LIVESTOCK IN STOCK AND CHANGE IN STOCK

				PURCHASES		OTHER ENTRIES (GIFTS - RECEIVED, ETC.)	SALES OF LIVE ANIMALS			
CODE LS GROUP	LIVESTOCK GROUP	CODE LS NAME	LIVESTOCK/POULTRY TYPE	4	5	6	7	8a	8b	8c
				How many [LIVESTOCK/POULTRY TYPE] did this household/farm buy alive from October 2022 to September 2023? IF 0 RECORD "0" AND ► 6	What was the average unit price of the [LIVESTOCK NAME] purchased from October 2022 to September 2023?	How many [LIVESTOCK/POULTRY TYPE] were received for free or as a gift or dowry from October 2022 to September 2023?	How many [LIVESTOCK/POULTRY TYPE] has this farm sold alive from October 2022 to September 2023? IF 0 RECORD "0" AND ► 9	ENUMERATOR: ASK RESPONDENT IF S/HE PREFERS GIVING THE TOTAL VALUE OF THE [LIVESTOCK/POULTRY TYPE] SOLD OR THE UNIT PRICE TOTAL VALUE..1 UNIT PRICE..2 ►8C	What were the total revenues from these [LIVESTOCK/POULTRY TYPE] sales from October 2022 to September 2023? ► 9	What was the average unit price of the [LIVESTOCK/POULTRY TYPE] sold from October 2022 to September 2023?
				number	TZS	number	number		TZS	TZS
1	Large ruminants	1	Indigenous cattle							
		2	Improved cattle							
2	Small ruminants	3	Goats							
		4	Sheep							
3	Pigs	5	Pigs							
4	Poultry	6	Indigenous chicken							
		7	Improved chicken							
		8	Ducks							
5	Donkeys	9	Donkeys							
6	Dogs	10	Dogs							

Ask if s1q07==1

SECTION 12. LIVESTOCK IN STOCK AND CHANGE IN STOCK

				DEATHS	**LOST**	**ANIMALS SLAUGHTERED**			
CODE LS GROUP	**LIVESTOCK GROUP**	**CODE LS NAME**	**LIVESTOCK/POULTRY TYPE**	9	10	11	12		13
				How many [LIVESTOCK/POULTRY TYPE] died (diseases, natural events, etc) from October 2022 to September 2023?	How many [LIVESTOCK/POULTRY TYPE] were lost (stolen, missing etc.) from October 2022 to September 2023?	How many [LIVESTOCK/POULTRY TYPE] has this household/farm slaughtered from October 2022 to September 2023? IF 0 RECORD "0" AND ► 16	What was the average weight of the [LIVESTOCK/POULTRY TYPE] before they were slaughtered?		Approximately, what proportion of [LIVESTOCK/POULTRY TYPE] meat was consumed by the household/farm from October 2022 to September 2023?
				number	number	number	QTY	UNIT	%
1	Large ruminants	1	Indigenous cattle						
		2	Improved cattle						
2	Small ruminants	3	Goats						
		4	Sheep						
3	Pigs	5	Pigs						
4	Poultry	6	Indigenous chicken						
		7	Improved chicken						
		8	Ducks						
5	Donkeys	9	Donkeys						
6	Dogs	10	Dogs						

Ask if s1q07==1

SECTION 12. LIVESTOCK IN STOCK AND CHANGE IN STOCK

				ANIMALS SLAUGHTERED			**OTHER EXITS (DONATIONS, GIVEN AWAY ETC.)**
CODE LS GROUP	**LIVESTOCK GROUP**	**CODE LS NAME**	**LIVESTOCK/POULTRY TYPE**	14	15	15b	16
				Did the household/farm sell any slaughtered [LIVESTOCK/POULTRY TYPE] or their meat from October 2022 to September 2023? YES...1 NO....0 ►16 CODE	Approximately, what proportion of slaughtered [LIVESTOCK/POULTRY TYPE] was sold by the farm from October 2022 to September 2023? %	What was the price per kg of [LIVESTOCK/POULTRY TYPE] meat sold from October 2022 to September 2023? TZS/	How many [LIVESTOCK/POULTRY TYPE] were given away for example as dowry from October 2022 to September 2023? number
1	Large ruminants	1	Indigenous cattle				
		2	Improved cattle				
2	Small ruminants	3	Goats				
		4	Sheep				
3	Pigs	5	Pigs				
4	Poultry	6	Indigenous chicken				
		7	Improved chicken				
		8	Ducks				
5	Donkeys	9	Donkeys				
6	Dogs	10	Dogs				

Ask if s1q07==1

SECTION 13: LIVESTOCK PRODUCTION COSTS

CODE LS NAME	LIVESTOCK/POULTRY TYPE	1a. How much has this household/farm paid for water for [LIVESTOCK GROUP] during the wet season from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	1b. How much has this household/farm paid for water for [LIVESTOCK GROUP] during the dry season from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	2a. How much has this household/farm spent to purchase fodder / crop residues / grazing insitu / industrial products / roots & tubers / balanced concentrates / feed supplements for [LIVESTOCK GROUP] during the wet season from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	2b. How much has this household/farm spent to purchase fodder / crop residues / grazing insitu / industrial products / roots & tubers / balanced concentrates / feed supplements for [LIVESTOCK GROUP] during the dry season from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	3. How much did this household/farm spend in total for breeding [LIVESTOCK GROUP] from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	4. How much did this household/farm spend on vaccines and controls against internal and / external parasites for [LIVESTOCK GROUP] from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS	5. How much did this household/farm spend in total on curative treatments for [LIVESTOCK GROUP] from October 2022 to September 2023? *RECORD 0 IF NO COSTS INCURRED TZS
1	Indigenous cattle							
2	Improved cattle							
3	Goats							
4	Sheep							
5	Pigs							
6	Indigenous chicken							
7	Improved chicken							

Ask if s12q01a.ContainsAny(1,2,3)

SECTION 14: MILK PRODUCTION

					IF Q1==1 && Holding_TYPE==2	IF Q02==1	IF (Q01==1 && Holding_TYPE==1) || Q02==0	IF (Q01==1 && Holding_TYPE==1) || Q02==0	IF IsAnswered(Q04a)	IF IsAnswered(Q04b)	IF IsAnswered(5a)
				1	2	3	4a	4b	5a	5b	6a
CODE LS GROUP	LIVESTOCK GROUP	CODE LS NAME	LIVESTOCK NAME	Did the household/farm milk any [LIVESTOCK NAME] from October 2022 to September 2023?	Did the household/farm keep record of the quantity of milk produced from October 2022 to September 2023?	What was the quantity of milk produced from the [LIVESTOCK NAME] from October 2022 to September 2023?	During the wet season between October 2022 and September 2023, how many [LIVESTOCK NAME] were milked?	During the dry season between October 2022 and September 2023, how many [LIVESTOCK NAME] were milked?	From October 2022 to September 2023, during the wet season, on average for how many days were [LIVESTOCK NAME] milked?	From October 2022 to September 2023, during the dry season, for average on how many days were [LIVESTOCK NAME] milked?	On these days during the wet season in which [LIVESTOCK NAME] were milked, what was the average milk production per head and per day?
				1 = Yes 0 = No	1 = Yes 0 = No	Litres	number	number	number	number	litres
1	Large ruminants	1	Indigenous cattle								
		2	Improved cattle								
2	Small ruminants	3	Goats								

Ask if s12q01a.ContainsAny(1,2,3)

SECTION 14: MILK PRODUCTION

				IF IsAnswered(5b)	IF Q1==1 && Holding_TYPE==1	IF Q1==1	IF Q8==1	IF Q8==1	IF Q9b==1	IF Q9b==2
				6b	7	8	9a	9b	9c	9d
CODE LS GROUP	LIVESTOCK GROUP	CODE LS NAME	LIVESTOCK NAME	On these days during the dry season in which [LIVESTOCK NAME] were milked, what was the average milk production per head and per day?	From October 2022 to September 2023, what percentage or proportion of the [LIVESTOCK NAME] milk collected did this farm consume?	From October 2022 to September 2023, did this household/farm sell the milk of [LIVESTOCK NAME]?	From October 2022 to September 2023, what percentage or proportion of the [LIVESTOCK NAME] milk collected did the household/farm sell?	ENUMERATOR: ASK RESPONDENT IF THE farm PREFERS GIVING THE TOTAL VALUE OF EARNINGS OR THE UNIT PRICE Total value...1 Unit Price...2	How much has this farm earned in total by selling [LIVESTOCK NAME] milk from October 2022 to Septembe r 2023?	What was the average unit price of the [LIVESTOCK NAME] milk sold from October 2022 to September 2023? REPORT THE PRICE PER LITRE
				litres	%	1=Yes 0 = No	%	CODE	TZS	TZS
1	Large ruminants	1	Indigenous cattle							
		2	Improved cattle							
2	Small ruminants	3	Goats							

SECTION 15: EGG PRODUCTION

					IF Q1a==1	IF Q1a==1 && Holding_TYPE==2	IF Q02==1 || @rowcode==2	IF IsAnswered(s15q03)	IF @rowcode==1 && ((Q01a==1 && Holding_TYPE==1) || Q02==0)	IF IsAnswered(Q04)
				1a	1b	2	3	3_unit	4	5
CODE LS GROUP	**CODE LS NAME**	**LIVESTOCK GROUP**	**LIVESTOCK NAME** **IF farm KEPT ANY [LIVESTOCK NAME] ASK QUESTION 1** **IF NOT GO TO NEXT [LIVESTOCK NAME]**	Has any [LIVESTOCK NAME] in the household/farm produced any eggs from October 2022 to September 2023? 1 = Yes 0 = No **IF 0 ► NEXT LINE**	How many of [LIVESTOCK NAME] layed eggs from October 2022 to September 2023? number	Did the farm keep record of the quantity of eggs layed from October 2022 to September 2023? 1 = Yes 0 = No	How many eggs did [LIVESTOCK NAME] lay from October 2022 to September 2023? number	Unit mentioned by the respondent 1 = Eggs 2 = Trays (30 eggs)	How many clutching periods did [LIVESTOCK NAME] have on average from October 2022 to September 2023? number	How many eggs per clutching period did [LIVESTOCK NAME] lay on average? IF NONE, RECORD 0 number
4	6	Poultry	Indigenous chicken							
	7		Improved chicken							

SECTION 15: EGG PRODUCTION

				IF IsAnswered(s15q05)	IF Q1a==1 && Holding_TYPE==1	IF Q1a==1	IF Q7==1	IF Q7==1	IF Q8b==1	IF Q8b==2
				5_unit	6	7	8a	8b	8c	8d
CODE LS GROUP	CODE LS NAME	LIVESTOCK GROUP	LIVESTOCK NAME IF farm KEPT ANY [LIVESTOCK NAME] ASK QUESTION 1 IF NOT GO TO NEXT [LIVESTOCK NAME]	Unit mentioned by the respondent 1 = Eggs 2 = Trays (30 eggs)	From October 2022 to September 2023, what percentage or proportion of the [LIVESTOCK NAME] eggs were consumed by the household/farm? %	From October 2022 to September 2023, did this household/farm sell the [LIVESTOCK NAME] eggs? 1 = Yes 0 = No	From October 2022 to September 2023, what percentage or proportion of the [LIVESTOCK NAME] eggs did the household/farm sell? %	ENUMERATOR: ASK IF THE farm PREFERS GIVING THE TOTAL VALUE OF EARNINGS OR THE UNIT PRICE Total value..1 Unit Price...2	How much has this household/farm earned in total by selling [LIVESTOCK NAME] eggs from October 2022 to September 2023? TZS	What was the average unit price of the [LIVESTOCK NAME] eggs sold from October 2022 to September 2023? TZS per %s15q03_unit%
4	6	Poultry	Indigenous chicken							
	7		Improved chicken							

Ask if s1q07==1 || s1q08==1

SECTION 16: OTHER LIVESTOCK PRODUCTS

Q1. Did this household/farm produce any of the following livestock product types or services from October 2022 to September 2023?

*Read answers

*Select all that apply

STING BEE HONEY.....1
STINGLESS BEE HONEY.....2
ANIMAL SKINS.....3
ANIMAL HIDES.....4
ANIMAL DUNG.....5
DRAUGHT ANIMAL POWER (E.G. OXEN)....6
ANIMALS RENT OUT FOR BREEDING.....7
OTHER (SPECIFY).....99
NONE OF THE ABOVE.....0

Ask if s1q07==1 || s1q08==1

SECTION 16: OTHER LIVESTOCK PRODUCTS

		IF @rowcode.InList(1,2)	IF @rowcode.InList(1,2)			IF Q4==1	IF Q04==1 && @rowcode.Inlist(1,2,3,4,5,99)	IF Q04==1 && @rowcode.Inlist(6,7)	IF Q6a==1	Q06a==2
PRODUCT CODE	[SPECIFIC ITEMS TO BE ENABLED BASED ON THE ANIMALS RAISED ON THE FARM] PRODUCT TYPE	2a. How many local bee hives does this household/farm have?	2b. How many improved bee hives does this household/farm have?	3. What is the quantity of [PRODUCT TYPE] produced from October 2022 to September 2023? Number/pieces.1 Kg.....2 Litre.....3		4 Did this household/farm sell any [PRODUCT TYPE] from October 2022 to September 2023? YES..1 NO...0 ► NEXT PRODUCT	5. What is the quantity of [PRODUCT TYPE] sold from October 2022 to September 2023? *ASK IN %s16q02_unit%	6a ENUMERATOR: ASK RESPONDENT IF S/HE PREFERS GIVING THE TOTAL VALUE OF EARNINGS OR THE UNIT PRICE Total Value..1 Unit Price...2	6b How much in total did this household/farm earn by selling [PRODUCT TYPE] from October 2022 to September 2023?	6c What is the total value of [PRODUCT TYPE] sold from October 2022 to September 2023?	6d What was the average price of the [ITEM] per %s16q02_unit% sold from October 2022 to September 2023?
		NUMBER	**NUMBER**	**QUANTITY**	**UNIT**	**CODE**	**QUANTITY**	**CODE**	TZS	TZS	TZS per %s16q02_unit%
1	Sting bee honey								-		
2	Stingless bee honey								-		
3	Animal skins								-		
4	Animal hides								-		
5	Animal dung								-		
6	Animal draught power (oxen)									-	-
7	Animal rent out for breeding									-	-
99	Other (specify)								-		

Ask if s1q09==1

SECTION 17. AQUACULTURE PRODUCTION

ENUMERATOR READ: In the next sections, I will ask you about your aquaculture activity from October 2022 to September 2023.

1a. From October 2022 to September 2023, did the household/farm collect any of the following aquaculture products?

*READ ANSWERS
*SELECT ALL THAT APPLY

```
MILKFISH.................1
TILAPIA..................2
RAINBOW TROUT............3
LUNGFISH.................4
AFRICAN CATFISH..........5
PRAWNS...................6
CRABS....................7
SEAWEED..................8
SEA CUCUMBER.............9
```

```
MILKFISH.................1
TILAPIA..................2
TROUT....................3
RAINBOW LUNGFISH.........4
AFRICAN CATFISH..........5
PRAWNS...................6
CRABS....................7
```

Ask if s1q09==1

SECTION 17. AQUACULTURE PRODUCTION

-

ENUMERATOR READ: In the next sections, I will ask you about your aquaculture activity from October 2022 to September 2023.

	IF Holding_TYPE==1 && @rowcode.Inlist(1,2,3,4,5)		IF Holding_TYPE==1		IF Q04==1	IF Q04==1	IF Q06a==1	IF Q06a==2
	1b	2	3	4	5	6a	6b	6c
ITEMS	What was the main source of fingerlings for the [ITEM] collected from October 2022 to September 2023? OWN SOURCE.....1 NEIGHBOR.....2 GOVERNMENT INSTITUTION.....3 PRIVATE TRADE....4 NGO/PROJECT.....5 NATURAL POND.....6 OTHER (SPECIFY).99	What is the total quantity of [ITEM] collected from October 2022 to September 2023? *ASK IN KG	From October 2022 to September 2023, what percentage or proportion of the [ITEM] collected was consumed by this household?	From October 2022 to September 2023, did the household/farm sell any of the [ITEM] collected? YES...1 NO...0	From October 2022 to September 2023, what percentage or proportion of [ITEM] did the household/farm sell?	ENUMERATOR: ASK RESPONDENT IF S/HE PREFERS GIVING THE TOTAL VALUE OF EARNINGS OR THE UNIT PRICE Total value...1 Unit Price...2	What was the total amount earned from the sales of [ITEM] done from October 2022 to September 2023? CONSIDER ALL TYPES OF SALES, INCLUDING PRODUCTION CONTRACTS AND IN-KIND SALES ESTIMATE THE VALUE OF IN-KIND PAYMENTS.	What was the average price of the [ITEM] per kg sold in the agricultural year 2022/23?
	CODE	**QUANTITY**	**%**	**CODE**	**%**	**CODE**	TZS	TZS per kg
1. Milkfish								
2. Tilapia								
3. Rainbow Trout								
4. Lungfish								
5. African catfish								
6. Prawns								
7. Crabs								

8. Seaweed	[redacted]							
9. Sea cucumber								

Ask if VAR0==true

SECTION 18: LABOR

If Holding_TYPE==1

Household labor

					IF IsAnswered(Q01)	IF IsAnswered(Q02)	IF Q4.Contains(1)	IF IsAnswered(Q5a)	IF IsAnswered(Q5b)	IF Q4.Contains(2)	IF IsAnswered(Q5d)	IF IsAnswered(Q5e)	IF Q4.Contains(3)	IF IsAnswered(Q5g)	IF IsAnswered(Q5h)
INDIVIDUAL ID	1.	1.	2.	3.	4.	5a.	5b.	5c.	5d.	5e.	5f.	5g.	5h.	5i.
	PROGRAMMED IN CAPI: COPY FROM HH MEMBER ROSTER TO HERE ALL THE HOUSEHOLD MEMBERS AGED 5 YEARS AND ABOVE	For how many months has [NAME] worked on the farm during the past 2022/2023 agricultural year?	On such months, for how many days per month on average did [NAME] work on the farm?	On such days, for how many hours per day on average did [NAME] work on the farm ?	On what sector of activities did [NAME] work during the past 2022/2023 agricultural year? READ ANSWERS SELECT ALL THAT APPLY CROP.....1 LIVESTOCK...2 AOUACULTURE.3	For how many months has [NAME] worked on crop activities during the past 2022/2023 agricultural year?	How many days per month on average?	How many hours per day on average?	For how many months has [NAME] worked on livestock activities during the past 2022/2023 agricultural year?	How many days per month on average?	How many hours per day on average?	For how many months has [NAME] worked on aquaculture activities during the past 2022/2023 agricultural year?	How many days per month on average?	How many hours per day on average?
	PID	**NUMBER OF MONTHS**	**NUMBER OF DAYS**	**NUMBER OF HOURS**	**CODE**	**NUMBER OF MONTHS**	**NUMBER OF DAYS**	**NUMBER OF HOURS**	**NUMBER OF MONTHS**	**NUMBER OF DAYS**	**NUMBER OF HOURS**	**NUMBER OF MONTHS**	**NUMBER OF DAYS**	**NUMBER OF HOURS**
1		-	-	-										
2		-	-	-										

3		-	-	-									
4		-	-	-									
5													

Ask if VAR0==true

SECTION 18: LABOR

External labor

6a. During the past 2022/2023 agricultural year, did the household/farm use any of the following types of external workers?

*READ ANSWERS

*SELECT ALL THAT APPLY

```
FREE WORKERS.............1
EXCHANGE WORKERS.........2
HIRED WORKERS............3
NONE ....................4
```

-	-		IF Q6b==1	IF Q6b==1	IF IsAnswered(Q8)
WORKER CATEGORY	**SECTOR OF ACTIVITY**	6b. Did any of the [WORKER CATEGORY] work on [ACTIVITY] activities during the past agricultural year 2022/2023? YES...1 NO...0	7 How many [WORKER CATEGORY] worked on [ACTIVITY] activities during the past agricultural year 2022/2023?	8 During the past agricultural year 2022/2023, on average for how many months did [WORKER CATEGORY] work on [ACTIVITY] activities?	9 On such months, on average for how many days per month did the [WORKER CATEGORY] work on [ACTIVITY] activities?
WORKER ID	**ACTIVITYID**	-	**NUMBER**	**NUMBER OF MONTHS**	**NUMBER OF DAYS**
1. Free workers	1. CROP	-			
	2. LIVESTOCK	-			
	3. AQUACULTURE	-			
2. Exchange workers	1. CROP	-			
	2. LIVESTOCK	-			
	3. AQUACULTURE	-			
3. Hired workers	1. CROP	-			
	2. LIVESTOCK	-			
	3. AQUACULTURE	-			

Ask if VAR0==true

SECTION 18: LABOR

External labor

		IF IsAnswered(Q9)	IF WORKERID.InList(2,3)	IF Q11==1	IF Q11==1
		10	11	12	13
WORKER CATEGORY	**SECTOR OF ACTIVITY**	On such days, on average for how many hours per day did [WORKER CATEGORY] work on [ACTIVITY] activities?	Have you paid [WORKER CATEGORY] for the work on [ACTIVITY] activities? YES...1 NO...0	During the past agricultural year 2022/2023, how much in total did you pay cash [WORKER CATEGORY] for the work on [ACTIVITY] activities?	During the past agricultural year 2022/2023, how much in total did you pay in-kind [WORKER CATEGORY] for the work on [ACTIVITY] activities? EXCLUDE PAYMENTS MADE IN FARM PRODUCTION. ESTIMATE IN-KIND VALUE IN TZS RECORD 0 IF NONE
WORKER ID	**ACTIVITYID**	**NUMBER OF HOURS**	**CODE**	**TZS**	**TZS**
1. Free workers	1. CROP				
	2. LIVESTOCK				
	3. AQUACULTURE				
2. Exchange workers	1. CROP				
	2. LIVESTOCK				
	3. AQUACULTURE				
3. Hired workers	1. CROP				
	2. LIVESTOCK				
	3. AQUACULTURE				

Ask if VAR0==true

SECTION 19: OTHER ECONOMICS

-

1a. During the past 2022/2023 agricultural year, did the household/farm use/receive any of the following items or services?

*READ ANSWERS

*SELECT ALL THAT APPLY

*IF NECESSARY, PROVIDE EXAMPLES FROM THE ENUMERATOR MANUAL TO THE RESPONDENT

ANIMAL TRACTION RENTAL (RENT-IN) 1
POST-HARVEST LABOR.....2
TRANSPORT RELATED TO AGRICULTURAL ACTIVITIES....3
RENTAL OF MACHINERY, EQUIPMENT AND VEHICLES.....4
REPAIR AND MAINTENANCE OF MACHINERY, EQUIPMENT, VEHICLES.....5
RENTALS OR LEASING OF FARM LANDS AND BUILDINGS..6
REPAIRS AND MAINTENANCE OF FARM BUILDINGS.....7
AGRICULTURAL INSURANCE.....8
AGRICULTURAL EXTENSION SERVICES.....9
WATER FOR CROP CULTIVATION.....10
TAXES AND LICENSING FEES FOR AGRICULTURAL ACTIVITIES.....11
CONTRACTUAL SERVICES.....12
HIRED WORKERS FOR SIMPLE AND ROUTINE TASKS ON THE FARM.....13
FUEL FOR VEHICLES, MACHINERY FOR FARMING.....14

SECTION 19: OTHER ECONOMICS

(@rowcode.InList(14,15) && Holding_TYPE==2) || @rowcode.InList(1,2,3,4,5,6,7,8,9,10,11,12,13,99)

IF Q1b==1

IF Q1b==1

ITEM CODE	ITEM / SERVICE	1b. Did your household/farm pay for [ITEM] during the agricultural year 2022/23? YES...1 NO....0	2. What was the total amount paid for [ITEM]? TZS	3. What period of time does this payment cover? YEAR.....1 MONTH.....2 DAY.....3 AGRICULTURE DURATION	CODE
1	**Animal traction rental** (e.g. to prepare land)				
2	**Post-harvest labor** (e.g. for Shelling, Peeling, Drying, Cleaning or Processing , etc)				
3	**Transport related to agricultural activities** (e.g. transport crop to market, to storage, transport to buy inputs)				
4	**Rentals or leasing of machinery, equipment, or vehicles** related to agricultural activities (exclude transport costs)				
5	**Repairs and maintenance of machinery, equipment, and vehicles**				
6	**Rentals or leasing of farm lands and buildings**				
7	**Repairs and maintenance of farm buildings and fences**				
8	**Agricultural insurance**				
9	**Agricultural extension services** (e.g. government or private extension services)				
10	**Water for crop cultivation** (including irrigation fees)				
11	**Taxes and licensing fees related to agricultural activities** (e.g. land taxes, certification fees, crop production/sales)				
12	**Contractual services** for agricultural activities [exclude these costs from items above)				
13	**Hired workers for simple and routine tasks on the farm**				
14	**Fuel for vehicles, machinery used for farming**				
15	**Electricity for farming activity**				
99	**Other (specify)**				

	IF Holding_TYPE==1 && s2q04>=15 && s19q04a==1			IF Holding_TYPE==1 && s2q04>=15 && s19Q06a==1	IF Q06a==1	IF Q06a==1	IF Q06a==1
4a.	4b.	5	6a.	6b.	6c_cash	6c_kind	6d.
In the past 2022/2023 agricultural year, did this household/farm have access to or avail formal or informal credit for protection against external shocks? YES...1 NO....0	Who in the household had access to or avail formal or informal credit? *SELECT ALL MEMBERS THAT APPLY	In the past 2022/2023 agricultural year, did this household/farm have access to or avail insurance for protection against external shocks? YES...1 NO....0	In the past agricultural year 2022/2023, has the household/farm taken any cash or in-kind loan for agricultural purposes? YES.....1 No.....0	Who in the household took a loan for agricultural purposes? *SELECT ALL MEMBERS THAT APPLY	What was the total cash amount received in the past agricultural year 2022/2023?	What was the total in-kind amount received in the past agricultural year 2022/2023? *If no in-kind amount received, record 0. Estimate value in TZS.	What was the loan yearly interest rate? IF SEVERAL LOANS, INDICATE THE AVERAGE RATE
					TZS	in-kind	%
					|__||__||__||__|	|__||__||__||__|	

SECTION 19: OTHER ECONOMICS

IF Q06a==1	IF Q06a==1			IF Q06a==0	IF Q06a==1	IF Q09a==1	IF Q09a==1
6e.	7			8	9a	9b_cash.	9b_kind.
Who was the main loan provider? PUBLIC BANKS OR OTHER GOV. INSTITUTIONS...1 COMMERCIAL BANKS.....2 INSURANCE COMPANIES.....3 MICROFINANCE INSTITUTIONS.....4 NGOS.....5 PRODUCTION COOPERATIVES.....6 PRIVATE MONEY LENDER.....7 FRIENDS OR FAMILY - LIVING IN THE COUNTRY.8 FRIENDS OR FAMILY - LIVING ABROAD.....9 OTHER (SPECIFY).....99	What were your three main reason for seeking loans? PAY FOR LABORERS .....1 PURCHASE SEEDS, FERTILIZERS AGROCHEMICALS.....2 BUY OR REPAIR FARM EQUIPMENT, MACHINERY OR BUILDINGS.....3 DRAUGHT POWER.....4 PURCHASE LIVESTOCKS.....5 PURCHASE ANIMAL INPUTS.....6 AQUACULTURE.....7 APICULTURE (BEE KEEPING)....8 TRADING PRODUCE.....9			What is the main reason why the household/farm has not taken loans? DID NOT REQUEST.....1 REQUEST WAS REFUSED.....2 IMPOSSIBLE TO REQUEST, NO ACCESS...3 INVESTMENT ACTIVITY NOT ACCEPTED...4 NOT ENOUGH INCOME.....5 BAD CREDIT HISTORY.....6 INADEQUATE COLLATERAL...7 INTEREST RATE TOO HIGH....8	In the past agricultural year 2022/2023, has the household/farm repaid any cash or in-kind loan taken **for agricultural purposes**?.. Yes.....1 0	What was the total cash amount repaid in the past agricultural year 2022/2023?	What was the total in-kind amount repaid in the past agricultural year 2022/2023? *IF IN-KIND, ASK THE RESPONDENT TO ESTIMATE VALUE
	1st	2nd	3rd	CODE	CODE	TZS	TZS
|__|	|__|	|__|	|__|	|__|		|__|__|__|__|	|__|__|__|__|

Ask if VAR0==true && Holding_TYPE==2

SECTION 20. FARM REGISTRATION

1	2A	2B
Is the farm recorded in an official register? (e.g., administrative registers of agricultural enterprises, tax register, etc.) YES.....1 NO.....0 ► NEXT SECTION	Specify the type of register and provide the registration number 1. Registration of Business name 2. Registration of Company limited by Shares **DEFINITIONS:** **A Business Name** means the name or style under which any business is carried on, whether in partnership (more than one person) or sole proprietorship (an individual). **Company limited by shares** is a registration that involves an association of any two or more persons lawfully intending to carry on business in line with the requirements prescribed by the Companies Act.	
CODE	CODE	NUMBER

END OF INTERVIEW

CAPI-VAR6=1 if sect 13-Q1 CONTAINS MAIZE OR PADDY

1. STATUS OF THE INTERVIEW

- ❍ 1 completed
- ❍ 2 partially completed
- ❍ 3 not interviewed

2. **(IF Q1==2)** REASON FOR NOT COMPLETING THE INTERVIEW ☐

```
RESPONDENT HAD TO LEAVE...1
RESPONDENT WAS BUSY WITH
OTHER ACTIVITIES.........2
RESPONDENT    DID    NOT    KNOW    THE
ANSWERS..................3
RESPONDENT  REFUSED  TO  ANSWER  SOME
QUESTIONS................4
OTHER (SPECIFY).........99
```

3. END TIME OF INTERVIEW

DATE	HH	MM

4. Interview location ☐

```
DWELLING.....................1
MAIN AGRICULTURAL BUILDING......2
MAIN AGRICULTURAL PARCEL.......3
```

5. GPS coordinates of the interview location

5a. latitude			°			.		
5b. longitude			°			.		

APPENDIX: LIST OF PARTICIPANTS IN THE AASS 2022/23

STATISTICIAN GENERAL
Mr. Salum Kassim Ali - OCGS
PROJECT DIRECTOR
Mr. Bakari Kitwana - OCGS
PROJECT MANAGER
Miss. Nour Abdulwahid - OCGS
DESK OFFICER
Miss. Habiba Soud - OCGS
TECHNICAL SUPPORTERS
Miss. Chiara Brunelli
Mr. Benjamin Lamberet
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Miss. Silvia Missiroli
Mr. Javier Montero Serrano
Mr. Boniface Kamgang
Mr. Michele Rocca
Mr. Fadhili Mtengela
TECHNICAL COMMITTEE MEMBERS
Miss. Nour Abdulwahid
Miss. Habiba Soud
Mr. Rajabu Juma
Mr. Othman Ali
Mr. Ramadhani Ali
SAMPLE DESIGNERS

Miss. Sylvia Meku
Miss. Silvia Missiori
Mr. Ahmad Hamza
CAPI QUESTIONNAIRE DESIGNERS
Mr. Eliah Kazumali
Mr. Ariv Severe
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Miss. Aysha Said
CATOGRAPHERS
Mohamed Said
AUTHORS
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Miss. Habiba Soud
Mr. Rajabu Juma
Miss. Mwanaenzi Mahfoudh
Miss. Nour Abdulwahid
Mr. Ramadhani Ali
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Mr. Benjamin Lamberet
Miss. Rabia Kassim
Mr. Mohammed Said
Mr. Salim Makame Salim
Mr. Rajabu Juma
Miss. Aysha Said
Miss. Habiba Soud
Miss. Nour Masoud
ADVISORS
Mr. Oswald Ruboha
Mr. Longin Nsiima

FIELD SUPERVISORS	**REGION**
Miss. Aysha Ali	Mjini Magharibi
Mr. Ramadhan Hassan	Kaskazini Unguja
Mr. Othman Ali	Kusini Unguja
Miss. Nachia Salum	Kusini Pemba
Mr. Juma Omar	Kaskazini Pemba
LIST OF ENUMERATORS FOR AGRICULTURAL HOUSEHOLDS	**REGION**
Miss. Lutfia Ali Khatib	Kaskazini Unguja
Miss. Faidha Abdallah Khamis	Kaskazini Unguja
Mr. Miraji Haji Mshamba	Kaskazini Unguja
Mr. Hafidh Haji Salum	Kaskazini Unguja
Mr. Khatib Mohamed Khatib	Kusini Unguja
Miss. Hozema Jumbe Rajab	Kusini Unguja
Miss. Jumeu Said Khamis	Kusini Unguja
Mr. Aboud Ismail Maktoub	Kusini Unguja
Mr. Idrissa Juma Ali	Mjini Magharibi
Miss. Nassra Daud Ali	Mjini Magharibi
Mr. Abrahman Haji Eneani	Mjini Magharibi
Miss. Sesilia Kosta Henri	Mjini Magharibi
Mr. Nadir Khamis Ali	Kusini Pemba
Mr. Ahmed Mjaka Mkuu	Kusini Pemba
Mr. Mudrik Munir Ahmed	Kusini Pemba
Miss. Mgeni Khamis Haji	Kusini Pemba
Miss. Raya Haroub Ali	Kaskazini Pemba
Miss. Halima Asaa Othman	Kaskazini Pemba
Mr. Seif Sharif Hamad	Kaskazini Pemba
Miss. Rayyan Bakar Hamad	Kaskazini Pemba
LIST OF ENUMERATORS FOR LARGE SCALE FARMS	**REGION**

Mr. Mohamed Makame Abdulrahman	Kaskazini Unguja
Miss. Mwanaisha Juma Haji	Kusini Unguja
Mr. Ahmad Zahran Nassor	Mjini Magharibi
Mr. Abdalla Ayoub	Kusini Pemba
Mr. Omar Mbwana Dadi	Kaskazini Pemba