United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE
2002/2003

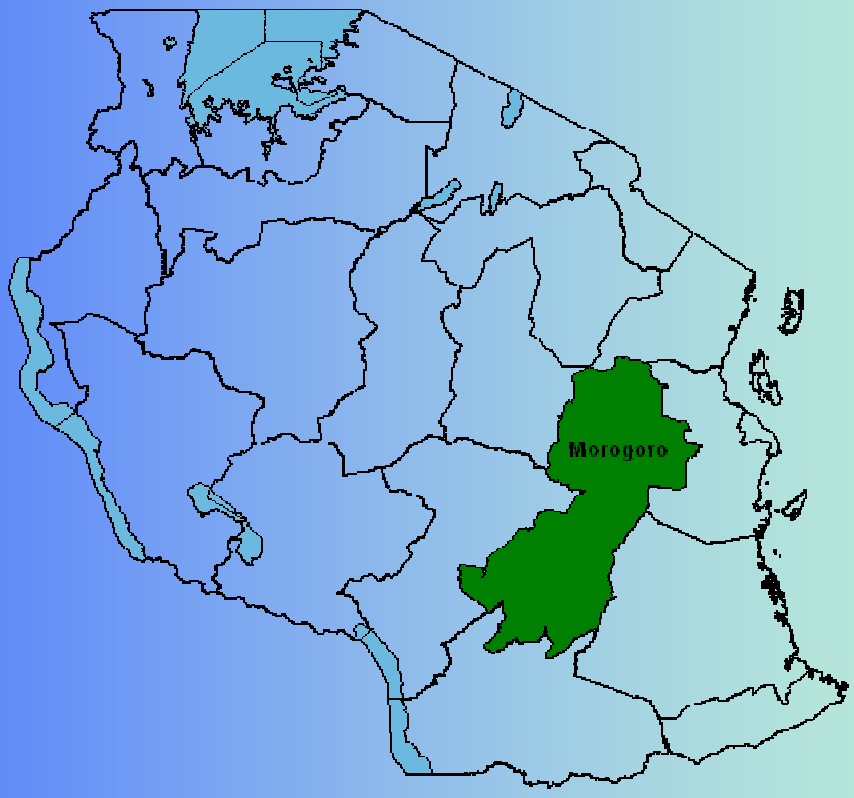
Volume Ve: REGIONAL REPORT: MOROGORO REGION


Cattle Rearing


Fish Harvesting


Eggs Production


Maize Planting




Paddy Growing


Hand Cultivation


Indigenous Chicken


Irrigation Practice


Orange Marketing


Cassava Planting


Goats Rearing

National Bureau of Statistics, Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development,
Ministry of Cooperatives and Marketing, Presidents Office, Regional Administration and Local Government
December 2007

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National Bureau of Statistics, Ministry of agriculture and Food Security,
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Presidents Office, Regional Administration and Local Government,
Ministry of Finance and Economic Affairs – Zanzibar

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ACRONYMS

ASDP	*Agricultural Sector Development Project*
CSPro	*Census and Survey Processing Program*
DFID	*Department For International Development*
DIAS	*District Integrated Agricultural Survey*
DS	*District Supervisor*
EAS	*Expanded Agricultural Survey*
EAs	*Enumeration Areas*
EU	*European Union*
FE	*Field Enumerator*
GDP	*Gross Domestic Product*
Ha	*Hectares*
IAS	*Integrated Agricultural Survey*
ICR	*Intelligent Character Recognition*
IEC	*Information, Education and Communication*
JICA	*Japanese International Cooperation Agency*
LRS	*Long Rainy Season,*
MAFS	*Ministry of Agriculture and Food Security*
MCM	*Ministry of Co-operatives and Marketing*
MWLD	*Ministry of Water and Livestock Development*
NBS	*National Bureau of Statistics*
NGO	*Non Governmental Organization*
NMS	*National Master Sample*
NSCA	*National Sample Census of Agriculture*
NSGRP	*National Strategy for Growth and Reduction of Poverty*
PORALG	*President's Office, Regional Administration and Local Government*
PPS	*Probability Proportional to Size*
PSU	*Primary Sampling Unit*
RAAS	*Rapid Appraisal Agricultural Survey*
RS	*Regional Supervisor*
RSM	*Regional Statistical Manager*
SAC	*Scott's Agriculture Consultancy Ltd*
SPSS	*Statistical Package for Social Science*
SRS	*Short Rainy Season*
TOT	*Training of Trainers*
ULG	*Ultek Laurence Gould*
UNDP	*United Nations Development Programme*
UNFAO	*United Nations Food and Agriculture Organization*
VPO	*Vice President Office*

PREFACE

At the end of the 2002/03 Agriculture Year, the National Bureau of Statistics and the Office of the Chief Government Statistician in Zanzibar in collaboration with the Ministries of Agriculture and Food Security; Water and Livestock Development; Cooperatives and Marketing as well as the Presidents Office, Regional Administration and Local Government (PORALG) conducted the Agriculture Sample Census. This is the third Agriculture Census to be carried out in Tanzania, the first one was conducted in 1971/72, the second in 1993/94 and 1994/95 (during 1993/94 data on household characteristics and livestock count were collected and data on crop area and production in 1994/95).

It is considered that this census is one of the largest to be carried out in Africa and indeed in many other countries of the world. The census collected detailed data on crop production, crop marketing, crop storage, livestock production, fish farming, tree farming, access to infrastructures and services and poverty indicators.

In addition to this, the census was large in its coverage as it provides data that can be disaggregated at district level and thus allow comparisons with the 1998/99 District Integrated Agricultural Survey. The census covered smallholders in rural areas only and large scale farms. This report presents Morogoro region data disaggregated to district level. It was very difficult to discuss all variables collected in a single report hence the analysis was based on the most important smallholder variables. The rest of the variables are found in the attached annex of table of results. The analysis in the report includes time series comparisons using data from the previous censuses and surveys.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information to assist in the proper planning of this sector and in the administrative decentralization of planning to district level. It is hoped that this report will provide new insights for planners, policy makers, researchers and others involved in the agricultural sector in order to improve the prevailing conditions faced by crop producers and livestock keepers in the country.

On behalf of the Government of Tanzania, I wish to express my appreciation for the financial support provided by the development partners, in particular, the European Union as well as DFID, UNDP, Japanese Government, JICA and others who contributed through the pool fund mechanism.

Finally, my appreciation goes to all those who in one-way or the other contributed to the success of the survey. In particular, I would also like to mention the enormous effort made by the Planning Group composed of professionals from the Agriculture Statistics Department of the National Bureau of Statistics (NBS), the Office of the Chief Government Statistician in Zanzibar (OCGS) and the Statistics Unit of the Ministry of Agriculture and Food Security (MAFS) with technical assistance provided by Ultec Lawrence Gould (ULG), Scotts Agriculture Consultancy Ltd and the Food and Agriculture Organisation of the United Nations (FAO).

Additionally, I would like to extend my appreciation to all professional staff of the National Bureau of Statistics, the sector Ministries of Agriculture and PORALG, the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. Certainly without their dedication, the census would not have been such a success.

Cletus P. B. Mkai
The Director General
National Bureau of Statistics

EXECUTIVE SUMMARY

The executive summary highlights the main survey results obtained during the National Sample Census of Agriculture 2002/03. This report covers small-scale agriculture households in rural areas of Morogoro region who were selected using statistical sampling techniques. The results in the report do not cover urban areas and large-scale farmers.

The highlights describe the important findings in relation to agricultural production, productivity, husbandry, access to resources, levels of involvement in agricultural related activities and poverty in Morogoro region activities indicators for one to get an overview, at regional level, of the rural agricultural households and their levels of involvement in agricultural related activities.

i) Household Characteristics

The number of agricultural households in Morogoro region were 265,198 out of which 178,406 (67.2%) were involved in growing crops only, 1,477 (0.6%) rearing livestock only, 194 (0.1%) were pastoralist, and 85,121 (32%) were involved in crop production as well as livestock keeping. In summary, Morogoro region had 259,246 households involved in crop production and 36,524 involved in livestock production.

Most of the agricultural households ranked annual crop farming as an activity that provides most of their cash income followed by off farm income, tree/forest resources, livestock keeping/herding, permanent crop farming, remittances and fishing/hunting and gathering.

The region has a literacy rate of 68 percent. The highest literacy rate is in Mvomero district (77%) followed by Kilombero district (73%), Morogoro Urban district (70%), Morogoro Rural (68%), Kilosa (67%) and Ulanga (66%). The literacy rate for the heads of households in the region was 77.2 percent.

The number of heads of agricultural households with formal education in Morogoro region was 196,247 (72%), those without formal education were 59,504 (23%) and those with only adult education were 4,995 (2%). The majority of heads of agricultural households (72%) had primary level education whereas less than 0.2 percent had post primary education.

In Morogoro region 139,109 household members (53%) were involved in one off-farm income generating activity, 79,217 (30%) involved in two off-farm income generating activities and 28,027 (11%) involved in more than two off-farm income generating activities.

ii) Crop Production

- **Land Area**

The total area of land available to smallholders was 558,133 ha. The regional average land area utilised for crop production per crop growing household was only 1.8 ha. This figure is below the national average of 2.0 hectares.

- **Planted Area**

The area planted with annual crops and vegetables was 414,604 hectares out of which 127,604 hectares (31%) were planted during short rainy season and 286,546 hectares (69%) during long rainy season.

An estimated area of 337,461 ha (81.5% of the total planted area with annual and vegetable crops) was with cereals, followed by 28,556 hectares (6.9%) of pulses, 22,301 ha (5.4%) of roots and tubers, 12,735 ha (3.1%) of oil seed, 12,400 hectares (3.0%) 0f fruit and vegetable, and 698 ha (0.2%) of cash crops.

- **Maize**

Maize is the dominant annual crop grown in Morogoro region and it had a planted area 1.5 times greater than paddy, which had the second largest planted area. The area planted with maize constitutes 47 percent of the total area planted with annual crops. Other crops in order of their importance (based on area planted) are beans, cassava, sorghum, simsim, tomatoes, sweetpotatoes, groundnuts, cabbage and cocoyam.

The yield of maize has dropped over the previous 10 years, the quantity produced has increased and this has been due to a large increase in the area under production. The area planted with maize increased from 1994/95 to 20002/03. The peak area recorded under maize production was in 1999/00 (242,544 ha). However, the yield of maize has shown a gradual decline over the years since 1994/95 (from 2.1t/ha in 1994/95 to 0.6 t/ha in 2003)

- **Paddy**

Paddy is the second most important cereal crop in the region in terms of planted area. The number of households that grew paddy in Morogoro region during the long rainy season was 109,655. This represented 49 percent of the total crop growing households in Morogoro region in the long rainy season.

- **Cassava**

The area planted with cassava was larger than any other root and tuber crop in Morogoro in terms of planted area (4% of the total area planted with annual crops and vegetables) and it accounted for 77 percent of the area planted with roots and tubers.

- **Fruit and Vegetables**

The total production of fruit and vegetables was 42,229 tonnes. The most cultivated fruit and vegetable crop was tomatoes. The production for this crop was 21,747 tonnes, which amounts to 51 percent of the total fruit and vegetable production, followed by cabbage 10,374 tonnes (25%), onion 4686 tonnes (11%), pumpkins 1,877 tonnes (4%), chillies 973 tonnes (2%), and amaranths 849 tonnes (2%). The production of the other fruit and vegetable crops was relatively small.

- **Permanent Crops**

The area of smallholders planted area with permanent crops was 50,712 hectares which is 11 percent of the area planted with annual crops in the region. The most important permanent crop is bananas which accounts for 19 percent of the total area planted with permanent crops followed by sugarcane (16%), coconut (15%) and mango (10%).

- **Improved Seeds**

The planted area using improved seeds was 55,330 ha which represents 14 percent of the total planted area with the annual crops and vegetables. The percentage use of improved seed in the long rainy season was 14.1 percent which is slightly higher than the corresponding percentage use for the short rainy season (13.6%).

- **Use of Fertilizers**

Most annual crop growing households do not use any fertiliser. The planted area without fertiliser for annual crops was 112,856 hectares representing 89 percent of the total planted area with annual crops. Of the planted area with fertiliser application, inorganic fertiliser was applied to 13,038 ha which represented 5 percent of the total planted area (44 % of the area planted with fertiliser application). This was followed by farm yard manure (10,901 ha, 40%). Compost fertilizers were used on a very small area and represented only 2 percent of the area planted with fertilizers.

- **Irrigation**

In Morogoro region, the area of annual crops and vegetables under irrigation was 64,685 ha representing 16 percent of the total area planted. The area under irrigation during the short rainy season was 6,810 ha accounting for 11 percent of the total area under irrigation. However, the percentage of the planted area under irrigation during the long rainy season was 20 percent compared with 5 percent in the short rainy season.

- **Crop Storage**

There were 336,432 crop growing households (15.3% of the total crop growing households) that reported storing various agricultural products in the region.

The most important stored crop was paddy with 99,430 households storing 19870 tonnes as of 1st January 2004. This was followed by maize (183,248 households and 17,805 tonnes), sorghum and millet (15,471 households and 1,436 tonnes) and beans and pulses (35,134 households and 955 tonnes) and groundnuts (1,524 household and 154 tonnes). The rest of the crops were stored in very small amounts.

- **Crop Marketing**

The number of households that reported selling crop was 182,902 which represent 70.1 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Kilombero (87%) followed by Morogoro Urban (76%), Ulanga (74%), Morogoro Rural (69%), Mvomero (69%) and Kilosa (60%) .

- **Agricultural Credit**

In Morogoro region, few agricultural households (11,457, 4.4%) accessed credit, out of which 7,799 (68%) were male-headed households and 3,658 (32%) were female headed households. In Kilosa district only male headed households got credit for agriculture purposes, whereas in Mvomero district more female household got agricultural credit than male household.. In the remaining districts both male and female headed households accessed credit.

- **Crop Extension Services**

The number of agricultural households that received crop extension was 67,368 (26% of total crop growing households in the region). Some districts have more access to extension services than others (Chart 3.96). Ulanga district had a relatively high proportion of households that received crop extension messages (37%), followed by Mvomero (35%), Kilombero (32%), Kilosa (21%), Morogoro Rural (13%) and Morogoro Urban (10%).

- **Soil Erosion and Water Harvesting Facilities**

The number of agricultural households that reported the presence of soil erosion and water harvesting facilities in their farms was 8,894. This number represents 3 percent of total number of agricultural households in the region. The proportion of farmers with soil erosion control and water harvesting facilities was highest in Mvomero district (28%) followed by Kilosa (26%), Morogoro Rural (20), Kilombero (11%), Ulanga (9%) and Morogoro Urban (6%).

iii) Livestock and Poultry Production

- **Cattle**

The total number of cattle in the region was 455,985. Cattle rearing is the dominant livestock type in the region followed by goats, sheep and pigs. The region had 2.7 percent of the total cattle population on the Tanzanian Mainland. The number of indigenous cattle was 455,985 head (98.9% of the total number of cattle in the region), 5,052 (1.1%) were dairy breeds and only 26 (0.005%) were beef breeds.

- **Goats**

The number of goat-rearing-households in the region was 27,920 (4.3% of all agricultural households) with a total of 243,175 goats giving an average of 9 head of goats per goat-rearing-households.

- **Sheep**

The number of sheep-rearing households was 7,442 (1.2% of all agricultural households) with a total of 95,680 sheep giving an average of 13 heads of sheep per sheep-rearing household.

- **Pigs**

The number of pig-rearing households in the region was 18,088 (2.8% of the total agricultural households) rearing about 44,986 pigs. This gives an average of 3 pigs per pig-rearing household.

- **Chicken**

The number of households keeping chickens was 154,850, raising 2,100,861 chickens. This gives an average of 14 chickens per chicken-rearing household. In terms of total number of chickens in the country Morogoro ranked sixth out of the 21 Mainland regions.

- **Use of Draft Power**

The region has 20,104 oxen and they were found in Ulanga 10,281, Kilombero 6,466, Kilosa 2,591 and Mvomero 766. Morogoro region has 0.9 percent of the total 2,233,927 head of oxen found on the Mainland and were used to cultivate 17,218 hectares of land.

- **Fish Farming**

The number of households involved in fish farming was 902 (0.3 percent of the total agricultural households in the region). Kilombero was the leading district with 369 agricultural households involved in fish farming (41%) followed by Morogoro Rural 363 (40%), Kilosa 93 (10%) and Ulanga 76 (8%). Fish farming was not practiced in Morogoro Urban and Mvomero districts.

iv) Poverty Indicators

- **Availability of Toilets**

It was estimated that 94.7 percent of all rural agricultural households used the traditional pit latrines, 2.2 percent used improved pit latrine and 1.2 percent had flush toilets. The remaining 0.2 percent of households had other unspecified types of toilets. Households with no toilet facilities represent 2.7 percent of the total agriculture households in the region.

- **Household Assets**

Out of all assets, radios had the highest percent of households owning them (58% of households) followed by bicycle (38.7%), iron (13.6%), wheelbarrow (4.1%), mobile phone (1.6%), landline phone (0.3%), vehicle (0.2%) and television/video (0.0%).

- **Source of Lighting Energy**

Wick lamp is the most common source of lighting energy in the region. About 70.5 percent of the total rural households used this source of energy followed by hurricane lamp (22.4%), pressure lamp (4.3%), mains electricity (1.1%), firewood (1.2%), candle (0.1%), gas or biogas (0.1%) and solar (0.1%),

- **Energy for Cooking**

The most prevalent source of energy for cooking was firewood, which was used by 92.2 percent of all rural agricultural households. The second most common source of energy for cooking was charcoal (6.3%). The rest of energy sources accounted for 1.5 percent. These were bottled gas (0.22%), crop residues (0.46%), mains electricity (0.21%), solar (0.20%), livestock dung (0.03%), parrafin/kerosene (0.35%) and none for gas/biogas.

- **Roofing Materials**

The most used roofing material (for the main dwelling) was grass and/or leaves and it was used by 54 percent of the rural agricultural households however, this was closely followed by iron sheets (36.2%). Other roofing materials are grass/mud (8.4%), asbestos (0.2%), tiles (0.8%), concrete (0.4%) and others (0.1%).

- **Number of Meals per Day**

About 53.2 percent of the holders in the region took two meals per day, 42.6 percent took three meals, 3.5 percent took one meal and 0.7 percent took four meals.

- **Food Security**

Households which seldom had problems in satisfying their food needs represent 34.8 percent of the total number of agriculture households in the region. Households with recurring food shortage problems represent 11.2 percent whereas those with little problems represent 8.1 percent. About 8.7 percent of agriculture households always faced food shortages whilst 37.2 percent had not experienced any food shortage problems.

- **Main Source of Cash Income**

Selling of food crops was the main cash income earning activity reported by 56.8 percent of all rural agricultural households. The second main cash income earning activity was casual labour (11.8%) followed by selling of cash crops (9.6%), businesses (8.8%) and cash remittances (2.3%). Other income earning activities were employment (3.2%), sale of livestock (1.6%), sale of forest products (4.3%), sale of livestock products (0.5%) and fishing (0.4%).

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1. BACKGROUND INFORMATION

1.1 Introduction

This part of the report presents a brief description of the regional profile by providing information on geographical location, land area, climate, administrative set up, population and socio-economic indicators. The information will provide the user with general understanding of the region and its resources.

1.2 Geographical Location and Boundaries

Morogoro region is located in the Mid – Eastern part of Tanzania mainland. The region lies between latitudes 5° 58' and 10' south of the equator and between longitude 35° 25' and 38° 30' East Greenwich.

To the north Morogoro region shares boarders with Arusha and Tanga regions. To the east and southeast, it shares boarders with Ruvuma and Lindi regions respectively. To the west and southwest it shares borders with Dodoma and Iringa regions respectively.

1.3 Land Area

1.4 Climate

1.4.1 Temperatur

Morogoro region has an average temperature of 24° C. The minimum is 18° C in mountainous areas and has a maximum of 30° C in lowland areas. The coolest months are May, June and July, while the hottest months are September and October.

1.4.2 Rainfall

Altitudes vary considerably from one district to another. The main rain season is from November to May, while the dry season in from June to October. The topographical variations in different parts of the region explain the existing variations in the climatic conditions. The variation in rainfall is between 500 mm in low areas and 2,200 mm in the mountainous areas.

1.5 Population

According to the 2002 Population and Housing Census, there were 1,759,809 inhabitants in Morogoro region. The population of Morogoro region ranked 6th of the 21 regions in Tanzania.

1.6 Socio - Economic Indicators

The regional Gross Domestic Product (GDP) at current prices for the year 2003 was estimated to be TShs 439,520 million with a per capita income of shillings 249,754. The region held 8th position among regions on GDP and contributed about 4.5 percent to the national GDP[1]

The region headquarter can easily be reached by road from dare s Salaam, Dodoma and Iringa towns. It is also the centre for travelers going to Dodoma, Tabora, Lake zone and Kigoma by train.

The region has a tourist attraction – Mikumi National Park that is about 100 kilometers from Morogoro town and about 300 kilometers from DAR ES salaam and Selous game reserve.

The region is famous for producing both food and cash crops. The main food crops produced in Morogoro region include: maize, paddy, sorghum, bulrush millets and beans. The main cash crops include cotton and tobacco. Livestock keeping is als an important economic activity in the region.

2.1 INTRODUCTION

This part of the report provides the technical and operational description of the National Sample Census of Agriculture (NSCA), carried out in the rural areas of Tanzania Mainland and Zanzibar during the 2002/03 agricultural year. It details the background and the rationale for carrying out the NSCA in 2002/03 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

2.2 The Rationale for Conducting the National Sample Census of Agriculture

In 2003, the Government of Tanzania launched the Agricultural Sample Census as an important part of the Poverty Monitoring Master Plan which supports the production of statistics for advocacy of effective public policy, including poverty reduction, access to services, gender, as well as the standard crop production data normally collected in an agriculture census. The census is intended to fill the information gap and support planning and policy formulation by high level decision making bodies. It is also meant to provide critical benchmark data for monitoring Agriculture Sector Development Programme (ASDP) and other agriculture and rural development programs as well as prioritising specific interventions of most agriculture and rural development programs.

Following the decentralisation of the Government's administration and planning functions, there has been a pressing need for agriculture and rural development data disaggregated at regional and district levels. The provision of district level estimates will provide essential baseline information on the state of agriculture and support decision making by the Local Government Authorities in the design of District Agricultural Development and Investment Projects (DADIPS). The increase in investment is an essential element in the national strategy for growth and reduction of poverty.

This report (Volume V) is among the 21 regional reports for the mainland. Other Census reports include the Technical Report (Volume I), crop sector at national and regional levels including Zanzibar estimates (Volume II), Livestock Report (Volume III), Smallholder Household Characteristics and Access to Natural Resources Report (Volume IV), 21 Regional Reports for the Mainland (Volume V), Large Scale Farms Report (Volume VI) and a separate report for Zanzibar (Volume VII). In order to address the specific issue of gender, a separate thematic report on gender has been published. Other thematic reports will be produced depending on the demand and availability of funds. In addition to these reports two dissemination applications have been produced to allow users to create their own tabulations, charts and maps.

The report is divided into five main sections: Background Information, Introduction, Results, Evaluation and Conclusion and Appendices. The definitions relating to all aspects of this report can be found in the questionnaire (Appendix III).

2.3 Census Objectives

The 2003 Agriculture Sample Census was designed to meet the data needs of a wide range of users down to district level including policy makers at local, regional and national levels, rural development agencies, funding institutions, researchers, Non government Organisations (NGOs), farmer organisations, etc. As a result, the dataset is both more numerous in its sample and detailed in its scope compared to previous censuses and surveys. To date this is the most detailed Agricultural Census carried out in Africa. The census was carried out in order to:

- Identify structural changes if any, in the size of farm household holdings, crop and livestock production, farm input and implement use. It also seeks to determine if there are any improvements in rural infrastructure and in the level of agriculture household living conditions;

- Provide benchmark data on productivity, production and agricultural practices in relation to policies and interventions promoted by the Ministry of Agriculture and Food Security and other stake holders.
- Establish baseline data for the measurement of the impact of high level objectives of the Agriculture Sector Development Programme (ASDP), National Strategy for Growth and Reduction of Poverty (NSGRP) and other rural development programs and projects.
- Obtain benchmark data that will be used to address specific issues such as: food security, rural poverty, gender, agro-processing, marketing, service delivery, etc.

2.4 Census Coverage and Scope

The census was conducted for both large and small scale farms. The National Sample Census of Agriculture covered a total of 3,221 selected rural villages of Tanzania Mainland out of which 215 villages were from Tanga region.

The census covered agriculture in detail as well as many other aspects of rural development and was conducted using three types of questionnaires:

- Small scale farm questionnaire
- Community level questionnaire
- Large scale farm questionnaire

The small scale farm questionnaire was the main census instrument and it includes questions related to crop and livestock production and practices; population demographics; access to services, resources and infrastructure; issues on poverty, gender and subsistence versus profit making production units. The main sections covered are as follows:

- Identification (i.e. region, district, ward and village)
- Household and holding characteristics
- Household information
- Land ownership/tenure
- Land use
- Access and use of resources
- Crop and vegetable production
- Agro processing and by-Products
- Crop storage and marketing
- On-farm investment
- Access to farm inputs and implements
- Use of credit for agricultural purposes
- Tree farming/agro-forestry
- Crop extension services
- Livelihood constraints
- Animal contribution to crop production
- Livestock
- Livestock products
- Fish farming
- Livestock extension

- Labour use
- Access to infrastructure and other services
- Household facilities

The community level questionnaire was designed to collect village level data such as access and use of common resources, community tree plantation and seasonal farm gate prices.

The large scale farm questionnaire was administered to large scale farms that were either privately or corporately managed. There will be a national report on large scale farming on Tanzania Mainland.

2.5 Legal Authority of the National Sample Census of Agriculture

The NSCA 2002/03 was conducted under the legal authority of the 2000 National Bureau of Statistics Act which, among other things, makes data collected from individuals strictly confidential and to be used for statistical purposes only.

2.6 Reference Period

Two types of reference periods were used namely the agricultural year and the reference date for livestock enumeration. The agricultural year 2002/03 (that is October 2002 to September 2003) was used for the data items that are related to crop production. The reference date of enumeration for livestock and poultry count was 1st October 2003.

2.7 Census Methodology

The main focus at all stages of the census execution was on data quality and this is emphasised in this section. The main activities undertaken include:

- Census organisation
- Tabulation plan preparation
- Sample design
- Design of census questionnaires and other instruments.
- Field pretesting of the census instruments
- Training of trainers, supervisors and enumerators
- Information Education and Communication (IEC) campaign
- Data Collection
- Field supervision and consistency checks
- Data processing:
  - Scanning
  - ICR extraction of data
  - Structure formatting application
  - Batch validation application
  - Manual data entry application
  - Tabulation preparation using SPSS
- Table formatting and charts using Excel, map generation using ArcView and Freehand.
- Report preparation using Word and Excel.

2.7.1 Census Organization

The Census was conducted by the National Bureau of Statistics in collaboration with the sector ministries of agriculture, and the Office of the Chief Government Statistician in Zanzibar. At the national level the Census was headed by the Director General of the National Bureau of Statistics with assistance from the Director of Economic Statistics. The Planning Group, made up of staff from the National Bureau of Statistics, Department of Agricultural Statistics and three representatives from the Ministry of Agriculture and Food Security (Department of Policy and Planning), oversaw the overall operational aspects of the Census. At the regional level, implementation of census activities was overseen by the Regional Statistical Officer of NBS and the Regional Agriculture Supervisor from the Ministry of Agriculture and Food Security. At the District level, two supervisors from the President's Office, Regional Administration and Local Government (PORALG), managed the enumerators who also came from the same ministry.

Members of the Planning Group had a minimum qualification of a bachelor degree, the regional supervisors were either agricultural economists, statisticians or statistical officers. The district supervisors and enumerators had diploma level qualifications in agriculture.

The Census and Surveys Technical Working Group provided support in sourcing financing, approving budget allocations and technical assistance inputs as well as monitoring the progress of the census. A Technical Committee for the census was established with members from key stakeholder organisations (i.e. NBS, sector ministries of agriculture, President's Office, Planning and Privatization (POPP), PORALG, University of Dar es Salaam (UDSM), Tanzania Food and Nutrition Centre (TFNC) and the Office of Chief Government Statistician (OCGS) in Zanzibar). The main function of the committee was to approve the proposed instruments and procedures developed by the Planning Group. It also approved the tabulations and analytical reports prepared from the Census data.

2.7.2 Tabulation Plan

The tabulation plan was developed following three user group workshops and thus reflects the information needs of the end users. It took into consideration the tabulations from previous census and surveys to allow trend analysis and comparisons.

2.7.3 Sample Design

The Mainland sample consisted of 3,221 villages. These villages were drawn from the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) to serve as a national framework for the conduct of household based surveys in the country. The National Master Sample was developed from the 2002 Population and Housing Census. In most cases, within each selected village, data was collected from a sub-sample of fifteen agricultural households. In few large villages thirty households were selected. The total Mainland sample was 48,315 agricultural households. In Zanzibar a total of 317 EAs were selected and 4,755 agricultural households were covered. Nationwide, all regions and districts were sampled with the exception of three urban districts (two from Mainland and one from Zanzibar).

In both Mainland and Zanzibar a stratified two stage sample was used. In the first stage, villages/enumeration areas (EAs) were selected with probability proportional to the number of villages in each district. In the second stage, 15 households were selected from a list of

Table 2.1: Census Sample Size

Number of	Mainland	Zanzibar	Total
Households	48,315	4,755	53,070
Villages/Eas	3,221	317	3,539
Districts	117	9	126
Regions	21	5	26

farming households in each Village/EA using systematic random sampling. Table 2.1 gives the sample size of households, villages and districts for Tanzania Mainland and Zanzibar.

2.7.4 Questionnaire Design and Other Census Instruments

The census questionnaires were designed following user/producer meetings to ensure that the information collected was in line with their data needs. Several features were incorporated into the design of the questionnaire to increase the accuracy of the data:

- Where feasible all variables were extensively coded to reduce post enumeration coding error.
- The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the farmer.
- The responses to all questions were placed in boxes printed on the questionnaire, with one box per character. This feature made it possible to use scanning and ICR technologies for data entry.
- Skip patterns were used to avoid asking unnecessary questions
- Each section was clearly numbered, which facilitated the use of skip patterns and provided a reference for data type coding for the programming of CSPro, SPSS and the dissemination applications.

Besides the questionnaires, there were other instruments used:

- Village listing forms that were used for listing households in the villages and from these list a systematic sample of 15 agricultural households were selected from each village.
- Training manual which was used by the trainers for the cascade/pyramid training of supervisors and enumerators. This manual was trainers guiding document on the procedures to follow during tha training
- Enumerator Instruction Manual which was used as reference material.

2.7.5 Field Pre-Testing of the Census Instruments

The Questionnaire was pre-tested in five locations (Arusha, Dodoma,,Tanga, Unguja and Pemba). This was done purposely to test the wording, flow and relevance of the questions and to finalise crop lists, questionnaire coding and manuals. In addition to this, several data collection methodologies had to be finalised, namely, livestock numbers in pastoralist communities, cut flower production, mixed cropping, use of percentages in the questionnaire and finalising skip patterns and documenting consistency checks.

2.7.6 Training of Trainers, Supervisors and Enumerators

Cascade/pyramid training techniques were employed to maintain statistical standards. The top level training was provided to 66 national and regional supervisors (3 per region plus Zanzibar). The trainers were members of the Planning Group and the trainees were from the National Bureau of Statistics and the sector ministries of agriculture. The second level training was for the district supervisors and enumerators. This training was conducted in the regions. In each region three training sessions were conducted for the district supervisors and enumerators. In addition to training in field level Census methodology and definitions, emphasis was placed on training the enumerators and supervisors in consistency checking. Tests were given to the enumerators and supervisors and the best 50 percent of the trainees were selected to administer the smallholder and community level questionnaires. This increased the number of interviews per enumerator but it also released finance to increase the number of supervisors and hence the Supervisor Enumerator Ratio. The household listing exercise was carried out by all trained enumerators.

2.7.7 Information, Education and Communication (IEC) Campaign

Information, Education and Communication (IEC) is an important aspect of any census/survey undertaking. This is due to the fact that inadequately informed and hence uncooperative citizens may jeopardize the entire census/survey. As far as the 2002/03 Agricultural Sample Census was concerned, the main objective of the IEC program was to sensitize and mobilize Tanzanians to support, cooperate and participate in the census exercise.

Radio, television, newspapers, leaflets, t-shirts and caps were used to publicise the Sample Census. T-shirts and caps were used by the field staff and the village chairmen as official uniforms during the field work. The village chairmen helped to locate the selected households.

2.7.8 Household Listing

The household listing exercise was done in seven days. During the listing exercise, forms ACLF1 and ACLF2 were administered. The information collected included the number of fields operated by the household, the number of different types of livestock and poultry. This information was used to determine the agricultural households. From the list of agricultural households, 15 households were selected for the interview. The selection was done using the Random Number Table.

2.7.9 Data Collection

Data collection activities for the 2002/2003 Agricultural Sample Census took three months from January to March 2004. The data collection methods used during the census were by interview and no physical measurements, e.g., crop cutting and field area measurement were taken. Field work was monitored by a hierarchical system of supervisors at the top of which was the Mobile Response Team followed by the national, regional, and district supervisors.

The Mobile Response Team consisted of three principal supervisors who provided overall direction to the field operation and responded to queries arising outside the scope of the training exercise. The mobile response team consisted of the Manager of Agriculture Statistics Department, Long-term Consultant and Desk Officer for the Census. Decisions made on definitions and procedures were then communicated back to all enumerators via the national, regional and district supervisors.

District supervision and enumeration were done by staff from the President's Office, Regional Administration and Local Government (PORALG). National and regional supervisions were provided by senior staff of the National Bureau of Statistics and the sector ministries of agriculture. During the household listing exercise 3,221 extension staff were used. For the enumeration of the small holder questionnaire, 1,611 enumerators were used and additional 5 percent enumerators were held in reserve in case of drop outs during the enumeration exercise.

2.7.10 Field Supervision and Consistency Checks

Enumerators were trained to probe the respondents until they were satisfied with the responses given before they recorded them in the questionnaire. The first check of the questionnaires was done by enumerators in the field during enumeration. The second check was done by the district supervisors followed by regional and national supervisors. Supervisory visits at all levels of supervision focused on consistency checking of the questionnaires. Inconsistencies encountered were corrected, and where necessary a return visit to the respondent was made by the enumerator to obtain the correct

information. Further quality control checks were made through a major post enumeration checking exercise where all questionnaires were checked for consistencies by all supervisors in the district offices.

2.7.11 Data Processing

Data processing consisted of the following processes:

- Manual editing
- Data entry
- Data structure formatting
- Batch validation
- Tabulation
- Illustration production
- Report formatting

Manual Editing

Prior to scanning, all questionnaires underwent a manual cleaning exercise. This involved checking that the questionnaire had a full set of pages, correct identification and good handwriting. A score was given to each questionnaire based on the legibility and the completeness of enumeration. This score will be used to assess the quality of enumeration and supervision in order to select the best field staff for future censuses/surveys.

Data entry/Scanning and ICR extraction technologies

Scanning and ICR data capture technology was used for the small holder questionnaire. This not only increased the speed of data entry, it also increased the accuracy due to the reduction in keystroke errors. Interactive validation routines were incorporated into the ICR software to track errors during the verification process. The scanning operation was so successful that it is highly recommended that this technology be adopted for future censuses/surveys.

The Census and Surveys Processing Program (CSPro) was used to enter 2,880 of small holder questionnaires that were rejected by the Intelligent Character Recognition (ICR) extraction application.

Data structure formatting

A program was developed in visual basic to automatically alter the structure of the output from the scanning/extraction process in order to harmonise it with the manually entered data. The program automatically checked and changed the number of digits for each variable, the record type code, the number of questionnaires in the village, the consistency of the Village Identification (ID) code and saved the data of one village in a file named after the village code.

Batch validation

A batch validation program was developed in order to identify inconsistencies within a questionnaire. This is in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. It took six months to screen, edit and validate the data from the smallholder questionnaire. After the long process of data cleaning, the results were prepared based on a pre-designed tabulation plan.

Tabulations

Statistical Package for Social Sciences (SPSS) was used to produce the Census results and Microsoft Excel was used to organize the tables and compute additional indicators.

Analysis and report preparation

The analysis in this report focuses on regional and district production estimates, districts comparisons and time series analysis. Microsoft Excel was used to produce charts; whereas Microsoft Word was used to compile the report.

Data quality

A great deal of emphasis was placed on data quality throughout the whole exercise from planning, questionnaire design, training, supervision, data entry, validation and cleaning/editing. As a result of this NBS believes that the Census is highly accurate and representative of what was experienced at field level during the Census year. With very few exceptions the variables in the questionnaire are within the norms for Tanzania and they follow expected time series trends when compared to historical data. Standard Errors and Coefficients of Variation for the main variables can be found in the Technical Report (Volume I).

2.7 Funding Arrangements

The Agricultural Sample Census was supported mainly by the European Union (EU) who financed most of the operational activities. Other funds for operational activities came from the Government of Tanzania, Government of Japan, United Nations Development Programme (UNDP) and other partners in the Pool Fund of the Vice President's Office (VPO). In addition to this, technical assistance was provided by the European Union (EU), Department for International Development (DFID) and Japanese International Cooperation Agency (JICA). Technical assistances were managed by Ultek Laurence Gould Consultants (ULG), Scotts Agriculture Consultancy Ltd (SAC) and the Food and Agriculture Organisation (FAO).

3. CENSUS RESULTS

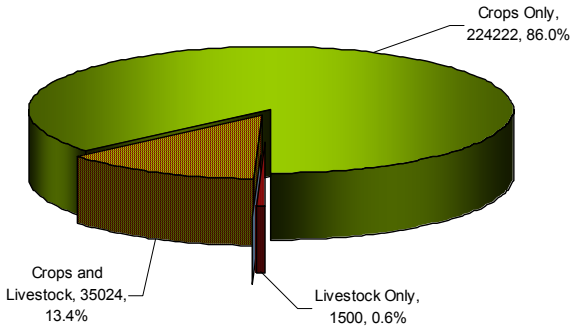
This part of the report presents the results of the census data for Morogoro region which are based on the data tables presented in Appendix A2. The results are presented in different forms including brief summaries, charts, condensed tables and graphs and Maps in order to make it easier for the users to understand. Comparisons are made between related variables and between districts. Comparisons are also made with past censuses/surveys results such as the 1994/95 National Sample Census of Agriculture (NSCA), the 1995/96 and the 1996/97 Expanded Agricultural Surveys, the 1997/98 Integrated Agricultural Survey, the 1998/99 District Integrated Agricultural Survey and the 1999/00 Rapid Agricultural Appraisal Survey. The presentation of results is divided into four main sections which are household characteristics, crop results, livestock results and poverty indicators. More effort has been placed in analyzing the results in order to formulate solid conclusions than in previous censuses and surveys.

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Morogoro region was 260,746. The largest number of agriculture households was in Kilosa (73,435) followed by Morogoro Rural (53,117), Mvomero (50,069), Kilombero (48,782), Ulanga (30,908) and Morogoro Urban (4,434) (Map 3.1). The highest density of household was found in Mvomero (20 km^2) and Kilosa (14km^2) (Map 3.2). Most household (224,222, 86%) were involved in growing crops only, 1,500 (0.6%) rearing livestock only and 35,024, (13%) were involved in crop production as well as livestock keeping (Chart 3.1) (Map 3.3,3.4,3.5 and 3.6)

Chart 3.1 Agriculture Households by Type - Morogoro



3.1.2 Livelihood Activities/Source of Income

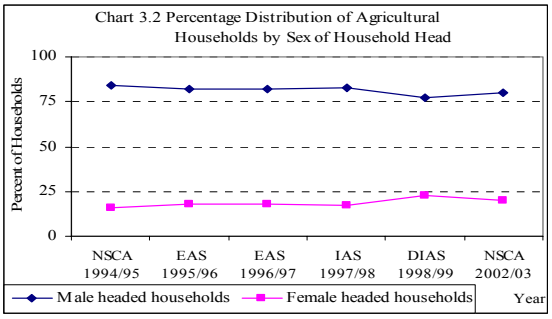
The census results for Morogoro region indicates that most of the agricultural households ranked annual crop farming as an activity that provides most of their cash income followed by off farm income, tree/forest resources, livestock, keeping/herding, permanent crop farming, remittances and fishing/hunting (Table 3.1).

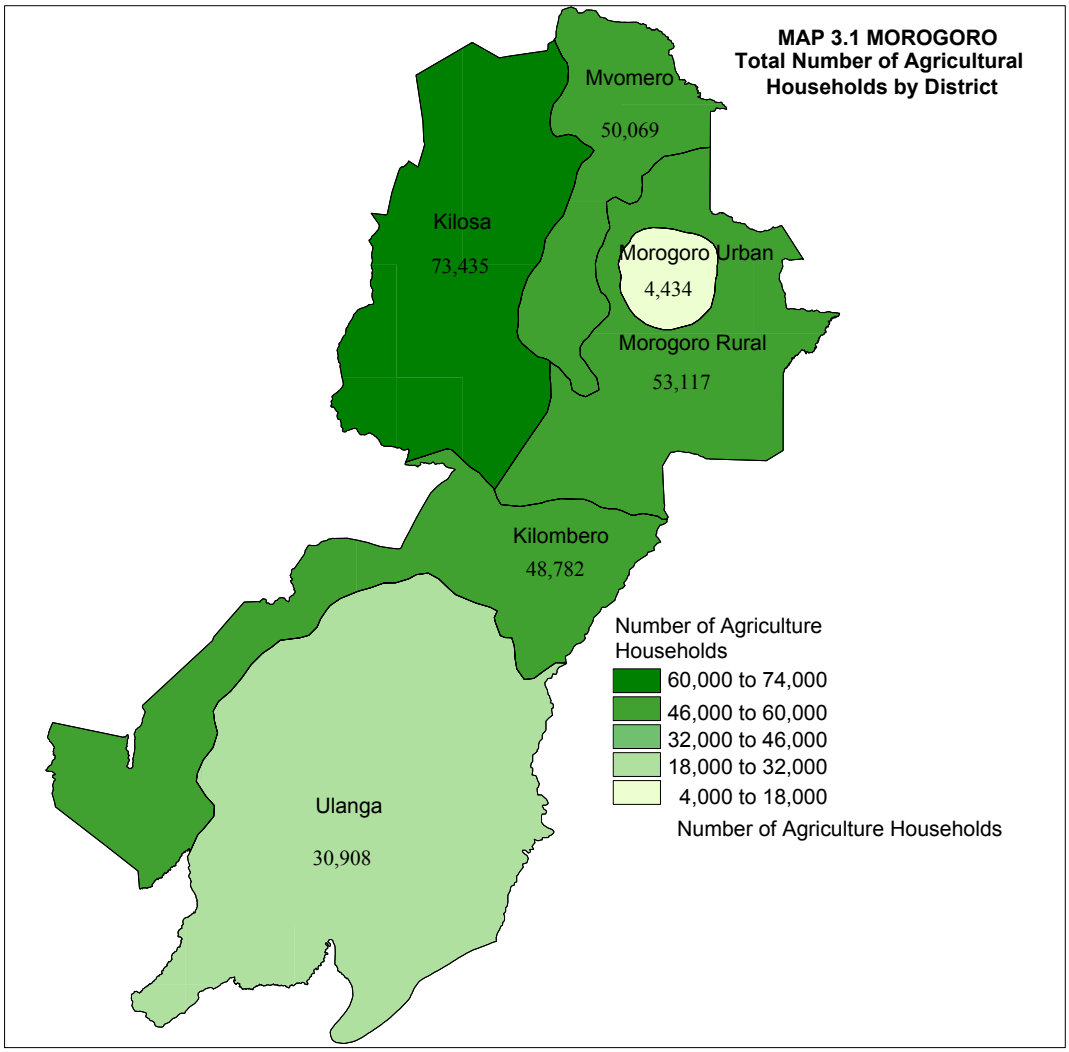
Table 3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

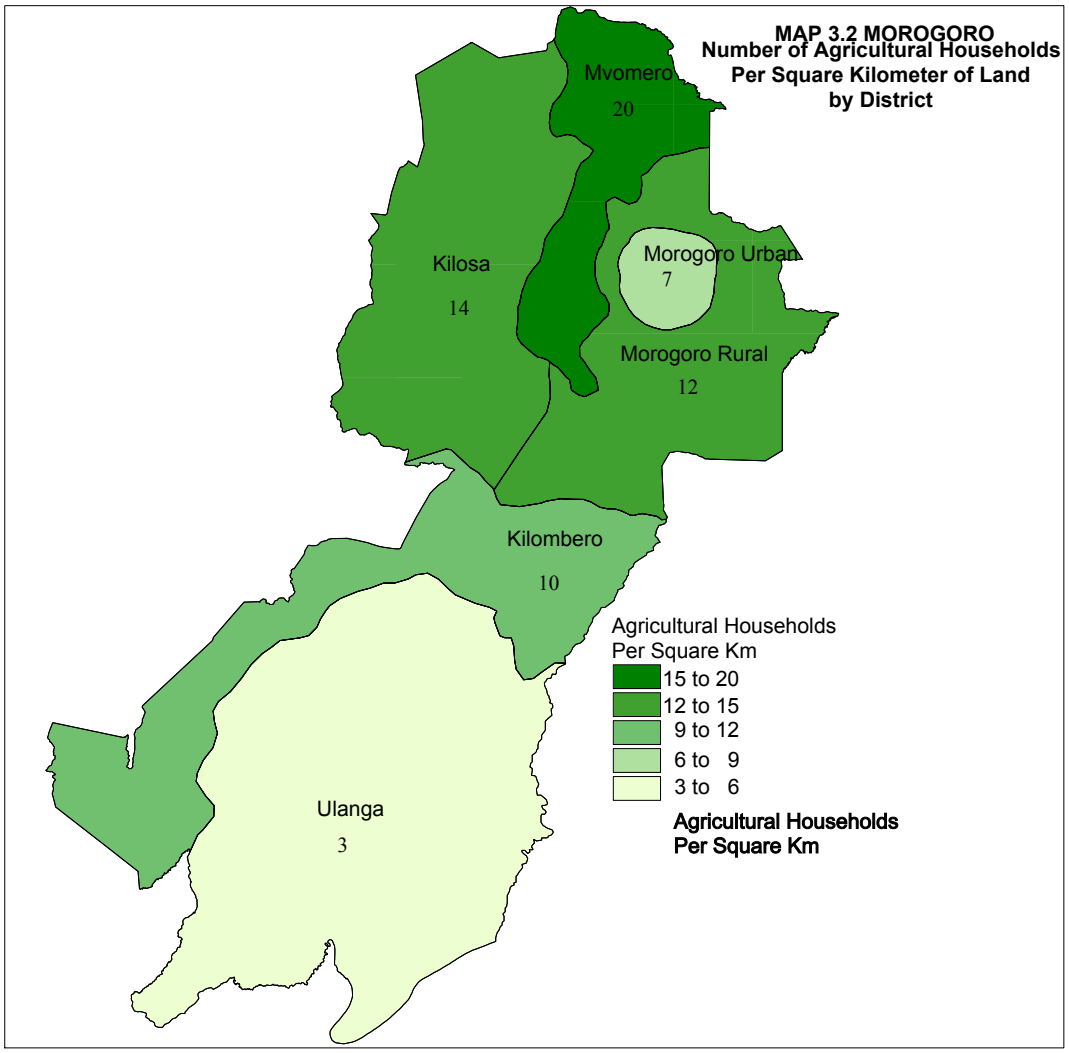
District	Livelihood Activity						
	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	1	5	4	2	6	7	3
Morogoro	1	4	5	2	6	7	3
Kilombero	1	4	5	2	6	7	3
Ulanga	1	5	4	2	6	7	3
Morogoro Urb	1	3	5	4	6	7	2
Mvomero	1	5	4	3	6	7	2
Total	1	5	4	2	6	7	3

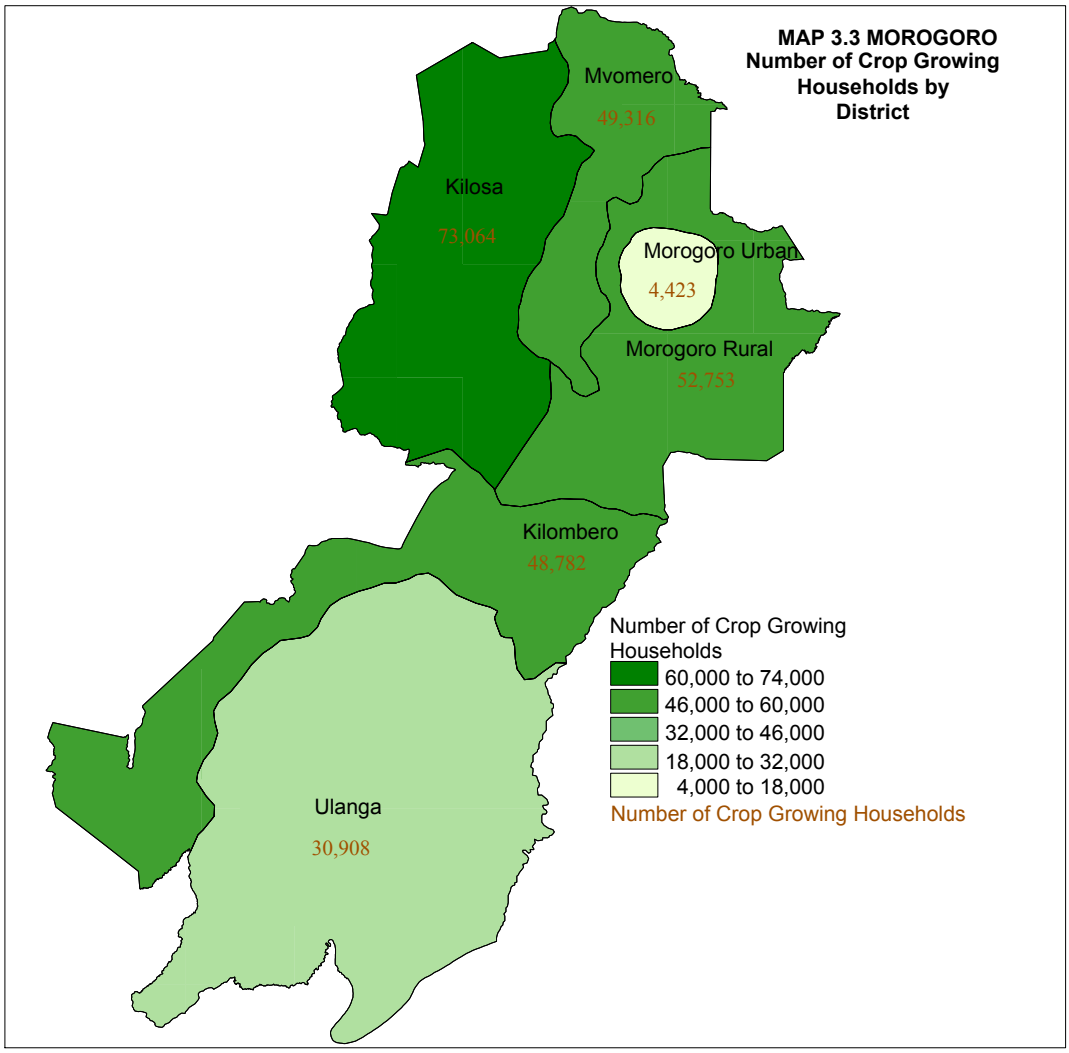
3.1.3 Sex and Age of Heads of Households

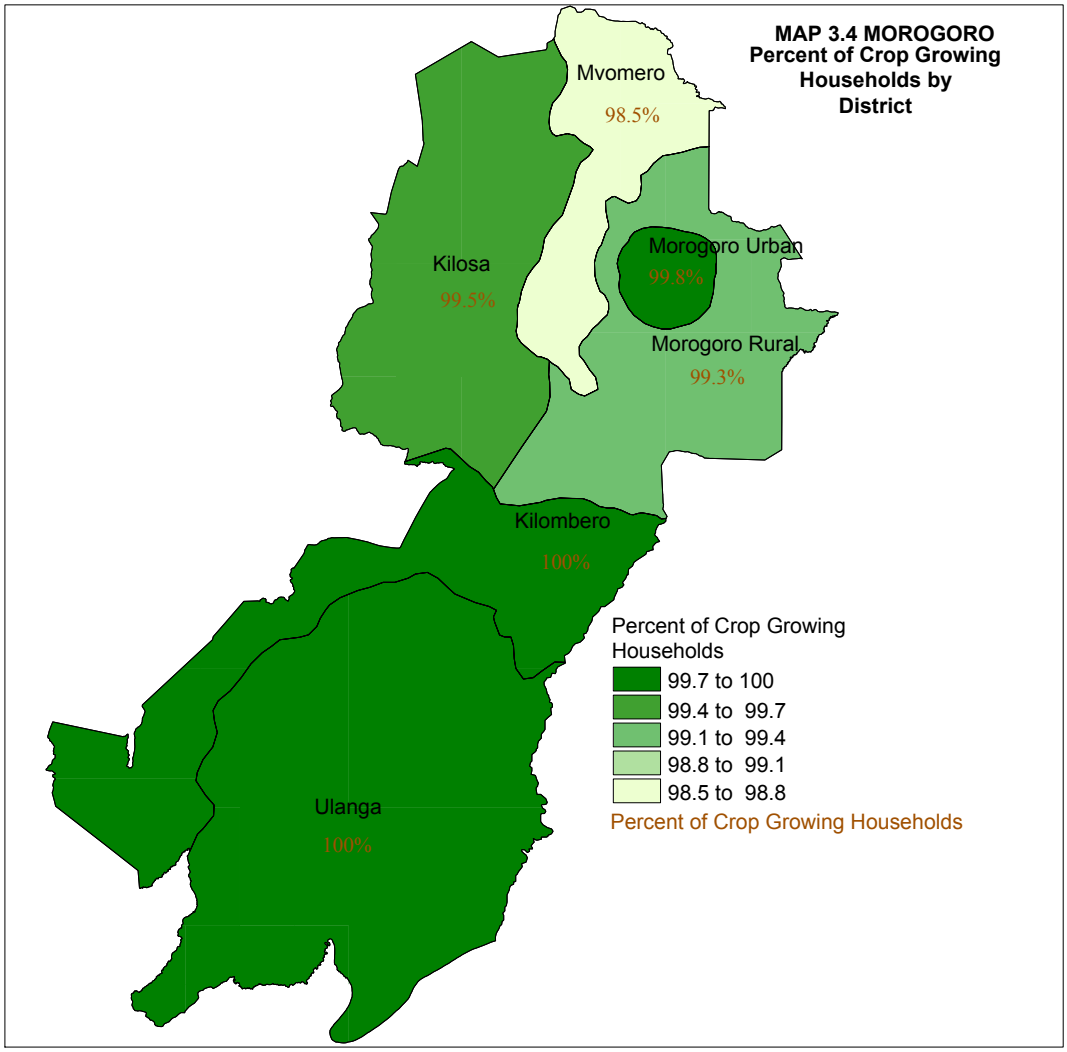
The number of male-headed agricultural households in Morogoro region was 209,037 (80% of the total regional agricultural households) whilst for female-headed households the number was 51,709 (20% of the total regional agricultural households). The mean age of household heads was 44 years (43 years for male heads and 45 years for female heads)

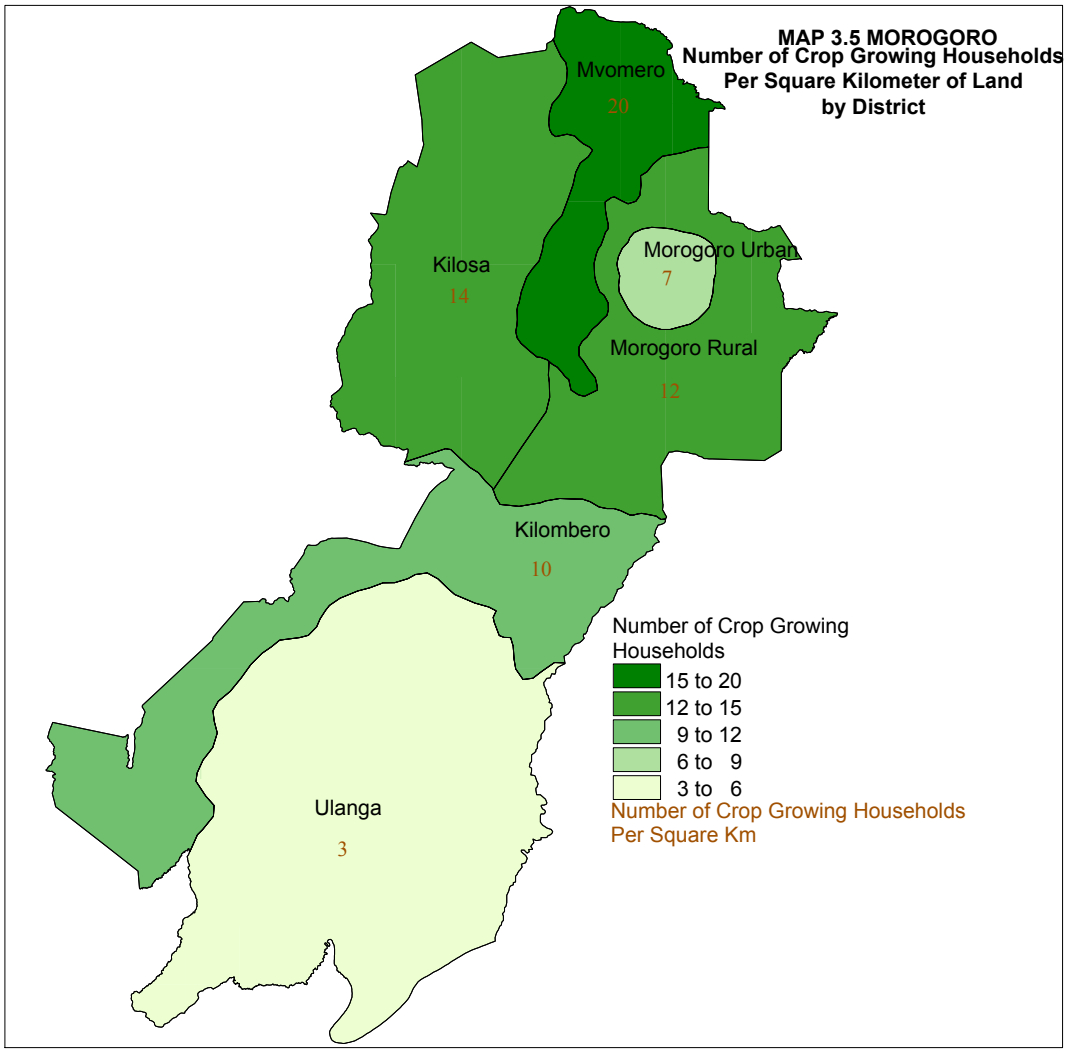


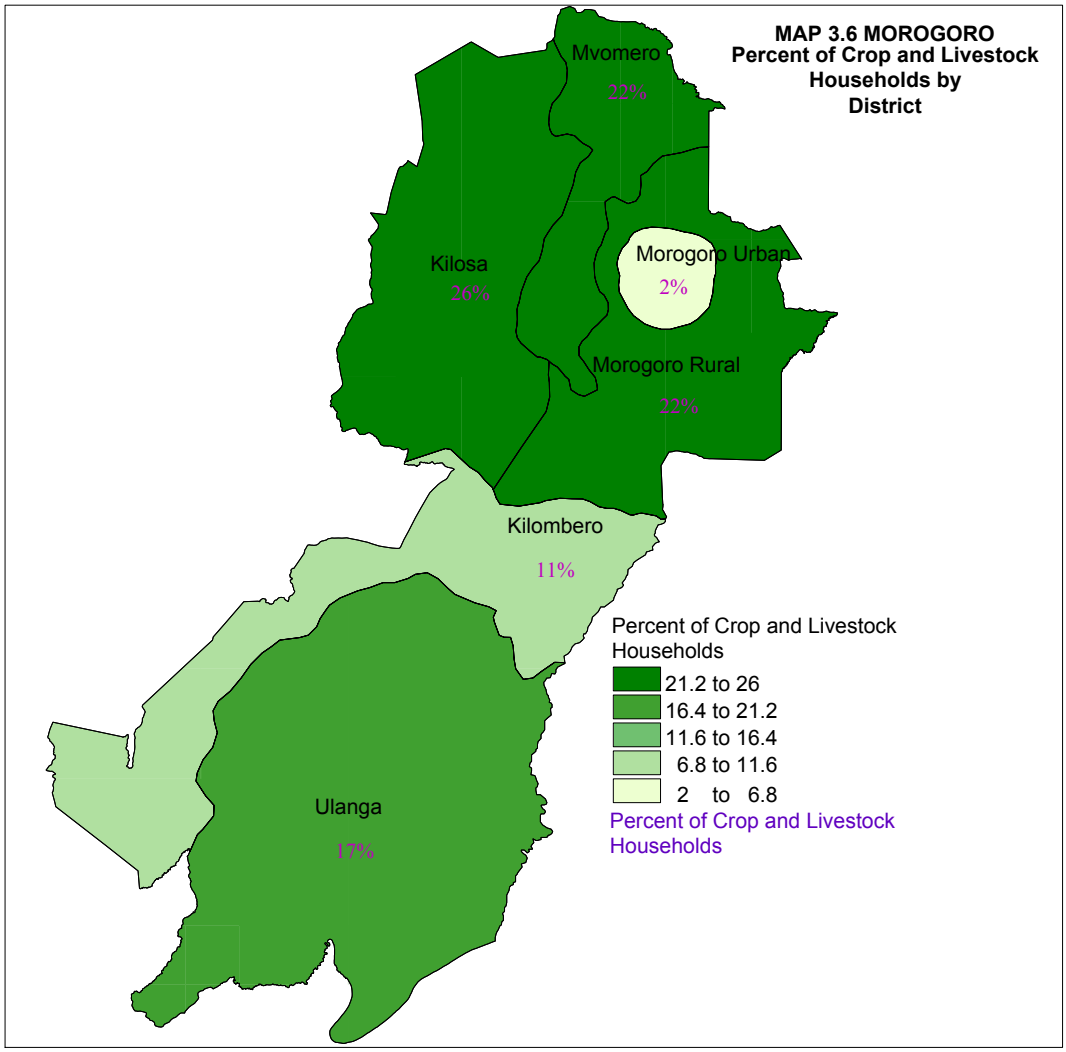

MAP 3.1 MOROGORO
Total Number of Agricultural Households by District
Mvomero
50,069
Kilosa
73,435
Morogoro Urban
4,434
Morogoro Rural
53,117
Kilombero
48,782
Ulanga
30,908
Number of Agriculture Households
60,000 to 74,000
46,000 to 60,000
32,000 to 46,000
18,000 to 32,000
4,000 to 18,000
Number of Agriculture Households


MAP 3.2 MOROGORO
Number of Agricultural Households Per Square Kilometer of Land by District
Mvomero
20
Kilosa
14
Morogoro Urban
7
Morogoro Rural
12
Kilombero
10
Ulanga
3
Agricultural Households Per Square Km
15 to 20
12 to 15
9 to 12
6 to 9
3 to 6
Agricultural Households Per Square Km


MAP 3.3 MOROGORO
Number of Crop Growing Households by District
Mvomero
49,316
Kilosa
73,064
Morogoro Urban
4,423
Morogoro Rural
52,753
Kilombero
48,782
Ulanga
30,908
Number of Crop Growing Households
60,000 to 74,000
46,000 to 60,000
32,000 to 46,000
18,000 to 32,000
4,000 to 18,000
Number of Crop Growing Households


MAP 3.4 MOROGORO
Percent of Crop Growing Households by District
Mvomero
98.5%
Kilosa
99.5%
Morogoro Urban
99.8%
Morogoro Rural
99.3%
Kilombero
100%
Ulanga
100%
Percent of Crop Growing Households
99.7 to 100
99.4 to 99.7
99.1 to 99.4
98.8 to 99.1
98.5 to 98.8
Percent of Crop Growing Households

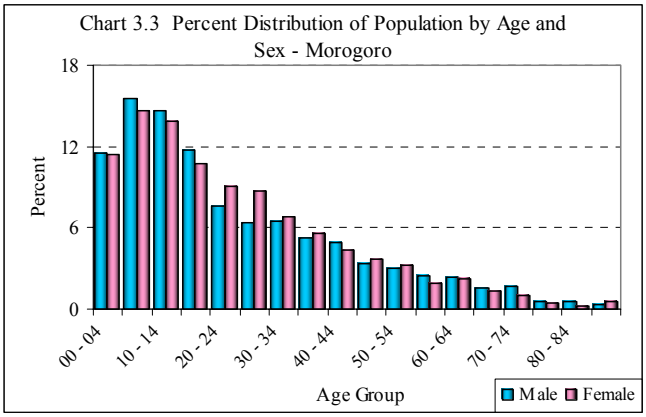

MAP 3.5 MOROGORO
Number of Crop Growing Households
Per Square Kilometer of Land
by District
Mvomero
20
Kilosa
14
Morogoro Urban
7
Morogoro Rural
12
Kilombero
10
Ulanga
3
Number of Crop Growing
Households
15 to 20
12 to 15
9 to 12
6 to 9
3 to 6
Number of Crop Growing Households
Per Square Km


MAP 3.6 MOROGORO
Percent of Crop and Livestock
Households by
District
Mvomero
22%
Kilosa
26%
Morogoro Urban
2%
Morogoro Rural
22%
Kilombero
11%
Ulanga
17%
Percent of Crop and Livestock
Households
21.2 to 26
16.4 to 21.2
11.6 to 16.4
6.8 to 11.6
2 to 6.8
Percent of Crop and Livestock
Households

The percentage trend for six censuses/surveys years shows that there has not been any significant change in the distribution of agricultural households between male and female headed households (Chart 3.2).

3.1.4 Number and Age of Household Members

Morogoro region had a total rural agricultural population of 1,235,577 of which 614,454 (50%) were males and 621,124 (50%) were females. Whereas age group 0-14 constituted 41 percent of the total rural agricultural population, age group 15–64 (active population) was only 55 percent. Morogoro region had an average household size of 5 with Kilosa and Morogoro Urban districts having the lowest household size of 4 (Chart 3.3).

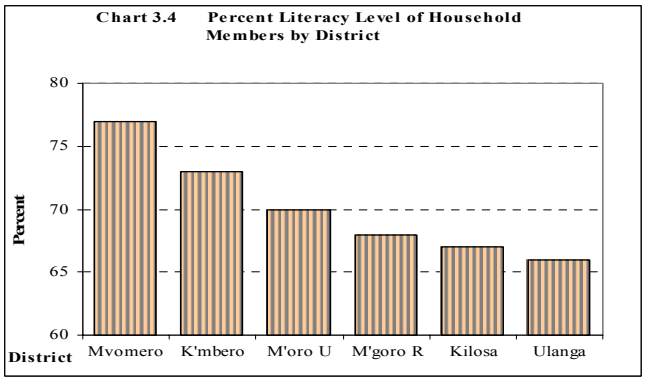


3.1.5 Level of Education

In order to obtain information on the level of education, information on literacy and education attainment were obtained for all persons aged five years and above in all households.

Literacy

The information on literacy level for family members aged five years and above was obtained by asking individual private households if their respective family members could read and write in Kiswahili only, English only, both English and Swahili or in any other language. Literacy is based on the ability to read and write Swahili, English or both.

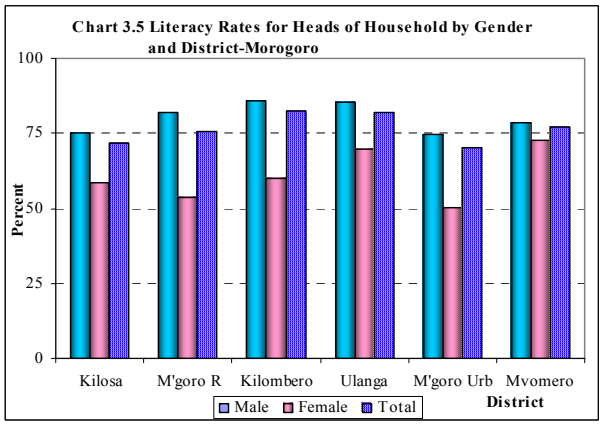


Literacy Level for Household Members

Morogoro region had a total literacy rate of 68 percent. The highest literacy rate was found in Mvomero district (77%) followed by Kilombero district (73%), Morogoro Urban district (70%), Morogoro Rural (68%), Kilosa (67%) and Ulanga (66%) (Chart 3.4)

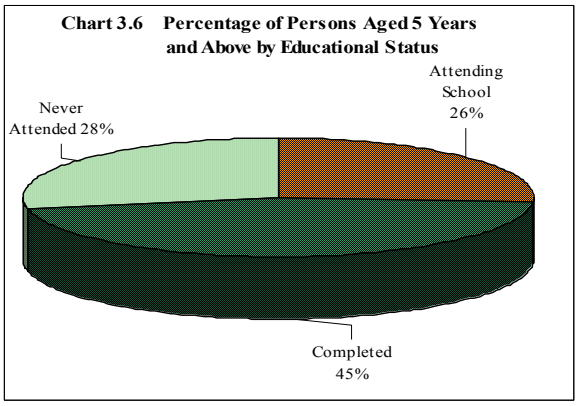
Literacy Rates for Heads of Households

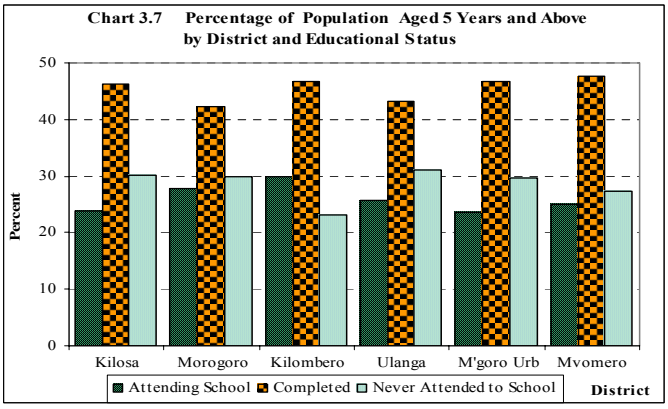
The literacy rate for the heads of households in the region was 77 percent. The literacy rates among the male and female heads of households were 78 and 73 percent respectively. Male head of household literacy rate was higher than that of female heads in all districts. The districts with the highest literacy rate amongst heads of households were Kilombero and Ulanga districts with each having a literacy rate of (82%) followed by Mvomero (77%), Morogoro Rural (76%), Kilosa (72%) and Morogoro Urban (70%) (Chart 3.5)



Educational Status

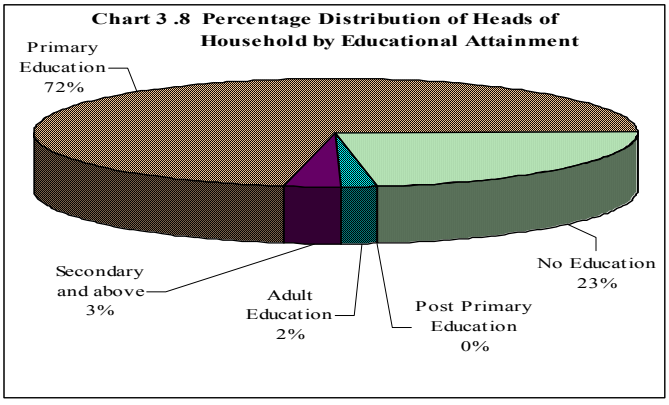
Information on educational status was collected from individual agricultural households members. The results show that 45 percent of the population aged 5 years and above in agricultural households in the region had completed different levels of education and 26 percent were still attending school. Those who have never attended school were 28 percent (Chart 3.6).





Agricultural households in Mvomero district had the highest percentage (48%) of population aged 5 years and above who had completed different levels of education. This was followed by Morogoro Urban and Kilombero districts each having 47% then Kilosa 46%, Ulanga 43% and Morogoro rural 42%.

The number of heads of agricultural households with formal education in Morogoro region was 196247 (75%), those without formal education were 64,498 (25%). The majority of heads of agricultural households (72%) had primary level education whereas less than 0.2 percent had post primary education (chart 3.8).

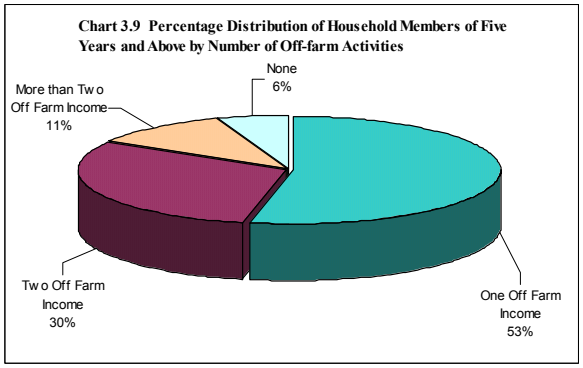


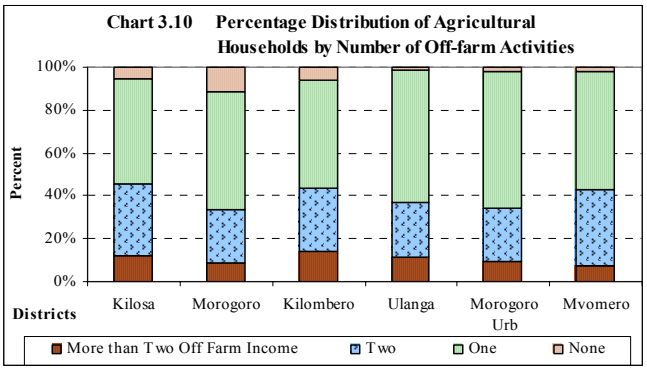
With regard to the heads of agricultural households with primary or secondary education in Morogoro region, Kilosa district had the highest percentage (26%) followed by Kilombero and Mvomero each having 20 percent then Morogoro rural 19 percent, Ulanga 13 percent and last was Morogoro Urban one percent. As for secondary education Kilombero had 30 percent followed by Ulanga 24 percent, Kilosa 19 percent, Morogoro Rural 15 percent, Mvomero 10 percent and Morogoro urban 6 percent. (Chart 3.8).

3.1.6 Off-farm Income

Off-farm income refers to cash generated from non-agricultural activities. This can be either from permanent employment (i.e., government, private sector or other), temporary employment or labourers. It also includes cash generated from working on farms belonging to other farmers. Off-farm income is important amongst agriculture households in Morogoro with 94 percent of households having at least one member with off-farm income. In Morogoro region 139,109 households had each one member age five years and above involved in off-farm income generating activity (53%), 79,217 households had each two members involved in off-farm income generating activities (30%) and 28,027 households had each more than two members involved in off-farm income generating activities (11%) and 14,393 households had each no member involved in off farm income generating activities (6%).

Ulanga district had the highest percentage of agriculture households with off-farm income (over 98.5% of total agriculture





households in the district). Other districts with high percent of agriculture households with off-farm income were Mvomero (98%), Morogoro Urban (98%), Kilosa (95%), Kilombero (94%) and Morogoro Rural (88%). The district with the highest percent of agriculture households with more than one member with off-farm income was Kilosa (48%). Morogoro district had the least number of households with more than one member having off-farm income (35%).

3.2 Crop Production

3.2.1 Land Use

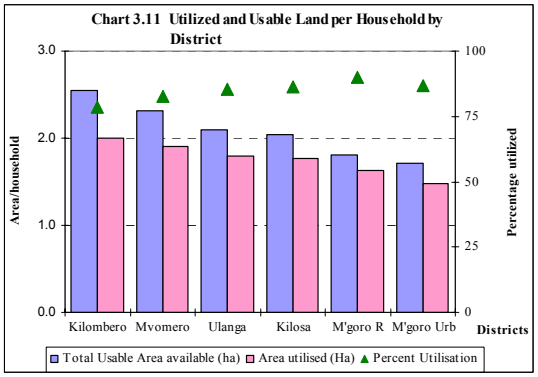
Land area and planted area are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on the land in one year. Planted area is the total area of crops planted in a year and the area is summed if there were more than one crop on the same land per year. A number of terms are used in this section which requires defining for clarification as follows:

Land Available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does NOT mean the total area of land that is designated as agriculture land in the country; however it is the land that is available to smallholders given the location of villages and lack of access to more remote parcels of unused agriculture designated land.

Usable land refers to the available land minus the land that cannot be used e.g. bare rock, shallow soils, steep slopes, swamp areas etc. It does however include un-cleared bush, Utilised land refers to the land that was used during the year.

3.2.1.1 Area of Land Utilised

The total area of land available to smallholders was 558,133 ha. The Regional average land area utilised for agriculture per household was only 1.8 ha. This figure is below the national average which is estimated at 2.0 hectares.



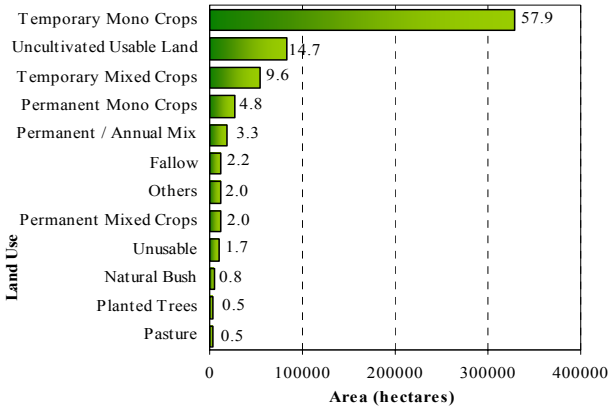
Land area utilised per household in five districts were below the national average with exception of Kilombero district which had the national average of 2.0 ha. It was followed by Mvomero 1.9ha, Ulanga 1.8ha, Kilosa 1.8ha, Morogoro Rural 1.6ha and Morogoro Urban 1.5ha. The percentage utilized of the usable land per household is highest in Morogoro Rural (90%) and lowest in Kilombero (78%). Eighty four percent of the total land

available to smallholders was utilised. Only 12.5 percent of usable land available to smallholders was not used (Chart 3.11 and Map 3.7).

3.2.1.2 Types of Land Use

The area of land under temporary mono crop was 328,994 hectares (57.9% of the total land available to smallholders in Morogoro), followed by area of uncultivated usable land (83,452ha, 14.7%), temporary mixed crops (54,759ha, 9.6%), area under permanent mono crops (27,285ha, 4.8%), area under permanent/ annual mix (18,491ha, 3.3%), area under fallow (12,208ha, 2.2%), area rented to others (11,497 ha, 2.0%), area under permanent mixed crops (11,388ha, 2.0%), area unusable (9,659ha, 1.7%), area under natural bush (4,299ha, 0.8%), area under planted trees (2,891ha, 0.5%) and area under pasture (2,868ha, 0.5%). (Chart 3.12)

Chart 3.12 Percentage distribution of Land Area by Type of Land Use



3.2.2 Annual Crops and Vegetable Production

Morogoro region has two rainy seasons, namely the short rainy season (October to November) and the long rainy season (April to May). The quantity of crops produced in both seasons will be used as a base for comparison with the past surveys and censuses.

3.2.2.1 Area Planted

The area planted with annual crops and vegetables was 428,534 hectares out of which 160,820 hectares (38%) were planted during short rainy season and 267,713 hectares (62%) during long rainy season. The average areas planted per household during the short and long rainy seasons was 0.6 and 0.7 ha respectively (Chart 3.13). The districts with the largest area planted per household (the average of the two seasons) were Kilombero (0.8 ha) followed by Ulanga and Mvomero district each having 0.7 ha. The district with the smallest average area planted was Morogoro Urban (0.4ha). The average planted area in all the district was higher in long rainy season than in short rainy season. (Chart 3.14 and Map 3.8)

Chart 3.13 Area Planted with Annual Crops by Season (hectares)

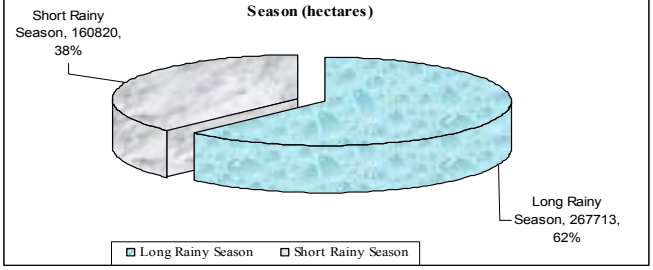
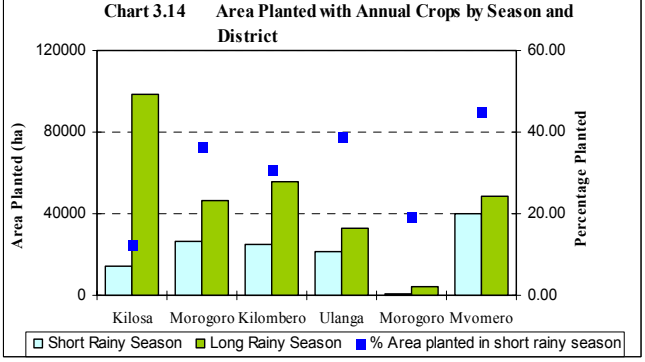
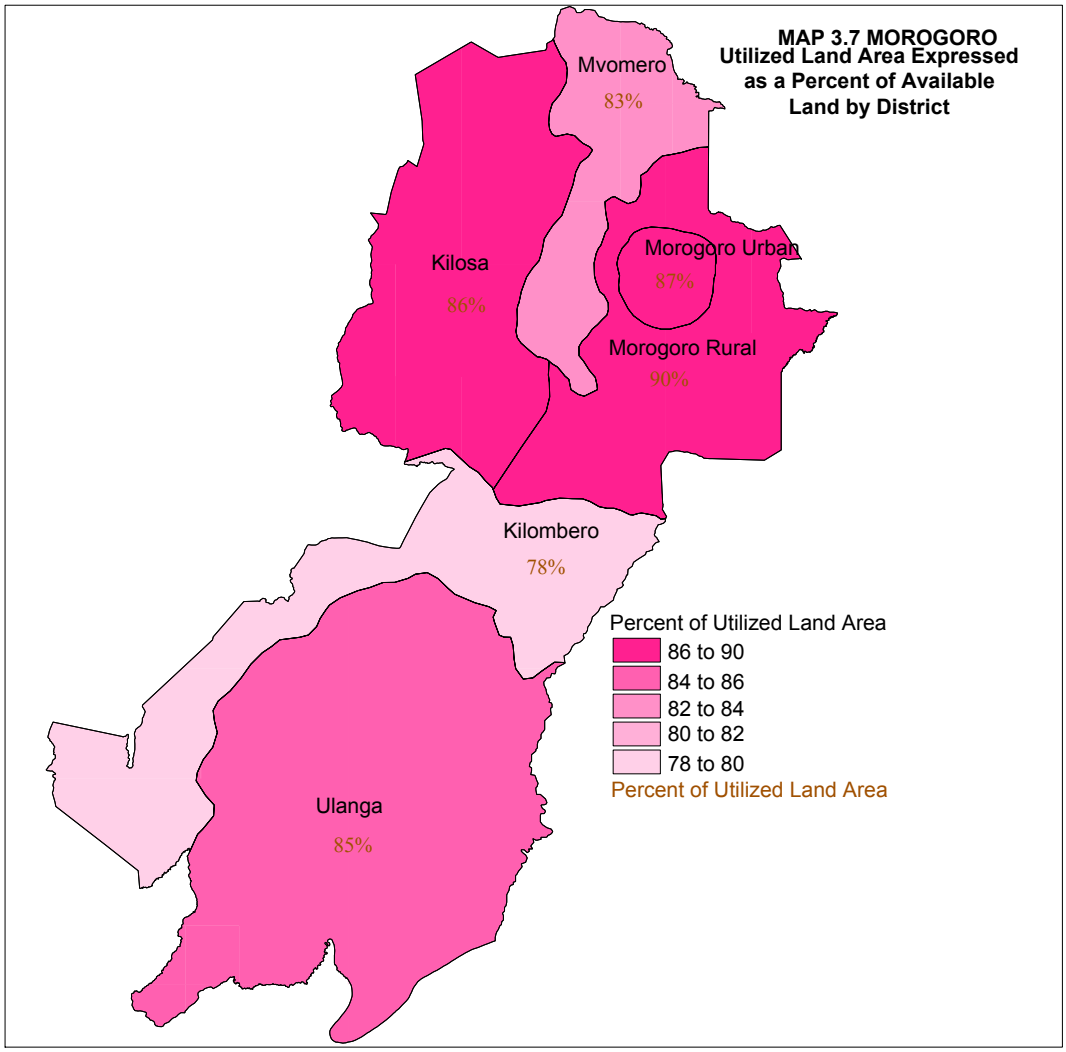
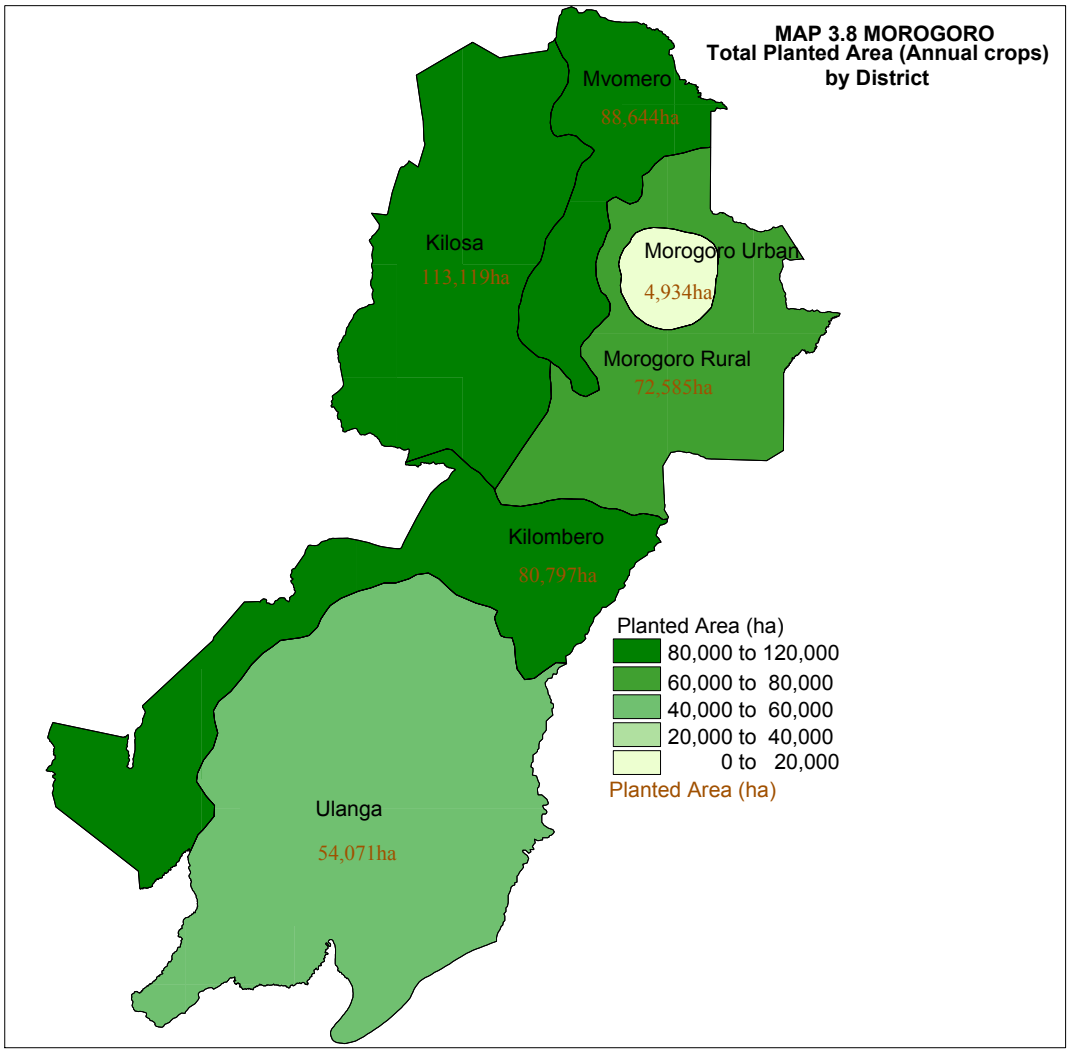


Chart 3.14 Area Planted with Annual Crops by Season and District



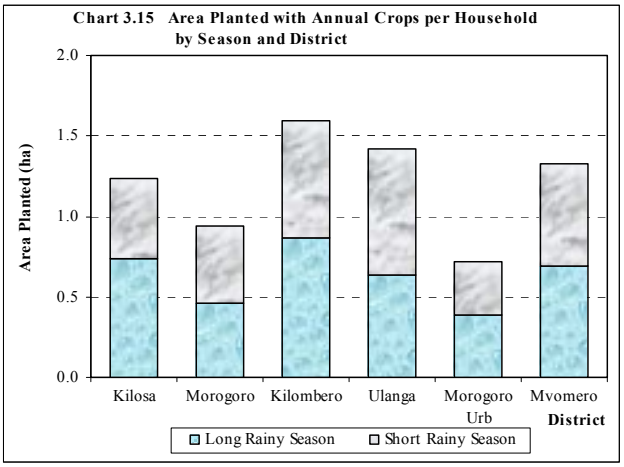
The planted area occupied by cereals was 337,461 ha (81.5% of the total area planted with annuals). This


MAP 3.7 MOROGORO
Utilized Land Area Expressed as a Percent of Available Land by District
Mvomero
83%
Kilosa
86%
Morogoro Urban
87%
Morogoro Rural
90%
Kilombero
78%
Ulanga
85%
Percent of Utilized Land Area
86 to 90
84 to 86
82 to 84
80 to 82
78 to 80
Percent of Utilized Land Area


MAP 3.8 MOROGORO
Total Planted Area (Annual crops) by District
Mvomero
88,644ha
Kilosa
113,119ha
Morogoro Urban
4,934ha
Morogoro Rural
72,585ha
Kilombero
80,797ha
Ulanga
54,071ha
Planted Area (ha)
80,000 to 120,000
60,000 to 80,000
40,000 to 60,000
20,000 to 40,000
0 to 20,000
Planted Area (ha)

was followed by pulses (28,556 hectares, 6.9%), roots and tubers (22,301 hectares, 5.4%), oil seeds (12,735 hectares, 3.1 %) fruit and vegetables (12,400 hectares, 3.0%) and cash crops (698 hectares, 0.2%).

The average area planted per household during the long rainy season in Morogoro region was 0.7 hectares. Almost all districts had an average of less than one hectare per household in that season. The district with the largest planted area per household was Kilombero 0.9ha followed by Kilosa and Mvomero each having 0.7ha, Ulanga 0.6ha, Morogoro Rural 0.5ha and the least was Morogoro Urban 0.4ha. (Chart 3.15 and Map 3.9)

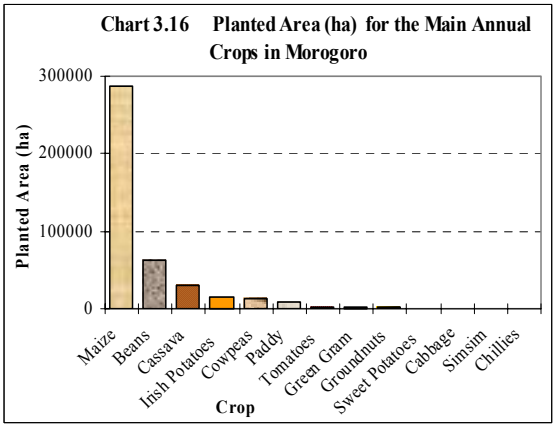


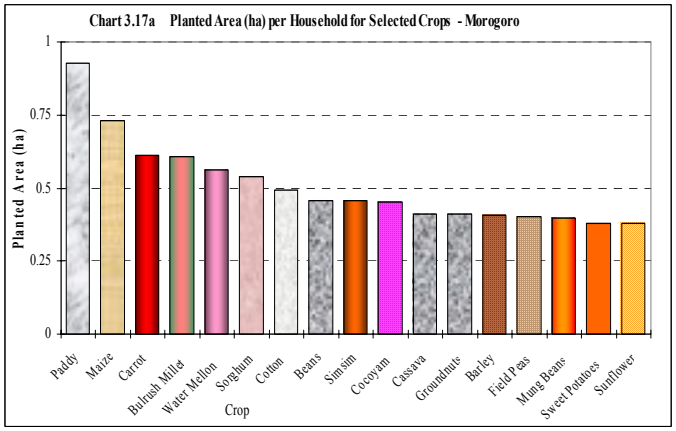
Analysis of the Most Important Crops

Results on crop production are presented in two different sections. The first section compares the importance of each crop regardless of whether they are annual or permanent. The second section contains a more detailed analysis on production based on crop types.

3.2.2.2 Crop Importance

Maize is the dominant annual crop grown in Morogoro region and it had a planted area 1.5 times greater than paddy, which had the second largest planted area. The area planted with maize constitutes 47 percent of the total area planted with annual crops in the region. Other crops in order of their importance (based on area planted) are beans, cassava, Irish potatoes, cowpeas, paddy and tomatoes (Chart 3.16) Households that grow paddy, maize, carrot and bulrush millets have larger planted areas per household than for other crops (Chart 3.17a)



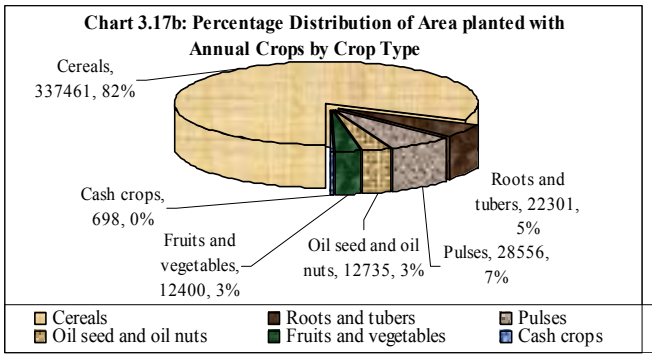


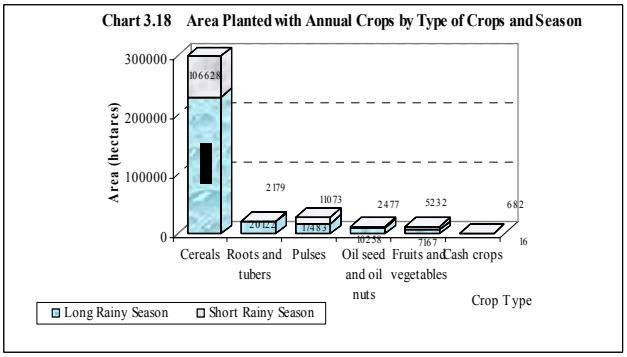
3.2.2.3 Crop Types

Cereals are the main crops grown in Morogoro region. The area planted with cereals was 337,461 ha (81.5% of the total planted area for annuals), followed by pulses with 28,556 ha (6.9%), roots and tubers 22,301 ha (5.4%), oil seeds and oil nuts 12,735 ha (3.1%) and fruits and vegetables 12,400 ha (3.0%). Annual cash crops which are mainly constituted of cotton and tobacco had the least planted area of about 698 ha (0.2%) (Chart 3.17b)

Cereals are the dominant crops grown in both seasons followed by pulses and other crop types are of minor importance in

comparison. There is little difference in the proportions of the different crop types grown between seasons and because short rainy season production was very small compared to long rainy season it is inappropriate to make detailed comparisons between the two seasons (Chart 3.18).





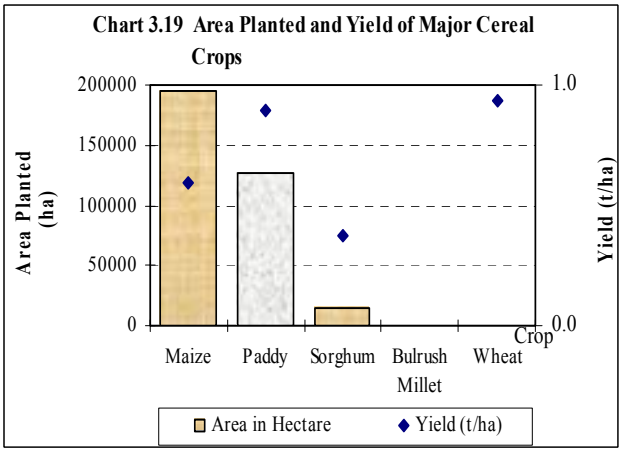
3.2.2.4 Cereal Crop Production

The total production of cereals was 234,558 tonnes. Maize was the dominant cereal crop at 115,570 tonnes which was 49 percent of total cereal crops produced, followed by paddy (48%) sorghum (2.36%), bulrush millets (0.04%), finger millets (0.04), wheat (0.09) and barley (0.02) (Map 3.10).

Table 3.2: Area, Production and Yield of Cereal Crops by Season

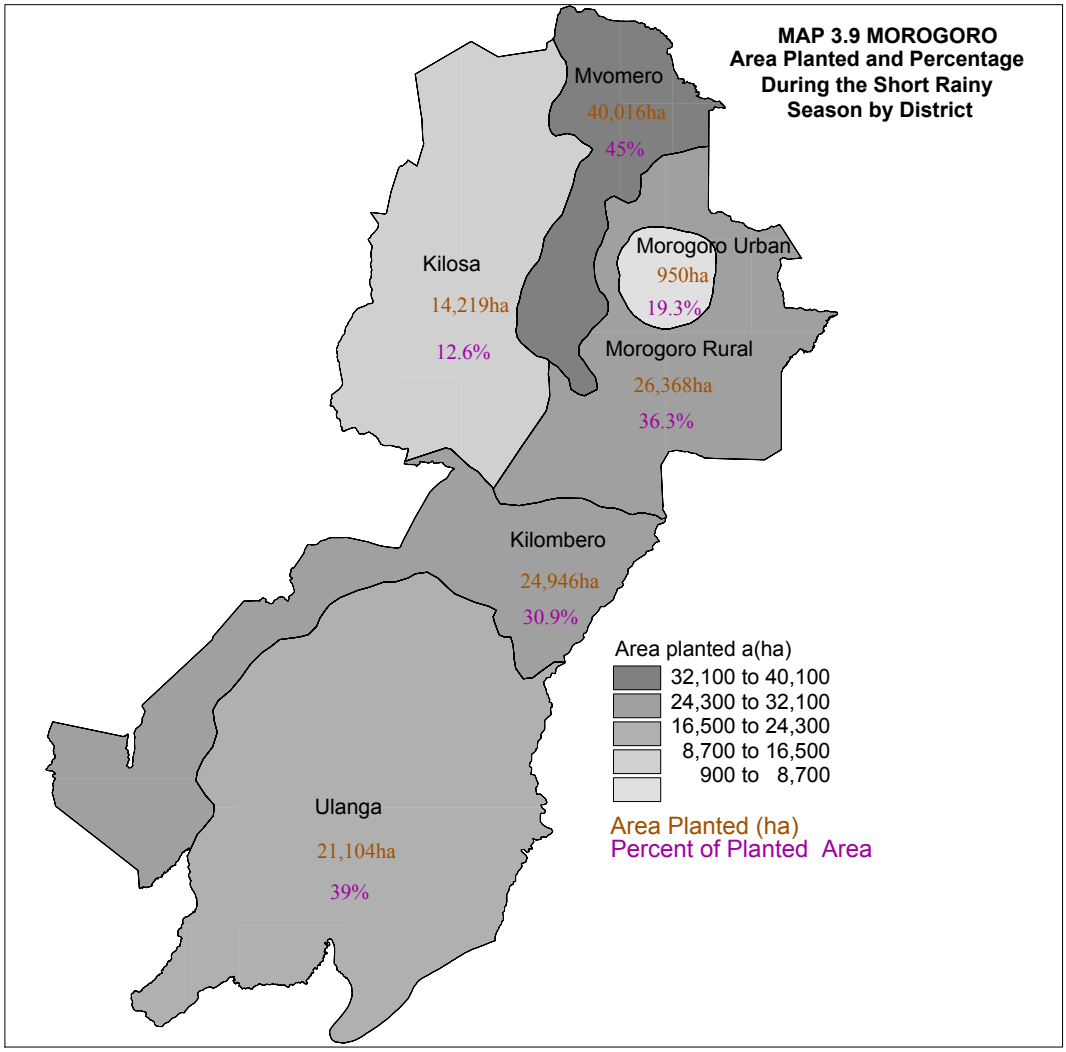
	Short Rainy Season			Long Rainy Season			Total		
Crop	Area Planted (ha)	Quantity Harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)
Maize	75654	55292	0.7	11943	60278	0.5	19509	115570	0.6
Paddy	27279	23114	0.8	99248	89889	0.9	12652	113003	0.9
Sorghum	3603	956	0.3	11227	4587	0.4	14830	5543	0.4
Bulrush Millet	39	19	0.5	416	70	0.2	455	89	0.2
Finger Millet	0	0	0.0	165	90	0.5	165	90	0.5
Wheat	0	0	0.0	238	223	0.9	238	223	0.9
Barley	53	0	0.0	104	40	0.4	157	40	0.3
Total	106628	79381		230834	155177		337462	234558	

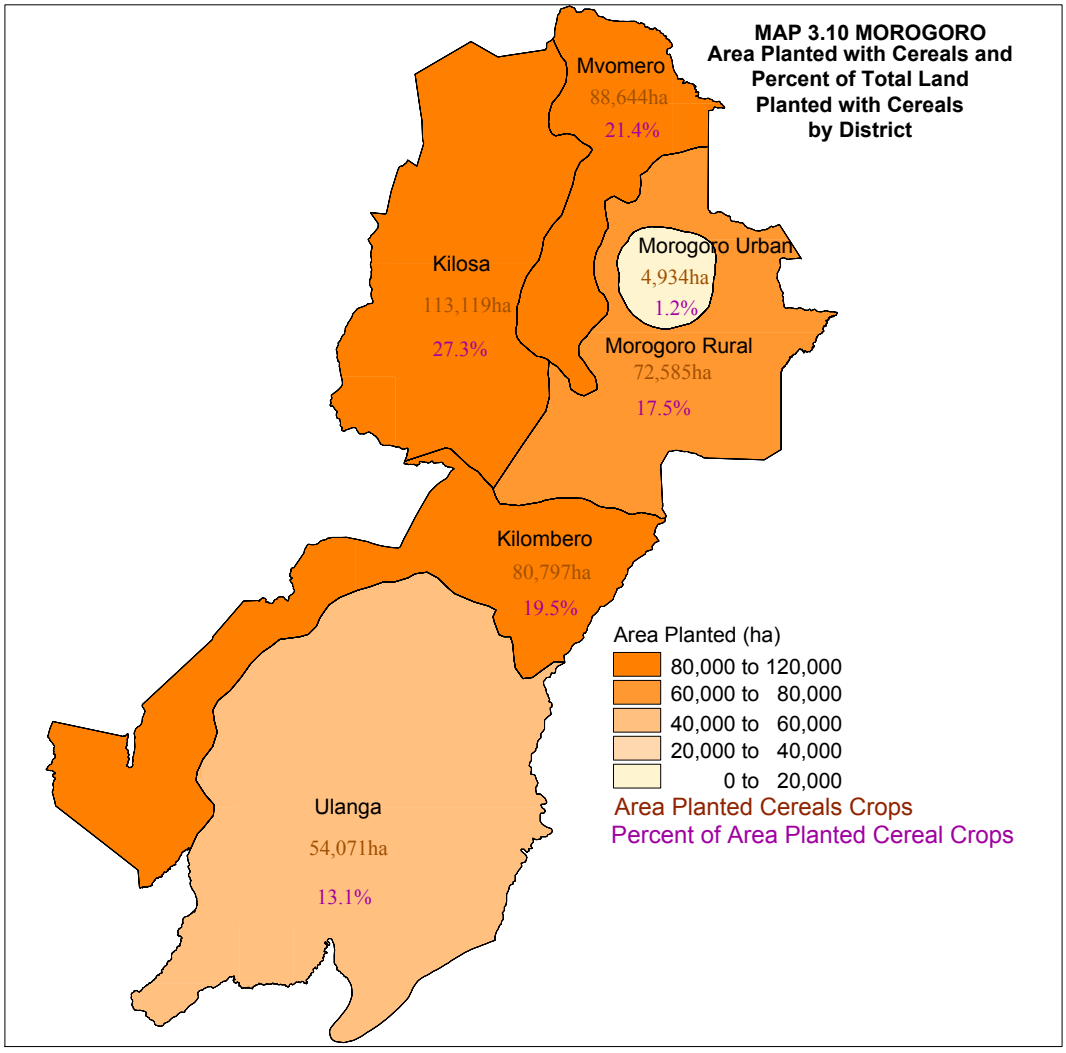
The total area planted with cereals during the short and long rainy seasons was 337,461 ha out of which 106,628 ha (32%) were planted in short rainy season and 230,834 ha (68%) were planted during the long rainy season. The long rainy season accounts for 66 percent of the total cereals produced in both seasons. The area planted with maize during the short rainy season was 71 percent of the total area planted with cereals in that season followed by Paddy (26%) and Sorghum (3%) (Table 3.2)



The area planted with maize was dominant and it represented 57.81 percent of the total area planted with cereal crops, then followed by paddy (37.49%), sorghum (4.39%), bulrush millets (0.13%) wheat (0.07), finger millet (0.05%), and barley (0.05).

The yield of wheat was 936 kg/ha, followed by paddy (893 kg/ha), maize (592 kg/ha), finger millets (543 kg/ha), sorghum 374 kg/ha, barley (254 kg/ha and bulrush millets (197 kg/ha) (Chart 3.19).

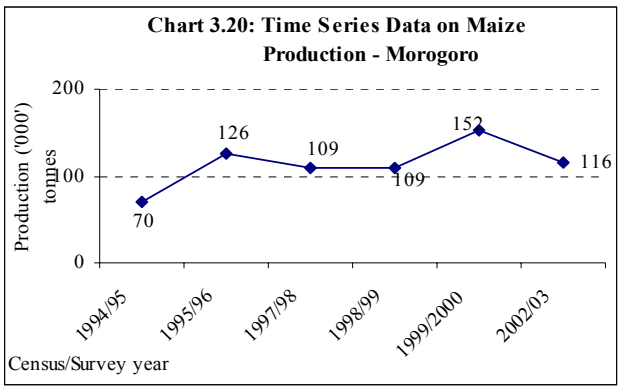

MAP 3.9 MOROGORO
Area Planted and Percentage During the Short Rainy Season by District
Mvomero
40,016ha
45%
Kilosa
14,219ha
12.6%
Morogoro Urban
950ha
19.3%
Morogoro Rural
26,368ha
36.3%
Kilombero
24,946ha
30.9%
Ulanga
21,104ha
39%
Area planted a(ha)
32,100 to 40,100
24,300 to 32,100
16,500 to 24,300
8,700 to 16,500
900 to 8,700
Area Planted (ha)
Percent of Planted Area

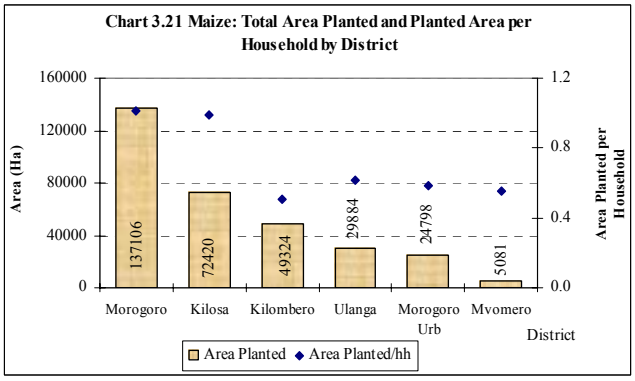

MAP 3.10 MOROGORO
Area Planted with Cereals and Percent of Total Land Planted with Cereals by District
Mvomero
88,644ha
21.4%
Kilosa
113,119ha
27.3%
Morogoro Urban
4,934ha
1.2%
Morogoro Rural
72,585ha
17.5%
Kilombero
80,797ha
19.5%
Ulanga
54,071ha
13.1%
Area Planted (ha)
80,000 to 120,000
60,000 to 80,000
40,000 to 60,000
20,000 to 40,000
0 to 20,000
Area Planted Cereals Crops
Percent of Area Planted Cereal Crops

3.3.4.1 Maize

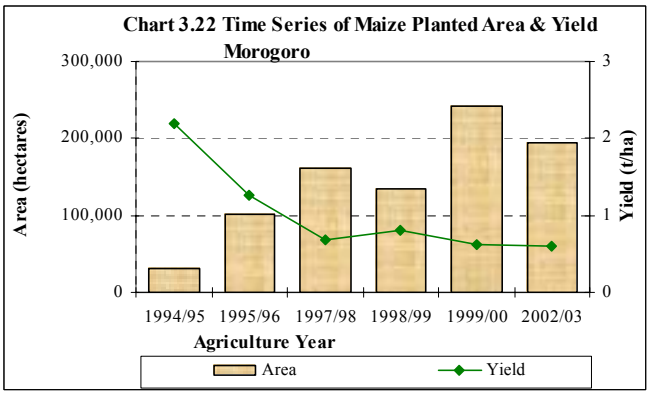
Maize dominates the production of cereal crops in the region. The number of households growing maize in Morogoro region during the long rainy season was 148,561 (66% of the total crop growing households in the region during the long rainy season). The total production of maize was 115,570 tonnes from a planted area of 195,090 hectares resulting in a yield of 0.6 t/ha.

Chart 3.20 indicates maize production trend (in thousand metric tons) for the combined long and short rainy seasons. The production was steadily increasing from 70,000 tons in 1994/95 to 116,000 tons in 2002/03. The peak maize production was recorded in 1999/2000 with 152,000 tons. The average area planted with maize per household was 0.8 hectares; however it ranged from 0.5 hectares in Kilombero district to 1.0 hectares in Morogoro rural district. Morogoro rural district had the largest area of maize (137,106 ha) followed by Kilosa (72,420 ha), Kilombero (49,324 ha), Ulanga (29,884 ha), Morogoro urban (24,798 ha), and Mvomero (5,081 ha) (Chart 3.21 and Map 3.11).





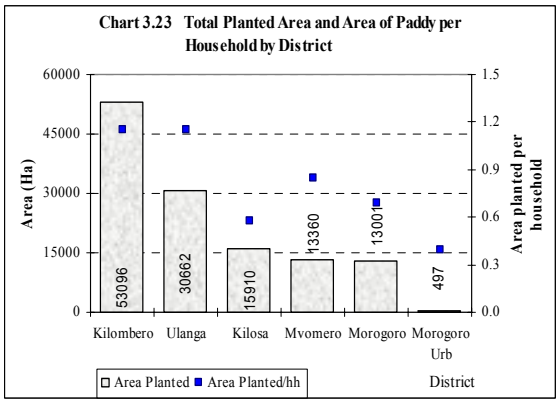
Charts 3.20 and 3.22 show that, whilst the yield of maize has dropped over the previous 10 years, the quantity produced has increased and this has been due to a large increase in the area under production. The area planted with maize increased from 1994/95 to 20002/03. The peak area recorded under maize production was in 1999/00 (242,544 ha). However, the yield of maize has shown a gradual decline over the years since 1994/95 (from 2.1t/ha in 1994/95 to 0.6 t/ha in 2003) (Chart 3.22) (Map 3.12).

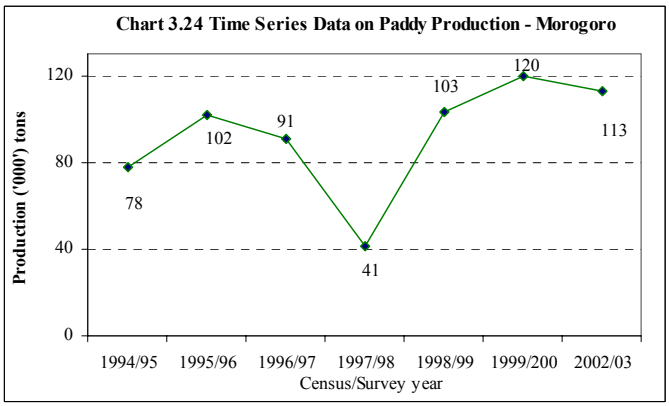


3.3.4.2 Paddy

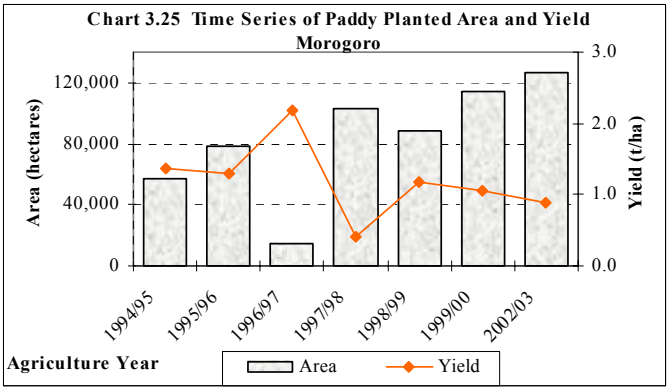
Paddy is the second most important cereal crop in the region in terms of planted area. The number of households that grew paddy in Morogoro region during the long rainy season was 109,655. This represents 49 percent of the total crop growing households in Morogoro region in the long rainy season. The total production of paddy was 113,003 tonnes from a planted area of 126,527 hectares resulting in a yield of 0.89 t/ha.

The district with the largest area planted with Paddy was Kilombero (53,096 ha) followed by Ulanga (30,662ha), Kilosa (15,910 ha), Mvomero (13,360 ha), Morogoro rural (13,001 ha), and Morogoro urban (497ha) (Map 3.13). There were significant variations in the average area planted per crop growing household among the districts ranging from 0.4 ha in Morogoro urban to 1.2 ha in Kilombero and Ulanga districts (Chart 3.23 and Map 3.14).



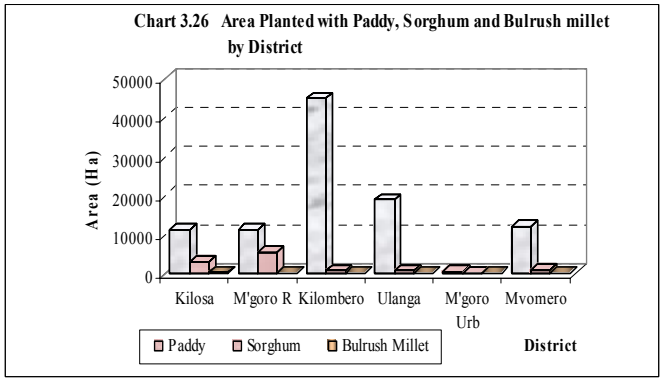


There was a sharp drop in production of paddy in 1995/96 from 102,000 tons to 41,000 tons in 1997/98. The production rose to 103,000 tons in 1998/99 and production increased again to 120,000 tons in 1999/2000 after which it drooped slightly to 113,000 tons in the following year (chart 3.24)



Charts 3.23 and 3.25 show that, whilst the yield of paddy has dropped dramatically over the previous 10 years, the quantity produced has increased and this has been due to a large increase in the area under production.

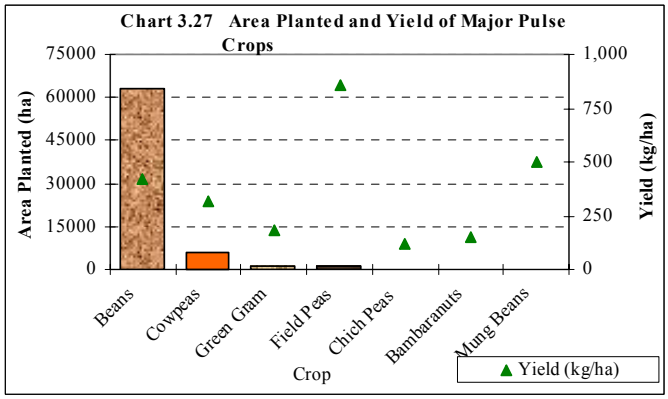
3.3.4.3 Other Cereals

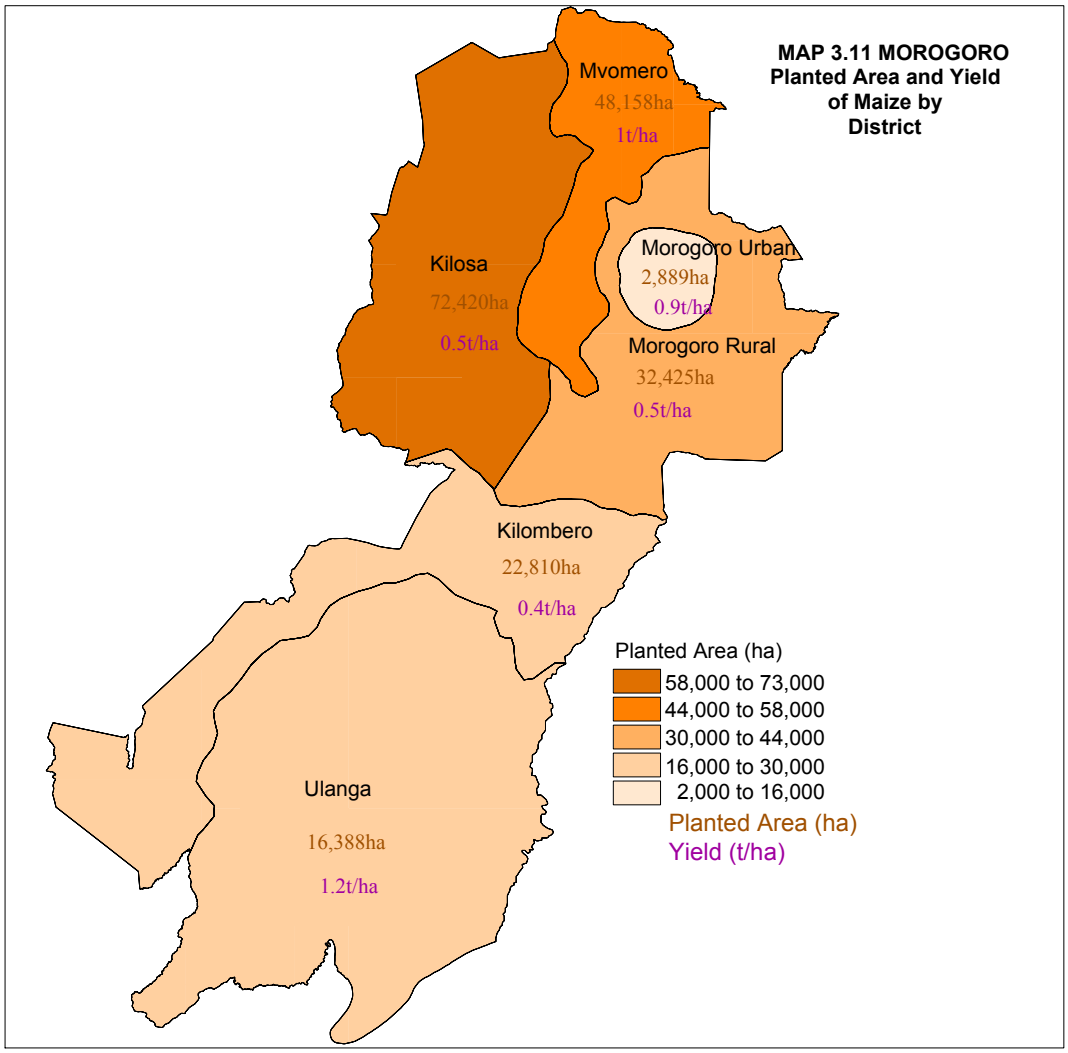


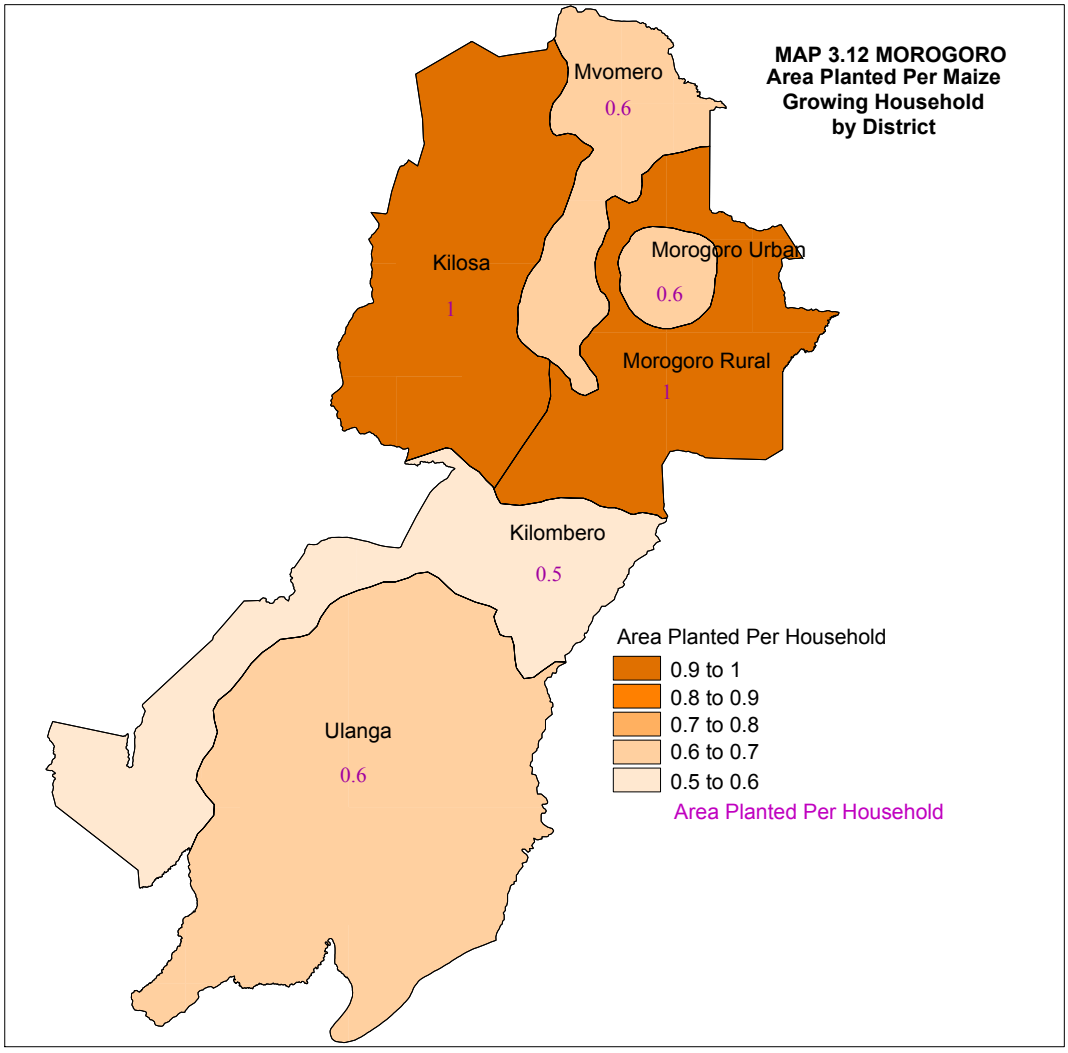
The third important cereal crop grown in Morogoro region is sorghum (14,830 ha). It is mainly produced in Morogoro rural (7,028 ha), Kilosa (3,224 ha), Mvomero (2,716 ha), Ulanga (903 ha), Kilombero (815 ha) and Morogoro urban (144 ha). Other cereals produced in the region includes bulrush millets (455ha), wheat (238 ha), finger millets (165 ha) and barley (157 ha) (Chart 3.26).

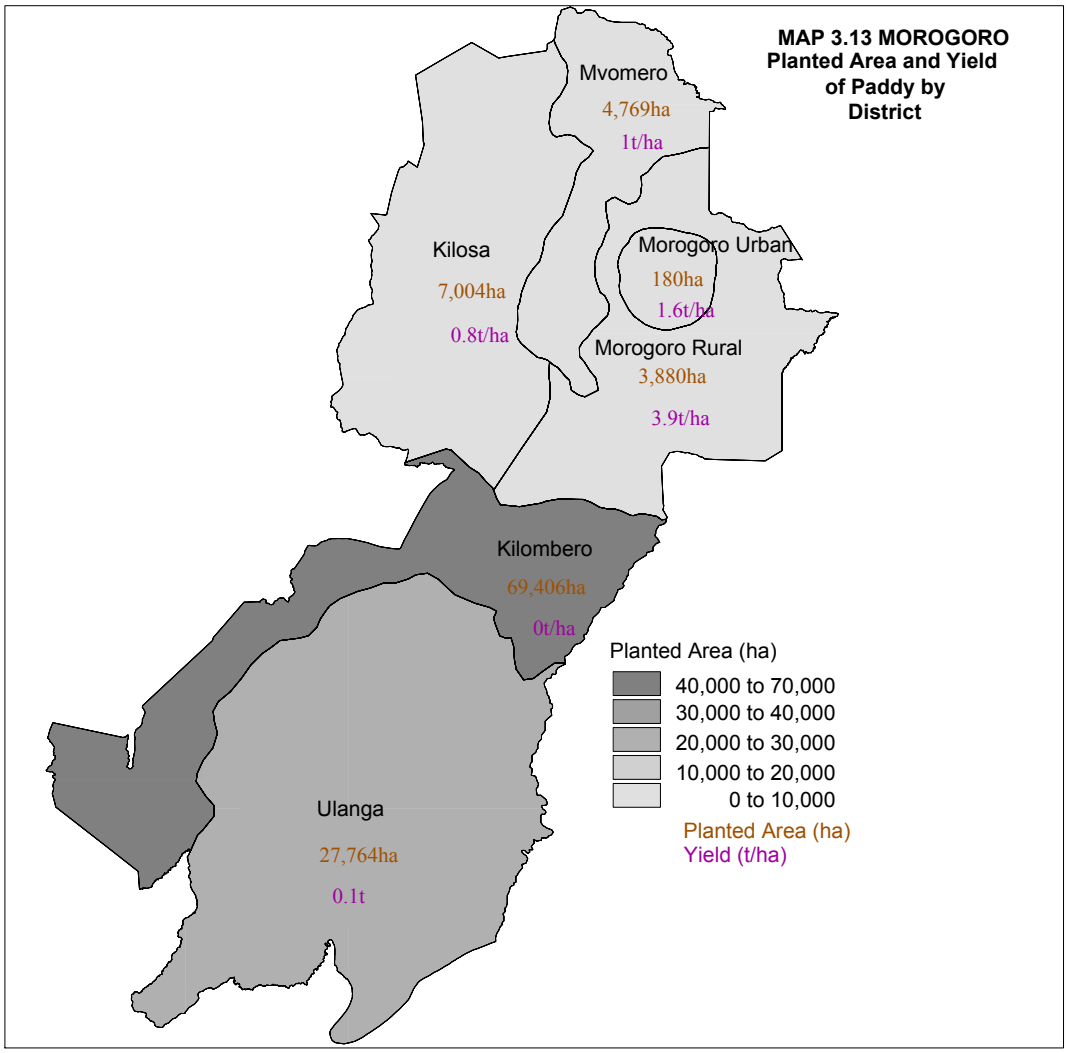
3.35 Pulse Crops Production

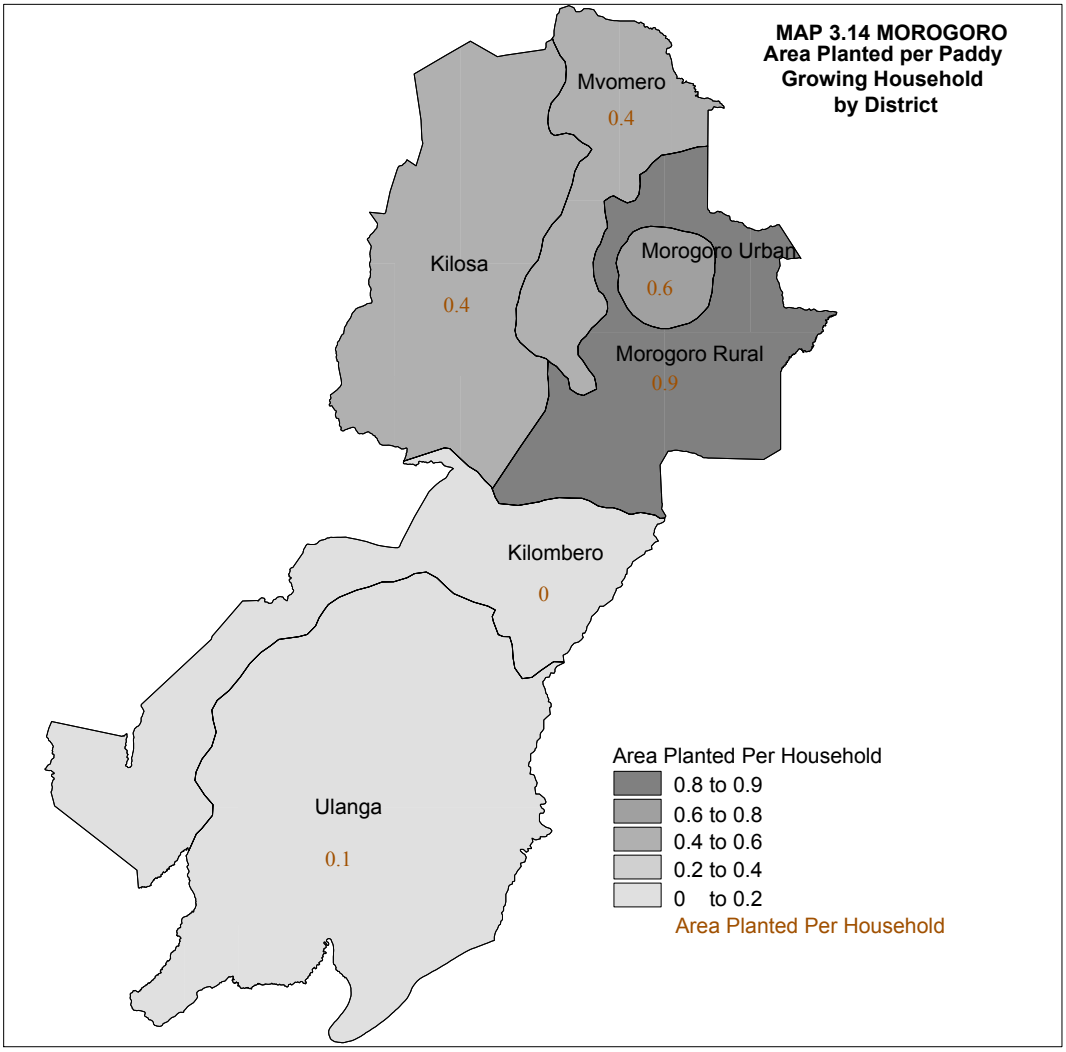
The total production of pulse crops was 11,595 tonnes. Beans production was higher than any other pulse crop in the region with a total production of 8,617 tonnes representing 74.3 percent of the total pulse crops production. This was followed by cowpeas with 1,948 tonnes (16.8%), field peas (816t, 7.0%), green peas (174t, 1.5%), and the other types represents 40t (0.4%) (Table 3.4a)




MAP 3.11 MOROGORO
Planted Area and Yield of Maize by District
Mvomero
48,158ha
1t/ha
Kilosa
72,420ha
0.5t/ha
Morogoro Urban
2,889ha
0.9t/ha
Morogoro Rural
32,425ha
0.5t/ha
Kilombero
22,810ha
0.4t/ha
Ulanga
16,388ha
1.2t/ha
Planted Area (ha)
58,000 to 73,000
44,000 to 58,000
30,000 to 44,000
16,000 to 30,000
2,000 to 16,000
Planted Area (ha)
Yield (t/ha)


MAP 3.12 MOROGORO
Area Planted Per Maize Growing Household by District
Mvomero
0.6
Kilosa
1
Morogoro Urban
0.6
Morogoro Rural
1
Kilombero
0.5
Ulanga
0.6
Area Planted Per Household
0.9 to 1
0.8 to 0.9
0.7 to 0.8
0.6 to 0.7
0.5 to 0.6
Area Planted Per Household

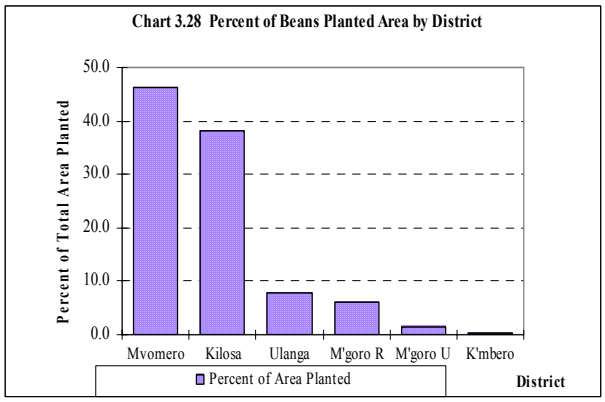

MAP 3.13 MOROGORO
Planted Area and Yield of Paddy by District
Mvomero
4,769ha
1t/ha
Kilosa
7,004ha
0.8t/ha
Morogoro Urban
180ha
1.6t/ha
Morogoro Rural
3,880ha
3.9t/ha
Kilombero
69,406ha
0t/ha
Ulanga
27,764ha
0.1t
Planted Area (ha)
40,000 to 70,000
30,000 to 40,000
20,000 to 30,000
10,000 to 20,000
0 to 10,000
Planted Area (ha)
Yield (t/ha)

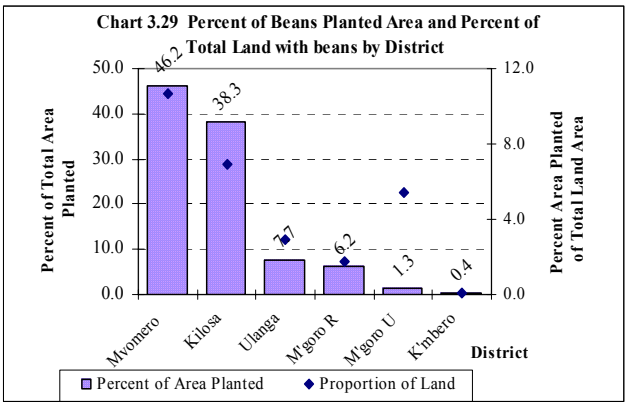

MAP 3.14 MOROGORO
Area Planted per Paddy Growing Household by District
Mvomero
0.4
Kilosa
0.4
Morogoro Urban
0.6
Morogoro Rural
0.9
Kilombero
0
Ulanga
0.1
Area Planted Per Household
0.8 to 0.9
0.6 to 0.8
0.4 to 0.6
0.2 to 0.4
0 to 0.2
Area Planted Per Household

The area planted with beans was larger than any other pulse crop and it was the most important crop in Morogoro in terms of planted area (5% of the total area planted with annual crops and vegetables) and it accounted for 71.5 percent of the area planted with pulses. The area planted with pulses during the long rainy season was 61% with beans having 70.2 percent of its production in the long rainy season. Other pulse crops were mainly produced during long rainy season with cowpeas 56.2 %, field peas 39.0% (which is mainly grown in short rainy season), green gram 67.8% and bambara nuts 100%. Mung beans and chick peas were grown during the short rainy season. The estimated yield was high for field peas 0.86t/ha, mung beans 0.5t/ha, beans 0.42t/ha, cowpeas 0.32t/ha, green peas .18t/ha, bambaranuts .15t/ha and chick peas 0.11t/ha.

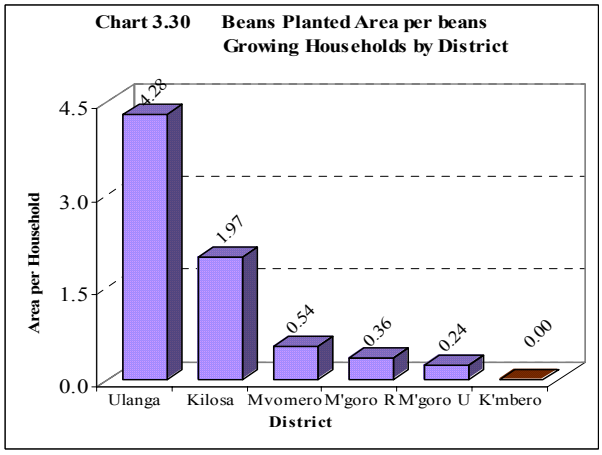
3.3.5.1 Beans

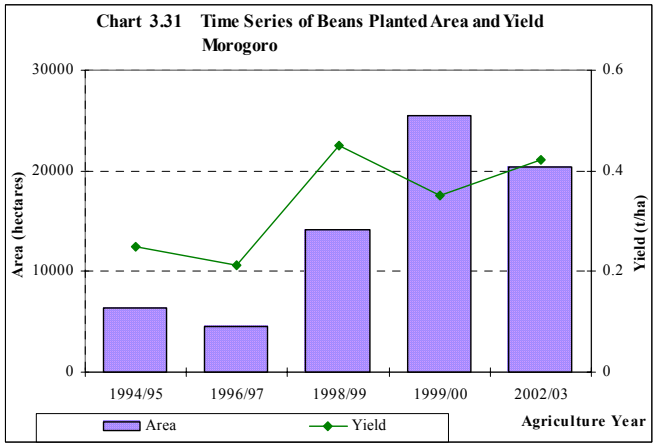
The number of households growing beans in the region was 44,718 which represents 17 percent of the total crop growing households in the region. The total production of beans during the census year was 8,617 tons. The area planted with beans increased sharply from 6,363 ha to 25,500 ha over the period 1994 to 1999. Then the area planted with beans dropped to 20,407 in 2003.

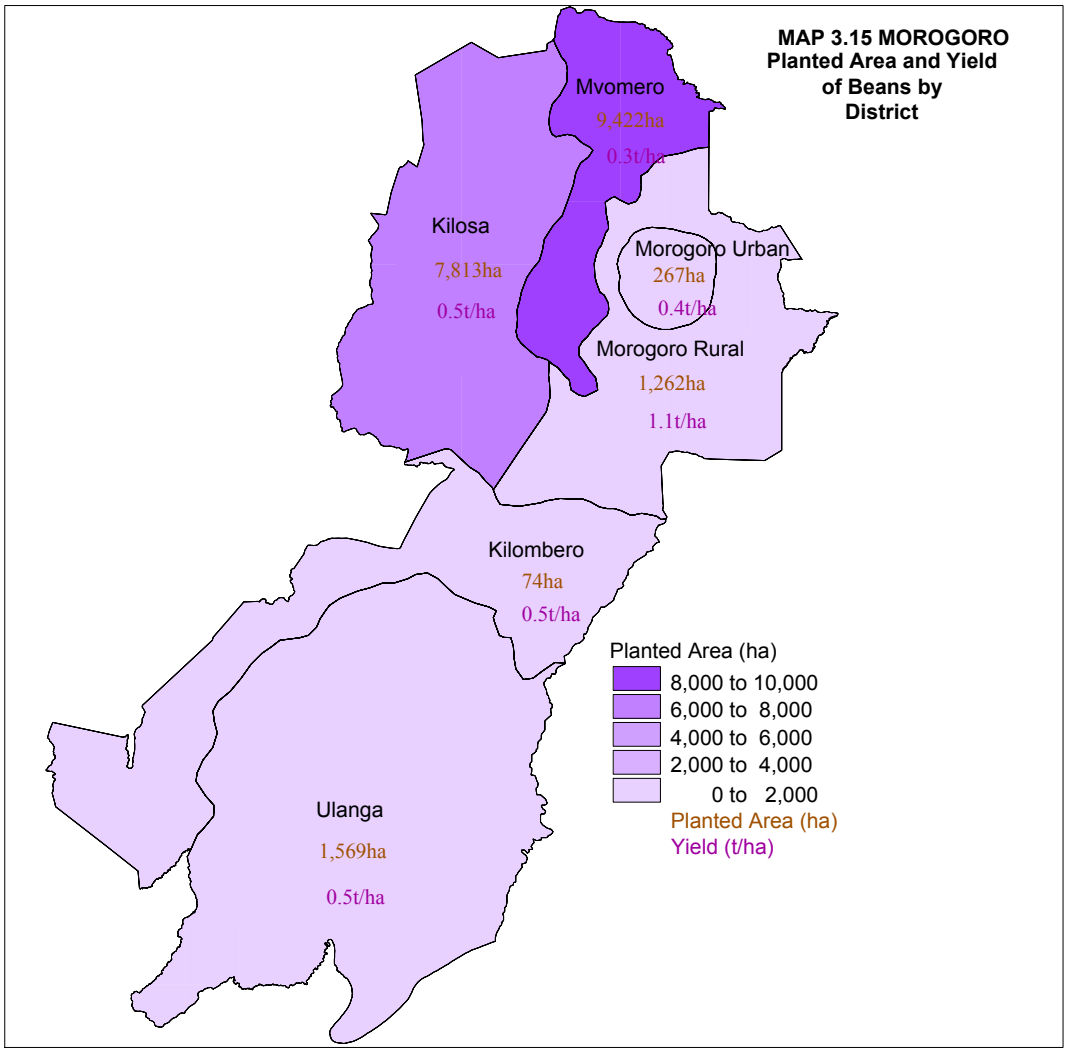




Mvomero district had the largest planted area of beans (9,422 ha, 46.2% of total area planted area for annual crops in the district), followed by Kilosa (7,813 ha, 38.3%), Ulanga (1,569 ha, 7.7%), Morogoro rural (1,262 ha, 6.2%), Morogoro urban (267 ha, 1.3%), and Kilombero (74 ha, 0.4%). However, the highest proportion of land planted with beans, expressed as a percent of the total land area was in Mvomero district (10.6%). This was followed by Kilosa (6.9%), Morogoro Urban (5.4%), Ulanga (2.9%), Morogoro Rural (1.7%), and Kilombero (0.1%) (Chart 3.29 and Map 3.15).






MAP 3.15 MOROGORO
Planted Area and Yield of Beans by District
Mvomero
9,422ha
0.3t/ha
Kilosa
7,813ha
0.5t/ha
Morogoro Urban
267ha
0.4t/ha
Morogoro Rural
1,262ha
1.1t/ha
Kilombero
74ha
0.5t/ha
Ulanga
1,569ha
0.5t/ha
Planted Area (ha)
8,000 to 10,000
6,000 to 8,000
4,000 to 6,000
2,000 to 4,000
0 to 2,000
Planted Area (ha)
Yield (t/ha)

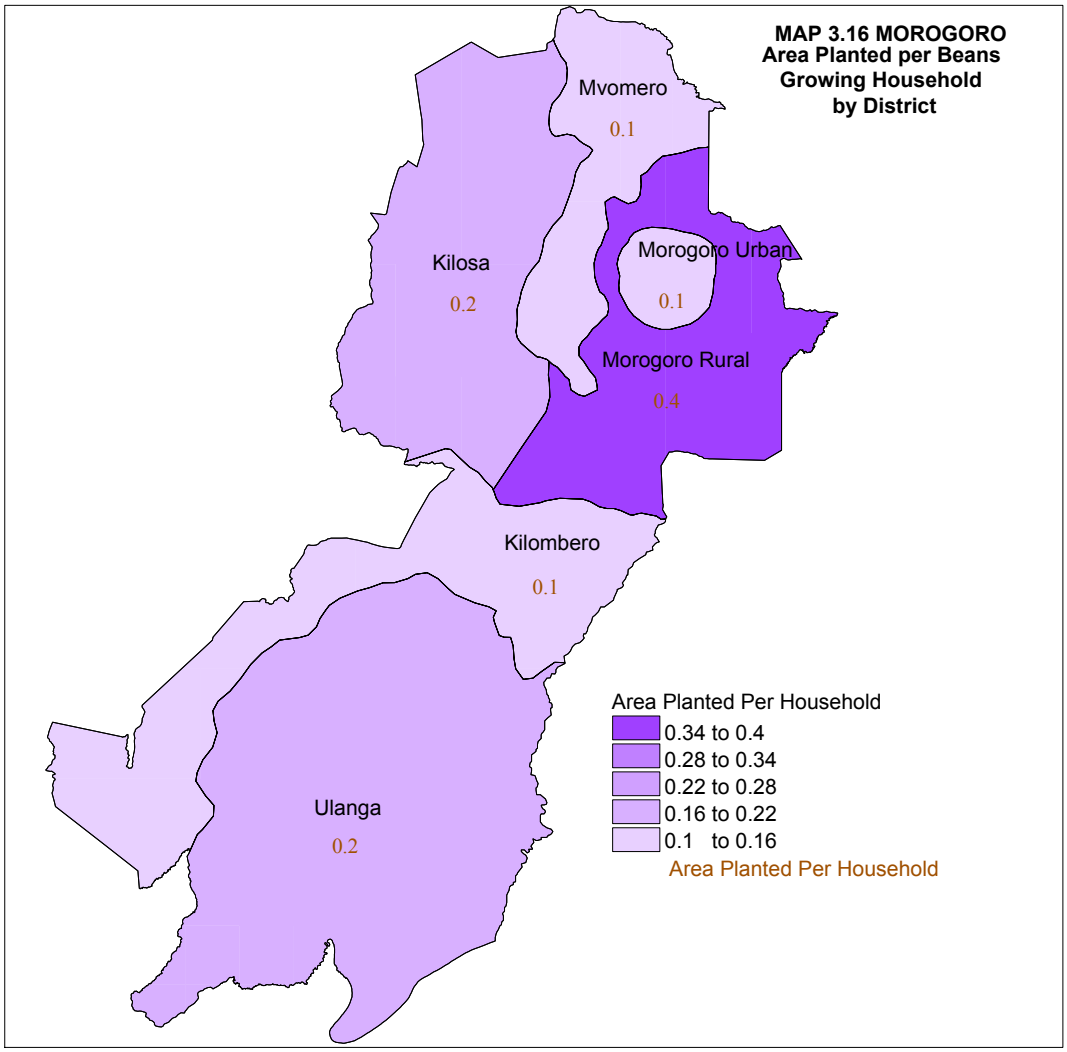

MAP 3.16 MOROGORO
Area Planted per Beans Growing Household by District
Mvomero
0.1
Kilosa
0.2
Morogoro Urban
0.1
Morogoro Rural
0.4
Kilombero
0.1
Ulanga
0.2
Area Planted Per Household
0.34 to 0.4
0.28 to 0.34
0.22 to 0.28
0.16 to 0.22
0.1 to 0.16
Area Planted Per Household

Table 3.4a : Area, Production and Yield of Pulses by Season

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)
Mung Beans	49	24	0.5	0	0	0.0	49	24	0.5
Beans	7047	2568	0.4	13360	6050	0.5	20407	8617	0.4
Cowpeas	2987	853	0.3	3096	1095	0.4	6083	1948	0.3
Green Gram	513	56	0.1	441	118	0.3	954	174	0.2
Chich Peas	65	8	0.1	0	0	0.0	65	8	0.1
Bambaranuts	0	0	0.0	52	8	0.2	52	8	0.2
Field Peas	411	497	1.2	535	318	0.6	947	816	0.9
Total	**11073**	**4006**	**0.4**	**17483**	**7589**	**0.4**	**28556**	**11595**	**0.4**

The average planted area of beans was 0.5 hectares per beans growing household. However, there were large district variations. The area planted per beans growing household was greatest in Ulanga (4.3 ha). This was followed by Kilosa (2.0 ha), Mvomero (0.5 ha), Morogoro Rural (0.4 ha), and Morogoro Urban (0.2 ha), (Chart 3.30) (Map 3.16).

3.3.5.2 Cow peas

The number of households growing cow peas in Morogoro Region during the long rainy season was 13,446. This was 29 percent of the total pulse crops growing households during the long rainy season. The total production of cow peas during the census year was 1,948 tonnes. Cow peas is grown in all the districts of Morogoro region, the district with the highest planted area was Morogoro Rural with (1,953 ha, 32%), followed by Mvomero (1,464 ha, 24%), Kilosa (1,298 ha, 21%), Ulanga (719 ha, 12%), Kilombero (397 ha, 7%) and Morogoro Urban 253 ha, 4%)(Map 3.17,3.18)

3.3.6 Root and Tuber Crops

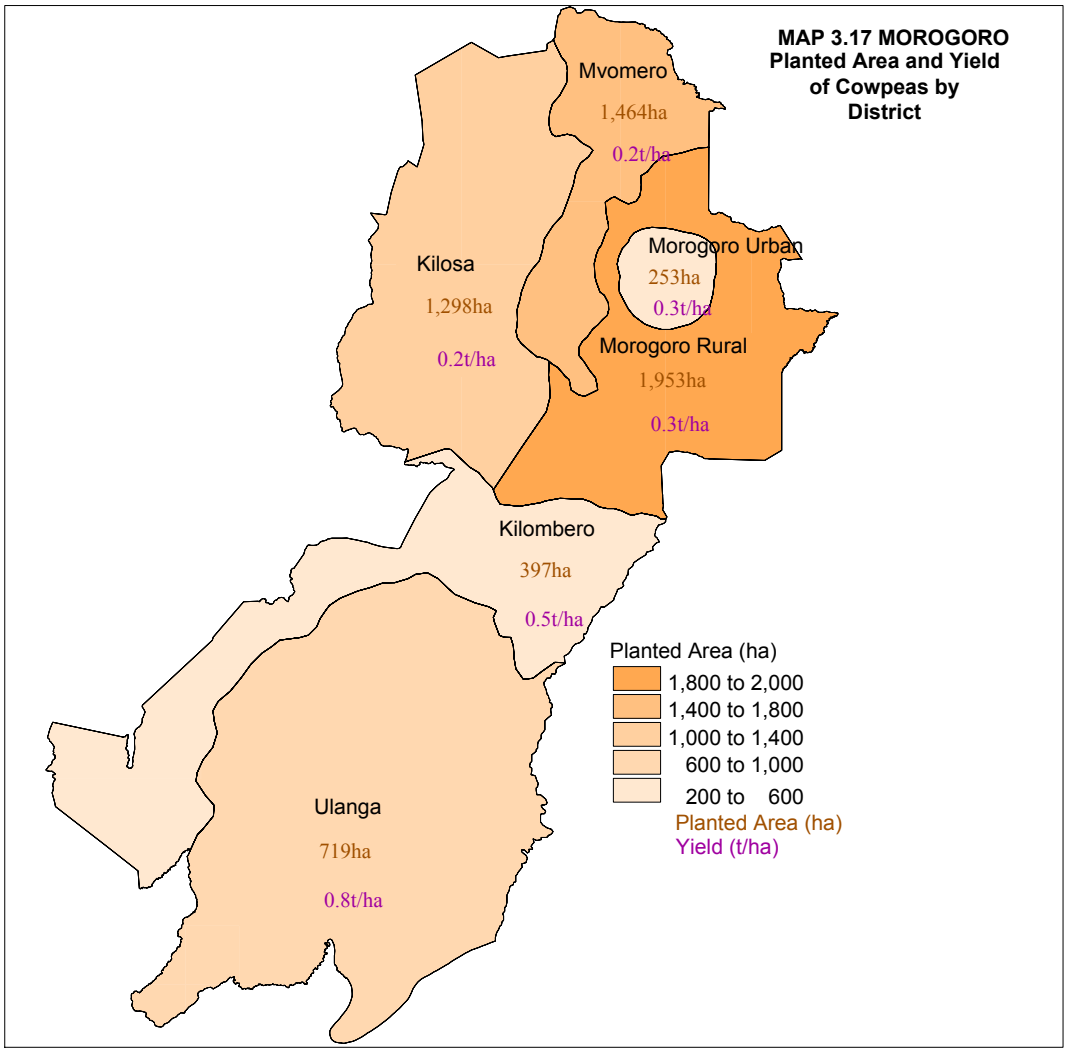
Table 3.4b: Area, Quantity Harvested and Yield of Root and Tuber Crops by Season

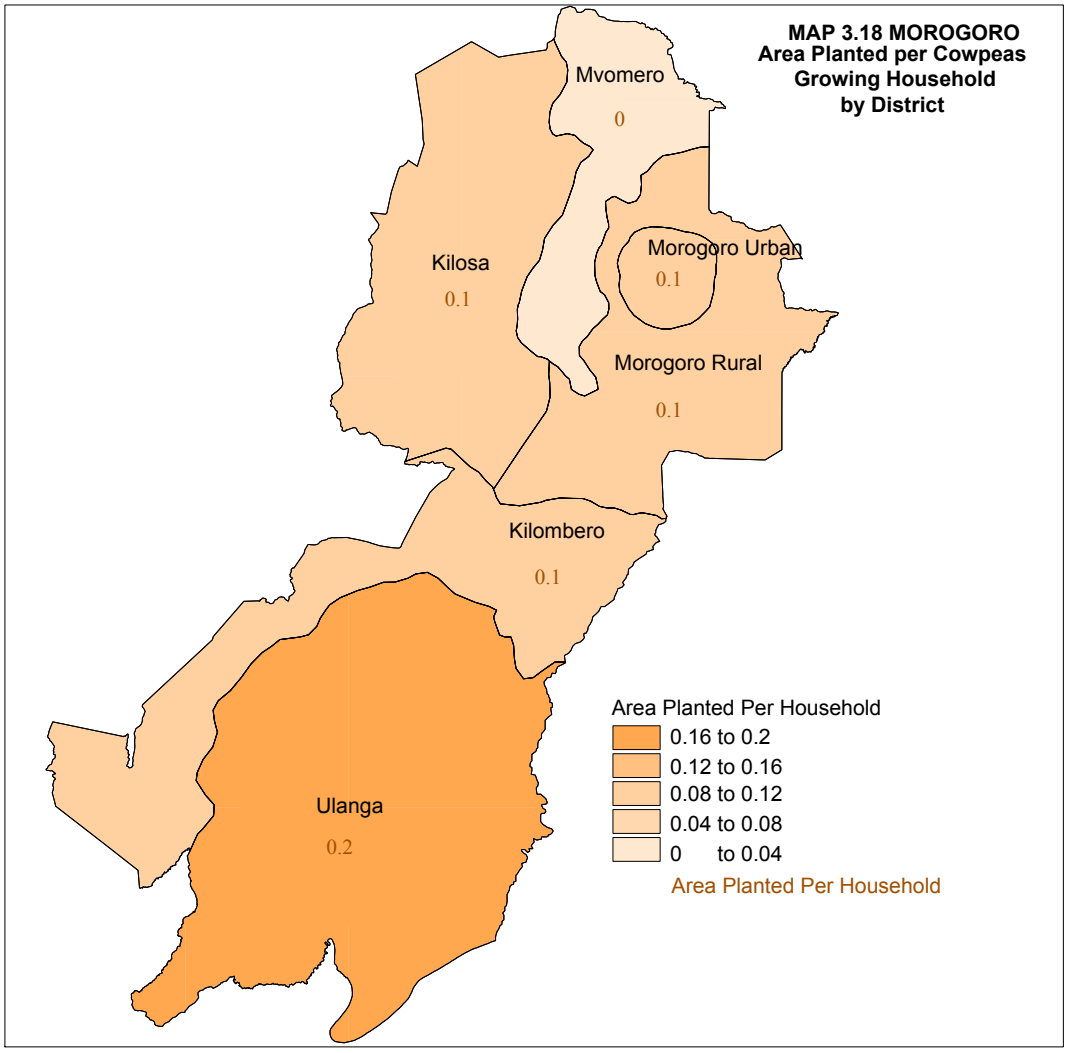
Crop	Short Rainy Season			Long Rainy Season			Total	
	Area Planted (ha)	Quantity Harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)
Cassava	530	667	1.3	16,644	22,958	1.4	17,174	23,625
Sweet Potatoes	436	705	1.6	2,514	4,178	1.7	2,950	4,883
Irish Potatoes	63	263	4.1	669	461	0.7	733	724
Yams	52	261	5.0	24	60	2.5	77	322
Cocoyam	1,098	785	0.7	269	813	3.0	1,367	1,598
Total	**2,179**	**2,681**		**20,122**	**28,471**		**22,301**	**31,152**

The total area planted with roots and tuber crop was 22,301 hectares out of which 17,174 ha were planted with cassava, this was 77 percent of the total area planted with cassava, followed by sweet potatoes 2,950 ha (13%), coco yam 1,367 ha (6%), Irish potatoes 733 ha (3%) and yams 77 ha (0.2%). The area planted with root and tuber in the short rainy season was 2,179 ha which represented (10%) of total area planted with roots and tuber during the year. Cassava was the most dominant crop during long rainy season at 16,644 ha which represented 83 percent of the total area planted with roots and tubers in that particular season, followed by sweet potatoes 2,514 ha (12%), Irish potatoes 669 ha (3%) and cocoyam 269 ha (1%).

The total production of roots and tubers was 31,152 tonnes. Cassava was the most cultivated crop producing 23,625 tonnes which accounted for 76 percent of the total roots and tubers production. This was followed by sweet potatoes 4,883 tons (16%), yams 1,598 tonnes (5%), Irish potatoes 724 tonnes (2%), and cocoyam 322 tonnes (1%) (Table 3.4b).

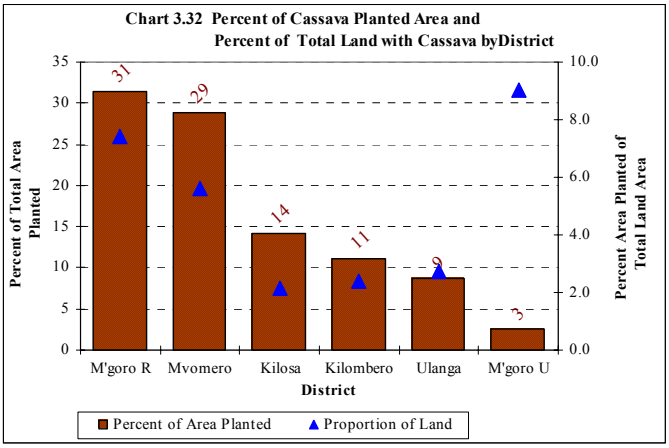
Yams and sweet potatoes had relatively higher yields of 4,200 and 1,700 kgs/ha respectively. The yields of the rest of the roots and tubers in kilograms per hectare were cassava1400, cocoyams 1200 and Irish potatoes 1000.

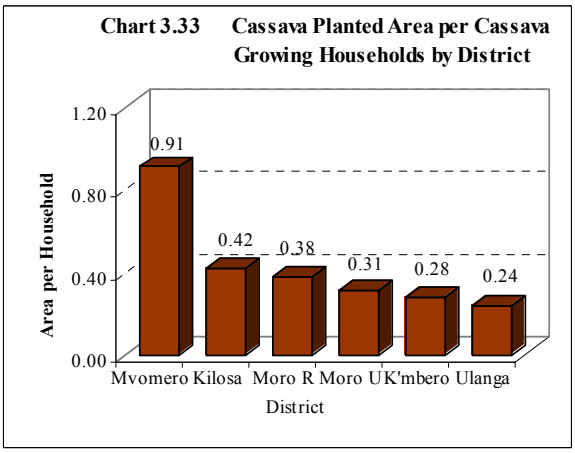

MAP 3.17 MOROGORO
Planted Area and Yield of Cowpeas by District
Mvomero
1,464ha
0.2t/ha
Kilosa
1,298ha
0.2t/ha
Morogoro Urban
253ha
0.3t/ha
Morogoro Rural
1,953ha
0.3t/ha
Kilombero
397ha
0.5t/ha
Ulanga
719ha
0.8t/ha
Planted Area (ha)
1,800 to 2,000
1,400 to 1,800
1,000 to 1,400
600 to 1,000
200 to 600
Planted Area (ha)
Yield (t/ha)


MAP 3.18 MOROGORO
Area Planted per Cowpeas Growing Household by District
Mvomero
0
Kilosa
0.1
Morogoro Urban
0.1
Morogoro Rural
0.1
Kilombero
0.1
Ulanga
0.2
Area Planted Per Household
0.16 to 0.2
0.12 to 0.16
0.08 to 0.12
0.04 to 0.08
0 to 0.04
Area Planted Per Household

3.3.6.1 Cassava

The largest area planted with cassava in the region (5,564ha, 32%) was located in Morogoro Rural District and the largest area planted with cassava per household was in Mvomero District (0.91 ha). The average area planted per household in the





region during the long rainy season was 0.42 ha. With exception of Kilosa and Morogoro Rural, the variations in area planted with cassava for the rest of the districts were small ranging from 0.24 ha in Ulanga, Kilombero 0.28ha and Morogoro Urban 0.31ha. (Chart 3.33 and Map 3.20)

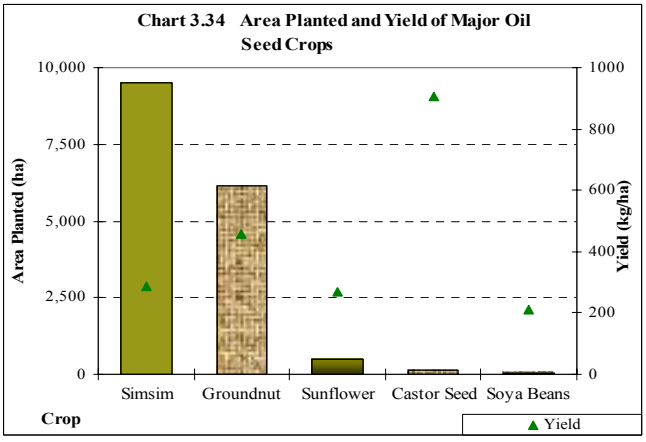
3.3.7 Oil Seed Production

In Morogoro Region the area planted with oil seeds and nuts was 2,735 hectares. Simsim was the most common oil seeds and nuts crop grown with 9,521 ha. This area represented 75 percent of the total area planted with oil seeds and nuts, followed by groundnuts (20%), sunflower (4%), castor seed and soyabeans each with (1%).

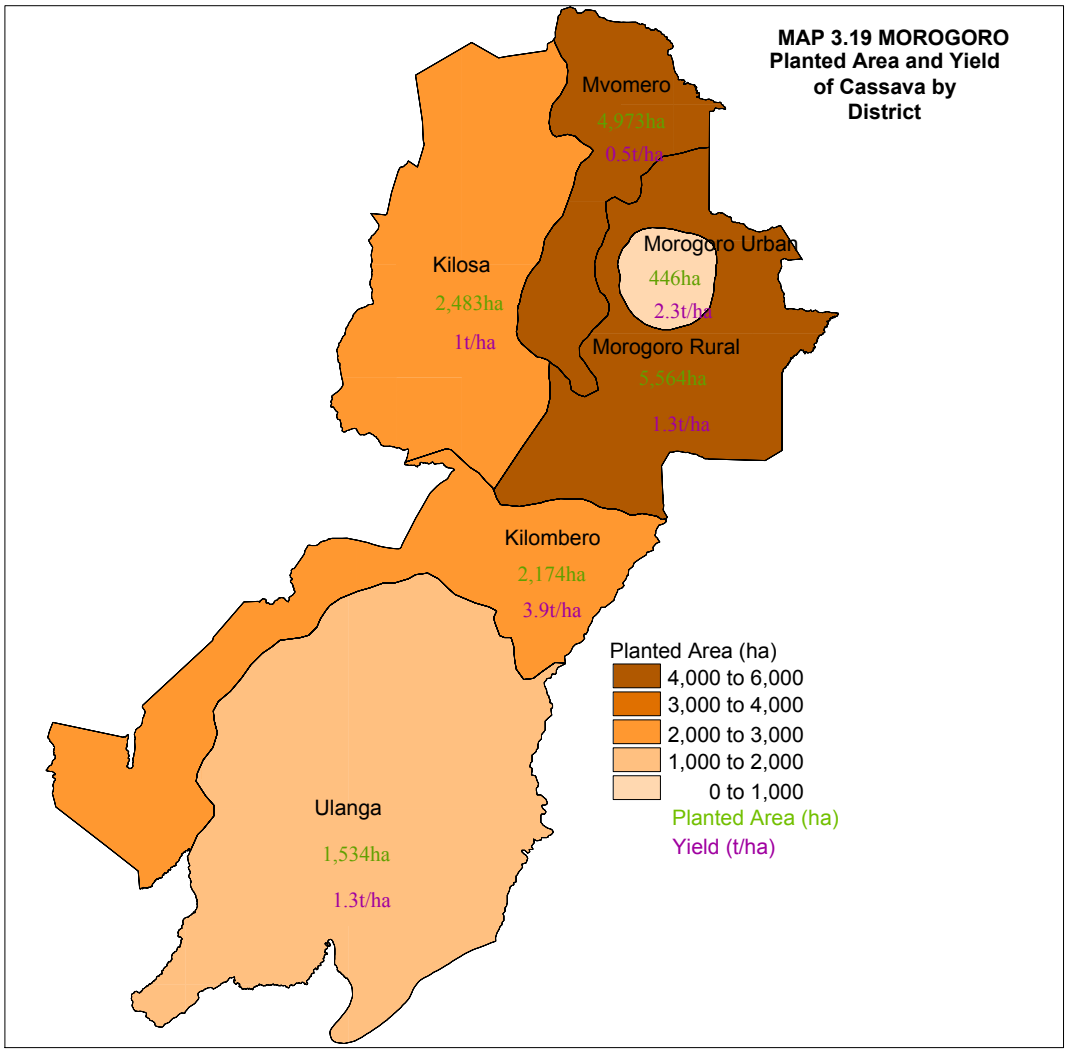
Table 3.5: Area, Quantity Harvested and Yield of Oilseed Crop by Season

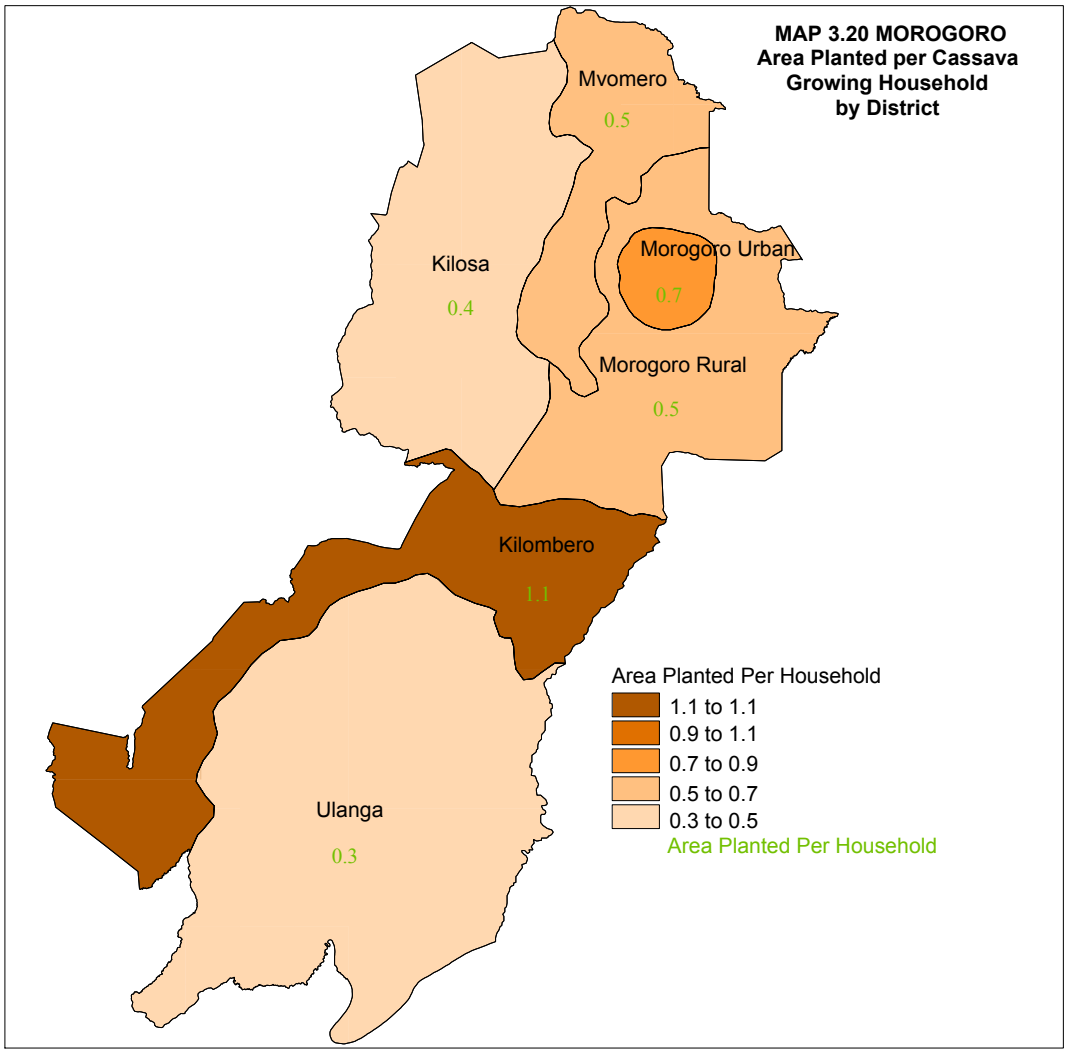
Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)
Sunflower	0	0	0.0	495	133	0.3	495	133	0.27
Simsim	2159	582	0.3	7362	2170	0.3	9521	2752	0.29
Groundnuts	307	168	0.5	2219	984	0.4	2527	1152	0.46
Soya Beans	11	2	0.2	54	12	0.2	65	14	0.21
Castor Seed	0	0	0.0	128	116	0.9	128	116	0.91
Total	**2477**	**751**	**0.3**	**10258**	**3415**	**0.3**	**12735**	**4167**	**0.33**

The area planted in short rainy season was 2,477 ha which represented (19%) of the total area planted with oil seeds and nuts. More than fifty percent of the simsim was cultivated during the long rainy season. The area planted with this crop at 7,362 ha represented 72 percent of the total area planted with oil seeds and nuts in the long rainy season, followed by groundnuts (22%) and sunflower (5%), castor seeds and soyabeans each with (1%). (Table 3.5)



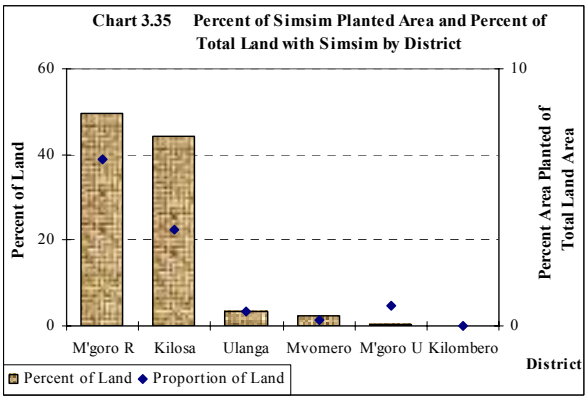
The yield was relatively high for castor seeds (900 kg/ha) followed by groundnuts (500 kg/ha), simsim (290 kg /ha), sunflower (270 kg/ha) and soyabeans (210 kg/ha) (Chart 3.34)

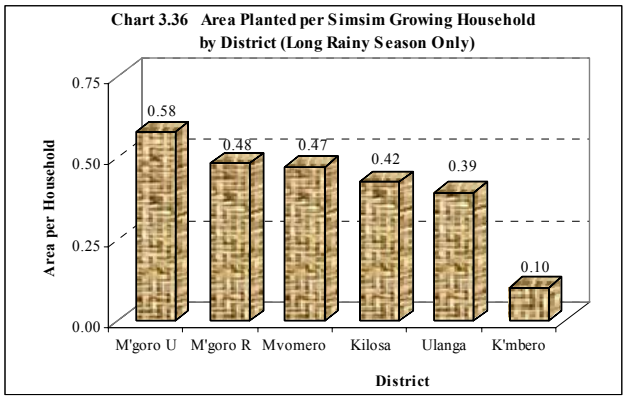

MAP 3.19 MOROGORO
Planted Area and Yield of Cassava by District
Mvomero
4,973ha
0.5t/ha
Kilosa
2,483ha
1t/ha
Morogoro Urban
446ha
2.3t/ha
Morogoro Rural
5,564ha
1.3t/ha
Kilombero
2,174ha
3.9t/ha
Ulanga
1,534ha
1.3t/ha
Planted Area (ha)
4,000 to 6,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Planted Area (ha)
Yield (t/ha)


MAP 3.20 MOROGORO
Area Planted per Cassava Growing Household by District
Mvomero
0.5
Kilosa
0.4
Morogoro Urban
0.7
Morogoro Rural
0.5
Kilombero
1.1
Ulanga
0.3
Area Planted Per Household
1.1 to 1.1
0.9 to 1.1
0.7 to 0.9
0.5 to 0.7
0.3 to 0.5
Area Planted Per Household

The total production of oil seeds and nuts was 4,167 tons. Out of which simsim were dominant at 2,752 accounted for 66 percent of the total production of oil seeds and nuts followed by groundnuts (28%), sunflower (3.2%), castor seed (2.8%) and soyabeans (0.3).

3.3.7.1 Simsim





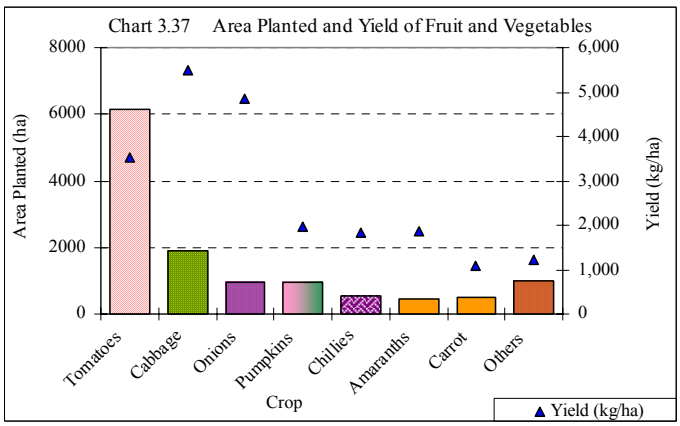
The number of household growing simsim in Morogoro region was 16,162 ha. The total production of simsim in the region was 2,170 tonnes from a planted area of 7,362 hectares resulting in a yield of 0.3 t/ha.

More than fourty nine percent of the area planted with simsim was located in Morogoro Rural District (4,712 ha) followed by Kilosa (4,223 ha' 44.45), Ulanga (312 ha, 3.2%), Mvomero (222 ha, 2.3%), Morogoro Urban (37.5 ha, 0.4%) and Kilombero (13 ha, 0.1%) (Chart 3.35 and Map 3.21)

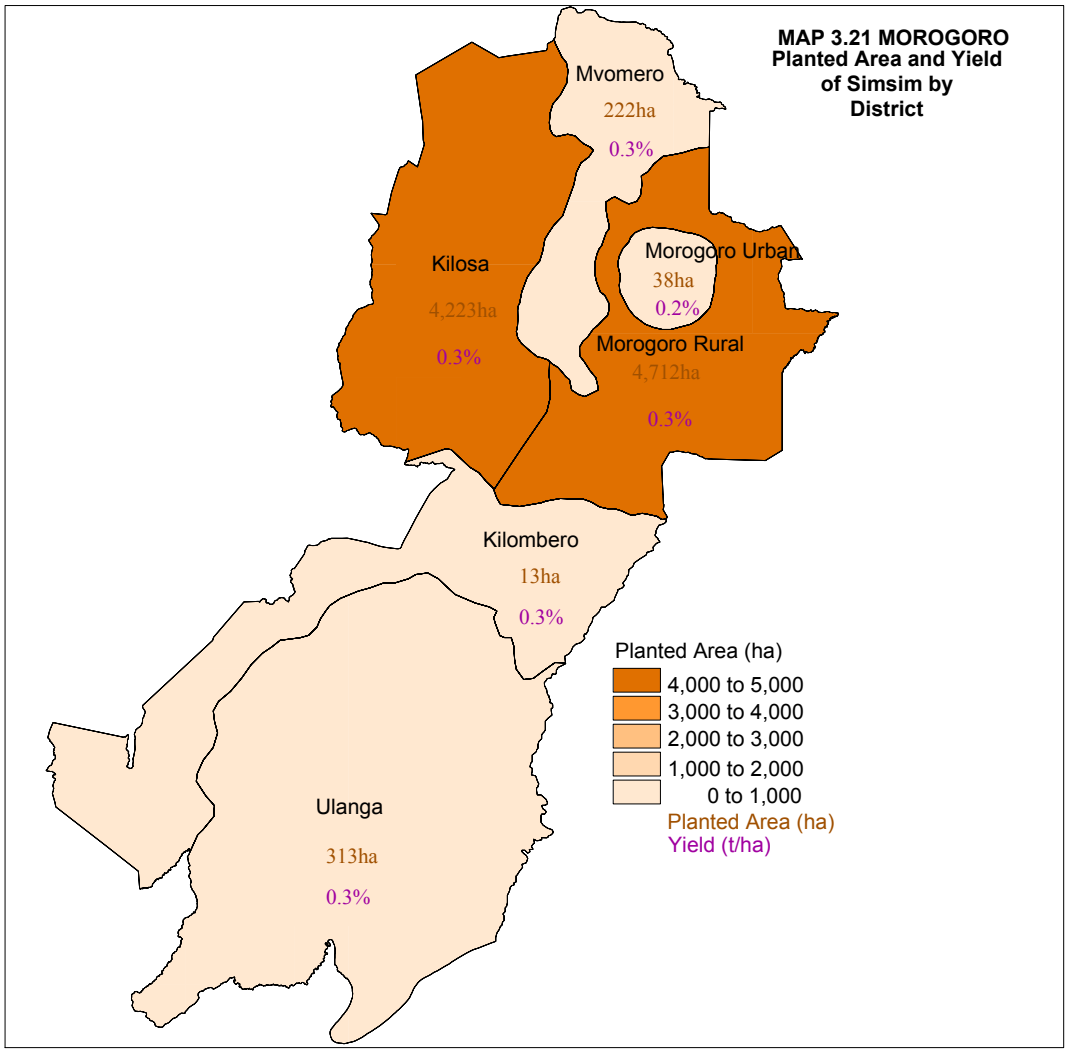
The largest area planted per simsim growing household was found in Morogoro Urban district (0.58 ha) and the lowest was Kilombero (0.1 ha) The range between the district with the highest and lowest area planted per household depicts small variations in area planted among the districts (Chart 3.36 and Map 3.22)

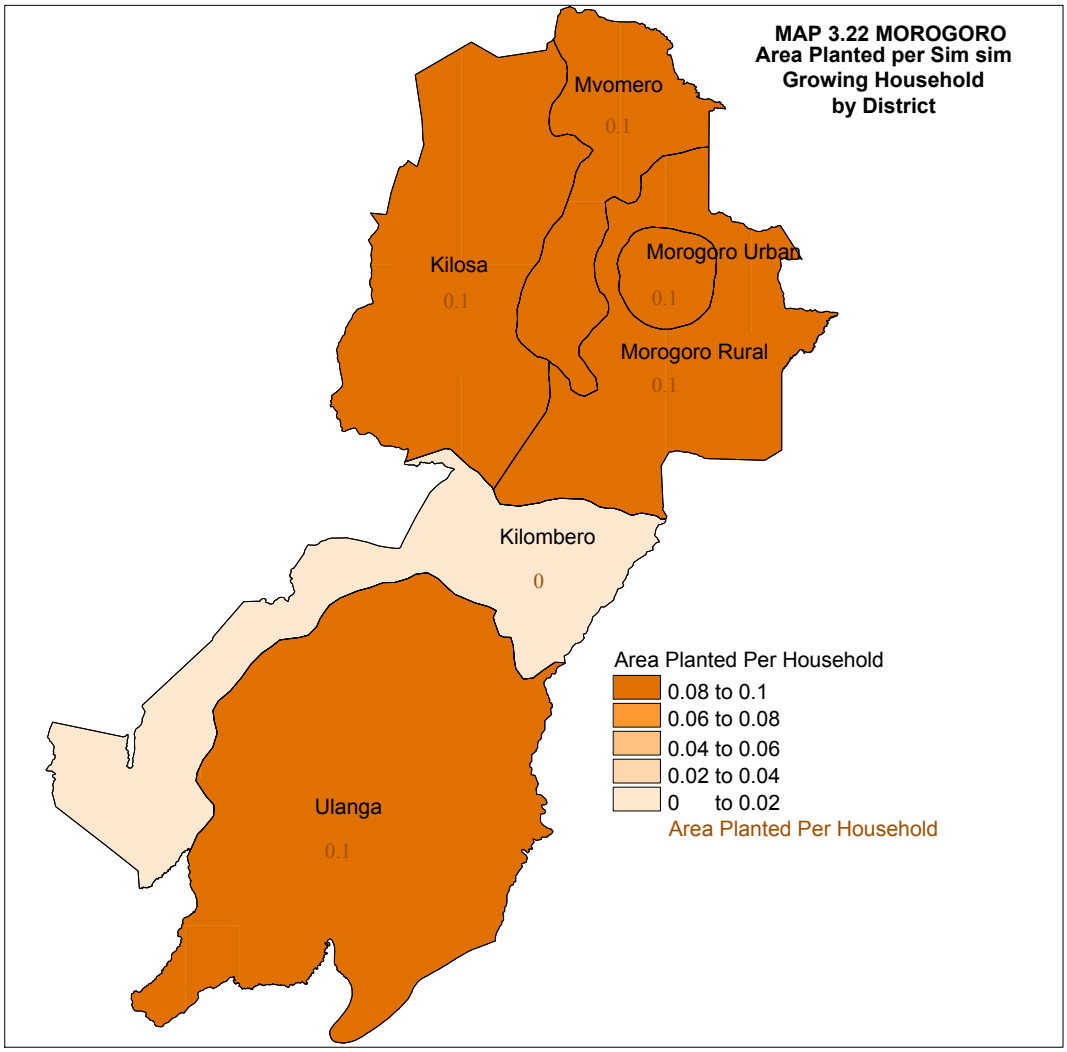
3.3. 8 Fruits and Vegetables

The collection of fruits and vegetables production data was difficult due to the small quantities produced per household. Most of the data presented here gives the production of smallholders who grew these crops as cash crops and not merely for household consumption. Most fruit production is from perennial crops and only water melon is reported as an annual crop in this section.



The long rainy season is relatively important for fruits and vegetables production since 58% of the total area planted with fruits and vegetables was during the long rainy season. For onions, cabbage, amaranths and pumpkins over 60 percent of the planted area for each crop was during the long rainy season. The planted area for carrot in the short rainy season was over 90 percent of the total planted area during the survey year. Reliable historical data for time series analysis of fruits and vegetables were not available.


MAP 3.21 MOROGORO
Planted Area and Yield of Simsim by District
Mvomero
222ha
0.3%
Kilosa
4,223ha
0.3%
Morogoro Urban
38ha
0.2%
Morogoro Rural
4,712ha
0.3%
Kilombero
13ha
0.3%
Ulanga
313ha
0.3%
Planted Area (ha)
4,000 to 5,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Planted Area (ha)
Yield (t/ha)

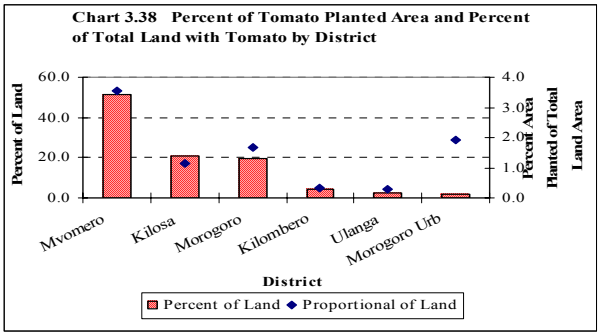

MAP 3.22 MOROGORO
Area Planted per Sim sim Growing Household by District
Mvomero
0.1
Kilosa
0.1
Morogoro Urban
0.1
Morogoro Rural
0.1
Kilombero
0
Ulanga
0.1
Area Planted Per Household
0.08 to 0.1
0.06 to 0.08
0.04 to 0.06
0.02 to 0.04
0 to 0.02
Area Planted Per Household

The total production of fruits and vegetables was 42,229 tonnes. The most cultivated fruit and vegetable crop was tomatoes. The production estimate for this crop was 21,747 tons which is equivalent to (51%) of the total fruits and vegetables produced, followed by cabbage 10,374 tons (25%) and onions 4,686 tons (11%), pumpkins 1,877 tons (4%), chillies 973 tons (2%) and amaranths 849 tons (2%). The production of other fruits and vegetables crops was relatively small (Table 3.6)

Cabbage had the highest yield of 5,492 kg/ha followed by onions 4,854 kg/ha, tomatoes (3,531kg/ha), cucumber (1,981 kg/ha) and chillies (1,828 kg/ha). Okra and water melon had the lowest yields of 603 and 612 kg/ha respectively (Chart 3.37)

3.3.8.1 Tomatoes

The number of households growing tomatoes in the region during the long rainy season was 11,777 and 7,972 households in the short rainy season. This represented 2.8 percent of the total crop growing households in the region during the long rainy season and 1.2 percent during the short rainy season.



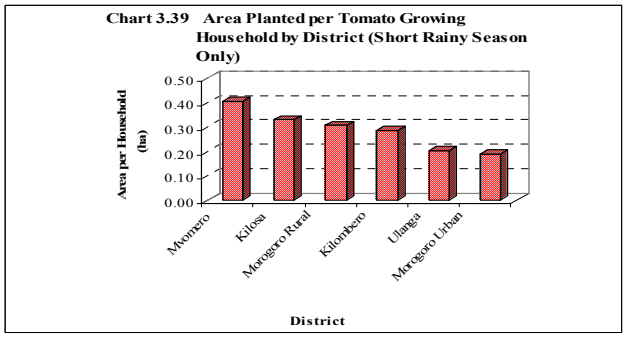
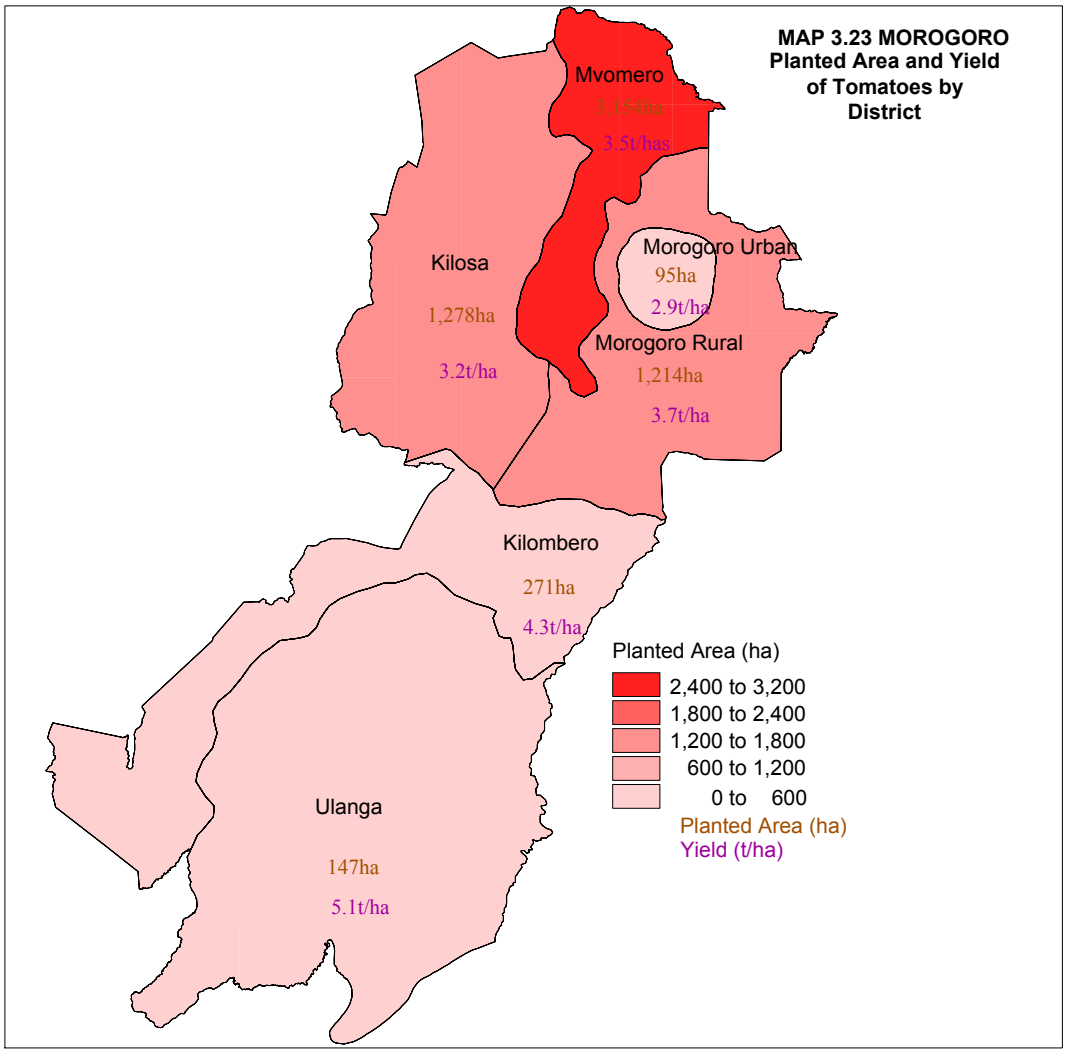


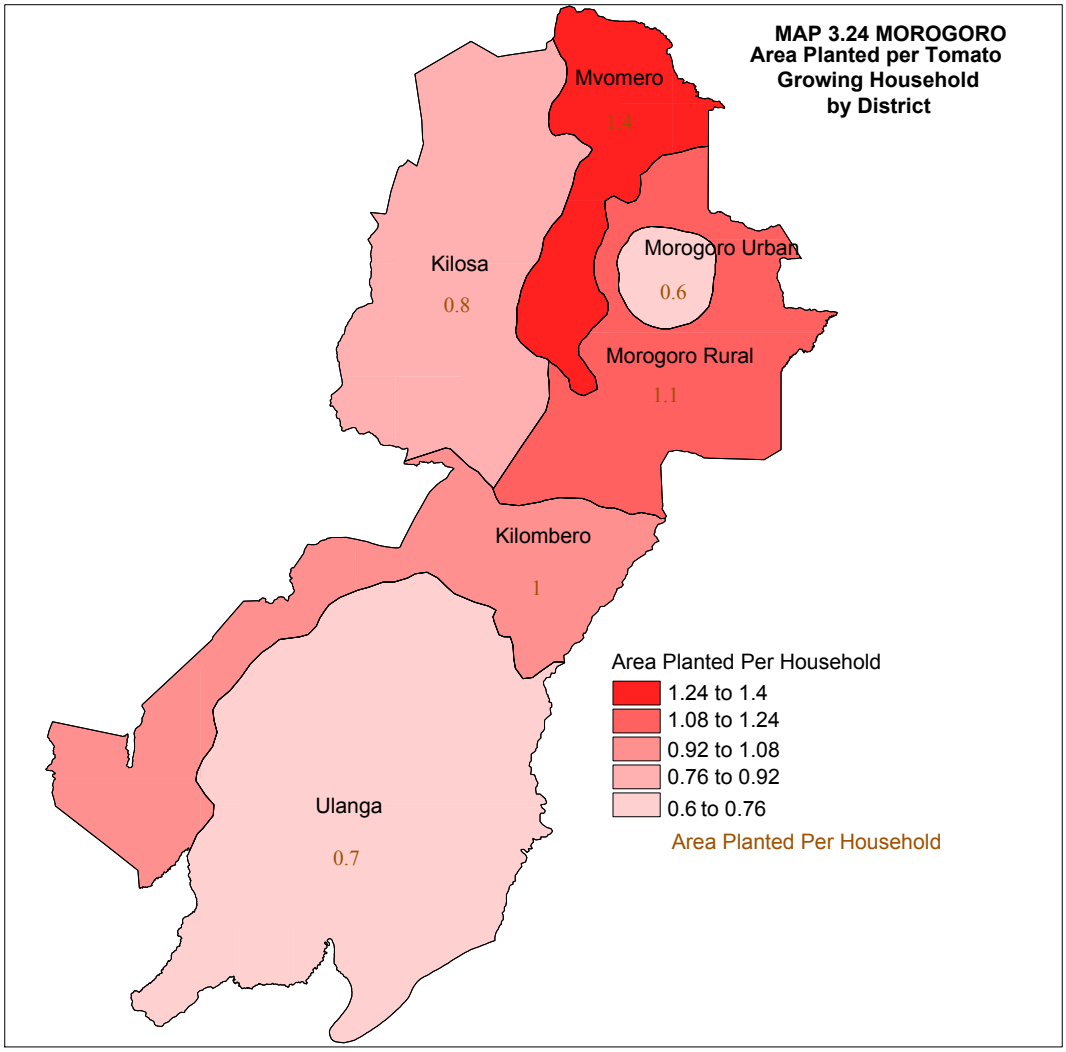
Table 3.6: Area, Production and Yield of Fruits and Vegetables by Season

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tonnes)	Yield kg/ha)	Area in (ha)	Quantity harvested (tonnes)	Yield (kg/ha)	Area in (ha)	Quantity harvested (tonnes)	Yield (kg/ha)
Okra	68	3	50	96	96	993	164	99	603
Bitter Aubergine	44	97	2,208	49	47	969	93	145	1,557
Onions	305	1057	3,462	660	3630	5,499	965	4687	4,854
Cabbage	667	3965	5,943	1222	6409	5,246	1889	10374	5,492
Tomatoes	2685	9700	3,612	3474	12047	3,468	6159	21747	3,531
Spinnach	96	156	1,628	88	191	2,163	184	347	1,884
Carrot	448	491	1,096	30	34	1,142	478	525	1,099
Chillies	278	443	1,595	255	530	2,081	533	973	1,828
Amaranths	90	273	3,029	367	577	1,571	457	849	1,858
Pumpkins	237	282	1,188	710	1595	2,246	947	1877	1,981
Cucumber	91	279	3,078	61	33	541	152	312	2,058
Egg Plant	75	84	1,123	80	68	861	154	153	988
Water Mellon	99	54	545	51	38	741	151	92	612
Cauliflower	49	24	494	25	24	988	74	48	659
Total	**5232**	**16909**		**7167**	**25320**		**12400**	**42229**	

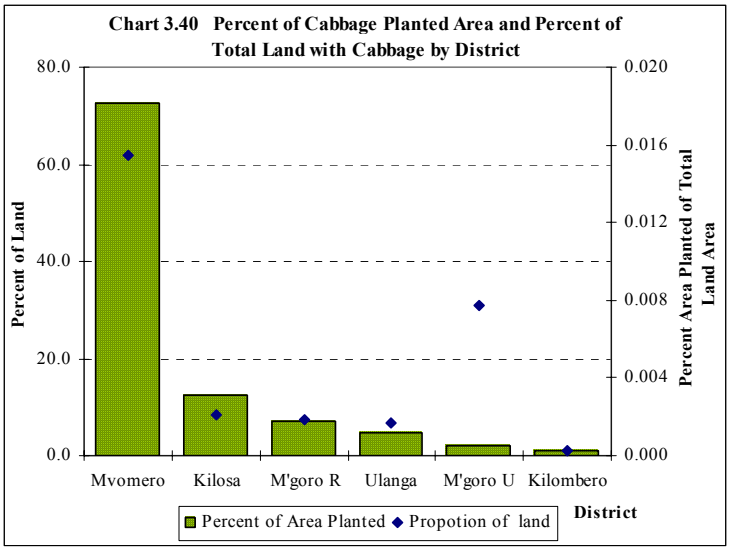
Mvomero district had the largest planted area of tomatoes (51.2% of the total area planted with tomatoes in the region), followed by Kilosa (20.8%), Morogoro Rural (19.7%), Kilombero (4.4%), Ulanga (2.4%) and Morogoro Urban (1.5%). The highest percentage of land with tomatoes was found in Mvomero followed by Morogoro Urban, Morogoro rural and Kilosa. The remaining districts have relatively low percentage of land used for tomato production (Chart 3.38 and Map 3.23).

The largest area planted per household was found in Mvomero district (0.4 ha) followed by Kilosa (0.30 ha), MorogoroRural (0.27 ha), Kilombero (0.22 ha), Ulanga (0.19 ha) and Morogoro Urban (0.13 ha) (Chart 3.39 and Map 3.24).


MAP 3.23 MOROGORO
Planted Area and Yield of Tomatoes by District
Mvomero
3,154ha
3.5t/ha
Kilosa
1,278ha
3.2t/ha
Morogoro Urban
95ha
2.9t/ha
Morogoro Rural
1,214ha
3.7t/ha
Kilombero
271ha
4.3t/ha
Ulanga
147ha
5.1t/ha
Planted Area (ha)
2,400 to 3,200
1,800 to 2,400
1,200 to 1,800
600 to 1,200
0 to 600
Planted Area (ha)
Yield (t/ha)


MAP 3.24 MOROGORO
Area Planted per Tomato Growing Household by District
Mvomero
1.4
Kilosa
0.8
Morogoro Urban
0.6
Morogoro Rural
1.1
Kilombero
1
Ulanga
0.7
Area Planted Per Household
1.24 to 1.4
1.08 to 1.24
0.92 to 1.08
0.76 to 0.92
0.6 to 0.76
Area Planted Per Household

The total area planted with tomatoes accounted for 1.5 percent of the total area planted with annual crops and vegetables during the short and long rainy seasons.



3.3.8.2 Cabbage

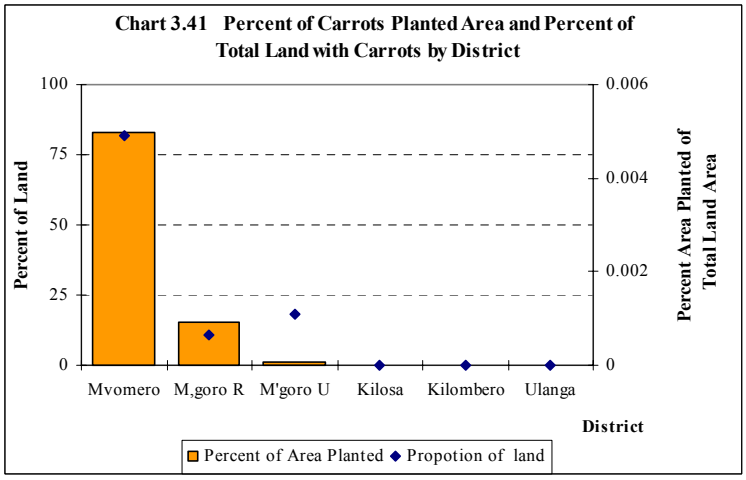
The number of households growing cabbages in the region during the long rainy season was 3,588 and 1,883 in the short rainy season .This represented 0.56 percent of the total crop growing households in the region in the long rainy season and 0.29 percent in the short rainy season.

Mvomero district had the largest planted area of cabbage (1,371 ha, 72.6% of the total area planted with cabbage in the region), followed by Kilosa (237 ha, 12.5%), Morogoro Rural (133 ha, 7.1%), Ulanga (91 ha, 4.8%), Morogoro Urban (38 ha, 2.0%) and Kilombero (19 ha, 1.0%) districts (Chart 3.40).

The total area planted with cabbages accounted for 0.3 percent of the total area planted with annual crops and vegetables during the short and long rainy seasons.

3.3.8.3 Carrots

The number of households growing carrots in the region during the long rainy season was 160 households and 623 in the short rainy season .This represented 0.02 percent of the total crop growing households in the region in the long rainy season and 010 percent in the short rainy season.



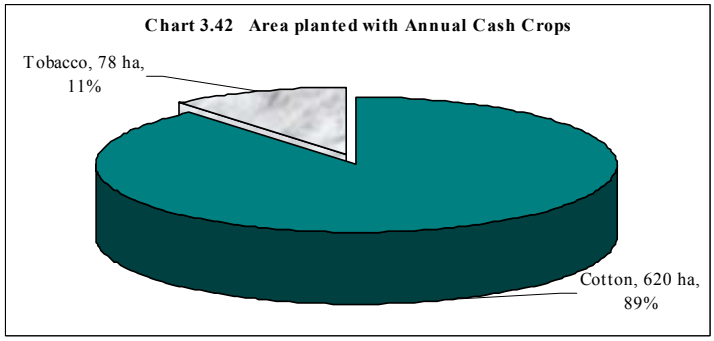
Mvomero district had the largest planted area of carrots (398 ha, 83.2% of the total area planted with carrots in the region), followed by Morogoro Rural (74 ha, 15.6%), Morogoro Urban (5 ha, 1.1%). Other districts of Kilosa, Kilombero and Ulanga reported no carrot production (Chart 3.41)

The largest proportion of the area planted with carrots was found in Mvomero district (0.45%), followed by Morogoro Urban (0.11%), Morogoro Rural (0.1%), the remaining districts of Kilosa, Kilombero and Ulanga reported no area planted with carrots.

The total area planted with carrots accounted for 0.07 percent of the total area planted with annual crops and vegetables during the short and long rainy seasons.

3.3.9 Other Annual Crops Production

Most of the other annual crops can be defined as cash crops, however it is difficult to distinguish between cash crops and other crops given that many of the food crops are also used for generating income. During the 2002/03 agriculture year an area of 698 ha was planted with other crops and of this cotton was the most prominent followed by tobacco.



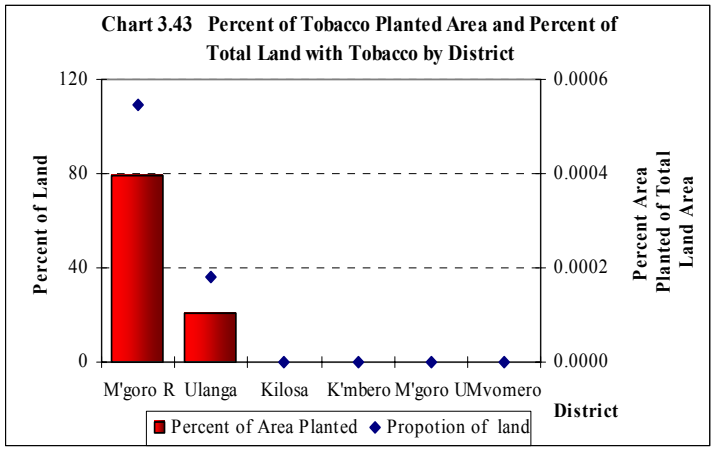
The area planted with annual cash crops in short rainy season was 16 ha which represented 2.3 percent of the total area planted with other annual cash crops in short and long rainy season.

3.3.9.1 Cotton

The quantity of cotton produced was 248 tonnes. Cotton had a planted area of 620 ha and it was produced during the long rainy season only (Chart 3.42). The crop is mainly grown in Kilosa, Ulanga and Mvomero districts.

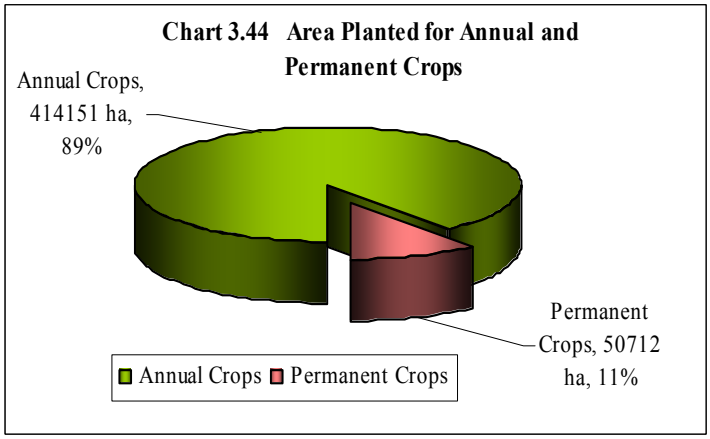
3.3.9.2 Tobacco

The quantity of tobacco produced was 38 tonnes. Tobacco had a planted area of 78 ha, most of which was planted in the long rainy season. Tobacco production is concentrated in 2 districts with Morogoro Rural having the largest area planted with this crop (79%) and Ulanga (21%) (Chart 3.43)

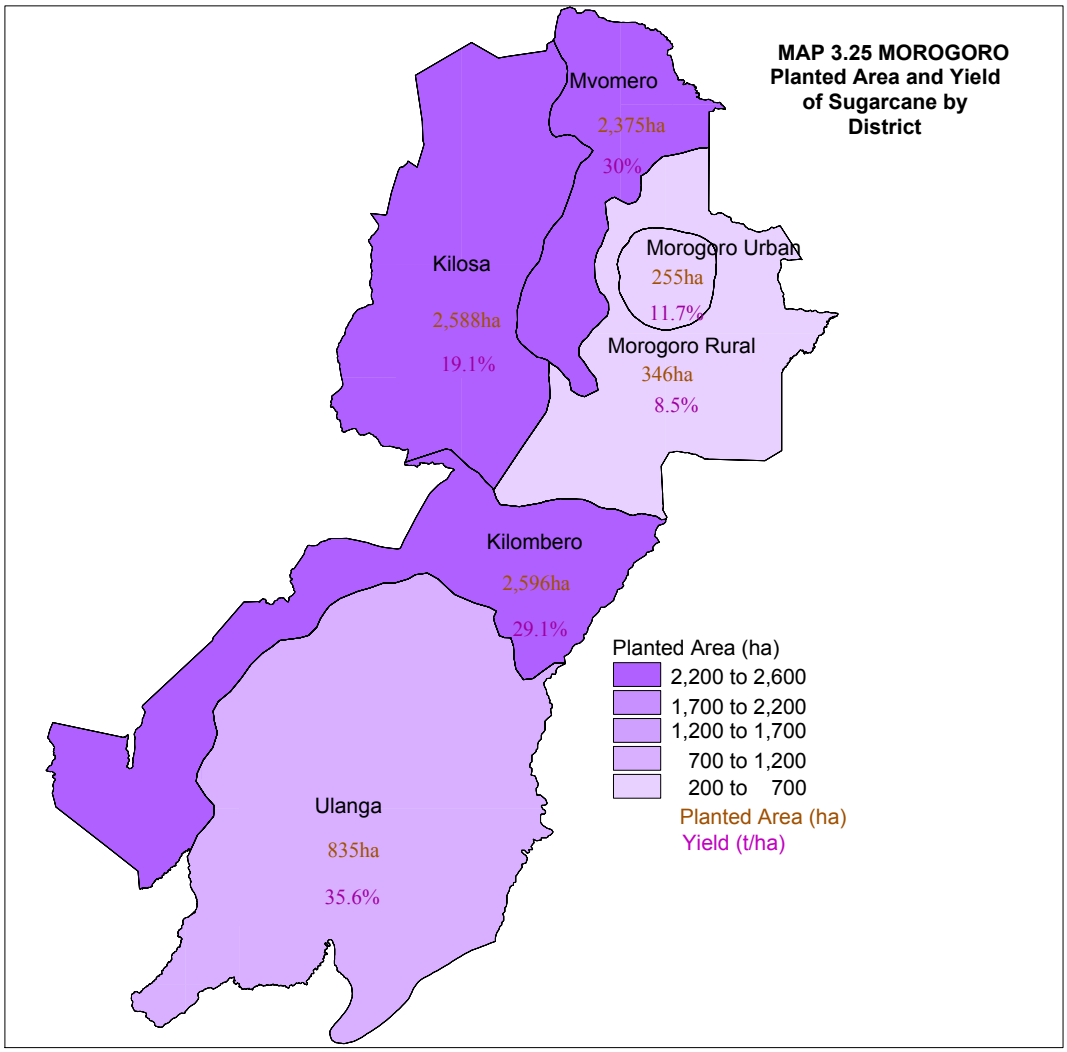


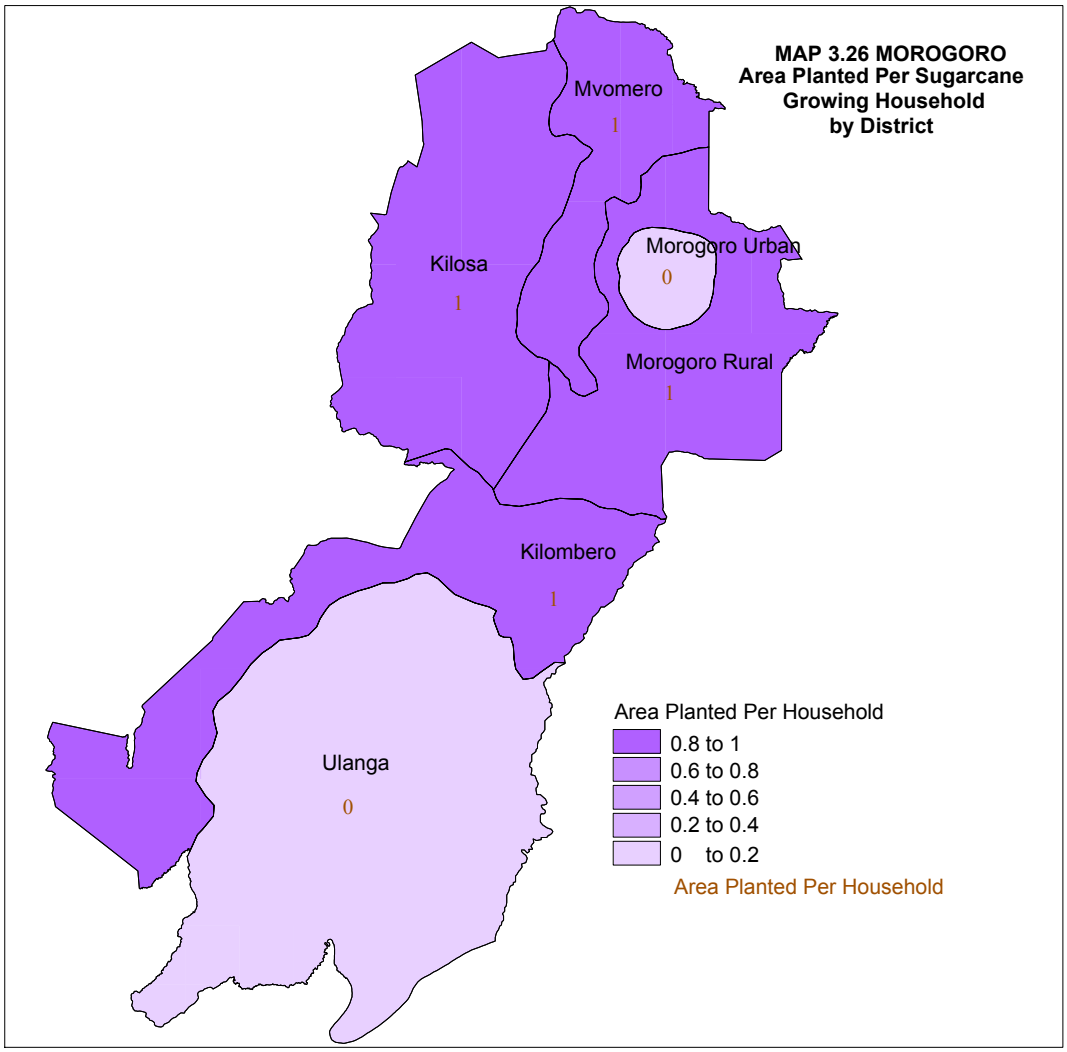
3.4 Perennial Crops

Perennial crops (sometimes referred as permanent crops) are crops that normally take over a year to mature and once mature can be harvest for a number of years. For most crops it is easy to determine if they are annual or perennial. However, for crops like cassava and bananas the distinction is not so clear. Cassava has varieties that mature within a year and produces only one harvest, whilst other varieties survive for more than one year and produces several harvests. In this census cassava was treated as an annual crop.

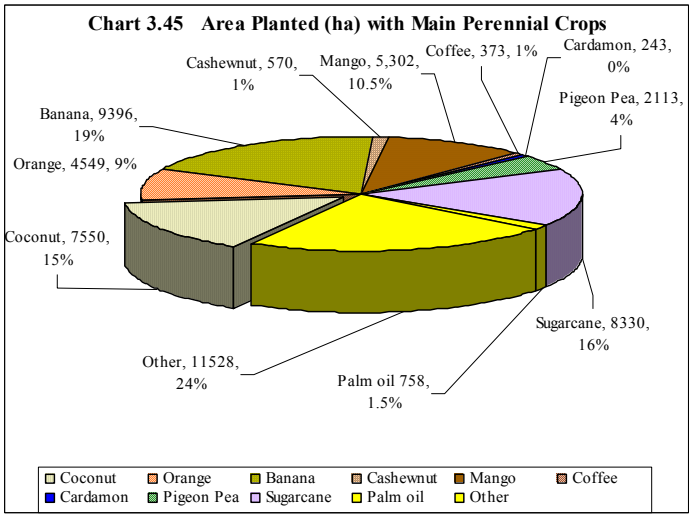


Bananas normally take less than a year to mature and produce a harvest and survive for more than one year. In the census bananas are treated as perennial crops. In this report the agriculture census results are presented for the most important perennial crop in terms of production, yield and area planted. Previous censuses and surveys did not measure these variables for perennials, therefore no time series data in this section.


MAP 3.25 MOROGORO
Planted Area and Yield of Sugarcane by District
Mvomero
2,375ha
30%
Kilosa
2,588ha
19.1%
Morogoro Urban
255ha
11.7%
Morogoro Rural
346ha
8.5%
Kilombero
2,596ha
29.1%
Ulanga
835ha
35.6%
Planted Area (ha)
2,200 to 2,600
1,700 to 2,200
1,200 to 1,700
700 to 1,200
200 to 700
Planted Area (ha)
Yield (t/ha)

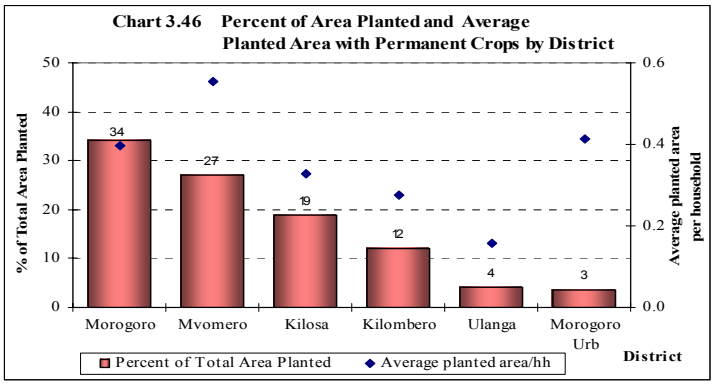

MAP 3.26 MOROGORO
Area Planted Per Sugarcane Growing Household by District
Mvomero
1
Kilosa
1
Morogoro Urban
0
Morogoro Rural
1
Kilombero
1
Ulanga
0
Area Planted Per Household
0.8 to 1
0.6 to 0.8
0.4 to 0.6
0.2 to 0.4
0 to 0.2
Area Planted Per Household

The area of smallholders planted with perennial crops was estimated at 50,712 hectares equivalent to 11 percent of the area planted with annual and perennial crops in the region. The most important perennial crop is bananas which accounts for 19% of the total area planted with perennial crops followed by sugar canes (16%), coconuts (15%) and mango (10.5%) (Chart 3.45).



However, the area planted with annual crops is not the actual physical land area as it includes the area planted more than once on the same land, whilst for the planted area for perennial crops is the same as physical planted land area. So the percentage physical area planted with perennial crops would be higher than indicated in Chart 3.44

Bananas had the highest smallholder planted area (9,396 ha, 19%) of all permanent crops followed by sugarcane (8,330 ha, 16%), coconut (7,550 ha, 15%), mango (5,302 ha, 10.5%) and orange 4,549 ha, 9%). Each of the remaining permanent crops had an area of less than 5% of the total area planted with permanent crops.



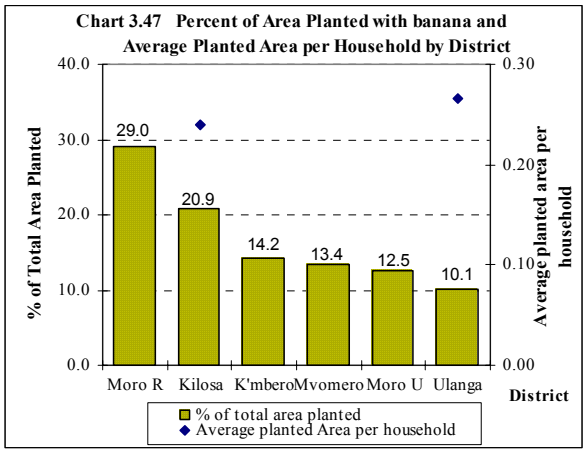
Morogoro Rural district had the largest area under smallholder permanent crops (17,368 ha, 34%). This is followed by Mvomero (13,773 ha, 27%), Kilosa (9,604 ha, 19%), Kilombero (6,360 ha, 12), Ulanga (2,125 ha, 4%) and Morogoro Urban (1,749 ha, 3%). In terms of area of permanent crops planted per household Ulanga had the largest area (0.50 ha) followed by Mvomero (0.28 ha), Morogoro Rural (0.25 ha), Morogoro Urban (0.24 ha), Kilombero (0.22 ha) and Kilosa (0.18% ha). However, in terms of area of permanent crops planted expressed as a percentage of the total area planted with crops per district, Morogoro Urban had the highest (26%) followed by Morogoro Rural (19%), Mvomero (13%), Kilosa (8%), Kilombero (7%) and Ulanga (4%) (Chart 3.46)

Table 3.7: Area, Production and Yield of Annual Cash Crops by Season

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)	Area in Hectare	Quantity harvested (tons)	Yield (t/ha)
Cotton	0	0	0.0	620	248	0.4	620	248	0.4
Tobacco	16	2	0.1	62	35	0.6	78	38	0.5
Total	**16**	**2**	**0.1**	**682**	**283**	**0.4**	**698**	**285**	**0.4**

3.4.1 Banana

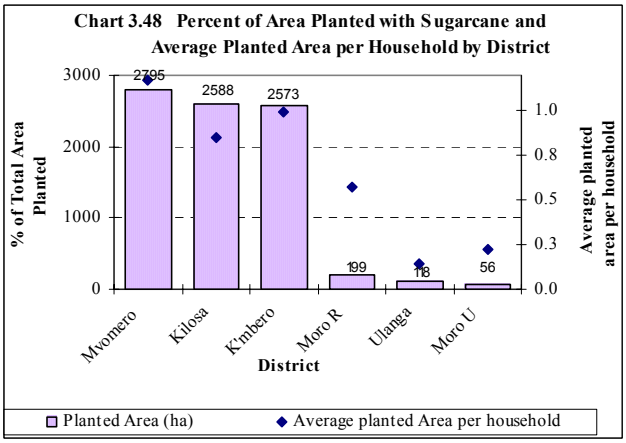
The total production of bananas by smallholders was 47,415 tonnes. In terms of area planted, banana was the most important permanent crop grown by smallholders in the region. It was grown by 30,480 households (22% of the total crop growing households). The average area planted with banana per household was relatively small at around 0.3 ha per banana growing household and the average yield obtained by smallholders was 5310 kg /ha from a harvest area of 8,928 hectares.



Morogoro Rural had the largest area of banana in the region (2,722 ha, 29%) followed by Kilosa (1,961 ha, 21%), Kilombero (1,330 ha, 14%), Mvomero (1,256 ha, 13%), Morogoro Urban (1,177 ha, 13 and Ulanga (950 ha, 10%). The average area planted with banana per banana planting household was highest in Morogoro Urban (0.63 ha) followed by Morogoro Rural (0.32 ha), Kilombero (0.31 ha), Mvomero (0.30 ha), Ulanga (0.27 ha) and Kilosa (0.24 ha) (Chart 3.47)

3.4.2 Sugarcane

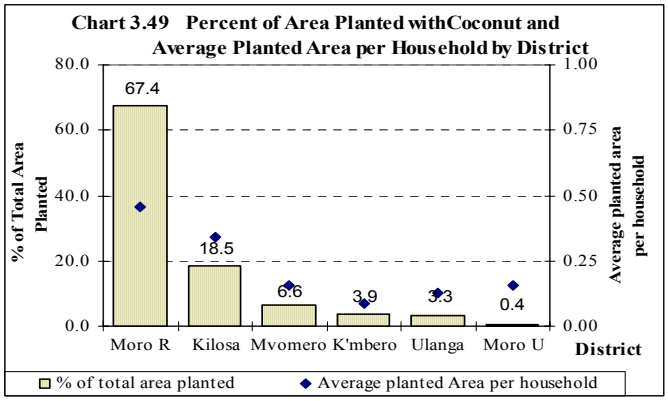
The total production of sugarcane by smallholders was 213,556 tonnes. In terms of area planted, sugarcane was the second most important permanent crop grown by smallholders in the region. It was grown by 9,463 households (6.9% of the total crop growing households). The average area planted with sugarcane per household was 0.9 ha per sugarcane growing household and the average yield obtained by smallholders was 28,798 kg /ha from a harvest area of 7,416 hectares.(Map 3.25)

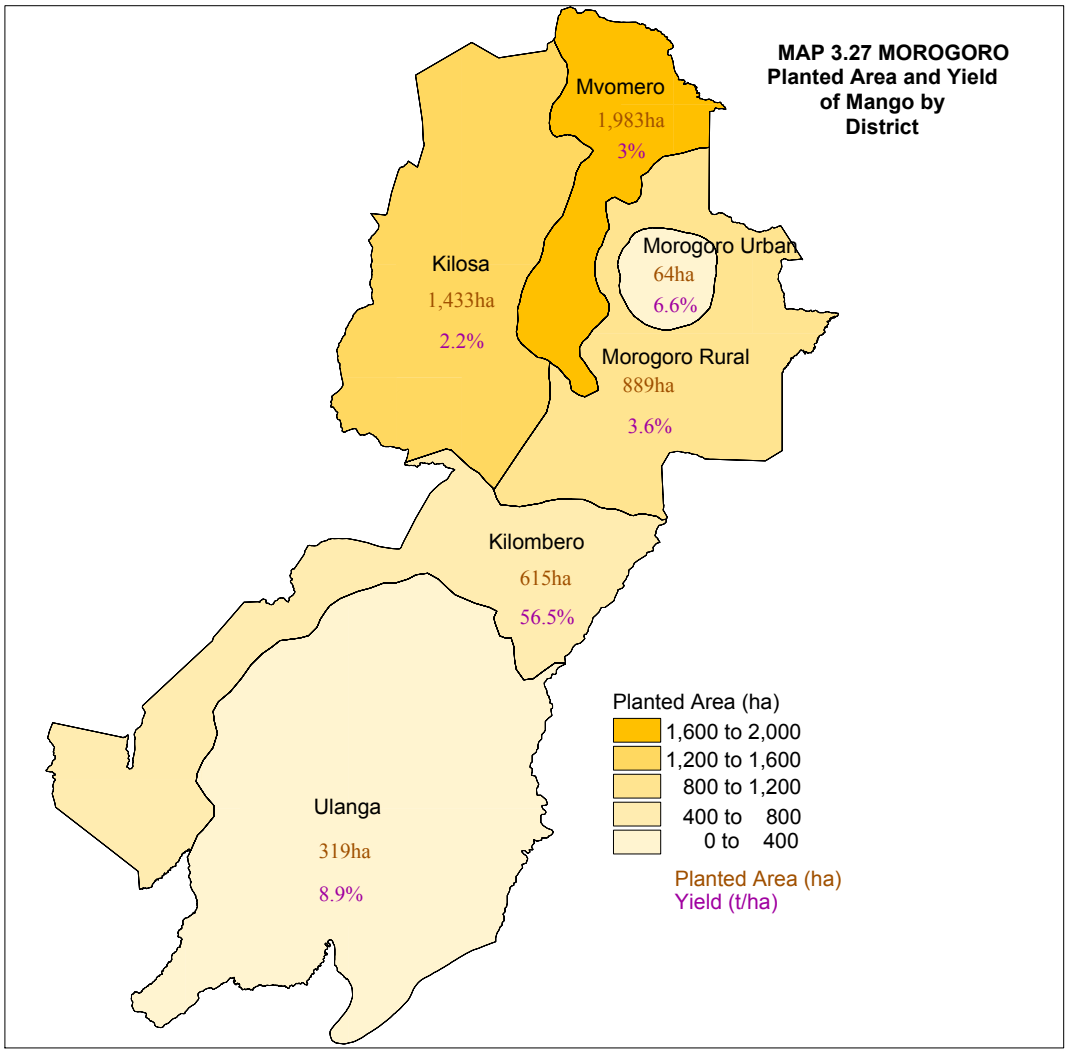


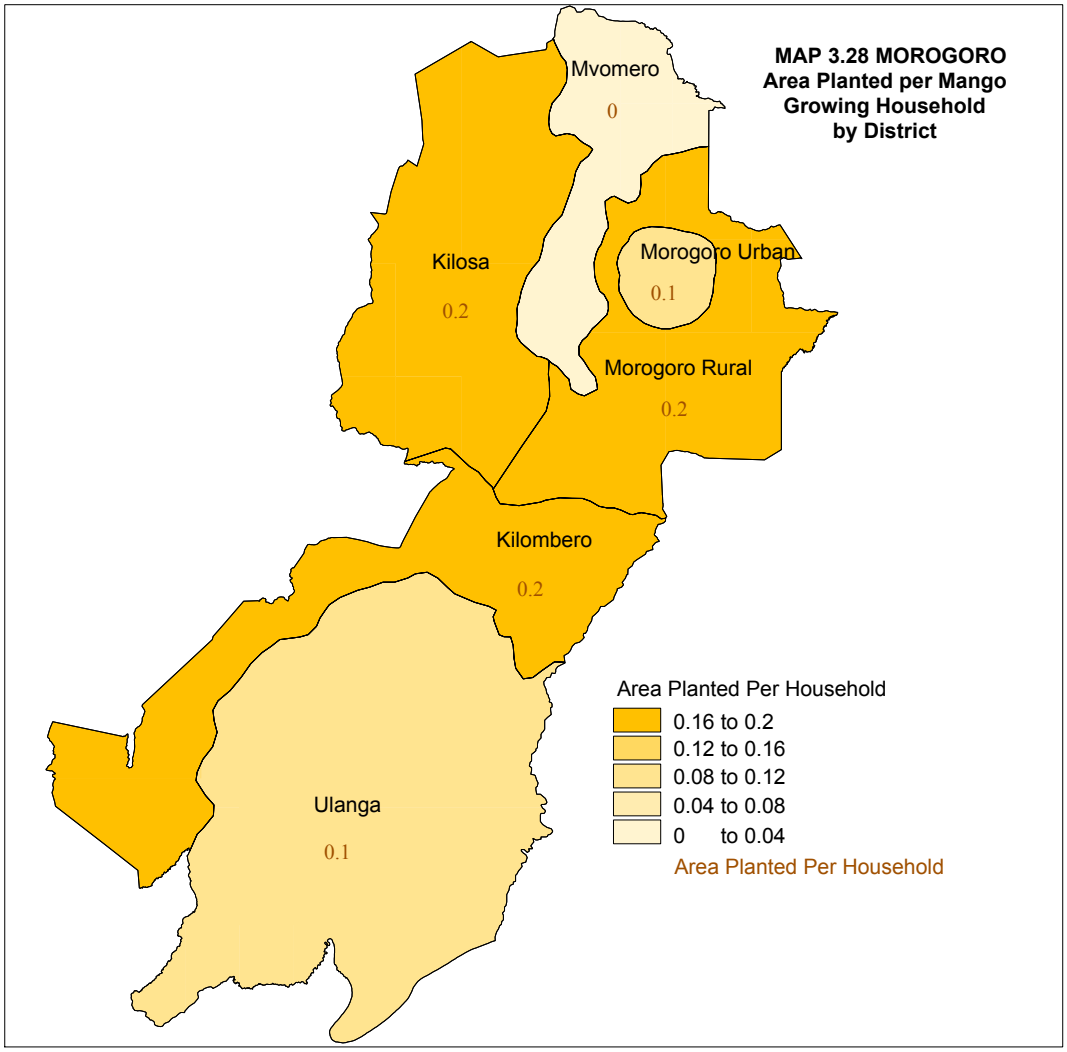
Mvomero had the largest area of sugarcane in the region (2,795 ha, 33.6%) followed by Kilosa (2,588 ha, 31.1%), Kilombero (2,573 ha, 30.9%), Morogoro Rural (199 ha, 2.4%), Ulanga (118 ha, 1.4%) and Morogoro Urban (56 ha, 0.7%). However, the average area planted with sugarcane per sugarcane planting household was highest in Mvomero (1.2 ha) followed by Kilombero (1.0 ha), Kilosa (0.8 ha), Morogoro Rural (0.6 ha), Morogoro Urban (0.2 ha) and Ulanga (0.1 ha) (Chart 3.48 and Map 3.26)

3.4.3 Coconut

The total production of coconut by smallholders was 7,550 tonnes. In terms of area planted, coconut was the third most important permanent crop grown by smallholders in the region. It was grown by 23,954 households (17% of the total crop growing households). The average area planted with coconut per household was relatively small at around 0.32 ha per coconut




MAP 3.27 MOROGORO
Planted Area and Yield of Mango by District
Mvomero
1,983ha
3%
Kilosa
1,433ha
2.2%
Morogoro Urban
64ha
6.6%
Morogoro Rural
889ha
3.6%
Kilombero
615ha
56.5%
Ulanga
319ha
8.9%
Planted Area (ha)
1,600 to 2,000
1,200 to 1,600
800 to 1,200
400 to 800
0 to 400
Planted Area (ha)
Yield (t/ha)


MAP 3.28 MOROGORO
Area Planted per Mango Growing Household by District
Mvomero
0
Kilosa
0.2
Morogoro Urban
0.1
Morogoro Rural
0.2
Kilombero
0.2
Ulanga
0.1
Area Planted Per Household
0.16 to 0.2
0.12 to 0.16
0.08 to 0.12
0.04 to 0.08
0 to 0.04
Area Planted Per Household

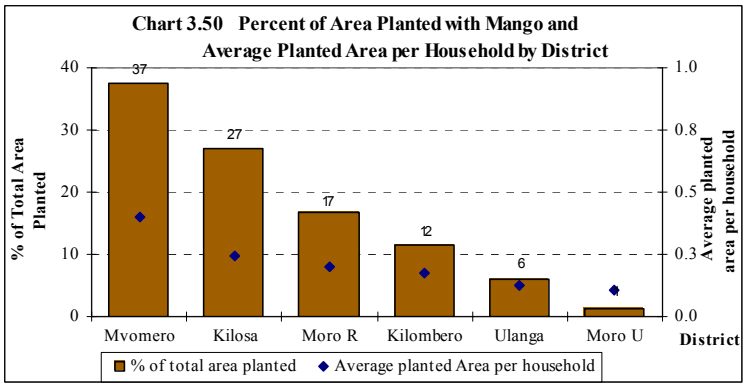
growing household and the average yield obtained by smallholders was 6,534 kg /ha from a harvested area of 2,749 hectares.

Morogoro Rural had the largest area of coconut in the region (5,086 ha, 67%) followed by Kilosa (1,397 ha, 19%), Mvomero (498 ha, 7%), Kilombero (296 ha, 4%), Ulanga (246 ha, 3%), Morogoro Urban (27 ha, 0.4%).
However, the area planted with coconut per coconut growing household was highest in Morogoro Rural (0.46 ha), followed by Kilosa (0.34 ha), Mvomero (0.15 ha), Morogoro Urban (0.15 ha), Ulanga (0.13 ha) and Kilombero (0.09 ha) (Chart 3.49).

3.4.4 Mango

The total production of Cashew nuts by smallholders was 49,490 tonnes. In terms of area planted, mango was the fourth most important permanent crop grown by smallholders in the region. It was grown by 21,979 households (16% of the total crop growing households). The average area planted with mango per household was relatively small at around 0.24 ha per mango growing household and the average yield obtained by smallholders was 19713 kg /ha from a harvest area of 2,511 hectares.(Map 3.27)

Chart 3.50 Percent of Area Planted with Mango and Average Planted Area per Household by District



Mvomero has the largest area of mango in the region (1,983 ha, 37%) followed by Kilosa (1,433 ha, 27%), Morogor Rural (889 ha, 17%), Kilombero (615 ha, 12%), Ulanga (319 ha, 6%) and Morogoro Urban (64 ha, 1%). However, the average area planted per mango planting household was highest in Mvomero (0.40 ha), followed by Kilosa (0.24 ha), Morogor Rural (0.20 ha), Kilombero (0.17 ha), Ulanga (0.13 ha) and Morogoro Urban (0.11 ha) (Chart 3.50 and Map 3.28)

3.5 Inputs/Implements Use

3.5.1 Methods of land clearing

Land clearing is a common pre-tillage operation practiced by most farmers in the region. Land clearing is divided into two categories: bush clearing, which by definition implies either expansion into virgin areas or into areas which have been left fallow for a long period. The other category, which includes burning, hand slashing or tractor slashing, is normally an annual clearing exercise to remove vegetation growth from the previous season.

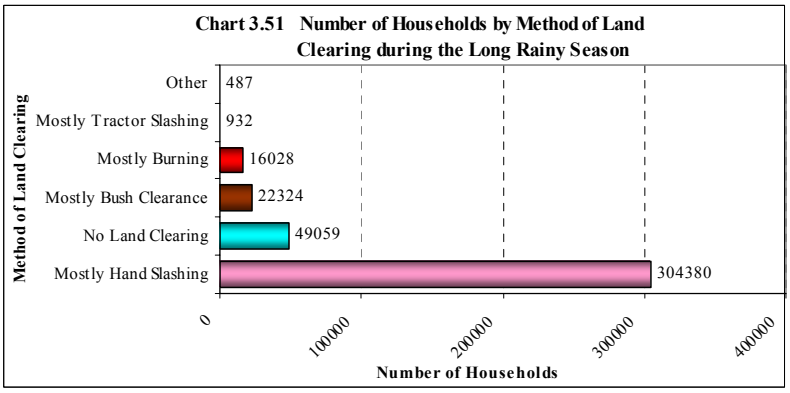


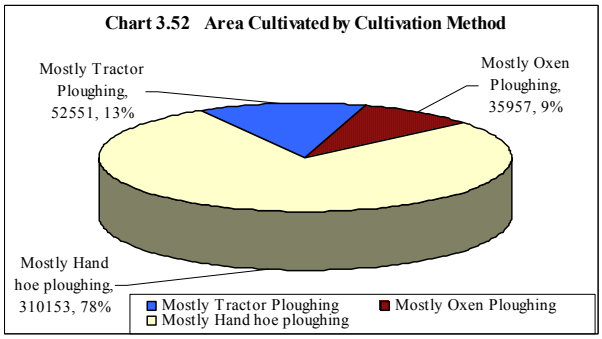
Table 3.8: Land Clearing Methods

Crop	Short Rainy Season			Long Rainy Season			Total		
	Number of Households	Area Planted (ha)	%	Number of Households	Area Planted (ha)	%	Number of Households	Area Planted (ha)	%
Mostly Hand Slashing	167653	197671	73.1	169	99288	77.9	167822	296959	74.6
No Land Clearing	29703	43184	16.0	18675	13228	10.4	48378	56412	14.2
Mostly Bush Clearing	**13584**	**16154**	6.0	**12844**	**8046**	6.3	26428	24200	6.1
Mostly Burning	12048	12569	4.6	8553	5655	4.4	20601	18224	4.6
Mostly Tractor Slashing	551	442	0.2	849	727	0.6	1400	1169	0.3
Other	242	342	0.1	576	577	0.5	818	919	0.2
	223781	270362	100.0	41666	127521	100.0	265447	397883	100.0

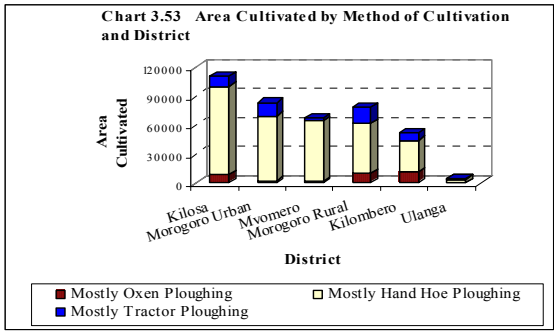
Hand slashing is the most widespread method used for land clearing. The area cleared by hand slashing in the region during the long rainy season was 99,288 ha which represented 74.8 percent of the total planted area. Bush clearance, burning and tractor slashing are less important methods for land clearing and they represent 5.9, 4.6 and 0.3 percent respectively (Table3.8).

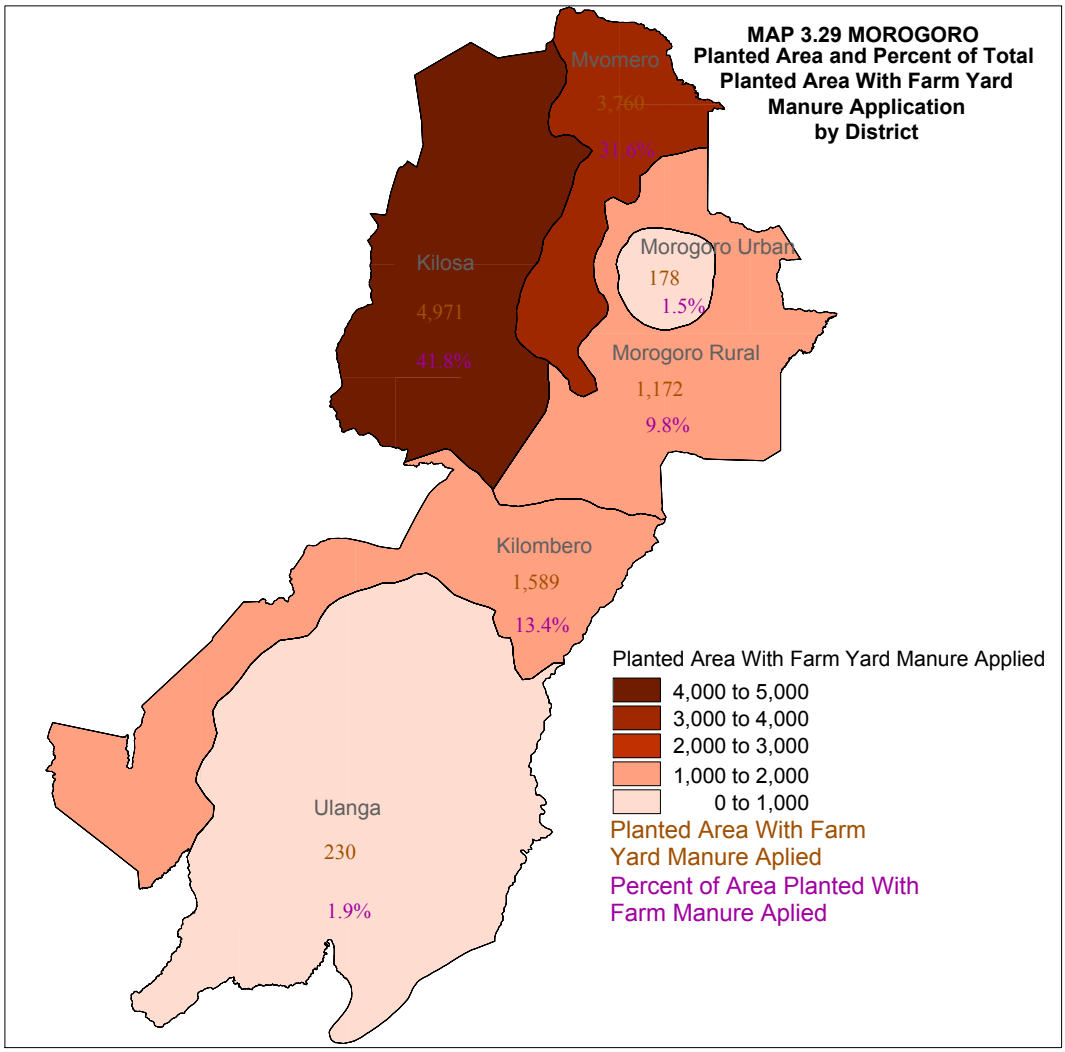
3.5.2 Methods of soil preparation

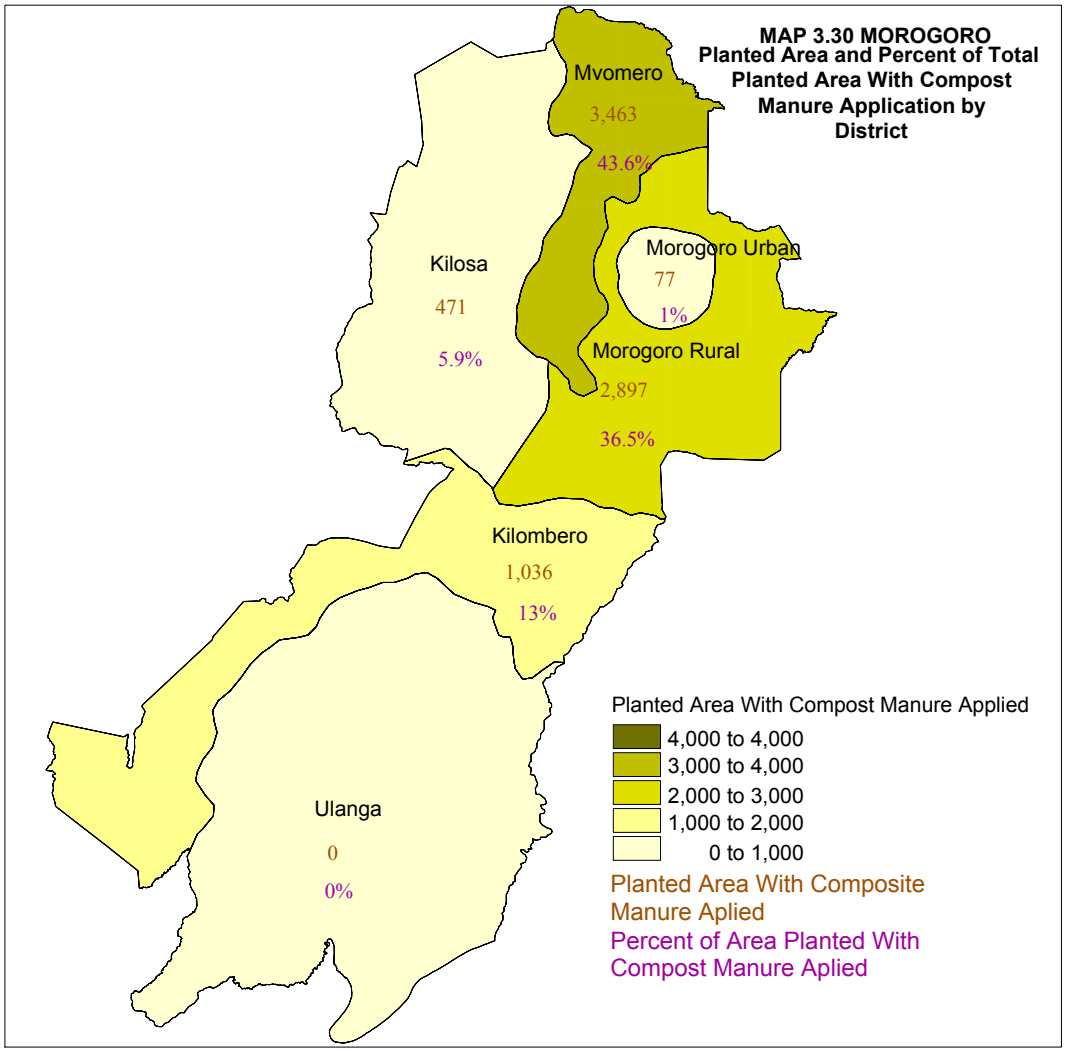
Hand cultivation is mostly used for soil preparation as it has been used in an area of 310,153 ha which represented 78 percent of the total planted area, followed by tractor ploughing (52,551, 13%) and ox-ploughing (35,957, 9%). Hand cultivation is mostly used in short rainy season where (81%) of the area used this method for soil preparation compared to (76%) for the long rainy season. Tractor ploughing is mostly used in long rainy season (Chart 3.52).



Hand cultivation was mostly used during short rainy season at 81% against 76% for the long rainy season. Tractor ploughing is mostly used in long rainy season with 15% against 8% oxen ploughing while during short rain season oxen ploughing is the most applied method with 11% against tractor ploughing 8%.




MAP 3.29 MOROGORO
Planted Area and Percent of Total Planted Area With Farm Yard Manure Application by District
Mvomero
3,760
31.6%
Kilosa
4,971
41.8%
Morogoro Urban
178
1.5%
Morogoro Rural
1,172
9.8%
Kilombero
1,589
13.4%
Ulanga
230
1.9%
Planted Area With Farm Yard Manure Applied
4,000 to 5,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Planted Area With Farm Yard Manure Aplied
Percent of Area Planted With Farm Manure Aplied


MAP 3.30 MOROGORO
Planted Area and Percent of Total Planted Area With Compost Manure Application by District
Mvomero
3,463
43.6%
Kilosa
471
5.9%
Morogoro Urban
77
1%
Morogoro Rural
2,897
36.5%
Kilombero
1,036
13%
Ulanga
0
0%
Planted Area With Compost Manure Applied
4,000 to 4,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Planted Area With Composite Manure Aplied
Percent of Area Planted With Compost Manure Aplied

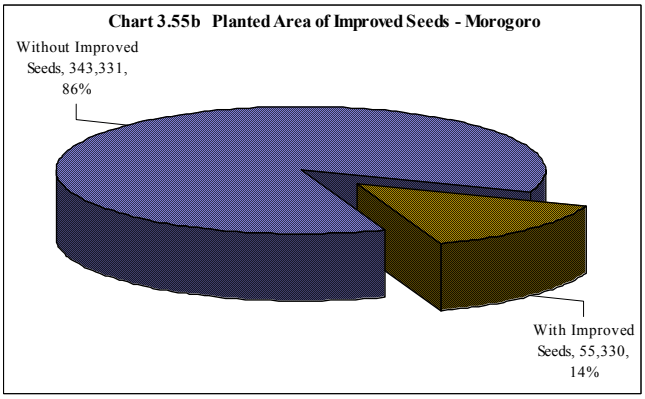
Though ox-ploughing is the most recommended tillage method for the Tanzanian small holder farmers in Morogoro region tractor ploughing is commonly used than oxen ploughing. Kilombero district is leading in practicing this technology having cultivated 17,246 (33%) hectares followed by Mvomero 13,535 (26%) hectares, Kilosa 11,541 (22%), Ulanga 7,543 (14%) hectares, Morogoro Rural 2,343 (4%) hectares and Morogoro Urban 340 (1%) hectares.

During the long rainy season, 82.5 percent of the total area cultivated by using oxen was planted with cereals followed by oil seed 9.5percent, pulses 3.9 percent, fruits and vegetables 1.9 percent, roots and tuber 1.7 percent and cash crops 0.6 percent.

3.5.3 Improved seeds use

The planted area using improved seeds was estimated at 55,330 ha which represents 14% of the total planted with the annual crops and vegetables area. The percentage use of improved seed in the long rainy season at (14.1%) was slightly higher than the corresponding percentage use for the short rainy season (13.6%).

Chart 3.55b Planted Area of Improved Seeds - Morogoro



Cereals had the largest planted area with improved seeds (44,355 ha, 80.2%) followed by fruit and vegetables (7,390 ha, 13.4%), pulses (2,087 ha, 3.8%), oilseed and oil nuts (800 ha, 1.4%), Cash crops (441 ha, 0.8%) and roots and tubers (257 ha, 0.5%) (chart 3.54). However the use of improved seed in cash crops and fruits and vegetables is much greater than in other crop types (63% and 60% respectively), only 4% of the planted area for roots and tubers used improved seed (Chart 3.55b).

Chart 3.54 Planted Area with Improved Seed by Crop Type

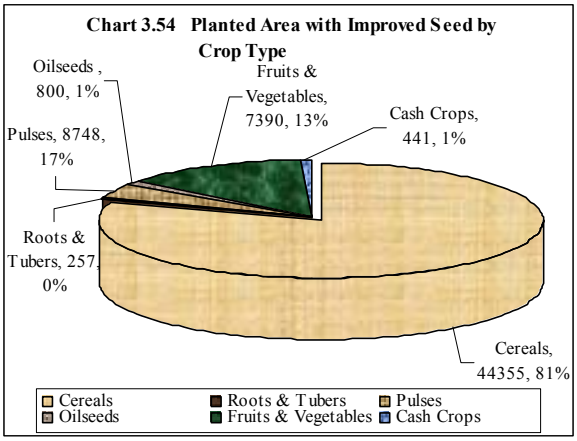
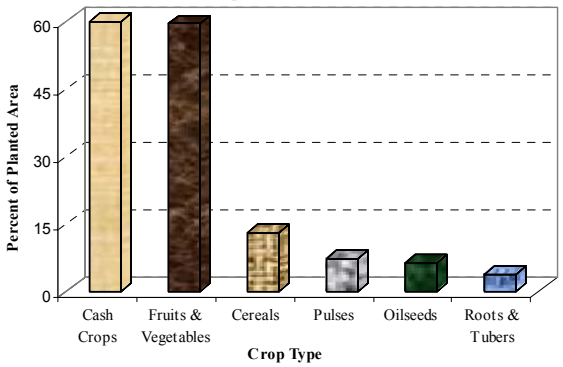
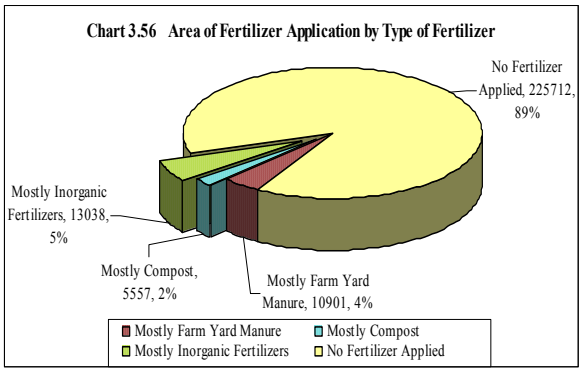


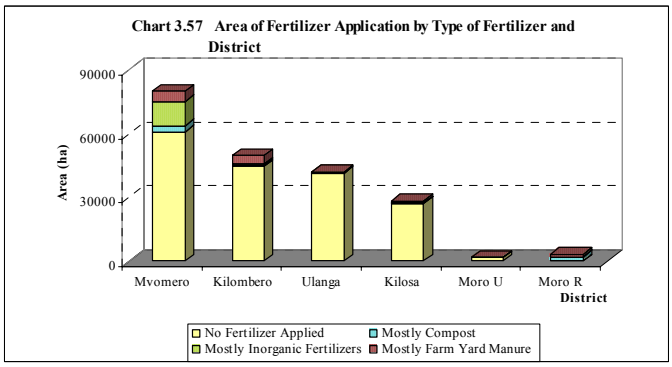
Chart 3.55a Percentage of Crop Type Planted Area with Improved Seed - Annuals



3.5.4 Fertilizers use

Most annual crop growing households do not use any fertiliser. The planted area without fertiliser for annual crops was 112,856 hectares representing 89 percent of the total planted area with annual crops. Of the planted area with fertiliser application, inorganic fertilizer was applied to 13,038 ha which represented 5 percent of the total planted area or 44 percent of the area planted with fertiliser application. This was followed by farm yard manure (10,901 ha, 4%). Compost fertilizers were used on a very small area and represented only 2 percent of the area planted with fertilizers (Chart 3.56)





The highest percentage of the area planted that was applied with fertilizer (all types) was in Mvomero District (69%) followed by Kilombero (17%), Morogoro Rural (11%), Kilosa (4%), Ulanga (3%) and Morogoro Urban (1%) (Chart 3.57).

Table 3.9a Planted Area by Type of Fertiliser Use and District - Long and Short Rainy Season

District	Fertilizer Use				No Fertilizer Applied
	Mostly Farm Yard Manure	Mostly Compost	Mostly Inorganic Fertilizer	Total	
Kilosa	5863	733	2492	9088	102444
Moro Rural	775	1850	161	2786	64534
Kilombero	2976	1096	3618	7691	71222
Ulanga	740	142	680	1562	51051
Moro Urban	254	102	201	558	3941
Mvomero	4439	3317	7955	15711	68073
Total	15048	7240	15108	37396	361265

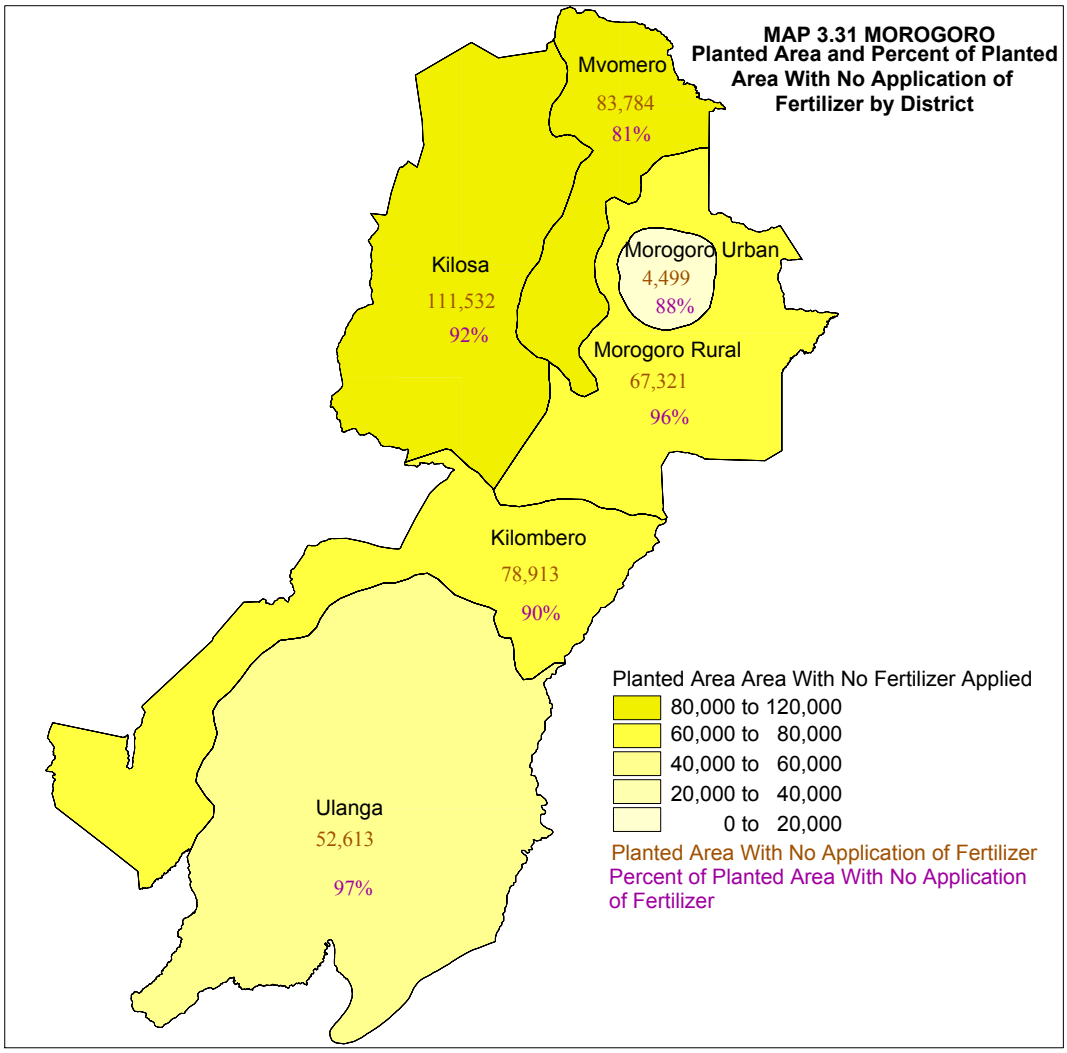
Fertilizer application rate was highest in cereals in which 54 percent of the area planted with these crops during the long rainy season was applied with various types of fertilizers. The second highest rate of fertilizer application was in fruits and vegetables (35%) followed by pulses (7%), cereals (4%) and oil seeds/nuts (0.3%). There was no fertilizer application in cash crop.

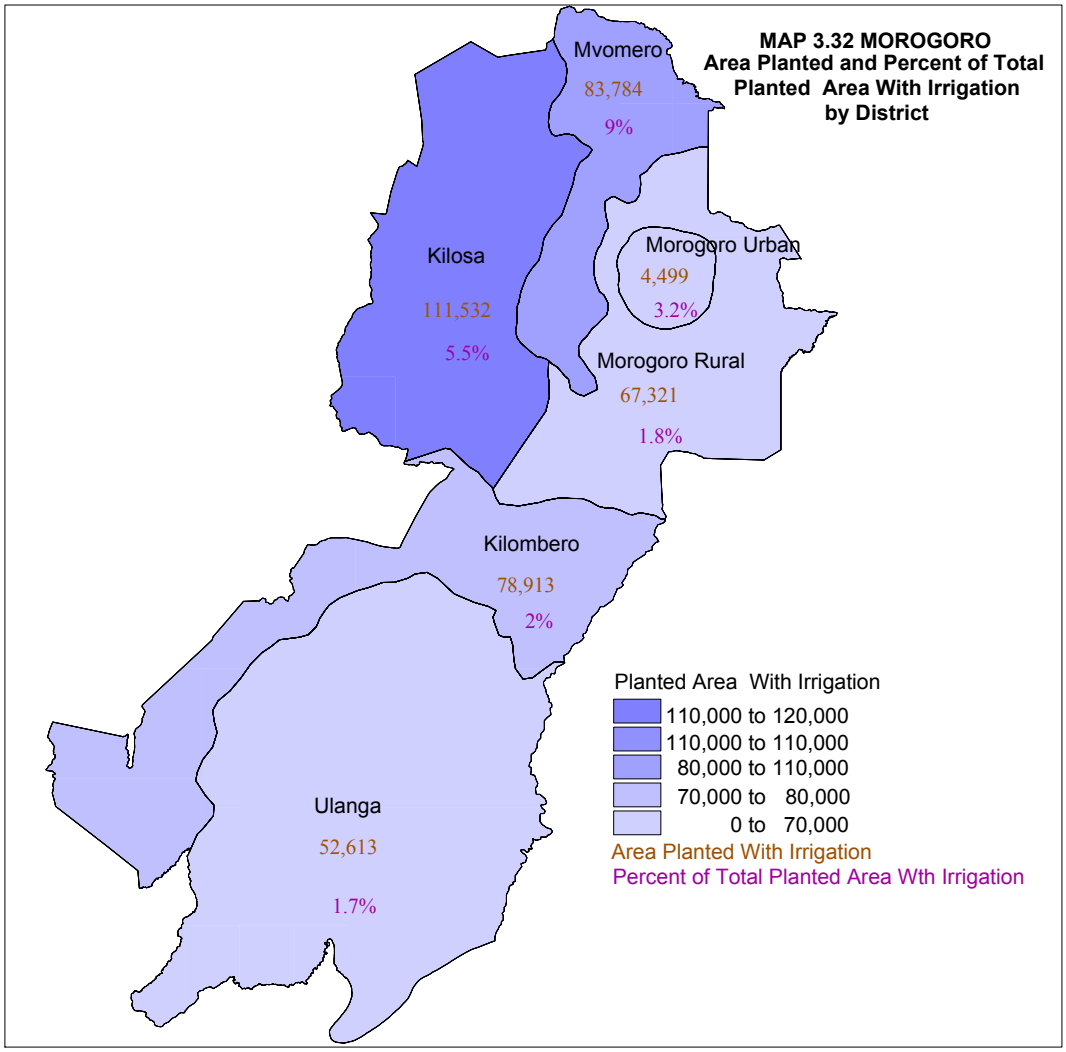
Table 3.9b Number of Crop Growing Households and Planted Area by Fertilizer Use and District - Long Rain Season

District	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Kilosa	4384	5068	341	470	2281	5918	61960	87444	68966	98900
Morogoro	122	50	1082	835	103	42	44052	45290	45360	46217
Kilombero	497	1051	459	789	1895	2453	41799	51558	44649	55851
Ulanga	230	222	0	.	227	515	26113	32230	26571	32967
Morogoro Urb	126	166	64	81	209	144	3895	3593	4293	3984
Mvomero	2121	2569	1858	1986	3869	4376	32127	39697	39975	48628
Total	7480	9126	3803	4161	8584	13448	209946	259812	229814	286546

The highest rate of using inorganic fertilizers among the various types of crops was in regard to cereals (49%) and lowest was in pulses (2.7%). There was no inorganic fertilizer application in oil seed/nuts, cash crops and roots and tubers.

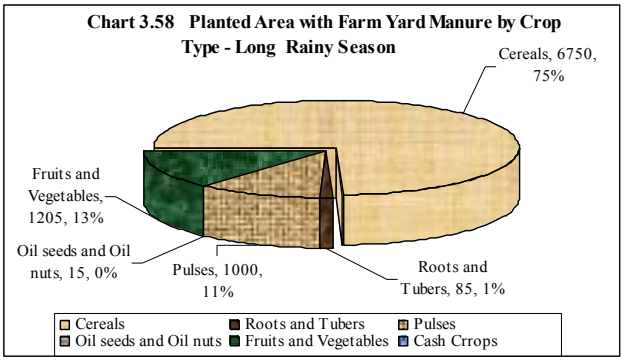
Most annual crop growing household do not use any fertilizer (approximately 209,946 Household, 91% (Map>>). The percentage of the planted area with applied fertilizer was highest for cereals (76% of the planted with these fruit and vegetable during the long rainy Season had an application of fertilizers). This was followed fruit and vegetables (17.6%), pulses (4.9%), roots and tubers (1.2%) and oil seeds (0.2%). There was no ferliser application in cash crops (Table 3.9b)

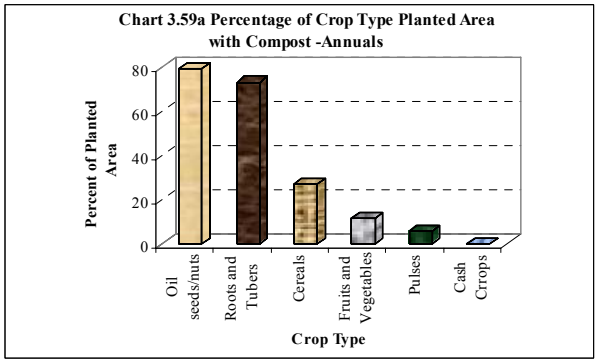

MAP 3.31 MOROGORO
Planted Area and Percent of Planted Area With No Application of Fertilizer by District
Mvomero
83,784
81%
Kilosa
111,532
92%
Morogoro Urban
4,499
88%
Morogoro Rural
67,321
96%
Kilombero
78,913
90%
Ulanga
52,613
97%
Planted Area Area With No Fertilizer Applied
80,000 to 120,000
60,000 to 80,000
40,000 to 60,000
20,000 to 40,000
0 to 20,000
Planted Area With No Application of Fertilizer
Percent of Planted Area With No Application of Fertilizer


MAP 3.32 MOROGORO
Area Planted and Percent of Total Planted Area With Irrigation by District
Mvomero
83,784
9%
Kilosa
111,532
5.5%
Morogoro Urban
4,499
3.2%
Morogoro Rural
67,321
1.8%
Kilombero
78,913
2%
Ulanga
52,613
1.7%
Planted Area With Irrigation
110,000 to 120,000
110,000 to 110,000
80,000 to 110,000
70,000 to 80,000
0 to 70,000
Area Planted With Irrigation
Percent of Total Planted Area Wth Irrigation

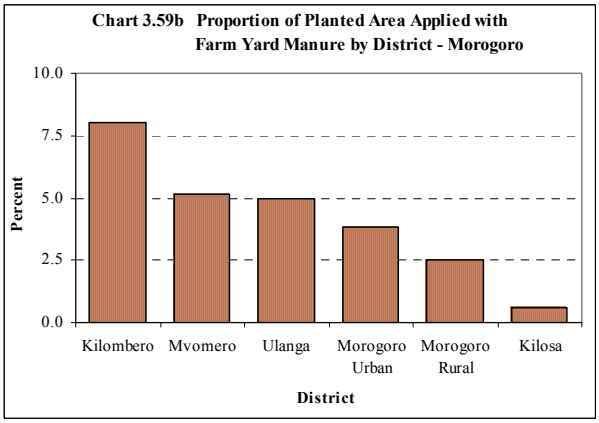
3.5.4.1 Farm yard manure use

The number of households that applied farm yard manure in their annual crops during the long rainy season was 7,480 and it was applied to 9,126 ha representing 3% of the total area planted during that season (Table 3.9). The largest proportion of area applied with farm yard manure was on pulses (78%), followed by cereals (37%), fruits and vegetables (33%), roots and tubers (27%) and oil seeds (21%). In the region farm yard manure was not applied in cash crops. However, the largest area applied with farm yard manure was found in cereals (6,750 ha, 75%) followed by fruits and vegetables (1,205 ha, 13%), pulses (1,000 ha, 11%), the use farm yard manure in oil seeds and cash crops was negligible (Chart 3.58 and 3.59a and Map 3.29)





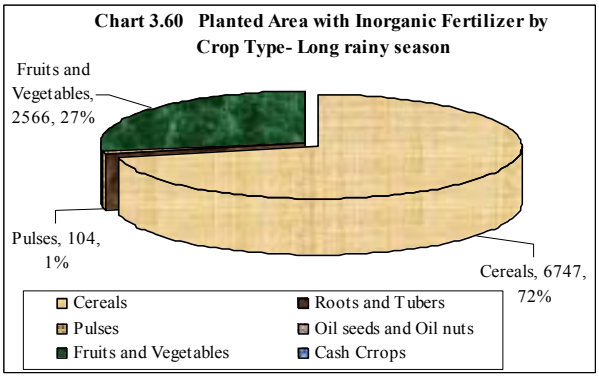
Farm yard manure is mostly used in Kilombero (8.0% of the total planted area in the district), followed by Mvomero (5.2%), Ulanga (5.0%), Morogoro Urban (3.8%), Morogoro Urban (2.5%) and Kilosa (0.6%). The results indicate the absence of clear relationship between the number of cattle in the district and the use of farm yard manure (Chart 3.59b)(Map 3.30)



For permanent crops, most farm yard manure is used for the production of bananas (35%), followed by mango (17%), coconut (16%), sugarcane (10%), orange (9%), other crops pawpaw, palm oil, pineapple, mandarin and cashew nut comprise (13%).

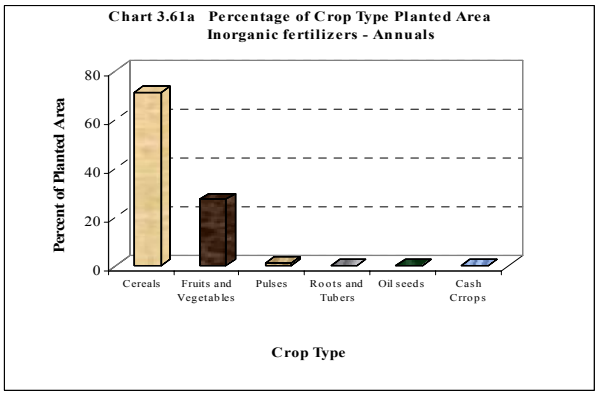
3.5.4.2 Inorganic Fertiliser Use

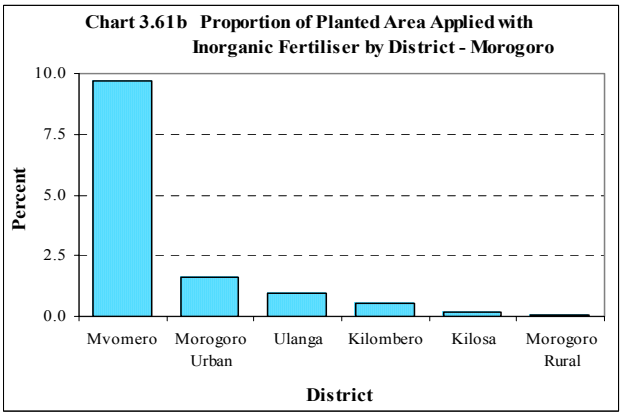
The number of households that applied inorganic fertilizer on their annual crops during the long rainy season was 8,584 and it was applied to 13,448 ha representing 4.7% of the total area planted during that season (Table 3.9). The largest area applied with inorganic fertilizers was on cereals



(72% of the total area applied with inorganic fertilizers), followed by fruits and vegetables (27%) and pulses (1%) (Chart 3.60) However, the proportion of fruit and vegetables with inorganic fertilizers was at (36%) higher than other crop types, followed by cereals (2.9%) and Pulses (0.6%). Inorganic fertiliser is mostly used in Mvomero district (9.7% of the total planted area in the district), followed by Morogoro Urban (1.6%). Other districts used small quantities of inorganic fertiliser and Morogoro Rural recorded the lowest proportion use of inorganic fertiliser (0.1%)(Map 3.31).

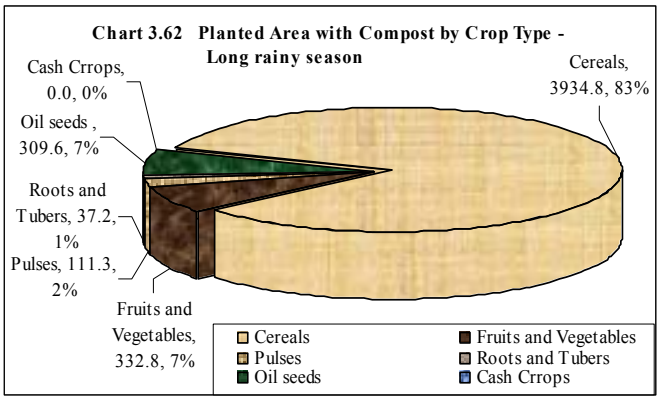
In perennial crops inorganic fertiliser were used on sugar cane (80.6%), followed by mango (11.4%), pineapple (4.2%) and coconut (3.8%).





3.5.4.3 Compost Use

The number of households that applied compost manure on their annual crops during the long rainy season were 3,803 and it was applied to 4,161 ha representing 1.6% of the total area planted (Table 3.9). The proportion of area applied with compost was very low for each type of crop (0 to 4%); however the distribution of the total area using compost manure shows that 83% of this area was cultivated with cereals, followed by fruits and vegetables (7%), oil seeds (7%) pulses (2%) and roots and tubers (1%)(Chart 3.62)(Map 3.30).

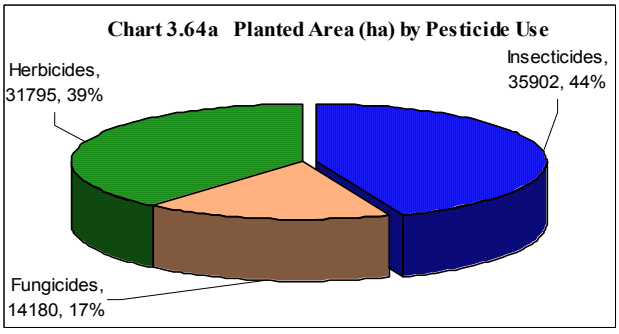


In permanent crop, compost was mostly used in coconut (29.3%) followed by mango (18.3%), banana (17.6%), sugarcane (12.7%), orange (7.8%), palm oil (6.1%), coffee (3.7%), pineapple (3.5%), cashew nut and lemon each having (0.4%).

3.3.4.5 Pesticide Use

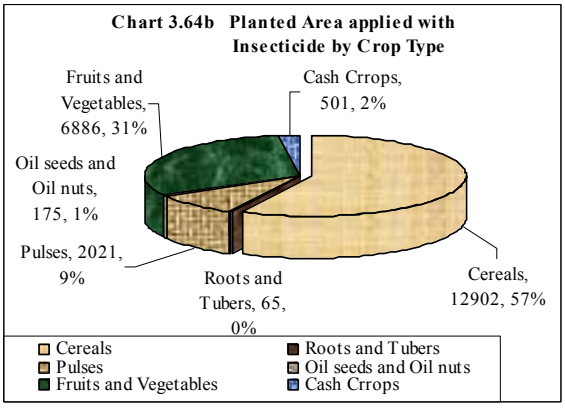
Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders on both annual and perennial crops in the region. Pesticides were applied to 35,902 ha of annual crops and vegetables.

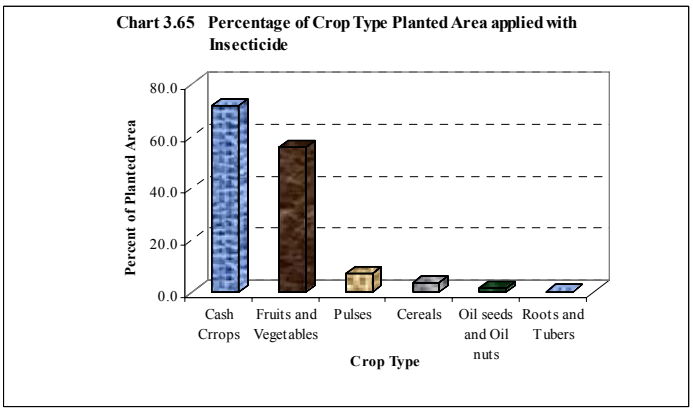
Insecticides are the most common pesticide used in the region (44% of the total area applied with pesticides). This was followed by herbicides (39%) and fungicides (17%) (Chart 3.64a)



Insecticide use

The planted area applied with insecticides was estimated at 35,902 ha which represented 9% of the total planted area for



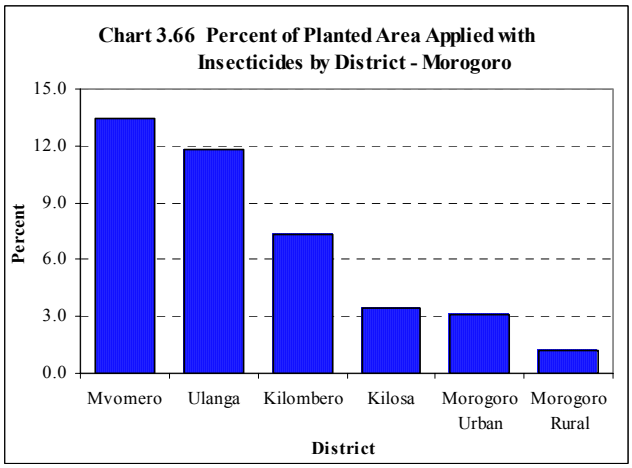


annual crops and vegetables. Cereals had the largest planted area applied with pesticide (22,552 ha, 57.2%) followed by fruits and vegetables (21,133 ha, 30.5%), pulses (2.021 ha, 9%), cash crops (501 ha, 2.2%), oil seeds (175 ha, 0.8%) and roots and tubers (65 ha, 0.3%) (Chart 3.65)

However the percent of insecticides used in cash crops and fruits and vegetables is much greater than in other crop types being 72% and 56% respectively, while only 0.3% of root and tuber crops were applied with insecticides (Chart 3.65).

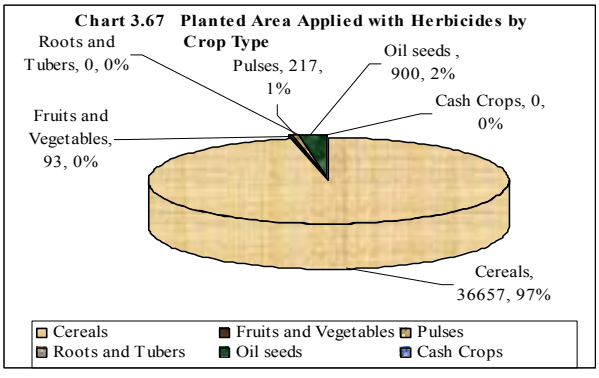
Annual Crops with more than 50% insecticide use were onions (100%), cabbage (86.2%), cucumber (82.5%), cotton (80.8%), chillies (65.3%), spinach (61.2%) tomatoes (60.1%) and carrots (55.3%).

Mvomero had the highest percent of planted area with insecticide (13.4% of the total planted area with annual crops in the district). This was closely followed by Ulanga (11.8%) then Kilombero (7.4%), Kilosa (3.4%) and Morogoro Urban (3.1%). The smallest percentage use was recorded in Morogoro Rural district (1.2%) (Chart 3.66)

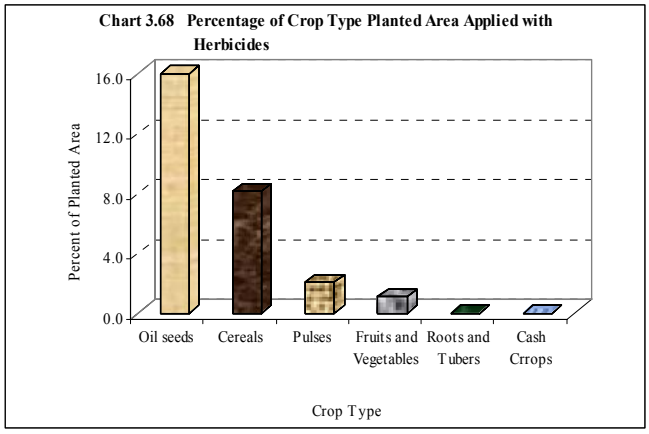


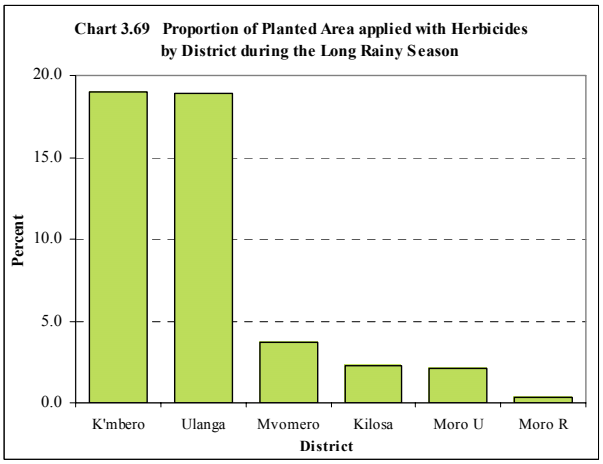
3.5.5.2 Herbicide Use

The planted area applied with herbicides was estimated at 37,867 ha which represented 7.8% of the total area planted with annual crops and vegetables. Cereals had the largest planted area applied with herbicides (36,657 ha, 97%) followed by oil seed (900 ha, 2.4%), pulses (217 ha, 0.6%) and fruits and vegetables (93 ha, 0.2%). Herbicides were not applied in cash crops and in roots and tubers (Chart 3.67).



However the percent of herbicide use in oil seed was much greater than in other crop types being 16.1% followed by cereals (8.1%), pulses (2.1%) and fruits and vegetables (1.1%) (Chart 3.68).



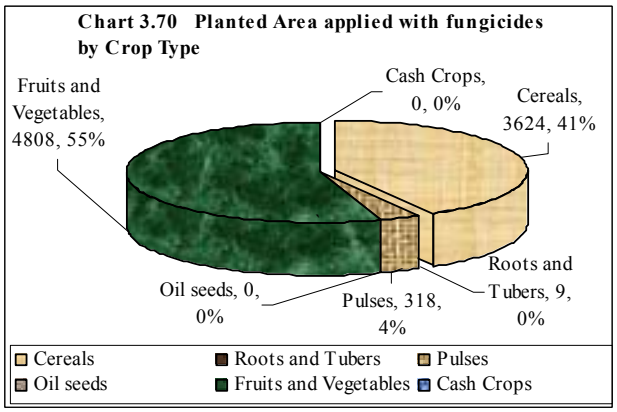


The top six annual crops with highest percentage use of herbicides in terms of area were paddy (27%), onion (16%), egg plant (16%), tomatoes (10%), cucumber (8%) and cabbage (6%).

The highest proportion of the planted area applied with herbicides was found in Kilombero district (19%) followed by Ulanga (18.9%), Mvomero (3.7%), Kilosa (2.3%), Morogoro Urban (2.1%) and Morogoro Rural (0.3%) (Chart 3.69).

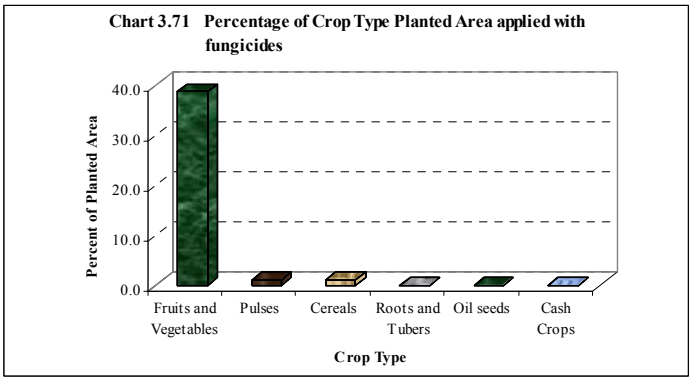
3.5.5.3 Fungicide Use

The planted area applied with fungicides was estimated at 14,180 ha which represented 3% of the total planted area for annual crops and vegetables. The percentage use of fungicides in the long rainy season at (4%) was higher than the corresponding percentage for the short rainy season (2%). Fruits and vegetables had the largest planted area applied with fungicides (4,808 ha, 55%) followed by cereals (3,624 ha, 41%), pulses (318 ha, 4%) and roots and tubers (9 ha, 0.1%). Fungicides were not used in cash crops and oil seeds (Chart 3.70).

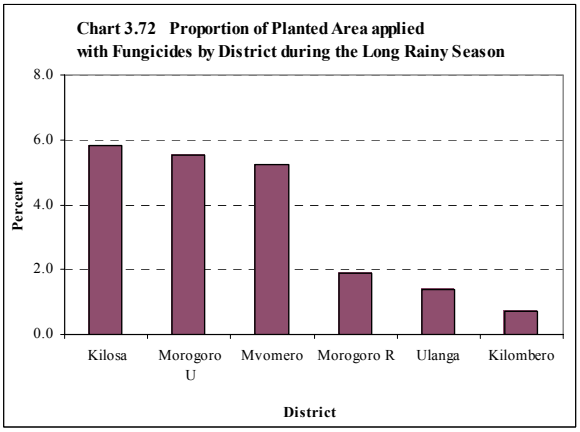


However the percentage use of fungicide in fruits and vegetables was much greater than in other crop types being 38% followed by pulses (1.1%), cereals (1.07%) and roots and tubers (0.4%). (Chart 3.71).

Annual crops with more than 40% fungicide use were tomatoes (56%), cucumbers (50%), onions (49%) and spinach (40%).



Kilosa, Morogoro Urban and Mvomero districts reported higher percentage use of fungicides with application to 5.8, 5.5 a.d 5.3 percent respectively of the total area planted while Morogoro Rural, Ulanga and Kilombero districts recorded the lowest percentage use of 1.9, 1.4 and 0.7 respectively (Chart 3.72).



3.5.6 Harvesting methods

The main harvesting method for cereals was reported to be by hand. All cereals planted during the agricultural year 2002/03(except maize and paddy) were harvested by hand. It is estimated that 89.6 percent of the total area planted with maize was harvested by hand whereas 0.1 percent was harvested by draft animals and 0.1 percent was harvested by machines. For paddy, 84.7 percent of the total area planted was harvested by hand, whereas 0.4 percent was harvested by machine. The rest of the annual crops and vegetables were harvested by hand.

3.5.7 Threshing methods

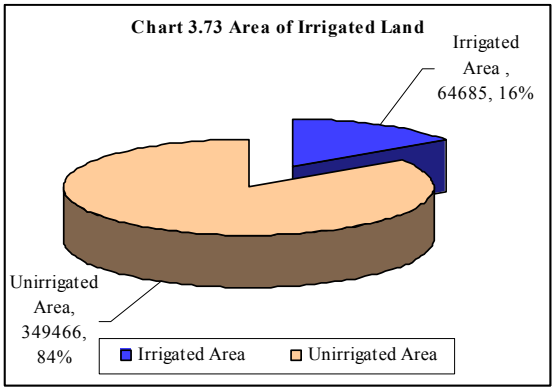
Hand threshing was the most common method used, out of the total area planted 86 percent of the total area planted with cereals during the long rain season of the agricultural year 2002/03 was threshed by hand. The crops that were threshed by draft animals, human powered tools and engine driven machines were harvested from 0.1%, 0.2% and 0.6% of the total area respectively. Cereals harvested from 13% of the total planted area were not threshed.

3.6 Irrigation

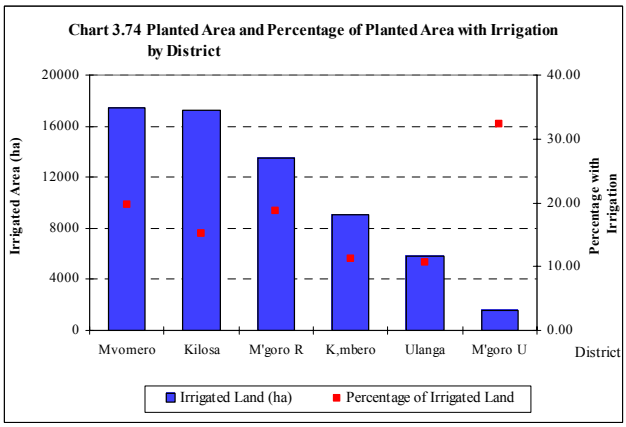
Water is the limiting factor to crop production in the majority of areas in Tanzania and without water most other agricultural practices applied to crops do not result in significant increases in yields. This section deals with the area under irrigation for different crops and the means by which water was extracted from the source and applied to the field.

3.3.5.1 Area planted with annual crops and under irrigation

In Morogoro region the area of annual crops and vegetables under irrigation was 64,685 ha representing 16 percent of the total area planted. The area under irrigation during the short rainy season was 6,810 ha accounting for 11 percent of the total area under irrigation in agricultural year 2002/03. However the percentage of the planted area under irrigation during the long rainy season was 20% compared with 5% in the short rainy season. Some crops, especially vegetables, were predominantly grown in the short rainy season with irrigation. In the short rainy season 62% of the area planted with vegetables was irrigated, whilst 56% of the vegetables were irrigated in the long rainy season.



The district with the largest planted area under irrigation for annual crops were Mvomero (17,481 ha, 27% of the total planted area with irrigation) and Kilosa (17,255 ha, 26.7%). When expressed as a percentage of the total area planted, Morogoro Urban (32%) and Mvomero (20%) had proportionally more planted area with irrigation than other districts, followed by Morogoro Rural (19%), Kilosa (15%), Kilombero (11%) and Ulanga (10.7%) (Chart 3.74)(Map 3.32)



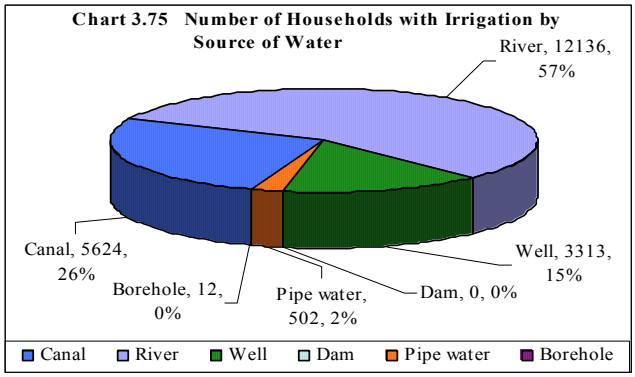
Of all the different crops and in terms of proportion of the irrigated planted area, watermelon (99.7%), onions (88%), cabbage (80%), chillies (73.8%) and spinach (73.1%).

In terms of crop type, the area under irrigation for roots and tubers was 14,756 ha (46% of the total area under irrigation), followed by cereals with 8,162 ha (26%), fruits and vegetables 7,255 (23%) and pulses 1,552 (5%) . All of the irrigation on cereals was applied to maize and paddy.

The area of fruits and vegetables under irrigation was estimated at 7,255 ha which represented 59% of the total planted area with fruits and vegetables. Watermelon, onions and cabbage were the most irrigated crops. Irrigation was not used in annual cash crops.

3.6.2 Sources of water used for irrigation

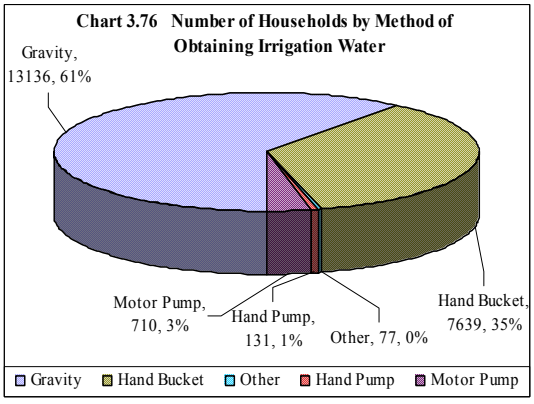
The main sources of water used for irrigation were river (57% of households with irrigation), canal (26%) and wells (15%). Only 0.1 percent of the households used water from boreholes and the proportion of households that used pipe water as a source of water for irrigation was (2%). Dams as source of irrigation water were not used in the region.



It was estimated that 53 percent of households using irrigation as well as 28 of households using river as source of irrigation water in the region were from Kilosa and Mvomero districts respectively.

3.6.3 Methods of Obtaining Water for Irrigation

Gravity was the most common means of getting water for irrigation with 61% of households using this method. This was closely followed by hand bucket by 35% of households. The remaining methods (hand pump, motor pump and others) were of minor importance (Chart 3.76).



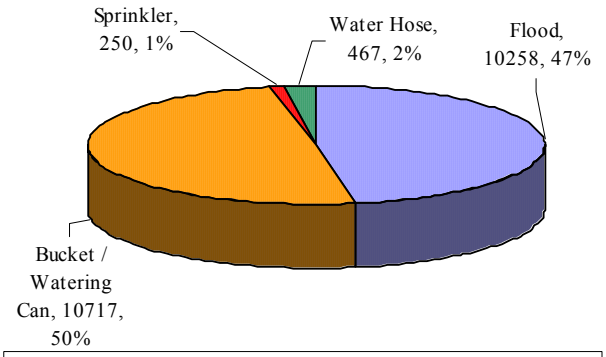
Gravity was used by most households with irrigation in Kilosa (49.7%), followed by Mvomero (32.5%), Kilombero (8%), Morogoro Rural (5.5%), Ulanga (2.9%) and Morogoro Urban (1.4%). Hand bucket was more common in Mvomero where 35.6% of households used this method to get water for irrigation, followed by Kilosa (24.4), Ulanga (18%), Morogoro Rural (10.9%), Kilombero (9.7%) and Morogoro Urban (1.3%).

3.6.4 Methods of Water Application

Most households used bucket/watering can (50% of households using irrigation). This was closely followed by hand jiijnbucket/watering can (47%). Water horse and sprinkler were not widely used (2% and 1% respectively) (Chart 3.77)

Although the method of obtaining irrigation water by hand bucket was very common in all six districts, motor pump as a method of obtaining water for irrigation was practiced in Kilosa and Mvomero district and hand motor was used in Kilosa District.

Chart 3.77 Number of Households with Irrigation by Method of Field Application



3.7 Crop Storage, Processing and Marketing

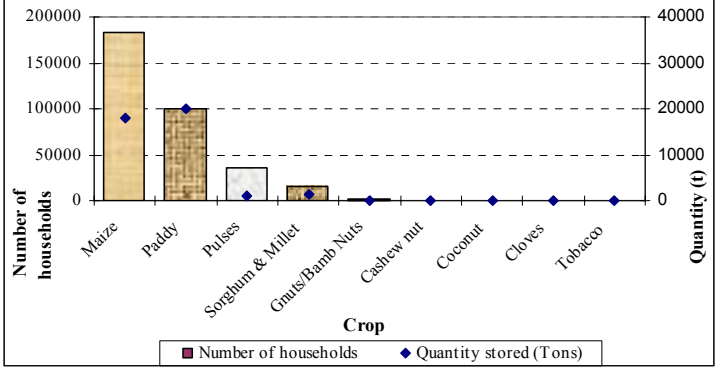
3.7.1 Crop Storage

Crop storage means keeping the crop for a certain period of time for various reasons. These reasons include storing the crops for food for the household, storing the crops in order to sell it later at higher prices and storing the crops as seed for planting in the following season.

The results for Morogoro region show that there were 336,432 crop growing households (15.3% of the total crop growing households) that reported storing various agricultural products in the region.

The most important stored crop in terms of quantity was paddy with 99,430 households storing 19,870 tonnes as of 1st Januari 2004. This was followed by maize (183,248 households and 17,805 tonnes), sorghum and millets (15,471 households and 1,436 tonnes) and beans and pulses (35,134 households and 955 tonnes) and groundnuts (1,524 household and 154 tonnes). The rest of the crops were stored in very small amounts (Chart 3.78)

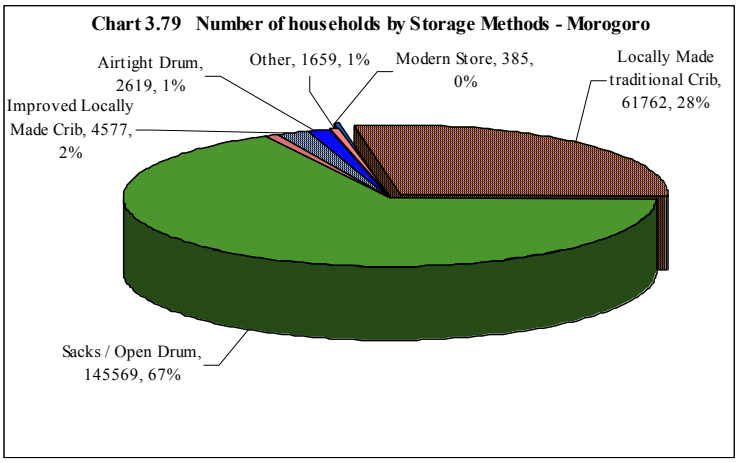
Chart 3.78 Number of Households and Quantity Stored by Crop Type - Morogoro



3.7.1.1 Methods of Storage

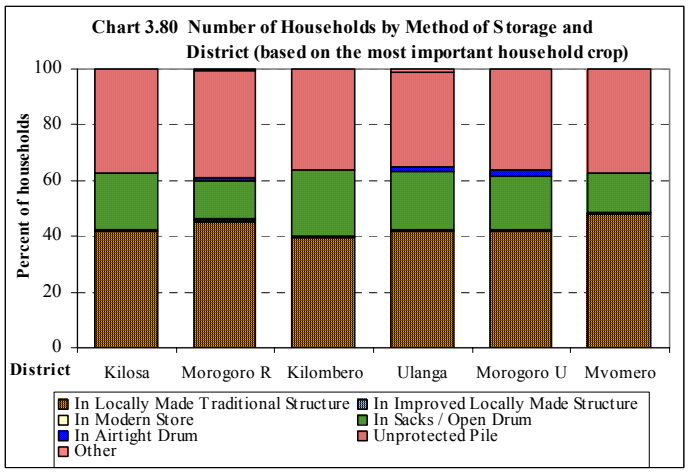
The region had 145,569 farming households storing their produce in sacks/open drum structures. This number is equivalent to 66.7 percent of households that stored crops. The households that stored their produce in locally made structures were estimated at 61,762 (28.3%). The number of households that used other methods of storage and their relative proportions were as follow: improved locally made structures 4,577 (2.1%), air tight drum structures 2,619 (1.2%), unprotected pile 1,670 (0.8%) and modern store 385 (0.2%). Those who stored in structure other than those mentioned above were estimated at 1,659 (0.8%) (Chart 3.79)

Chart 3.79 Number of households by Storage Methods - Morogoro



Sack/open drum structures were the dominating storage method in all districts. It was mostly used by households in Kilombero (82% of the total number of households storing crop products), followed by Kilosa households (76%), Morogoro Urban households (66%), Ulanga households (65%), Morogoro Rural (52%) and Mvomero (51.8%) (Chart 3.80).

Chart 3.80 Number of Households by Method of Storage and District (based on the most important household crop)

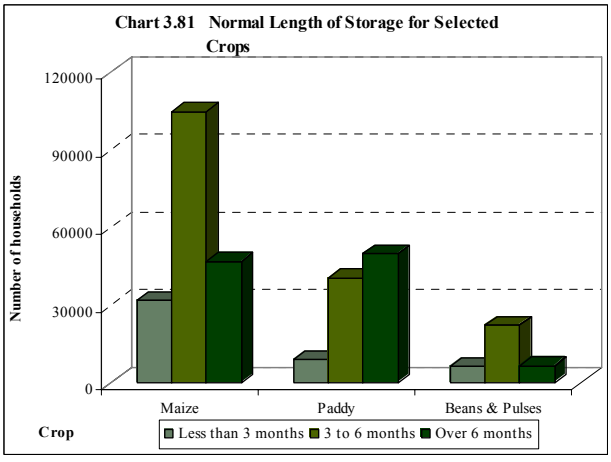


Locally made traditional structures were mostly used by households living in Mvomero (43.9%) of the total number of households storing crop products), followed Morogoro Rural (40.5%), Ulanga (26.6%), Morogoro Urban (21.5%), Kilosa (20.5%) and Kilombero (14.7%).

3.7.1.2 Duration of storage

Most of the households (54% of the households storing crops) stored their produce for the period of three to six months followed by those who stored for the period of more than six months (30%). The minority (16%) are those who stored their crop produce for the period of less than three months.

Chart 3.81 Normal Length of Storage for Selected Crops

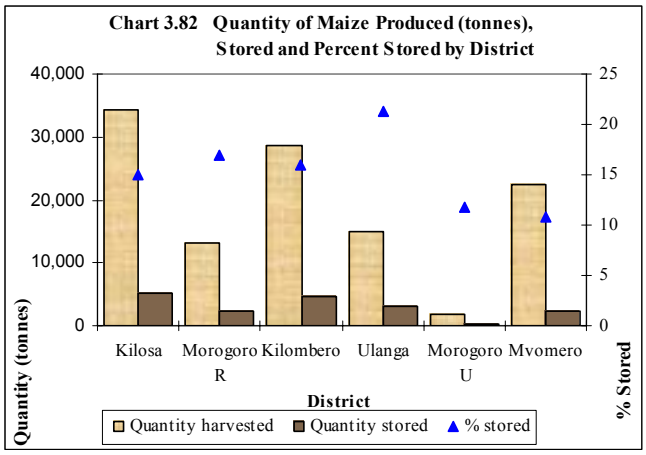


The storage pattern for beans and pulses indicated that most households were those storing for the period of between three and six months followed by over six months and the least number of household were those storing for the period of over less than three months (Chart 3.81). The proportion of households that store their produce for the duration of

three to six months was the highest in Morogoro Rural (66%) followed by Mvomero (65%), Ulanga (61%), Morogoro Urban (51%), Kilosa (51%) and Kilombero (32%) (Chart 3.82) (Map 3.33)

District comparison of duration of storage cannot be done for all crops combined. However, the analysis has been done for maize only as it is the most commonly stored crop. In general, quantity stored was related to the quantity produced. Districts with greater production had a higher percent of their crop stored as on 1st October 2003, however Mvomero district used proportionately more of the maize harvest than in some district with lower production indicating that the quantity stored was determined by the food and seed requirement of the household and not to sell during the "off-season" when the farm gate price of maize is higher.

Chart 3.82 Quantity of Maize Produced (tonnes), Stored and Percent Stored by District

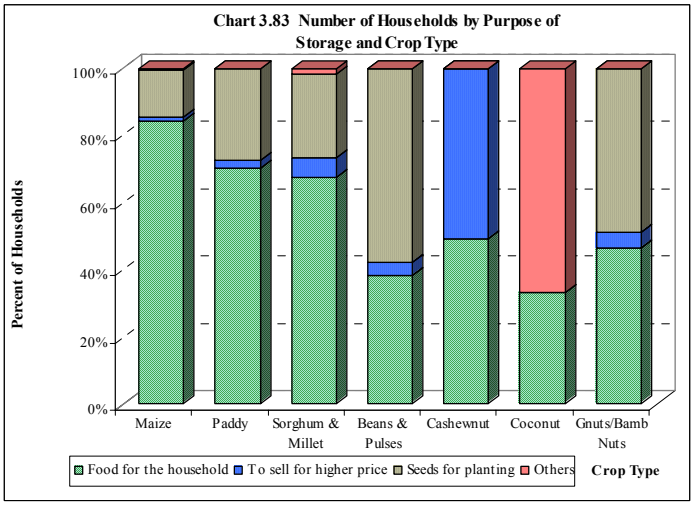


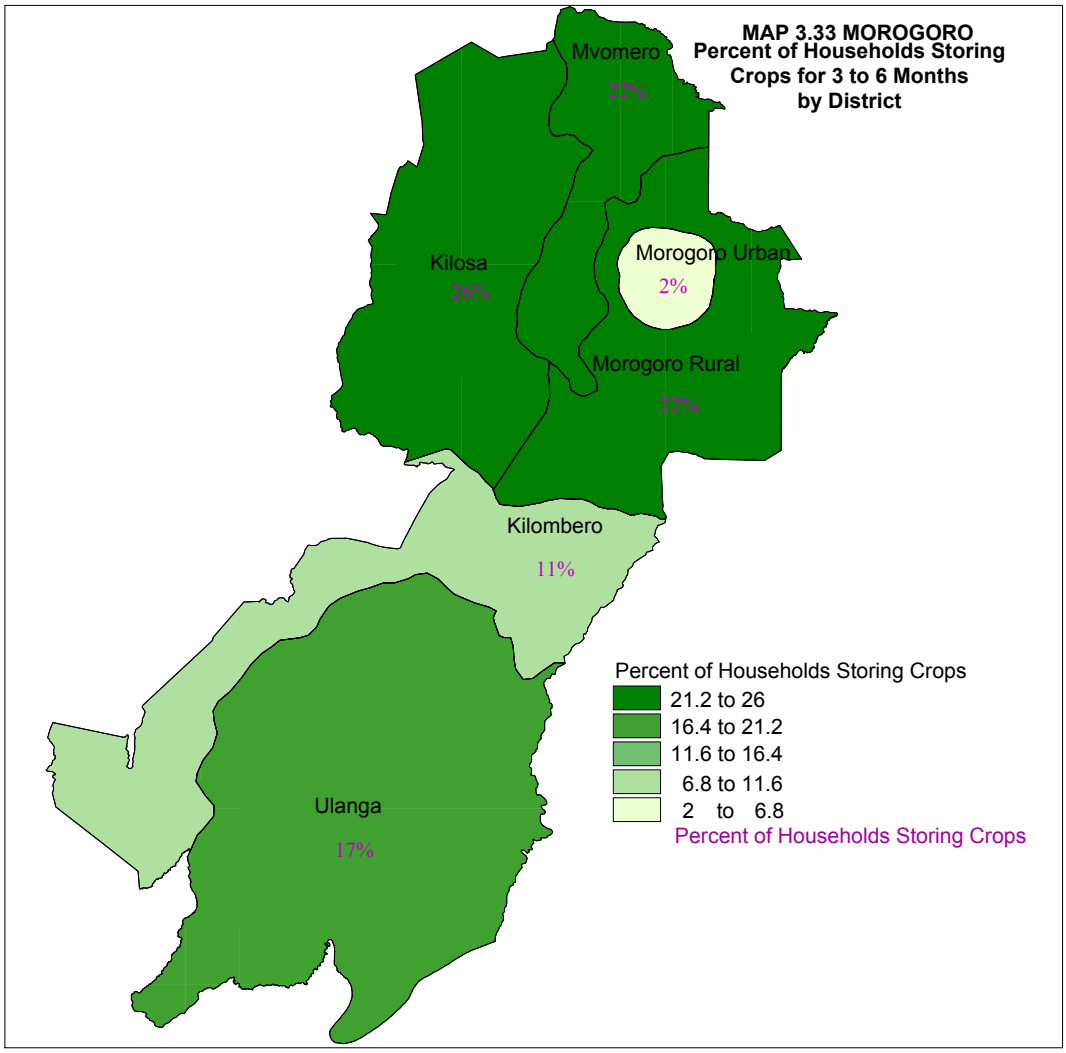
3.7.1.3 Purposes of Storage

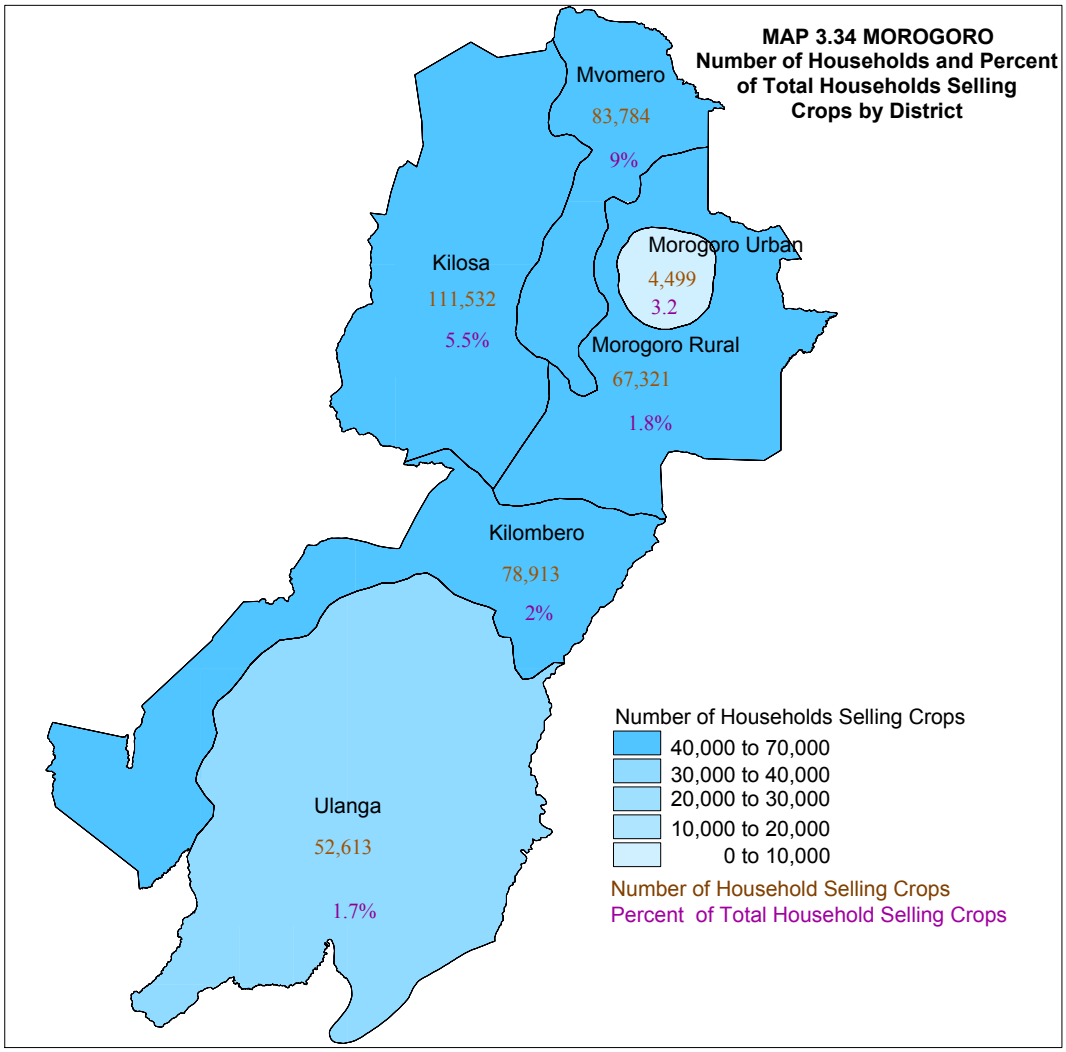
Basically, there are three major purposes of crop storage. These include storing crops for household consumption, seeds for planting and selling at higher prices.

Subsistence food crops (Maize, paddy, sorghum and millet, beans and pulses) are mainly stored for household consumption, with seed for planting being the second most important purpose. Practically all stored annual cash crops are stored for selling at higher price. Some of the stored perennial cash crops are for household consumption and seeds for planting in the case of cashew nuts. The percent of households that stored maize for household consumption as the main purpose of storage is 84.1 percent. This is followed by seed for planting (14%) and selling at a higher price (2%) (Chart 3.83)

Chart 3.83 Number of Households by Purpose of Storage and Crop Type




MAP 3.33 MOROGORO
Percent of Households Storing Crops for 3 to 6 Months by District
Mvomero
22%
Kilosa
26%
Morogoro Urban
2%
Morogoro Rural
22%
Kilombero
11%
Ulanga
17%
Percent of Households Storing Crops
21.2 to 26
16.4 to 21.2
11.6 to 16.4
6.8 to 11.6
2 to 6.8
Percent of Households Storing Crops


MAP 3.34 MOROGORO
Number of Households and Percent of Total Households Selling Crops by District
Mvomero
83,784
9%
Kilosa
111,532
5.5%
Morogoro Urban
4,499
3.2
Morogoro Rural
67,321
1.8%
Kilombero
78,913
2%
Ulanga
52,613
1.7%
Number of Households Selling Crops
40,000 to 70,000
30,000 to 40,000
20,000 to 30,000
10,000 to 20,000
0 to 10,000
Number of Household Selling Crops
Percent of Total Household Selling Crops

3.7.1.4 The Magnitude of Storage Loss

About 76 percent of households that stored crops had little or no loss but the proportion of households that reported experiencing a loss of more than a fourth or more is relatively high for foods crops than the crops that are produced for sale such as coffee, tobacco, cashew nut, groundnut and bambara nuts.

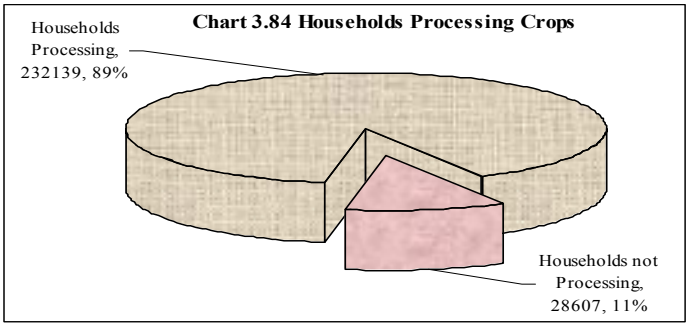
Table 3.10: Number of Households Storing Crops by Estimated Storage Loss and District

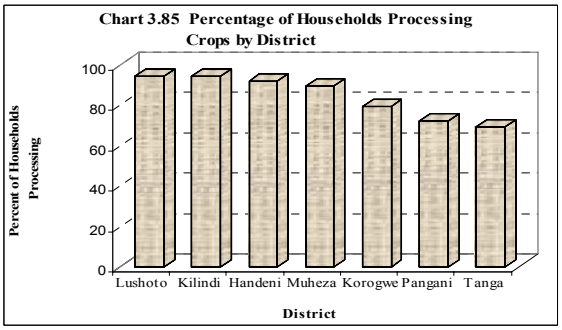
District	Estimate Storage Loss				
	Little or no Loss	Up to 1/4 Loss	Between 1/4 and 1/2 Loss	Over 1/2 Loss	Total
Kilosa	48098	8267	1562	1261	59188
Morogoro Rural	25084	13044	2784	607	41519
Kilombero	36186	7931	1698	0	45815
Ulanga	19676	6352	896	225	27149
M'goro Urban	2772	456	87	38	3353
Mvomero	34371	4179	1654	1014	41218
Total	166187	40229	8681	3145	218242

The proportion of households that reported a loss of more than one fourth for maize is the highest (6.2 of the total number of households that stored crops), followed by sorghum and millets (3.7%), paddy, beans and pulses (2.7%), It is estimated that 100 percent of the households that grew cash crops such as cashew nut, tobacco and annual crops such as groundnuts and bambara nuts reported little or no loss (Table 3.10)

3.7.2 Agro processing and by-products

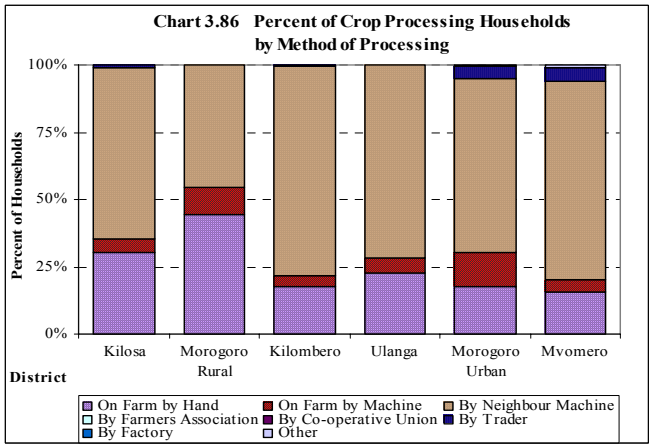
Agro processing refers to an activity which converts crop product from one form to another form in order to add value or increase the palatability of the product. Agro processing could aim at producing products for household utilization or for sale. Agro-processing was practiced in most crop growing households in the region (232,139 households, 89% of the total crop growing households). The percent of households processing crops was very high in all districts (above 80%). (Chart 3.85)





3.7.2.1 Processing Methods

Most crop processing households processed their crops using a neighbour's machine representing 65.8 percent (152,655 households). This was followed by those processing on-farm by hand (61,677 households, 26%), on farm by machine (14,316, 6.2%) and trader (2,684, 1.2%). The remaining methods of processing were used by very few households (less than 1%).

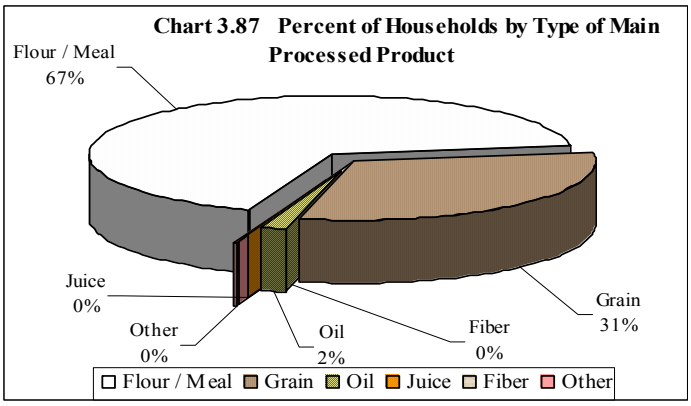


However there were district differences with Kilosa, Kilombero, Mvomero and Ulanga having the highest percent of households processing by hand (26%, 24%, 20% and 14% respectively). All other districts processed mostly by

neighbours machines. Processing by trader was more common in Morogoro Urban and Mvomero districts (4.79 and 4.77) than in other districts. Processing on farm by machine was more prevalent in Morogoro Urban, Morogoro Rural and Ulanga than in other districts(Chart 3.86).

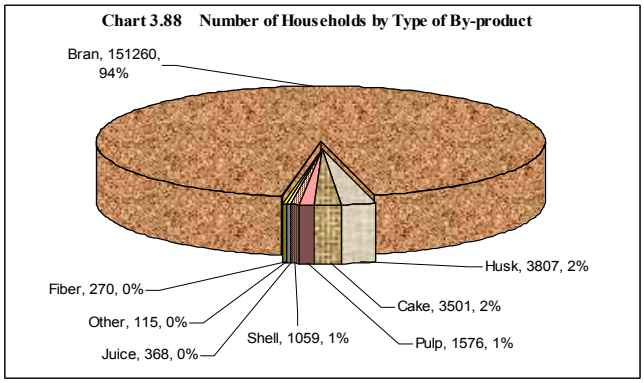
Main Agro-processing products

Two types of products are sometimes produced from agro-processing namely, main product and by-products. The main product is the major product after processing and the by-product is the secondary after processing. For example the main product after processing maize is normally flour whilst the by-product is normally the bran.



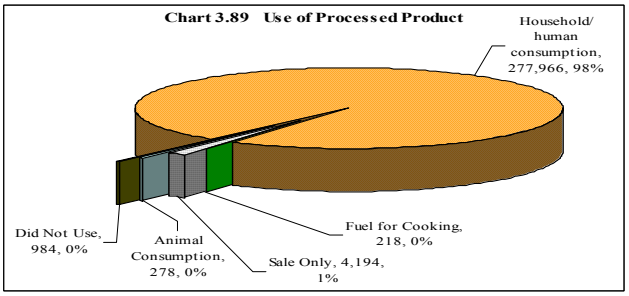
The main processed product produced by the largest number of crop growing households was flour/meal with 155,687 households (67%) followed by grain with 72,230 households (31%). The remaining products were produced by a small number of households (Chart 3.87).

The number of households producing by-products accounted for 84.8 percent of the households processing crops. The most common by-product produced by crop processing households was bran with 151,260 households (94%) followed by Husks (3,807 households, 2%), pulp (1,576, 1%) and cake (3,501, 2%). The remaining by-products were produced by a small number of households (Chart 3.88).

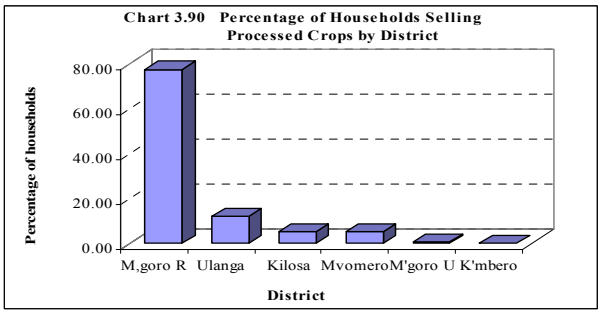


3.7.2.3 Main use of primary processed products:

The primary processed products were used for households or human consumption, fuel for cooking, for selling as well as animal consumption. Of all the uses, household/human consumption was leading as it represented about 97 percent of the total households that used primary processed product.

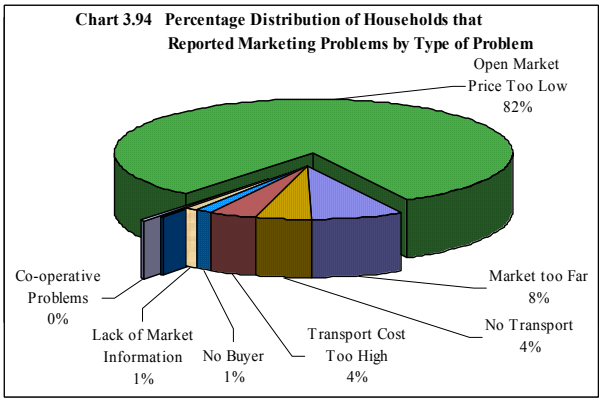


Mvomero, Kilombero and Morogoro Rural were the only districts which reported using the primary products as fuel for cooking.



Out of 2504 households that sold processed products, 1,938 were from Morogoro Rural (77.4% of the total number of households selling processed products in the region), followed by Ulanga with 296 households (11.8%), Kilosa with 131 households (5.2%), Mvomero with 127 households (5.1%), Morogoro Urban with 12 household (0.5 %) and none from Kilombero district. (Chart 3.89). However, the proportion of households that

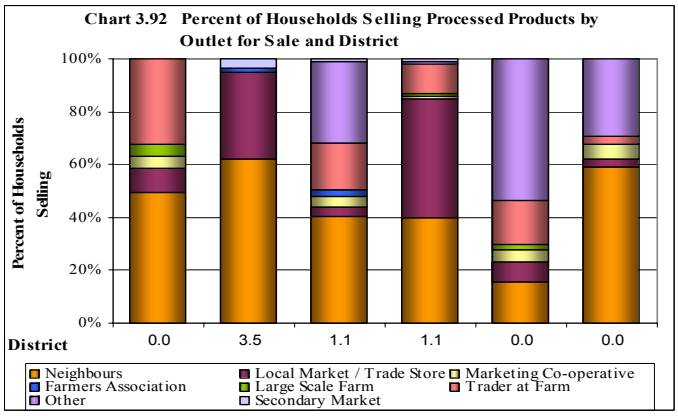
sold processed products (based on the number of households that used the processed product) is highest in Ulanga (44.3%), followed by Kilombero (13.1), Morogoro Rural (8.9%), Mvomero (8.3%), Morogoro Urban (7.9%) and Kilosa (4.1%).



3.7.2.4 Outlets for Sale of Processed Products

The greatest number of households sold processed products to neighbours (9,722 households, 47% of households that sold crops). This was followed by selling to local market/trade store (4,089, 19%), trader at farm (2,760, 13%), Marketing co-operatives (217, 1%), large scale farm (207, 1%) and Farmers Associations (212, 1%) (Chart 3.91)

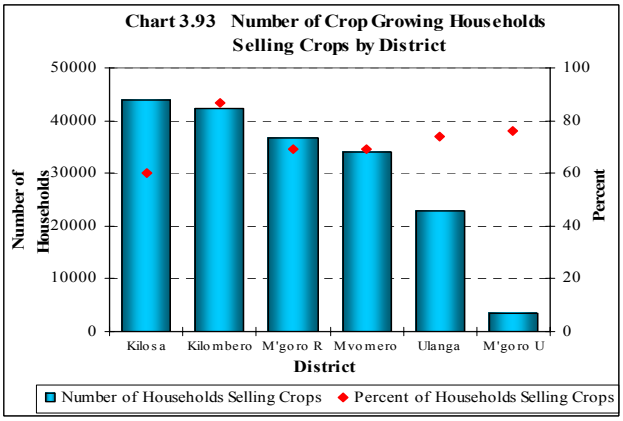
There are small differences between districts on crop processing households that sold processed produce to neighbours. The district differences were large for the rest of the sale outlets. In Kilombero , the sale of processed produce to farmer associations was prominent. The districts that had the highest proportion of farmers selling processed products to marketing cooperative were Ulanga and Kilosa.



The districts which had the highest percent of crop processing households selling to local markets or trade stores were Ulanga and Morogoro Rural. The percentage of households selling processed products to traders on farm was highest in Kilombero (51.4%), followed by Kilosa (23.5%), Ulanga (19.7%), Mvomero (3.1%) and Morogoro Urban (2.4%) (Chart 3.92). Morogoro Rural district reported no households selling processed products to traders at farm.

3.7.3 Crop Marketing

The number of households that reported selling crop was estimated at 182,902 which represent 70.1 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Kilombero (87%) followed by Morogoro Urban (76%), Ulanga (74%), Morogoro Rural (69%), Mvomero (69%) and Kilosa (60%) (Chart 3.93 and Map 3.34).



3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main problem reported by households (73% of households). Apart from low market prices, other problems were longer distances to the markets (15%), transport cost too high (5%), no transport (4%), no buyer (1%) and lack of market information (1%). Other marketing problems are minor and represented less than 1% of the total reported problems.

3.7.3.2 Reasons for Not Selling Crops

Table 3.11 Reasons for Not Selling Crop Produce

Main Reason	Household Number	%
Production Insufficient to Sell	86429	88.0
Other	7325	7.5
Price Too Low	1879	1.9
Trade Union Problems	710	0.7
Co-operative Problems	1398	1.4
Market Too Far	260	0.3
Government Regulatory Board Problems	239	0.2
Total	**98239**	100.0

The main reason for not selling crops was reported as "insufficient production to sell", representing 88 percent of the smallholders. This may had been a result of the insufficient rain. The remaining reasons for not selling are in such low numbers that it is not appropriate to rank their importance.

This general trend applies to all districts except for Kilosa and Morogoro Rural where the proportion of households reporting other reasons for not marketing their agricultural products is relatively high: 9.5 percent and 9.2 percent respectively.

3.8 Access to Crop Production Services

3.8.1 Access to agricultural credits

Table 3.12 AGRICULTURE CREDIT: Number of Households Receiving Credit By Sex of Household Member Receiving Credit By District

District	Male		Female		Total
	Number	%	Number	%	
Kilosa	1007	100	0	0	1007
Morogoro Rural	4484	65	2415	35	6899
Kilombero	1596	74	561	26	2157
Ulanga	456	60	305	40	761
Mvomero	255	40	377	60	632
Total	**7798**	**68**	**3658**	**32**	**11456**

The census result shows that in Morogoro region agricultural households (11,456, 4.4%) have access to credit out of which 7,798 (68%) were male-headed households and 3,658 (32%) were female headed households. In Kilosa district only male headed households got agricultural credits whereas in Mvomero districts more female households got credit than male households. In the remaining districts both male and female headed household's accessed agricultural credits (Table 3.12).

3.8.1.1 Source of agricultural credits

The major agricultural credit provider in Morogoro Region was family, friend and relative who collectively provided credit to 5,176 agricultural households (46% of the total number of households that accessed credit), followed by trader/trade store (22%), saving and credit society (11%), commercial bank (8%), private individual (7%) and other sources (2%),. The district distribution of household's main sources of credit shows that commercial banks were credit provider in Kilosa, Kilombero and Mvomero districts and savings and credit societies were found in all districts except in Morogoro Rural district. Trader/trader store was a major credit provider in Morogoro Rural district. Religious organization, NGO and projects were more involved in funding a relatively great number of households in Kilosa, Kilombero and Mvomero districts.

Chart 3.95 Percentage Distribution of Households that Received Credit by Main Sources

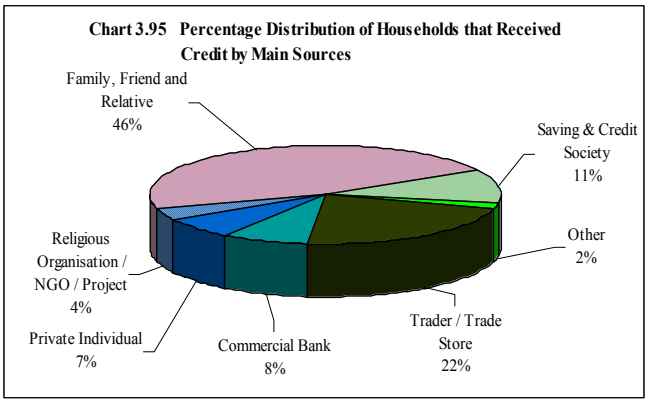
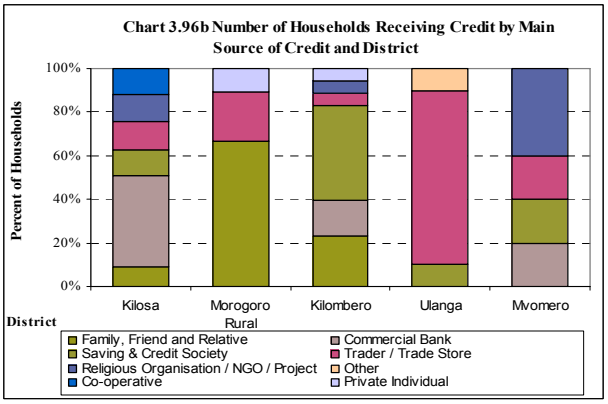
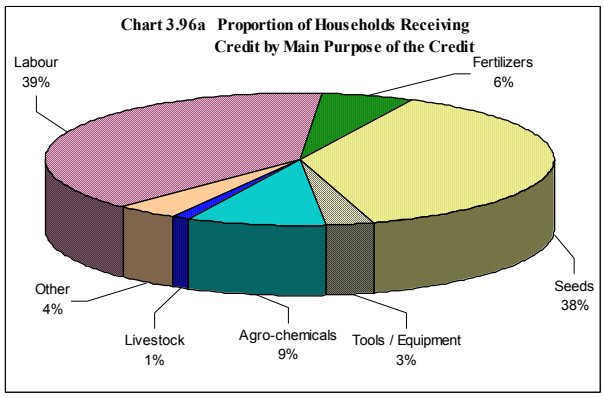


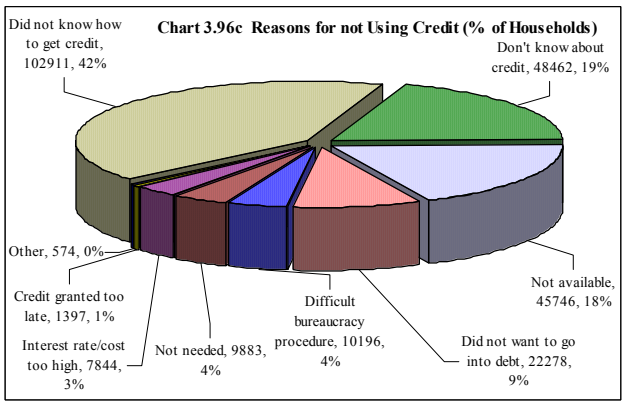
Chart 3.96b Number of Households Receiving Credit by Main Source of Credit and District



3.8.1.2 Uses of agricultural credits

A big proportion (39%) of the agricultural credits provided to agricultural households in the region were used on hiring labour, (38%) were used on buying seeds, agro-chemicals (9%), fertilizers (6%). The proportion of credits intended to be used for tools, equipment, livestock and other were very low (Chart 3.96a).



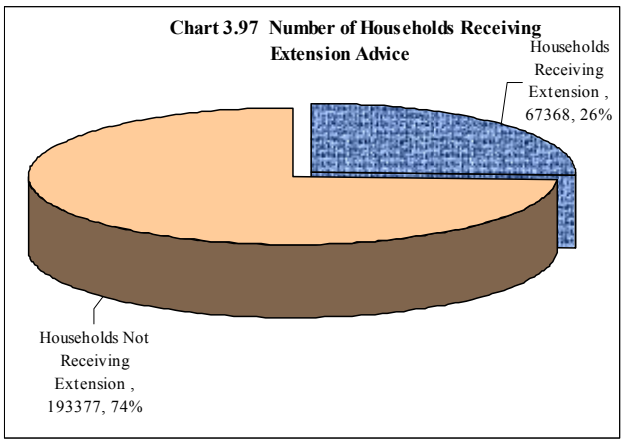


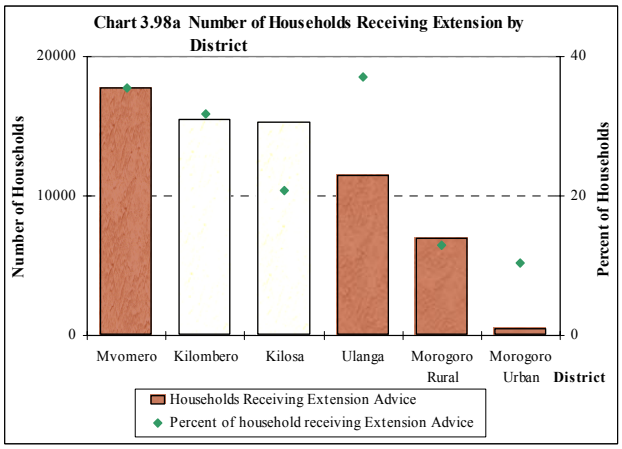
3.8.1.3 Reasons for not using agricultural credits

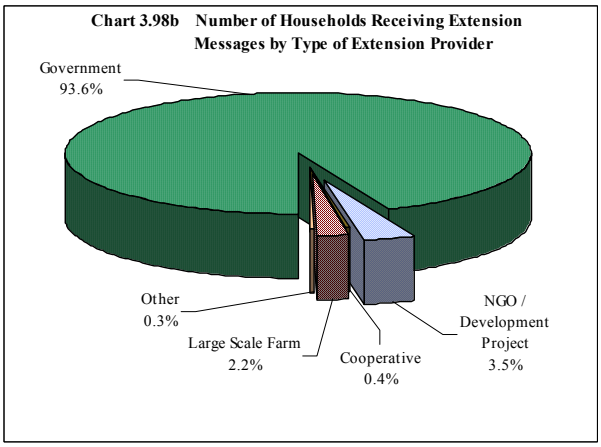
The main reason for not using agricultural credit as a source of finance was little credit awareness accounting to 42 percent of the agricultural households this was followed by households reporting the un-aware of the credit (19%). The proportions of households whose reasons for not getting agricultural credits were "unavailability" and "not wanting to go into debt" were 18 and 9 percents respectively. The rest of the reasons were collectively mentioned by less than 5 percent of the households (Chart 3.96c).

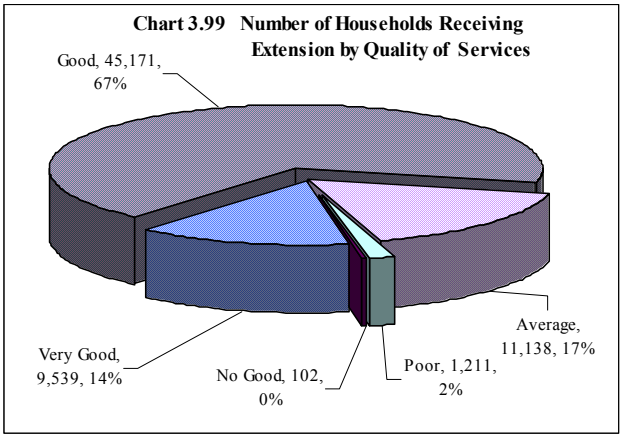
3.8.2 Crop Extension

The number of Agricultural households that received crop extension was estimated at 67,368 or 26 percent of total crop growing households in the region (Chart 3.97). Some districts have more access to extension services than others. Ulanga had a relatively high proportion of households (37%) that received crop extension messages in the district followed by Mvomero (35%), Kilombero (32%), Kilosa (21%), Morogoro Rural (13%) and Morogoro Urban (10%) (Chart 3.98a and Map 3.36).









3.8.2.1 Sources of crop extension messages

Of the households receiving extension advice the Government provided the greatest proportion (92.9%, 61,803 households), NGOs provide 3.5 percent, large scale farms 2.2 percent and the remaining providers less than 0.8 percent. However, district differences exist with the proportion of the households receiving advice from government services ranging between 86% and 97% in Morogoro Rural and Ulanga respectively.

3.8.2.2 Quality of Extension

The result on the assessment of extension quality indicates that 67 percent of the households receiving extension ranked the service as being good followed by average (17 %), very good (14%), poor (2%) and no good (0.2%)(Chart 3.99).

However, care should be exercised when making decisions on quality of extension and also other variables in the extension report as all the enumerators were extension agents and some degree of bias is expected.

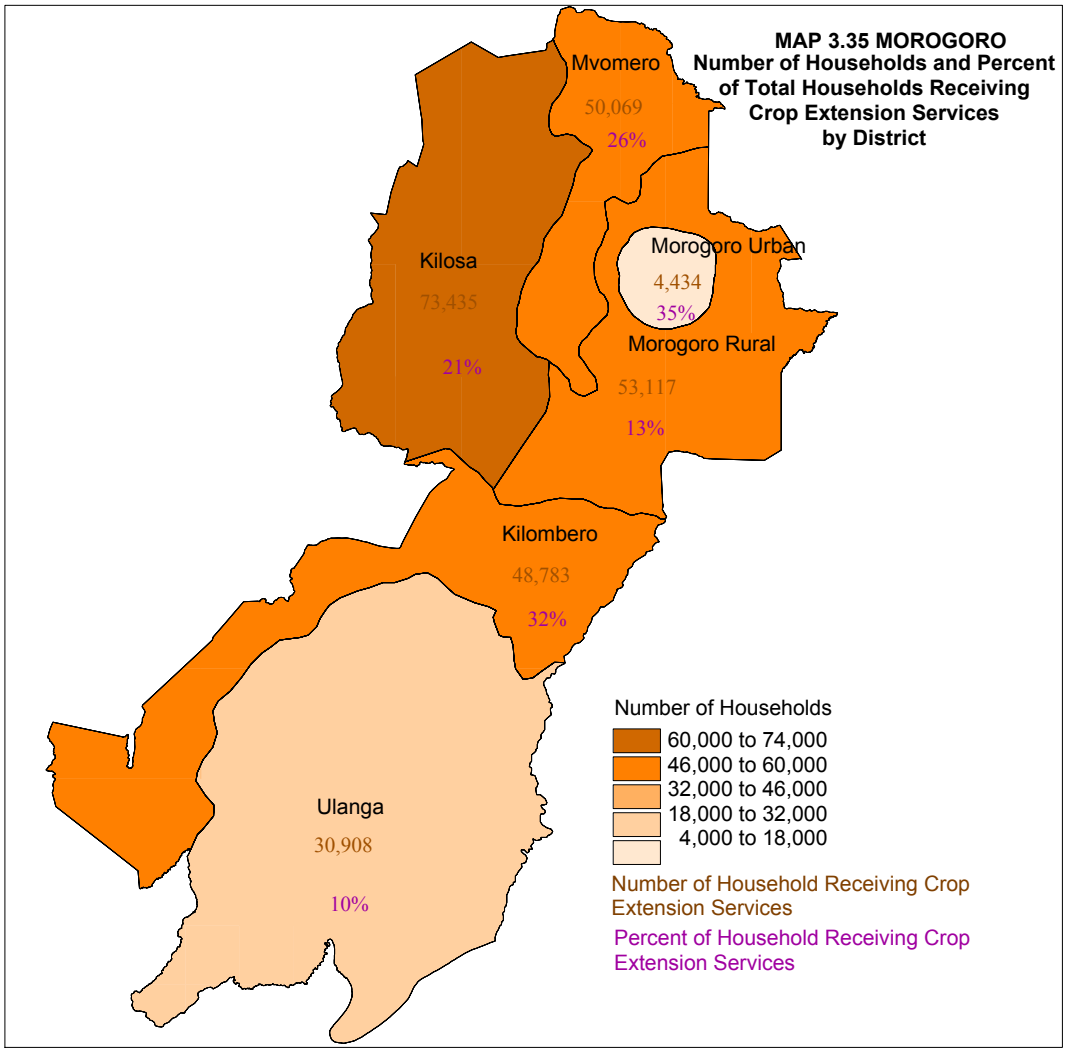
3.9 Access to Inputs

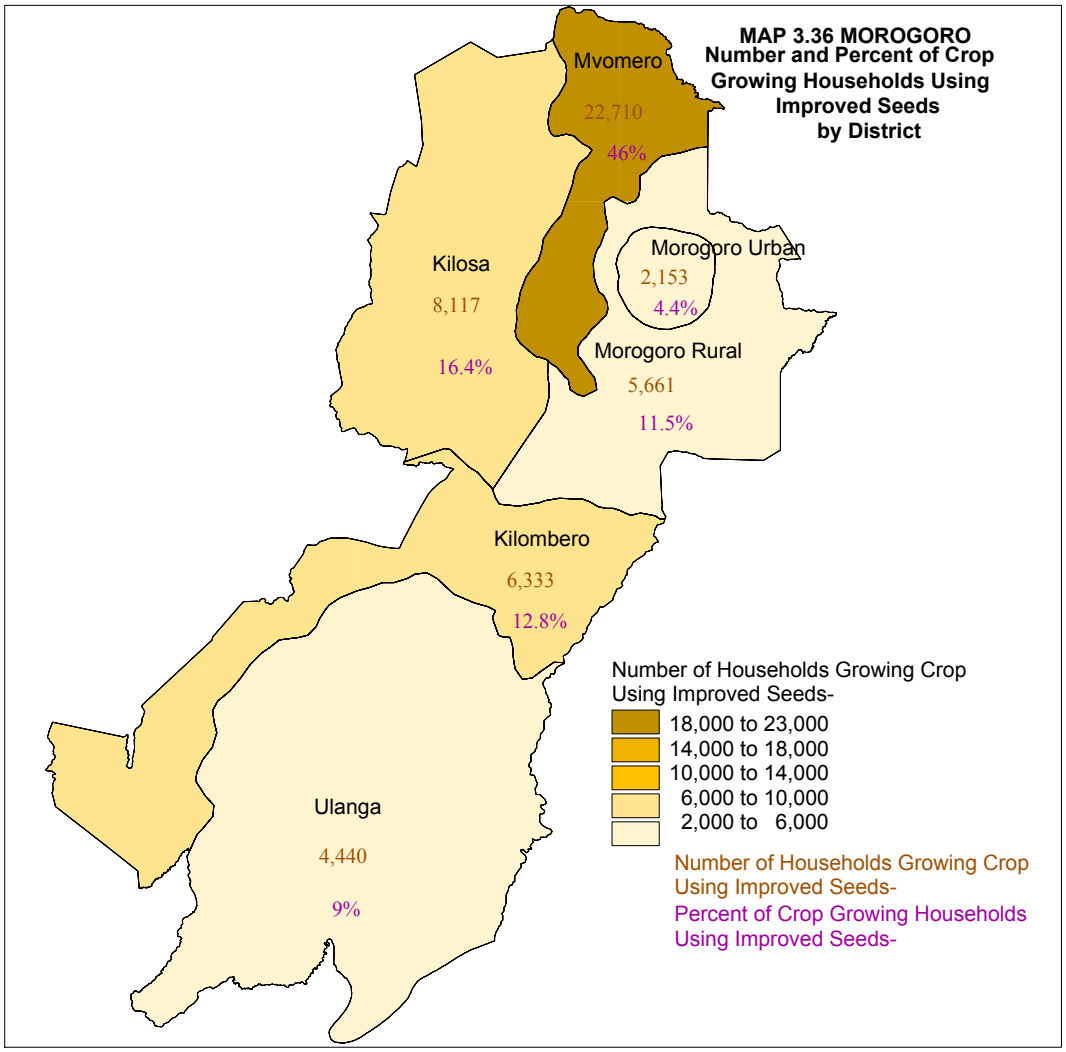
Access to inputs in this section refers to all crop growing households in Tanzania regardless of whether the household grew annual or permanent crops. In previous sections the reference was on annual crops only. Because of this, the figures presented in this section may be different from the previous section on inputs (Section 2.6). Data on source of inputs is only found in this section and it applies to both annual and permanent crops.

Table 2.13 Use of Inputs

Type of Input	Households With Access to Input		Without Access to Input	
	Number	%	Number	%
Farm yard manure	14937	6	246809	94
Improved seeds	38684	15	221916	85
Pestcides/Fungicide	20823	8	239784	92
Inorganic fertiliser	17374	7	243137	93
Compost	7421	3	253448	97
Herbicide	20987	8	239278	92

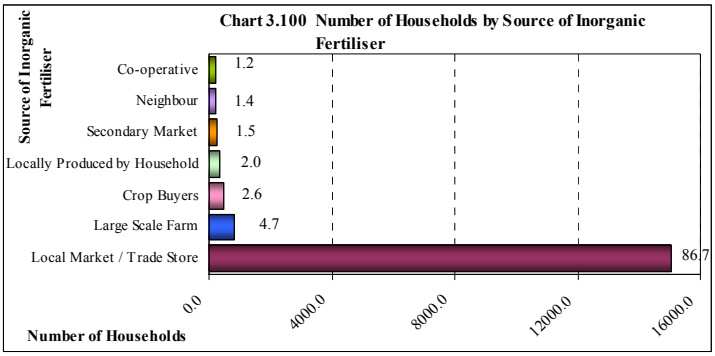
A small number of households use inputs and the most applied input is improved seeds which were used by 38,684 households (15% of the total number of crop growing household). This is followed by household using pestcides/fungicide (8%), herbicides (8%), inorganic fertilizers (7%), farm yard manure (6%) and compost (3%) (Table 2.13).


MAP 3.35 MOROGORO
Number of Households and Percent of Total Households Receiving Crop Extension Services by District
Mvomero
50,069
26%
Kilosa
73,435
21%
Morogoro Urban
4,434
35%
Morogoro Rural
53,117
13%
Kilombero
48,783
32%
Ulanga
30,908
10%
Number of Households
60,000 to 74,000
46,000 to 60,000
32,000 to 46,000
18,000 to 32,000
4,000 to 18,000
Number of Household Receiving Crop Extension Services
Percent of Household Receiving Crop Extension Services

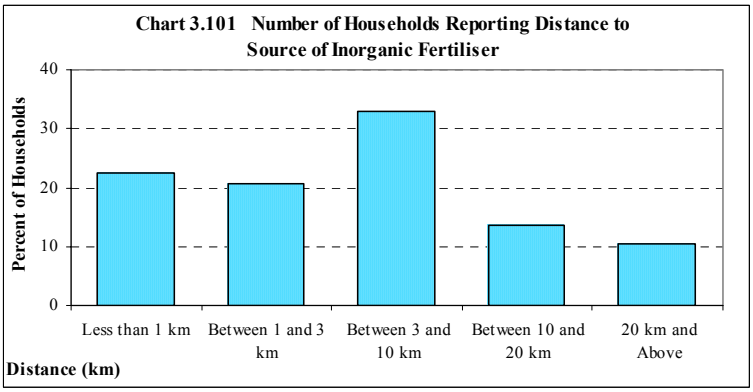

MAP 3.36 MOROGORO
Number and Percent of Crop Growing Households Using Improved Seeds by District
Mvomero
22,710
46%
Kilosa
8,117
16.4%
Morogoro Urban
2,153
4.4%
Morogoro Rural
5,661
11.5%
Kilombero
6,333
12.8%
Ulanga
4,440
9%
Number of Households Growing Crop Using Improved Seeds-
18,000 to 23,000
14,000 to 18,000
10,000 to 14,000
6,000 to 10,000
2,000 to 6,000
Number of Households Growing Crop Using Improved Seeds-
Percent of Crop Growing Households Using Improved Seeds-

3.9.2 Inorganic Fertilisers

Smallholders that use inorganic fertiliser in Morogoro mostly purchase it from the local market/trade store (86.7% of the total number of inorganic fertiliser users). The remaining sources of inorganic fertilisers are minor (Chart 3.100).

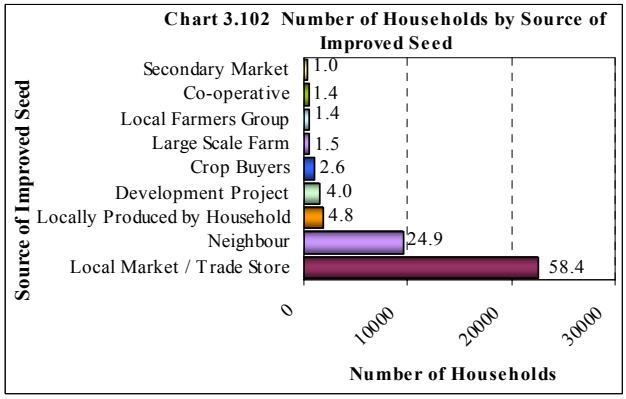


Access to inorganic fertiliser is mainly less than 10 km from the household with most households residing between 3 and 10 km from the source (33%), followed byless than 1 km (22%) and between 1 and 3 km (21%) (Chart 3.101). Due to the very small number of households using inorganic fertilisers coupled with the small number of households responding to "non available" (18%) as the reason for not using, it may be assumed that access to inorganic fertiliser is not the main reason for not using. Other reasons such as cost are more important with 61 percent of households responding to cost factors as the main reason for not using. In other words, it is assumed that if the cost was affordable the demand would be higher and access to inorganic fertiliser would be made more available. More smallholders use inorganic fertilisers in Mvomero than in other districts in Morogoro region (44% of households using inorganic fertilisers), followed by Kilosa (25%) and Kilombero (24%). The other districts use very little inorganic fertiliser.

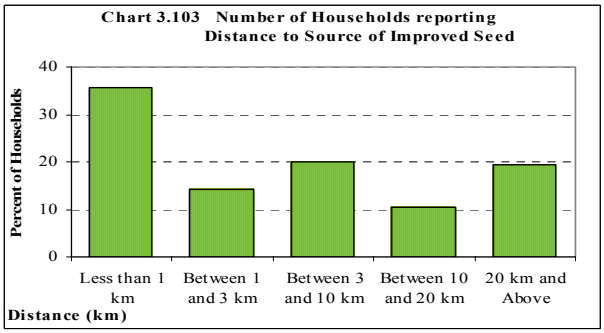


3.9.3 Improved Seeds

The percent of households that use improved seeds was 15 percent of the total number of crop growing households. Most of the improved seeds are from the local market/trade store (58.4%). Other less important sources of improved seed are from neighbours (24.9%), locally produced by household (4.8%) and development projects (4.0%). Only 1.5 percent of households using improved seed obtain them from large scale farms (Chart 3.102).



Access to improved seed is better than access to chemical inputs with 36 percent of households obtaining the input within 1 km of the household (Chart 3.103). This is in line with the higher use of improved seed compared to other chemical inputs, which further supports the concept

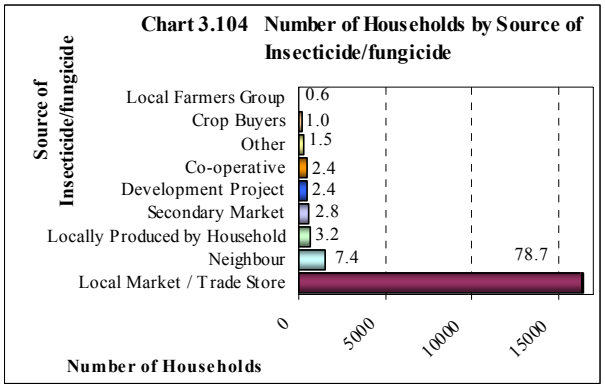


that it is not the availability that is the main issue in the use of inputs but rather other factors such as cost.

The districts that mostly use improved seeds are Mvomero with 44 percent of the total number of households using improved seeds, followed by Kilosa with 19 percent and Kilombero with 14 percent, Morogoro Rural 10 percent, Ulanga 9 percent and Morogoro Urban 4 percent.

3.9.4 Insecticides and Fungicide

Most smallholder households using insecticides and fungicides mainly purchase them from local markets/trade stores (78.7% of the total number of fungicide users), neighbours 7.4 percent, locally produced by household 3.2 percent. Other sources of insecticides/ fungicides are of minor importance (Chart 3.104).



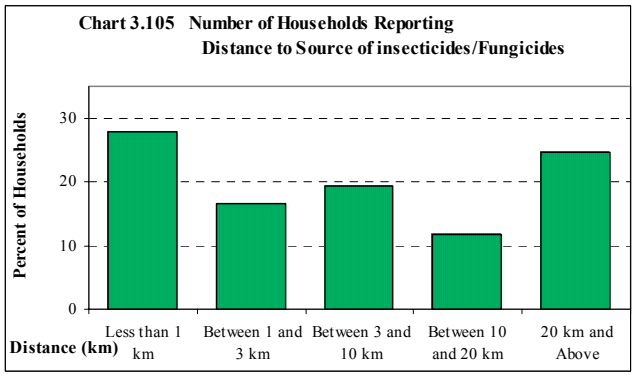
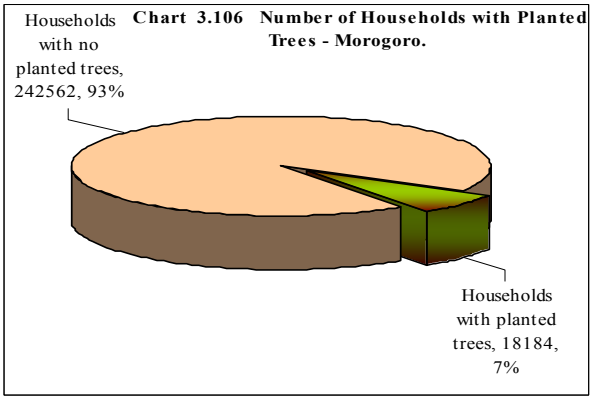


Chart 3.105 shows that there is no distinct pattern for the number of households with varying distances from the source of insecticide/fungicide.

The small number of households using insecticides/fungicides coupled with the 12 percent of households responding to "not available" as the reason for not using it may be assumed that access is not the main reason for not using. Other reasons such as cost are more important with 62 percent of households responding to cost factors as the main reason for not using. In other words, it is assumed that if the cost was affordable, the demand would be higher and access to insecticides/fungicides would be made more available. Fungicides are mostly used in Mvomero district with 51 percent of the total number of households using fungicide, followed by Kilosa (21%) and Ulanga (14%). Insecticides/fungicides use in the other districts is of minor importance.

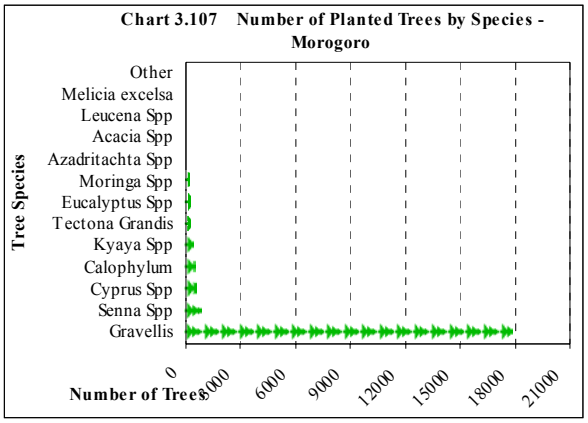
3.10 Tree Planting

The number of households involved in tree farming was 18,184 representing 7 percent of the total number of agriculture households (Chart 3.106).

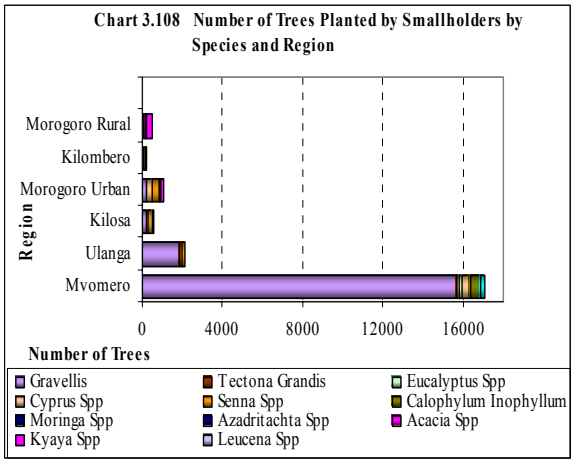


The number of trees planted by smallholders on their allotted land was 21,698 trees. The average number of trees planted per household that plants trees on their land was one tree.

The main species planted by smallholders is Gravellia spp (17,924 trees, 83%), followed by Senna spp. (904, 4%), then Cyprus spp. (626, 3%) and Canophylum Inophylum (510 trees, 2%). The remaining trees species are planted in

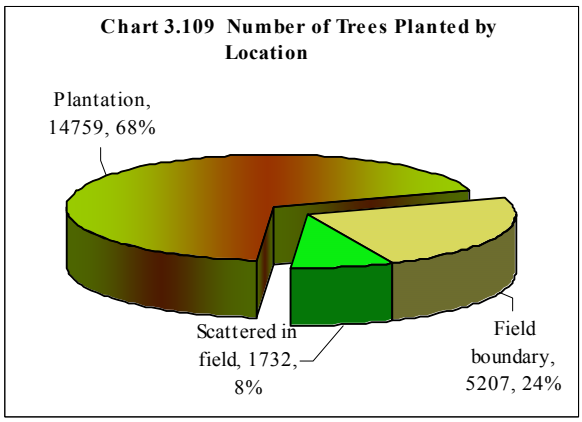


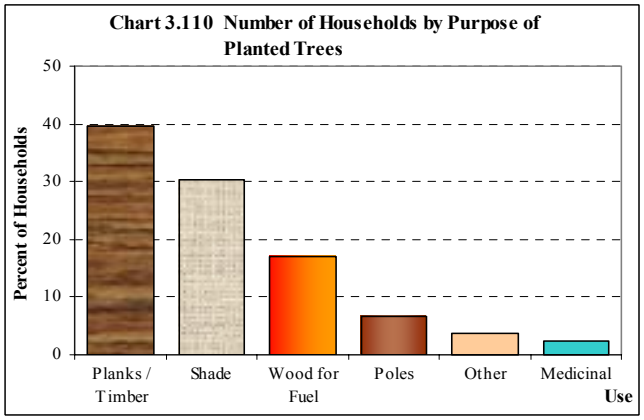
comparatively small numbers (Chart107.). Mvomero has the largest number of smallholders with planted trees than any other district (79%) and is dominated by Gravellia species. This is followed by Ulanga (10%) which is dominated by Gravellia, then Morogoro Urban (5%) and Kilosa (3%) which is mainly planted with Senna spp. (Chart 3.108 and Map 3.39).



Smallholders mostly plant trees on the boundary of fields. The proportion of households that plant on field boundaries is 74 percent, followed by scattered around fields (19%) and then trees planted in a plantation or coppice (7%) (Chart 3.109)

The main purpose of planting trees is to obtain planks/timber (40%). This is followed by shade (30%), wood for fuel (17%) and poles (7%) (Chart 3.110)





3.3.8 Investment in Irrigation and Erosion Control Facilities

Erosion control and water harvesting facilities are grouped together as they normally have dual purposes of reducing erosion and increasing the amount of water available for crop production.

The number of agricultural households that reported the presence of soil erosion and water harvesting facilities in their farms was 8,894. This number represented (3%) of total number of agricultural households in the region. The proportion of farmers with soil erosion control and water harvesting facilities was highest in Mvomero district (28%) followed by Kilosa

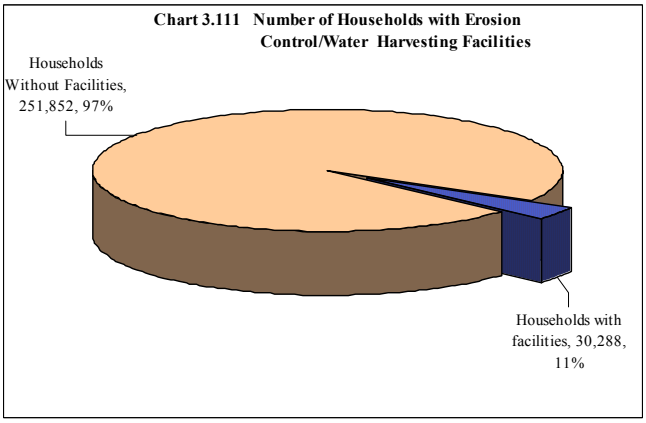


Chart 3.111 Number of Households with Erosion Control/Water Harvesting Facilities

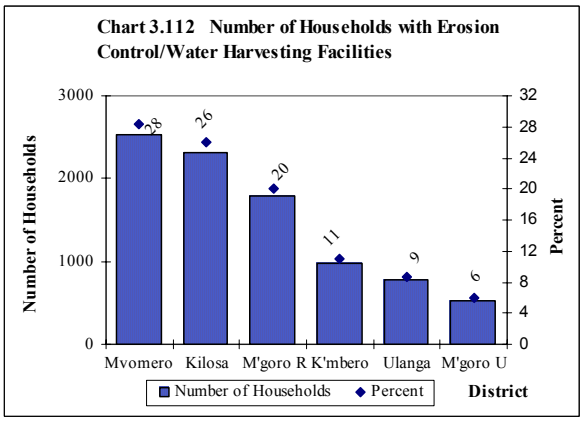


Chart 3.112 Number of Households with Erosion Control/Water Harvesting Facilities

(26%), Morogoro Rural (20%), Kilombero (11%), Ulanga (9%) and Morogoro Urban (6%) (Chart 3.112) The erosion control bunds for soil erosion control accounted for 58 percent of the total number of structures built, this was followed by water harvesting bunds (17%), terraces (15%), tree belts (6%), vetiver grass (2%), drainage ditches (1%), dam (0.4%) and gabions/sandbags (0.3%) (Map 3.40)

Erosion control by erosion control bunds, water harvesting bunds and terraces together had 108,277 structures. This represented about 90 percent of the total structures in the region, and the remaining 10 percentages were shared among the rest of the erosion control methods mentioned above.

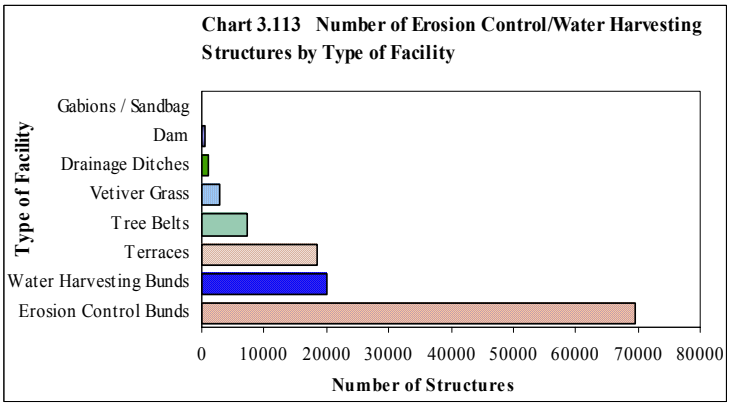


Chart 3.113 Number of Erosion Control/Water Harvesting Structures by Type of Facility

District-wise, Mvomero and Kilosa districts together were reported to have 4,833 control erosion structures and this is about 2% of the total structures.

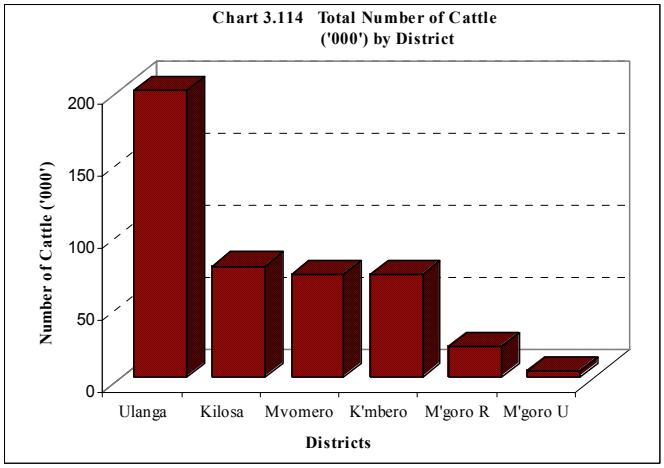
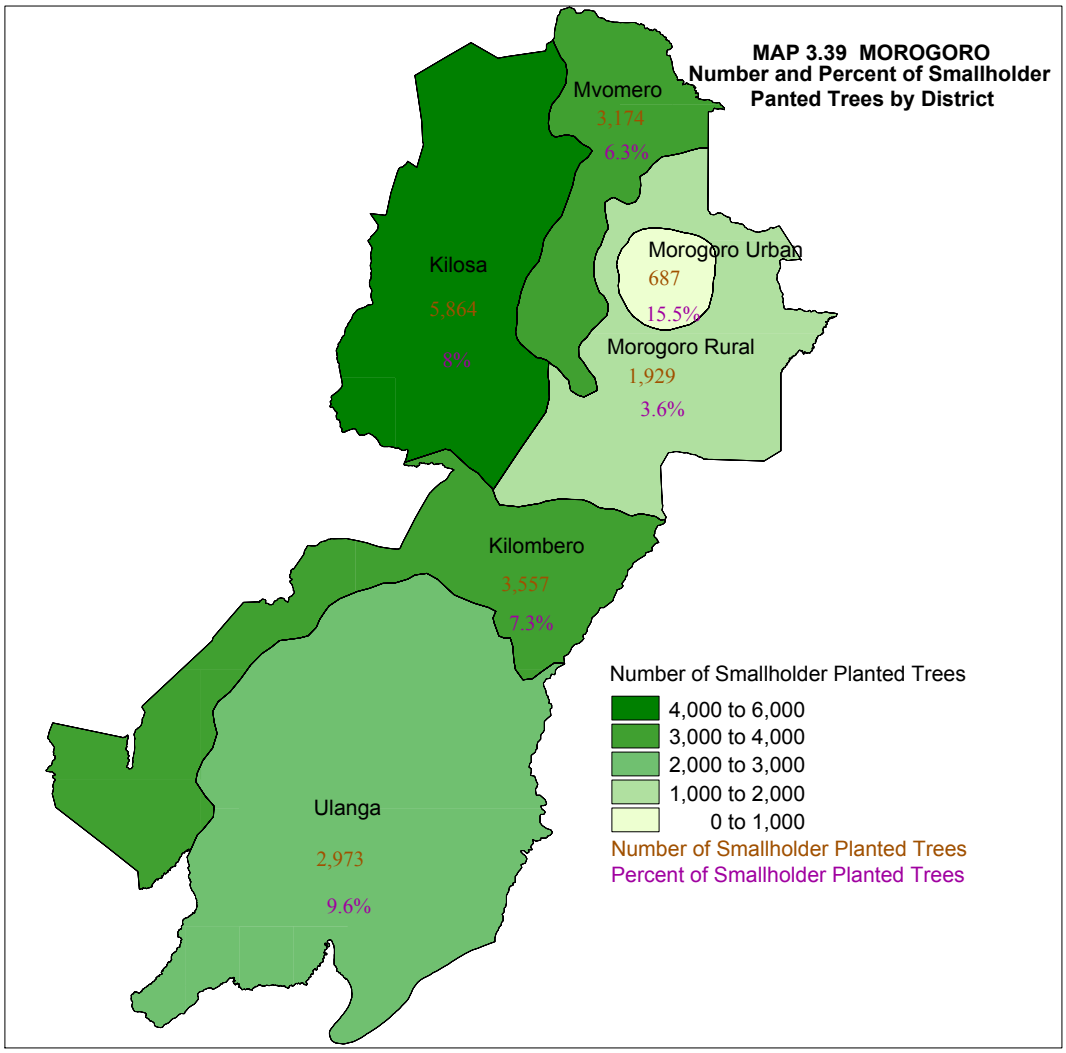


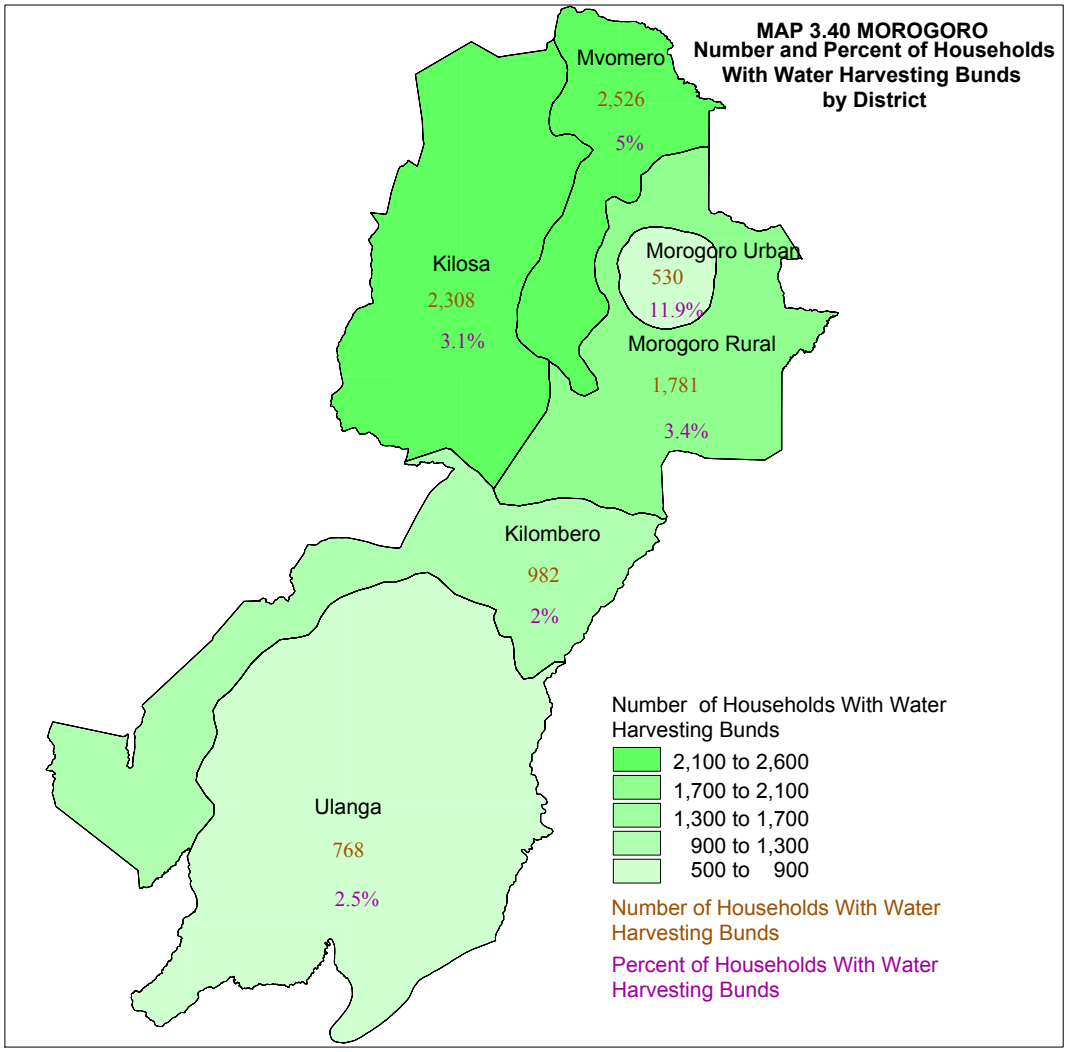
Chart 3.114 Total Number of Cattle ('000') by District

3.12 LIVESTOCK RESULTS

3.12.1 Cattle Production

The total number of cattle in the region was 461,063. Cattle are the dominant livestock type in the region followed by goats, sheep and pigs. The region had 2.7 percent of the total cattle population on Tanzania Mainland.


MAP 3.39 MOROGORO
Number and Percent of Smallholder Panted Trees by District
Mvomero
3,174
6.3%
Kilosa
5,864
8%
Morogoro Urban
687
15.5%
Morogoro Rural
1,929
3.6%
Kilombero
3,557
7.3%
Ulanga
2,973
9.6%
Number of Smallholder Planted Trees
4,000 to 6,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Number of Smallholder Planted Trees
Percent of Smallholder Planted Trees

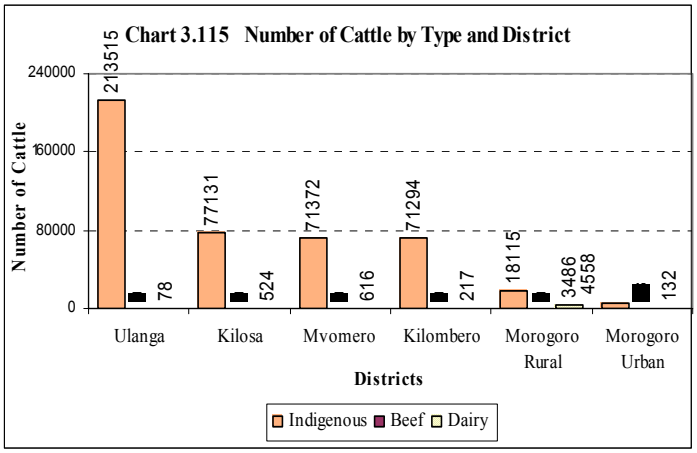

MAP 3.40 MOROGORO
Number and Percent of Households With Water Harvesting Bunds by District
Mvomero
2,526
5%
Kilosa
2,308
3.1%
Morogoro Urban
530
11.9%
Morogoro Rural
1,781
3.4%
Kilombero
982
2%
Ulanga
768
2.5%
Number of Households With Water Harvesting Bunds
2,100 to 2,600
1,700 to 2,100
1,300 to 1,700
900 to 1,300
500 to 900
Number of Households With Water Harvesting Bunds
Percent of Households With Water Harvesting Bunds

3.12.1.1 Cattle Population

The number of indigenous cattle in Morogoro region was 455,985 (98.9 % of the total number of cattle in the region), 5052 cattle (1.1%) were dairy breeds and 26 cattle (0.006%) were beef breeds.

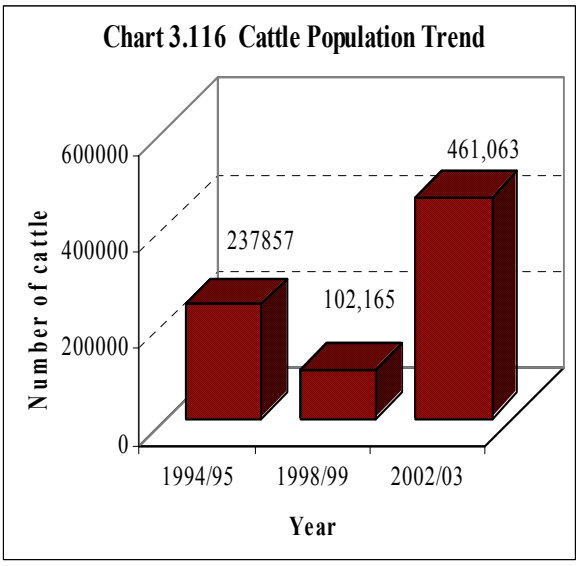
The census results show that 10,037 agricultural households in the region (88% of total agricultural households) kept 0.46 million cattle. This was equivalent to an average of 46 heads of cattle per cattle-keeping-household. The district with the largest number of cattle was Ulanga which had about 213,593 cattle (46.3% of the total cattle in the region). This was followed by Kilosa (77,655 cattle, 16.8%), Mvomero (71,988 cattle, 15.6%), Kilombero (71,511 cattle, 15.5%), Morogoro Rural (21,601 cattle, 4.7%) and Morogoro Urban (4,716 cattle, 1.0%). (Chart 3.114) (Map 3.41). However Mvomero district had the highest density (29 head per km^2) (Map 3.42)

Although Ulanga district had the largest number of cattle in the region, most of it was indigenous. The number of dairy cattle was very small and the number of beef cattle was zero. Morogoro Rural district had the largest number of diary cattle in the region. In general, the number of beef cattle in the all the districts was zero except in Morogoro Urban with very few beef cattle (Chart 3.115).



3.12.1.2 Herd Size

Thirty five percent of the cattle-rearing households had herds of size 1-5 cattle with an average of three cattle per household. Herd sizes of 6-30 accounted for about 48 percent of all cattle in the region. Only 17 percent of the cattle rearing households had herd sizes of 31- 100 cattle. About 83 percent of total cattle rearing households had herds of size 1-30 cattle and owns 14 percent of total cattle in the region, resulting in an average of 9 cattle per cattle rearing household. There were about 609 households with a herd size of more than 151 cattle each (277,069 cattle in total) resulting in an average of 455 cattle per household.

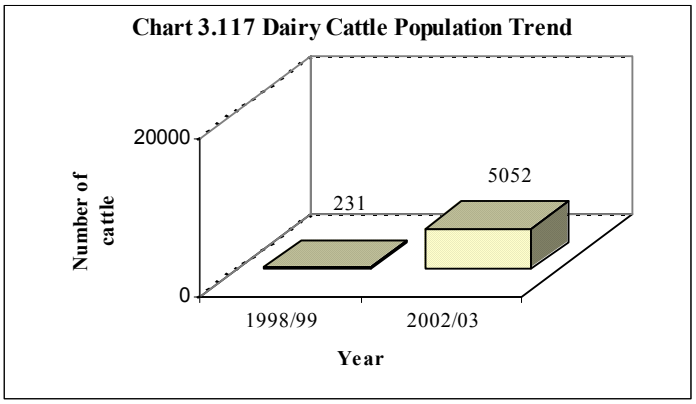


3.12.1.3 Cattle Population Trend

Cattle population in Morogoro decreased during the period of four years from 237,857 in 1995 to 102,165 cattle in 1998/99. This trend depicts an annual negative growth rate of -15.55 percent (Chart 3.116).

However, there was a very sharp increase in number of cattle for the period of four years from 1998/99 to 2002/03 at the rate of 45.75 percent whereby the number increased from 102,165 to 461,063. However, the number of cattle is estimated to have increased from 237,857 in 1994/95 to 461,063 in 2002/03 at the rate of 7.63 percent.

3.12.1.4 Improved Cattle Breeds

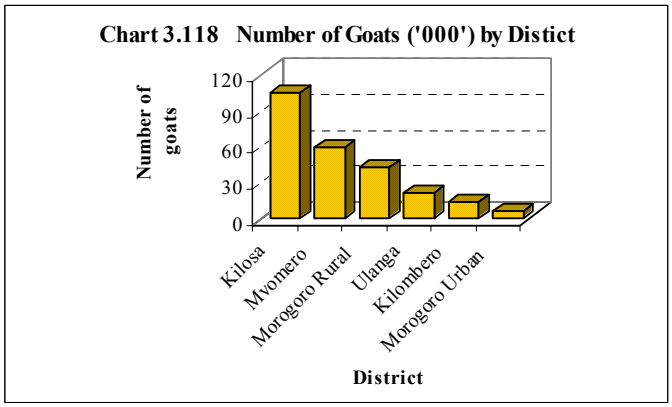


The total number of improved cattle in Morogoro region was 5,078 (5,052 dairy and 26 improved beef). The diary cattle constituted 1.1 percent of the total cattle and 99.5 percent of improved cattle in the region. The number of beef cattle in the region was insignificant constituting only 0.5 percent of the total number of the improved cattle and 0.005 percent of the total cattle. The number of improved cattle increased from 231 in 1998/99 to 5,052 in 2002/03 at an annual growth rate of 116 percent. The data for improved cattle for the year 1994/95 was not collected Chart 117).

3.12.2. Goat Production

Goat rearing was the second most important livestock keeping activity in the region followed by sheep and pig rearing. In terms of total number of goats on the Mainland, Morogoro region ranked 17 out of the 21 regions with 2.1 percent of the total goats on the Mainland.

3.12.2.1 Goat Population



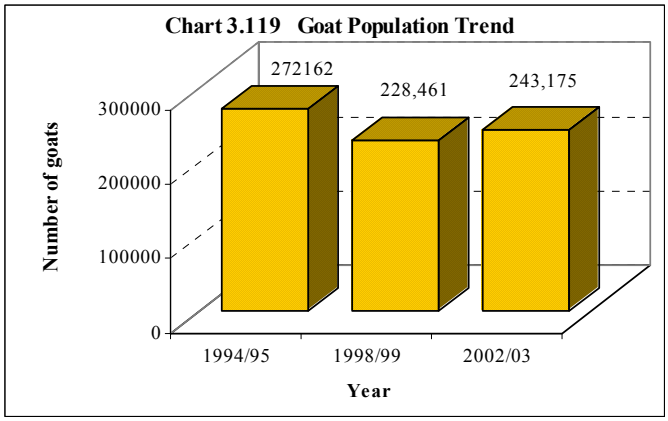
The number of goat-rearing-households in Morogoro region was 27,920 (4.3% of all agricultural households in the region) with a total of 243,175 goats giving an average of 9 head of goats per goat-rearing-household. Kilosa had the largest number of goats (104,202 goats, 43% of all goats in the region), followed by Mvomero (58,073 goats, 24%), Morogoro Rural (41,665 goats, 17%), Ulanga (21,181 goats, 9%) and Kilombero (12,554 goats, 5%). Morogoro Urban district had the least number of goats (5,501 goats, 2%) (Chart 3.118) (Map 3.43). However Mvomero had the highest density (24 head per km^2)

3.12.2.2 Goat Herd Size

Thirty five percent of the goat-rearing households had herd size of 1-4 goats with an average of 3 goats per goat rearing household. Eighty two percent of total goat-rearing households had herd size of 1-14 goats and owned 52 percent of the total goats in the region resulting in an average of 6 goats per goat-rearing households. The region had 101 households (0.4%) with herd sizes of 40 or more goats each (9,183 goats in total), resulting in an average of 91 goats per household.

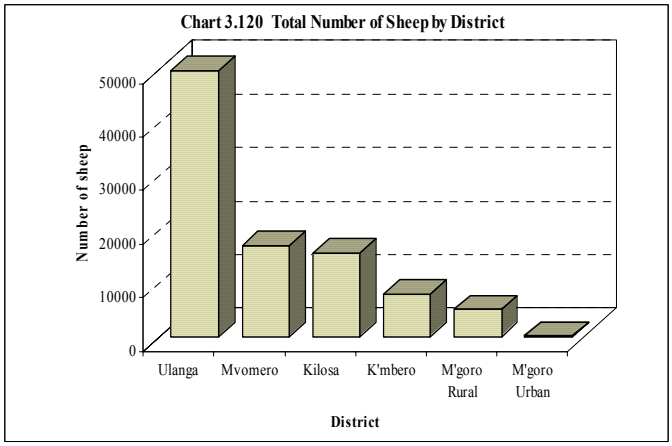
3.12.2.3 Goat Breeds

Goat husbandry in the region was dominated by the indigenous breeds that constituted 97.5 percent of the total goats in Morogoro region. Improved goats for meat and diary goats constituted 0.4 and 2.1 percent of total goats respectively.



3.12.2.4 Goat Population Trend

The overall annual growth rate of goat population from 1994/95 to 2002/03 was -1.40 percent. This negative trend implies eight years of population decrease from 272,162 in 1994/95 to 243,175 in 2002/03. The number of goats decreased from 272,162 in 1994/95 at an estimated annual rate of -4.25 percent to 228,461 in 1998/99. From 1998/99 to 202/03, the goat population increased at an annual rate of 1.57 percent (Chart 119).

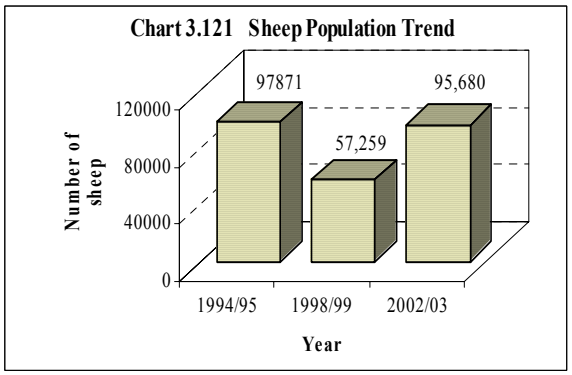


3.12.3. Sheep Production

Sheep rearing was the third important livestock keeping activity in Morogoro region after cattle and goats. The region ranked 11 out of 21 Mainland regions and had 2.4 percent of all sheep on Tanzania Mainland.

3.12.3.1 Sheep Population

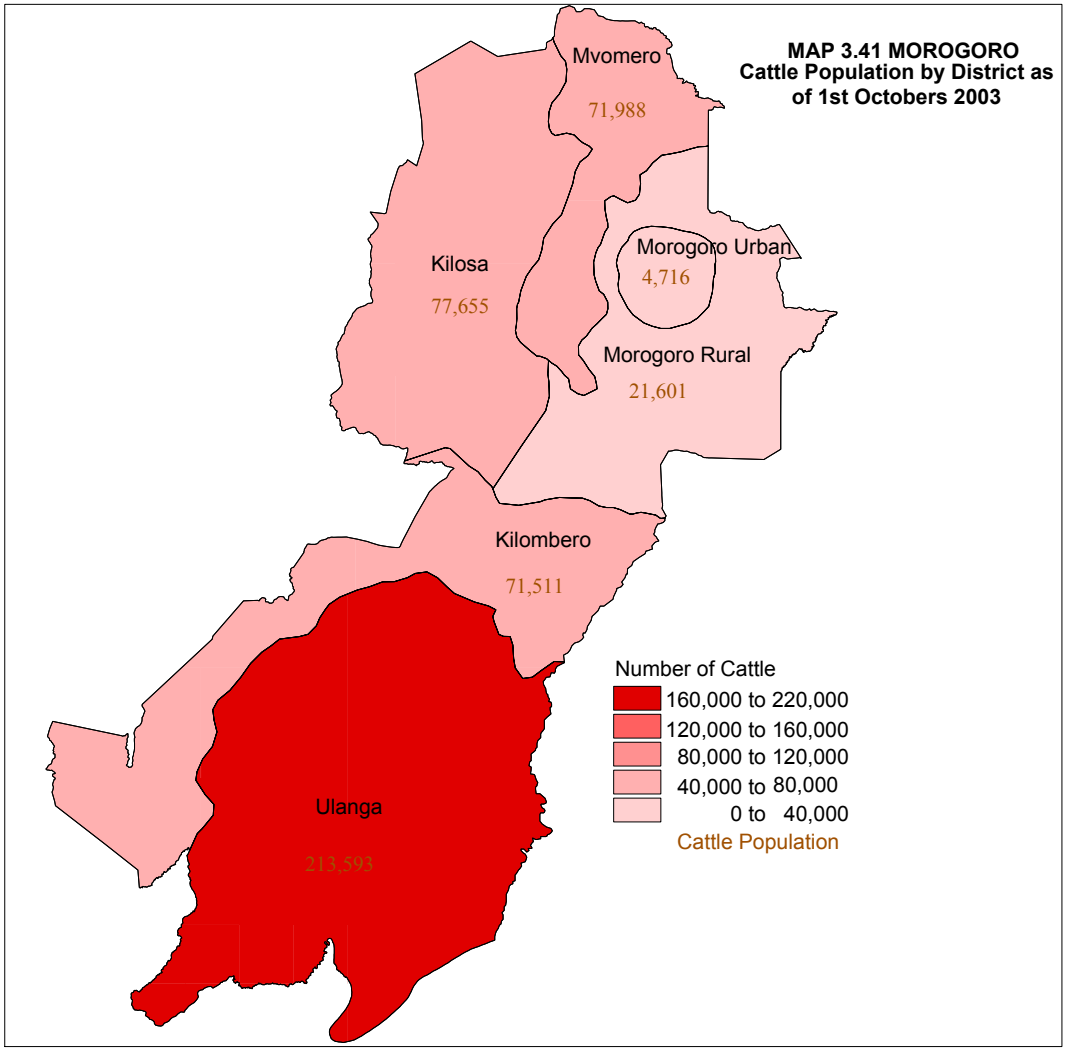
The number of sheep-rearing households was 7,442 (1.2% of all agricultural households in Morogoro region) rearing 95,680 sheep, giving an average of 13 heads of sheep per sheep-rearing household. The district with the largest number of sheep was Ulanga with 49,823 sheep (52% of total sheep in Morogoro region) followed by Mvomero (17,059 sheep, 18%), Kilosa (15,607 sheep, 16%), Kilombero (7,956 sheep, 8%) and Morogoro Rural (5,096 sheep, 5%). Morogoro Urban district had the least number of sheep (138 sheep, 0.1%) (Chart 3.120 and Map 3.45). Mvomero had the highest density (7 head per km^2).

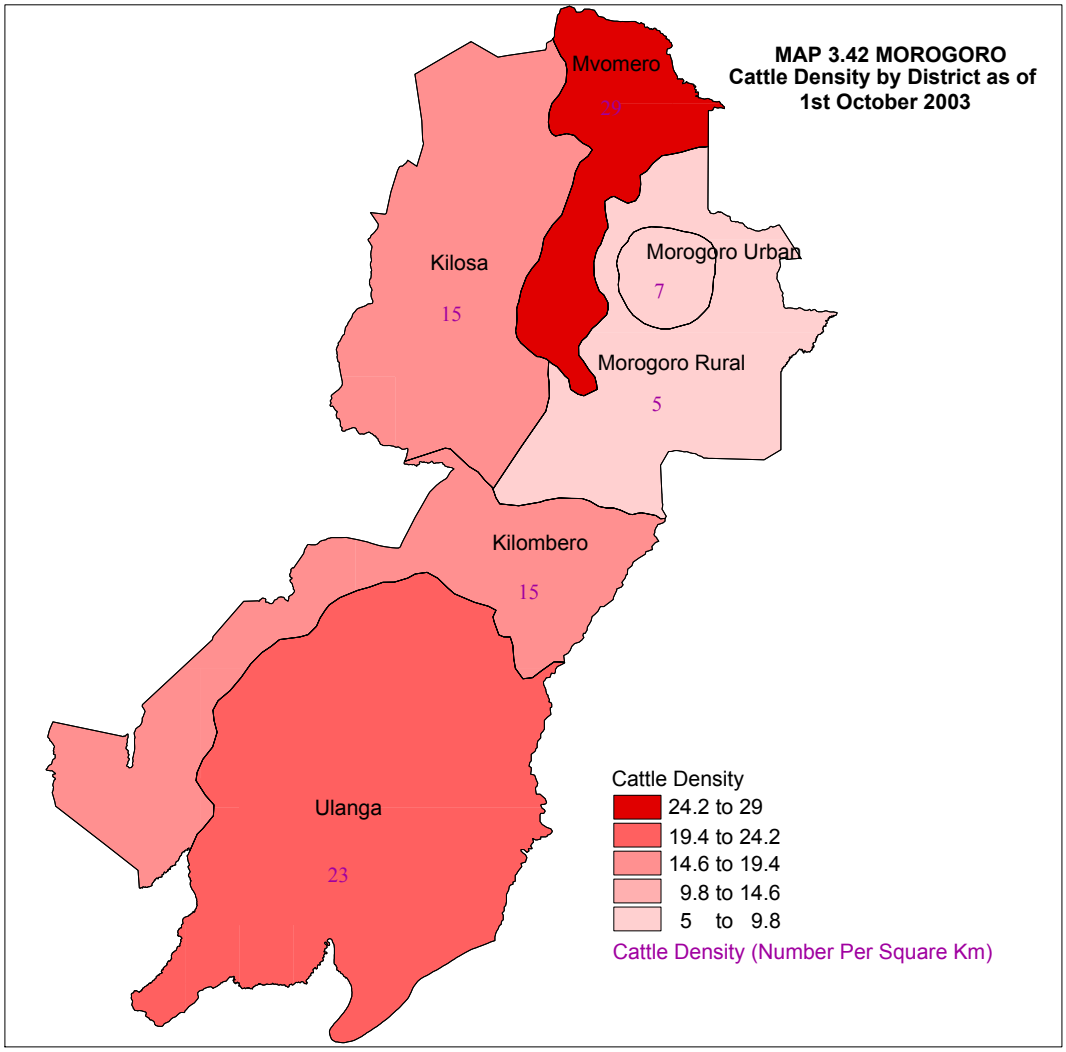


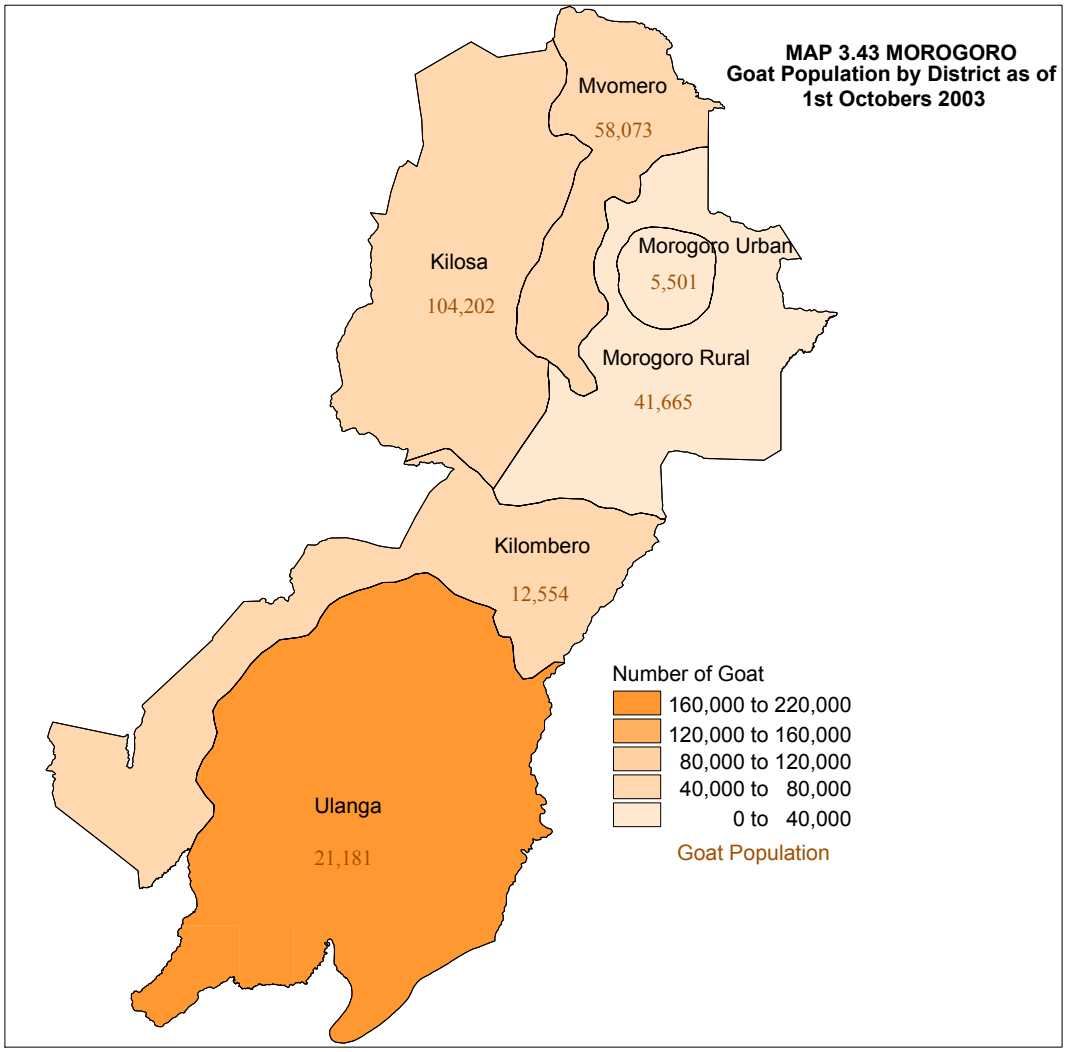
Sheep rearing was dominated by indigenous breeds that constituted 98 percent of all sheep kept in the region. Only 2 percent of the total sheep in the region were improved breeds.

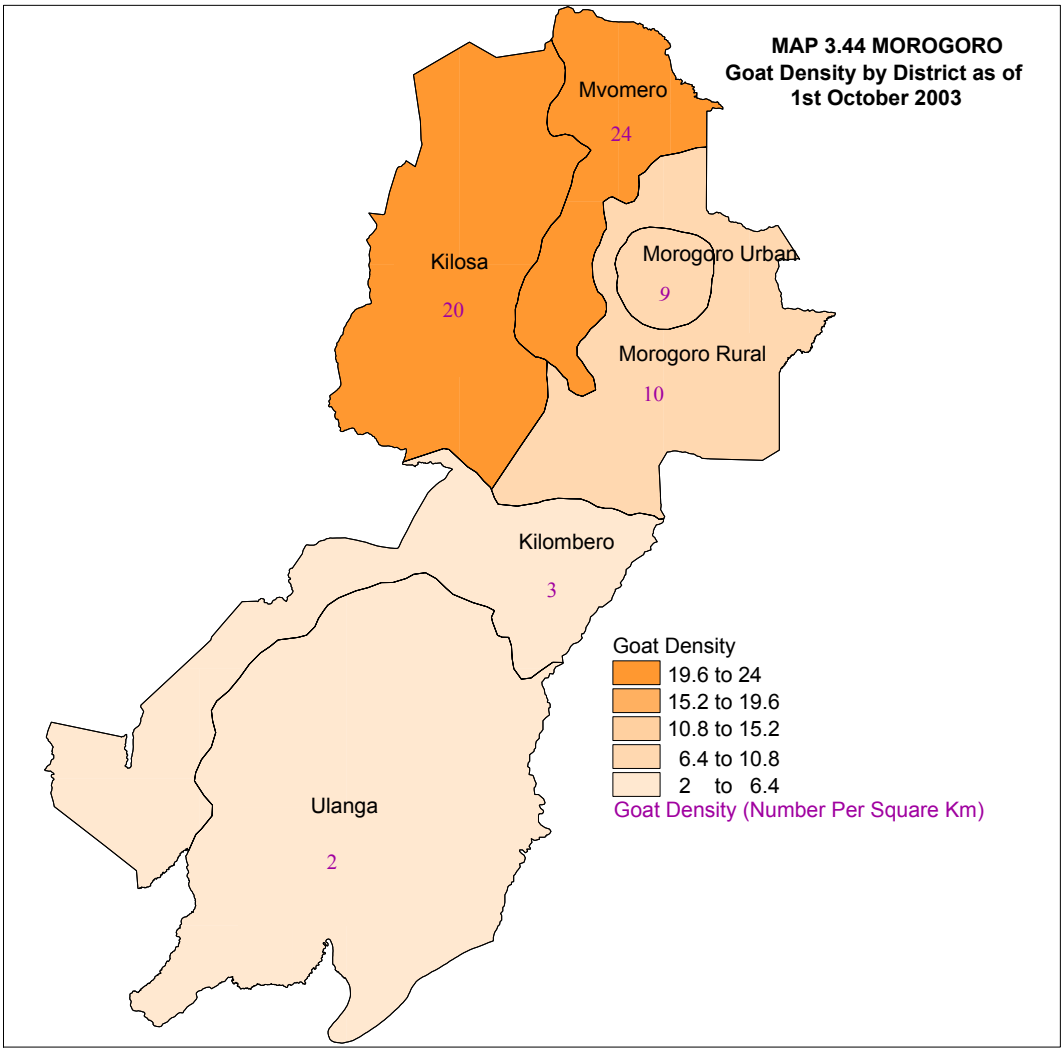
3.12.3.2 Sheep Population Trend

The overall annual growth rate of the sheep population for the eight year period from 1994/95 to 2002/03 is estimated at -0.28 percent. The population decreased at an annual rate of -12.54 percent from 97,871 in 1994/95 to 57,259 in 1998/99. From 1998/99 to 2002/03, sheep population increased at an annual rate of 13.70 percent (Chart 3.121).

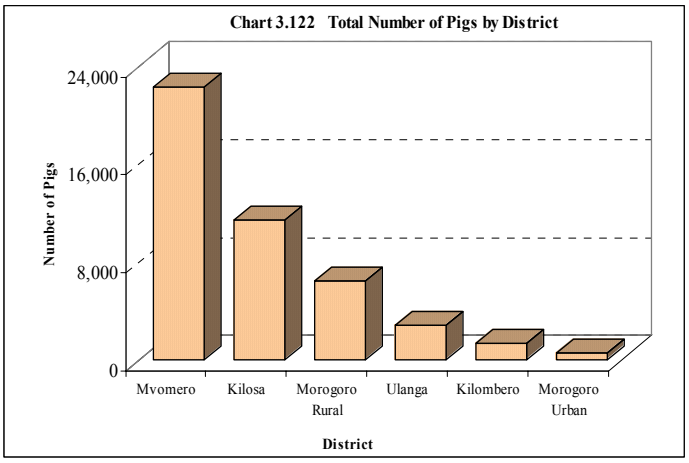

MAP 3.41 MOROGORO
Cattle Population by District as of 1st Octobers 2003
Mvomero
71,988
Kilosa
77,655
Morogoro Urban
4,716
Morogoro Rural
21,601
Kilombero
71,511
Ulanga
213,593
Number of Cattle
160,000 to 220,000
120,000 to 160,000
80,000 to 120,000
40,000 to 80,000
0 to 40,000
Cattle Population


MAP 3.42 MOROGORO
Cattle Density by District as of 1st October 2003
Mvomero
29
Kilosa
15
Morogoro Urban
7
Morogoro Rural
5
Kilombero
15
Ulanga
23
Cattle Density
24.2 to 29
19.4 to 24.2
14.6 to 19.4
9.8 to 14.6
5 to 9.8
Cattle Density (Number Per Square Km)


MAP 3.43 MOROGORO
Goat Population by District as of
1st Octobers 2003
Mvomero
58,073
Kilosa
104,202
Morogoro Urban
5,501
Morogoro Rural
41,665
Kilombero
12,554
Ulanga
21,181
Number of Goat
160,000 to 220,000
120,000 to 160,000
80,000 to 120,000
40,000 to 80,000
0 to 40,000
Goat Population

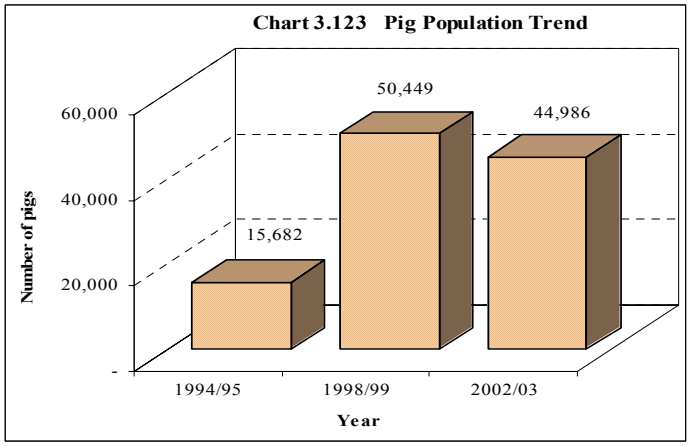

MAP 3.44 MOROGORO
Goat Density by District as of
1st October 2003
Mvomero
24
Kilosa
20
Morogoro Urban
9
Morogoro Rural
10
Kilombero
3
Ulanga
2
Goat Density
19.6 to 24
15.2 to 19.6
10.8 to 15.2
6.4 to 10.8
2 to 6.4
Goat Density (Number Per Square Km)

3.12.4. Pig Production



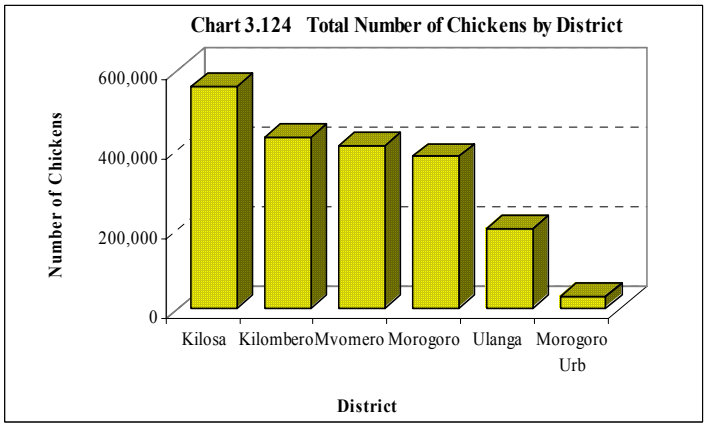
Piggery is the least important livestock keeping activity in the region after cattle, goats and sheep. The region ranks 8 out of 21 Mainland regions and is 4 percent of the Mainland total pigs.

The number of pig-rearing agricultural households in Morogoro region was 18,088 (2.8% of the total agricultural households in the region) rearing 44,986 pigs. This gives an average of 3 pigs per pig-rearing household. The district with the largest number of pigs was Mvomero with 22,254 pigs (49% of the total pig population in the region) followed by Kilosa (11,432 pigs, 25%), Morogoro Rural (6,496 pigs, 14%), Ulanga (2,870 pigs, 6%), Kilombero (1,330 pigs, 3%) and Morogoro Urban (604 pigs, 1%) (Chart 3.122 and Map 3.47) However, Mvomero district had the highest density (9 head pre km^2) (Map 3.48)



3.12.4.1 Pig Population Trend

The overall annual growth rate of the pig population for the eight years period from 1994/95 to 2002/03 was 14.1 percent. During this period the population grew from 15,682 to 44,986. The pig population increased from 15,688 in 1994/95 to 50,449, in 1998/99 a higher rate of 33.93 percent. The growth rate dropped to -2.82 percent during the following four years from 1998/99 to 2002/03 in which pig population decreased from 50,449 to 44,986(Chart 3.123).



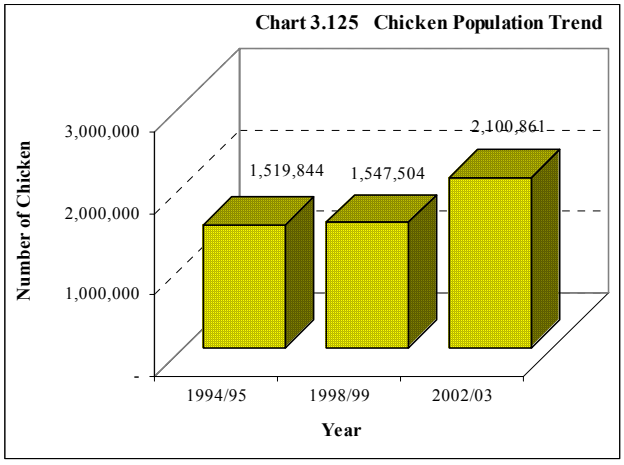
3.12.5 Chicken Production

The poultry sector in Morogoro region was dominated by chicken production. The region contributed 6.3 percent to the total chicken population on Tanzania Mainland.

3.12.5.1 Chicken Population

The number of households keeping chicken was 154,850 raising about 2,100,861 chickens. This gives an average of 14 chickens per chicken-rearing household. In terms of total number of chickens in the country, Morogoro region was ranked sixth out of the 21 Mainland regions

The District with largest number of chicken was Kilosa with 639,761 chicken (30% of the total chickens in the region) followed by Kilombero (433,045 chicken, 21%), Mvomero (411,992 chicken, 20%), Morogoro Rural (383,509 chicken, 18%), Ulanga (201,607 chicken, 10%) and Morogoro Urban (30,947 chicken, 1%). (Chart 3.124 and Map 3.49). However, Mvomero district had the highest density (167 head per km^2) (Map 3.50)



3.12.5.2 Chicken Population Trend

The overall annual chicken population growth rate during the eight-year period from 1995 to 2003 was 4.13 percent. The population increased at a rate of 0.45 percent from 1995 to 1999 after which it increased to 7.94 percent for the four year period from 1999 to 2003 (Chart 3.125).

Ninety eight percent of all chicken in Morogoro region were of indigenous breed. The dominance of indigenous breed makes the population trend for the indigenous chicken more-or-less the same as that of the total chickens in the region.

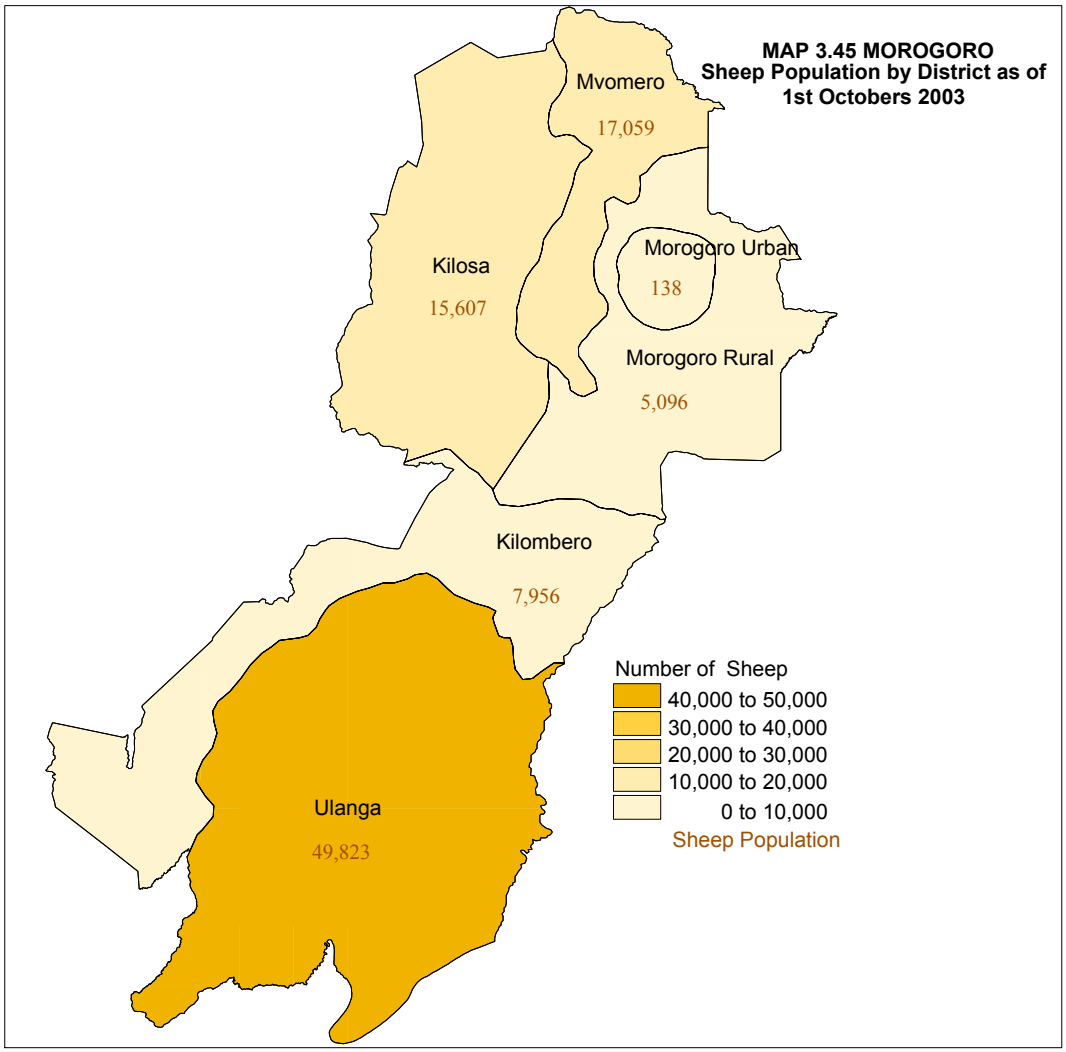
3.12.5.3 Chicken Flock Size

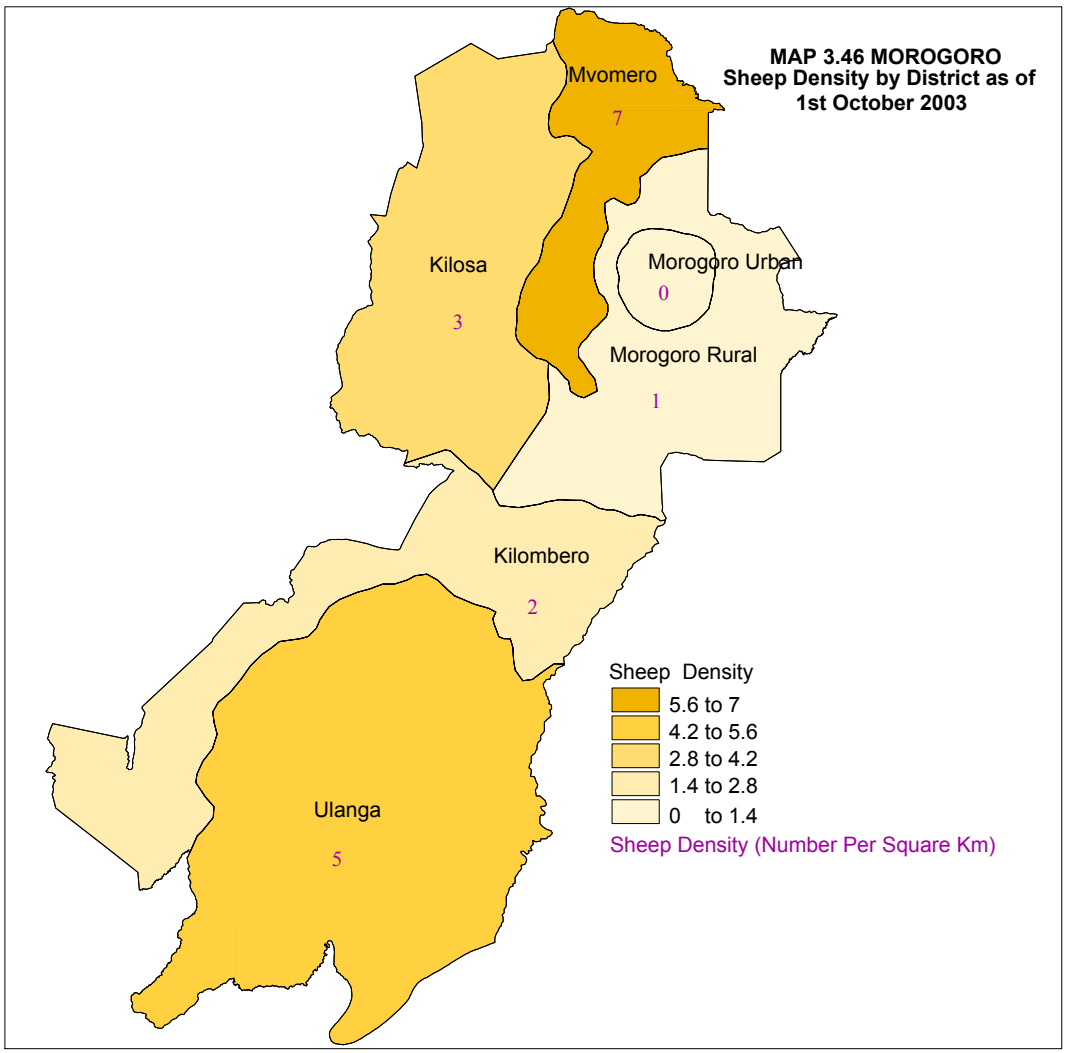
The results indicate that about 79 percent of all chicken-rearing households were keeping 1-19 chickens with an average of 7 chickens per holder. About 20 percent of holders were reported to be keeping the flock size of 20 to 99 chickens with an average of 32 chickens per holder.

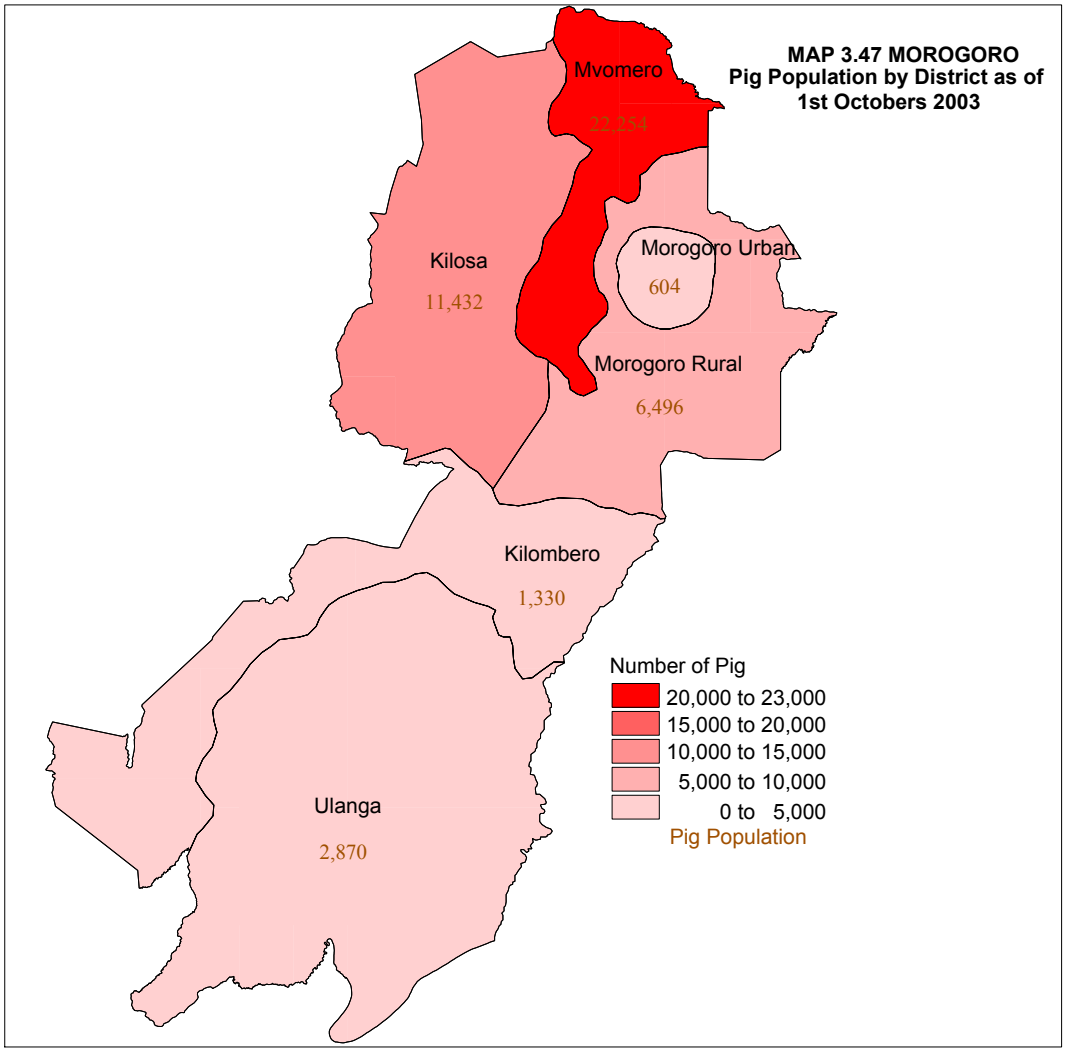
Table 3.13 Number of Household and Chickens Raised by Flock Size

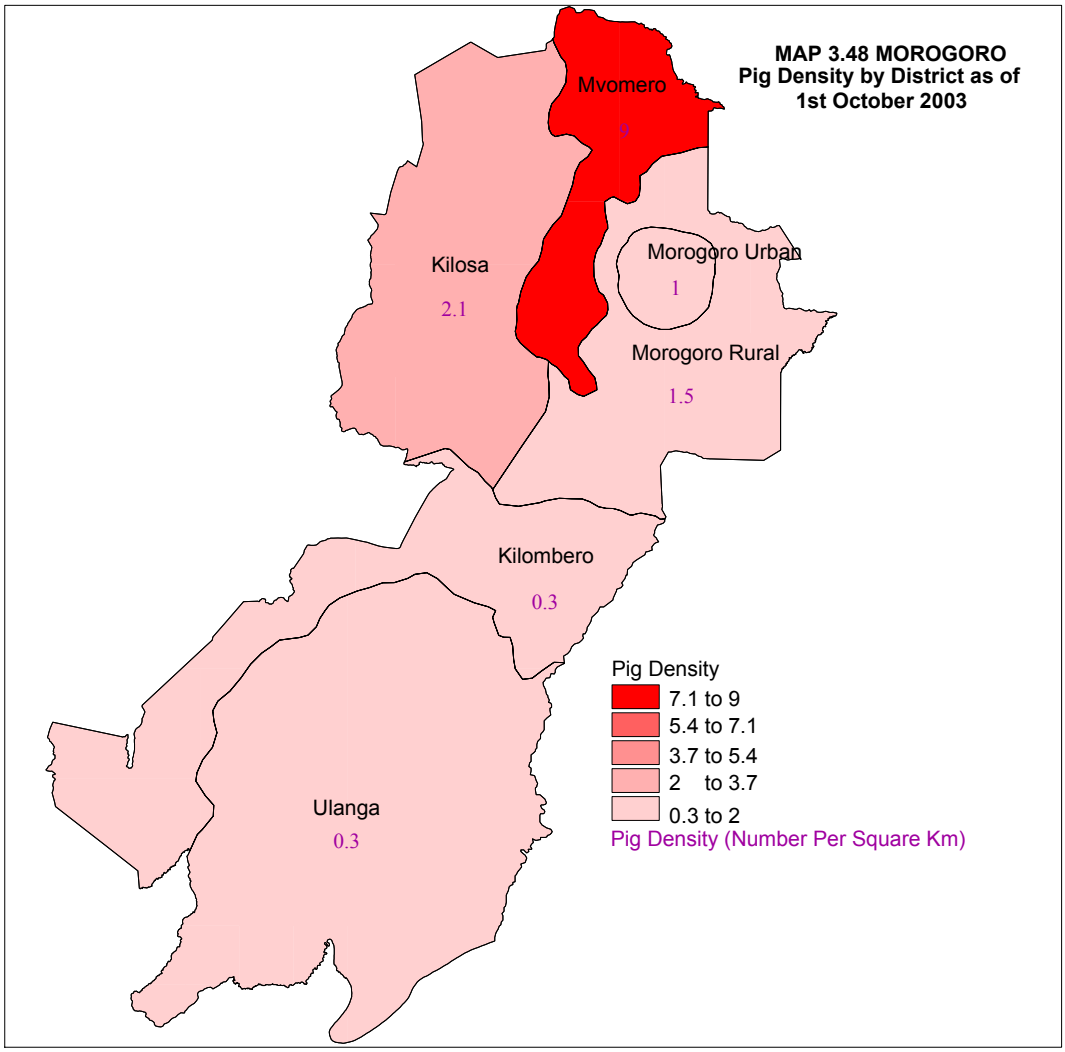
Flock Size	No. of Hh	%	Number of Chicken	Average chicken per household
1 - 4	38527	25	100926	3
5 - 9	41837	27	271789	6
10 - 19	42306	27	538660	13
20 - 29	16841	11	387719	23
30 - 39	7212	5	228874	32
40 - 49	2717	2	113122	42
50 - 99	4786	3	289911	61
100+	624	0.4	169859	272
Total	154850	100	2100861	14

Only 0.4 percent of holders kept the flock sizes of more than 100 chickens at an average of 272 chickens per holder (Table 3.13).

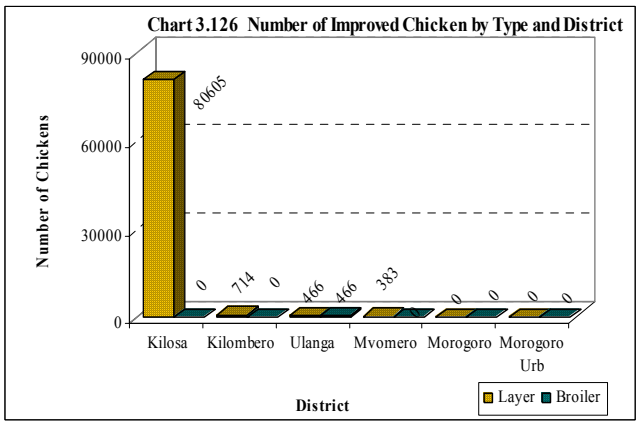

MAP 3.45 MOROGORO
Sheep Population by District as of
1st Octobers 2003
Mvomero
17,059
Kilosa
15,607
Morogoro Urban
138
Morogoro Rural
5,096
Kilombero
7,956
Ulanga
49,823
Number of Sheep
40,000 to 50,000
30,000 to 40,000
20,000 to 30,000
10,000 to 20,000
0 to 10,000
Sheep Population

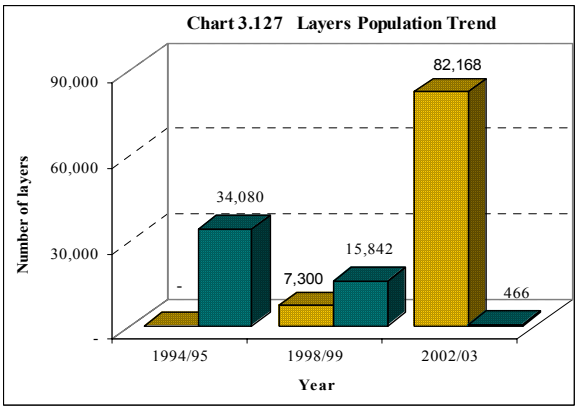

MAP 3.46 MOROGORO
Sheep Density by District as of
1st October 2003
Mvomero
7
Kilosa
3
Morogoro Urban
0
Morogoro Rural
1
Kilombero
2
Ulanga
5
Sheep Density
5.6 to 7
4.2 to 5.6
2.8 to 4.2
1.4 to 2.8
0 to 1.4
Sheep Density (Number Per Square Km)


MAP 3.47 MOROGORO
Pig Population by District as of
1st Octobers 2003
Mvomero
22,254
Kilosa
11,432
Morogoro Urban
604
Morogoro Rural
6,496
Kilombero
1,330
Ulanga
2,870
Number of Pig
20,000 to 23,000
15,000 to 20,000
10,000 to 15,000
5,000 to 10,000
0 to 5,000
Pig Population


MAP 3.48 MOROGORO
Pig Density by District as of
1st October 2003
Mvomero
9
Kilosa
2.1
Morogoro Urban
1
Morogoro Rural
1.5
Kilombero
0.3
Ulanga
0.3
Pig Density
7.1 to 9
5.4 to 7.1
3.7 to 5.4
2 to 3.7
0.3 to 2
Pig Density (Number Per Square Km)

3.12.5.4 Improved Chickens (layers and broilers)





Layers chicken population in Morogoro region increased at an annual rate of 83 percent for the period of four years from 7,300 in 1999 to 82,168 in 2003. The number of improved chicken was most significant in Kilosa district followed by Ulanga district (Chart 3.126).

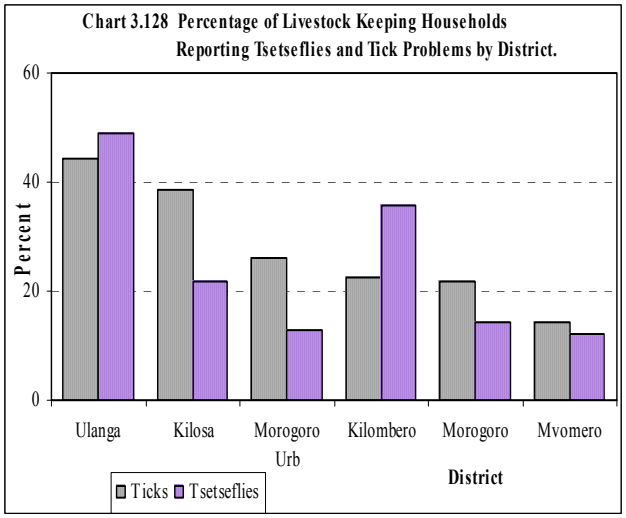
The overall annual growth rate for broilers during the eight-year period from 1995 to 2003 was -41.5 percent during which the population dropped from 34,080 to 466. The annual growth rate was -17.43% for the period of four years from 1995 to 1999. The broiler population exhibited a decreasing trend at the rate of -58.6 percent per annum for the period of four years resulting a decrease from 15,842 in 1999 to 466 in 2003 (Chart 3.127).

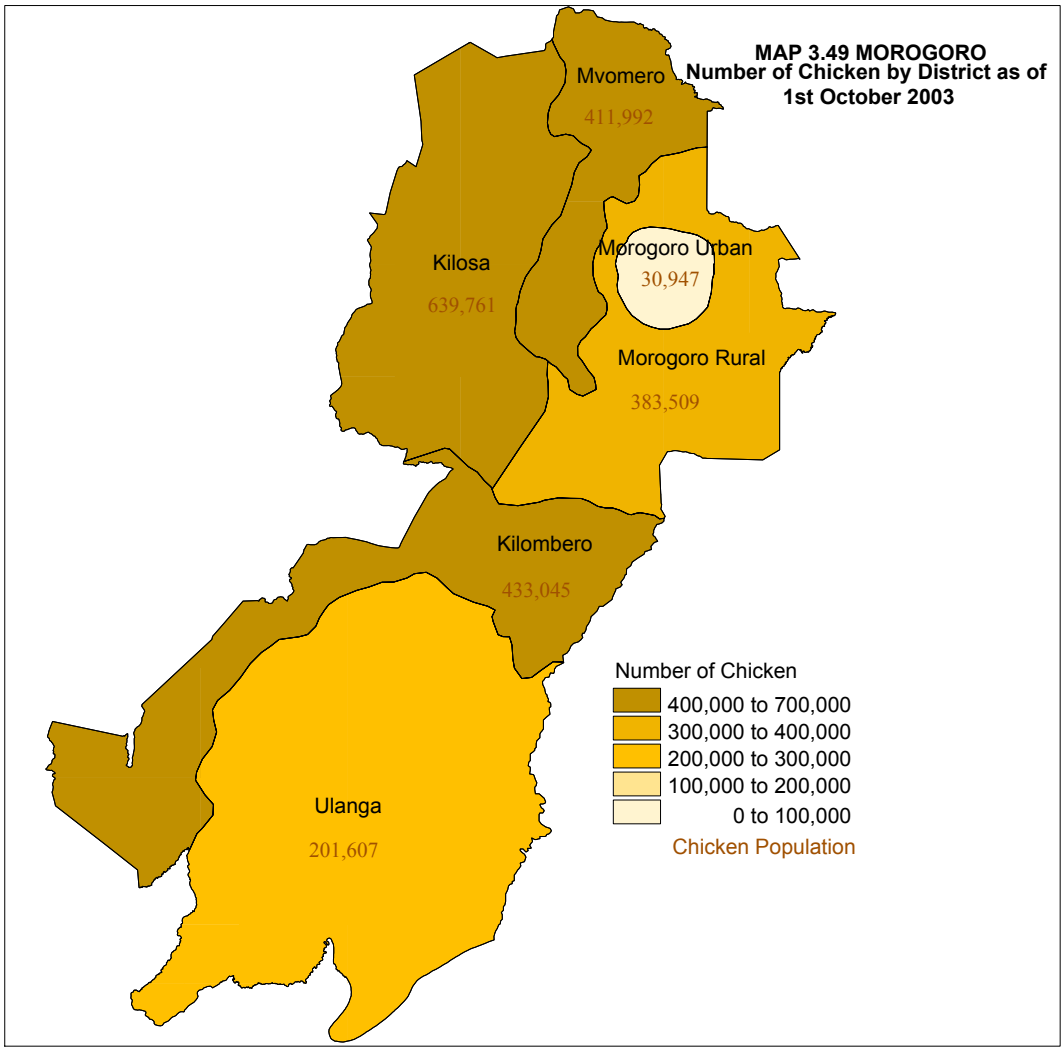
Table 3.14 Head Number of Other Livestock by Type of Livestock and District

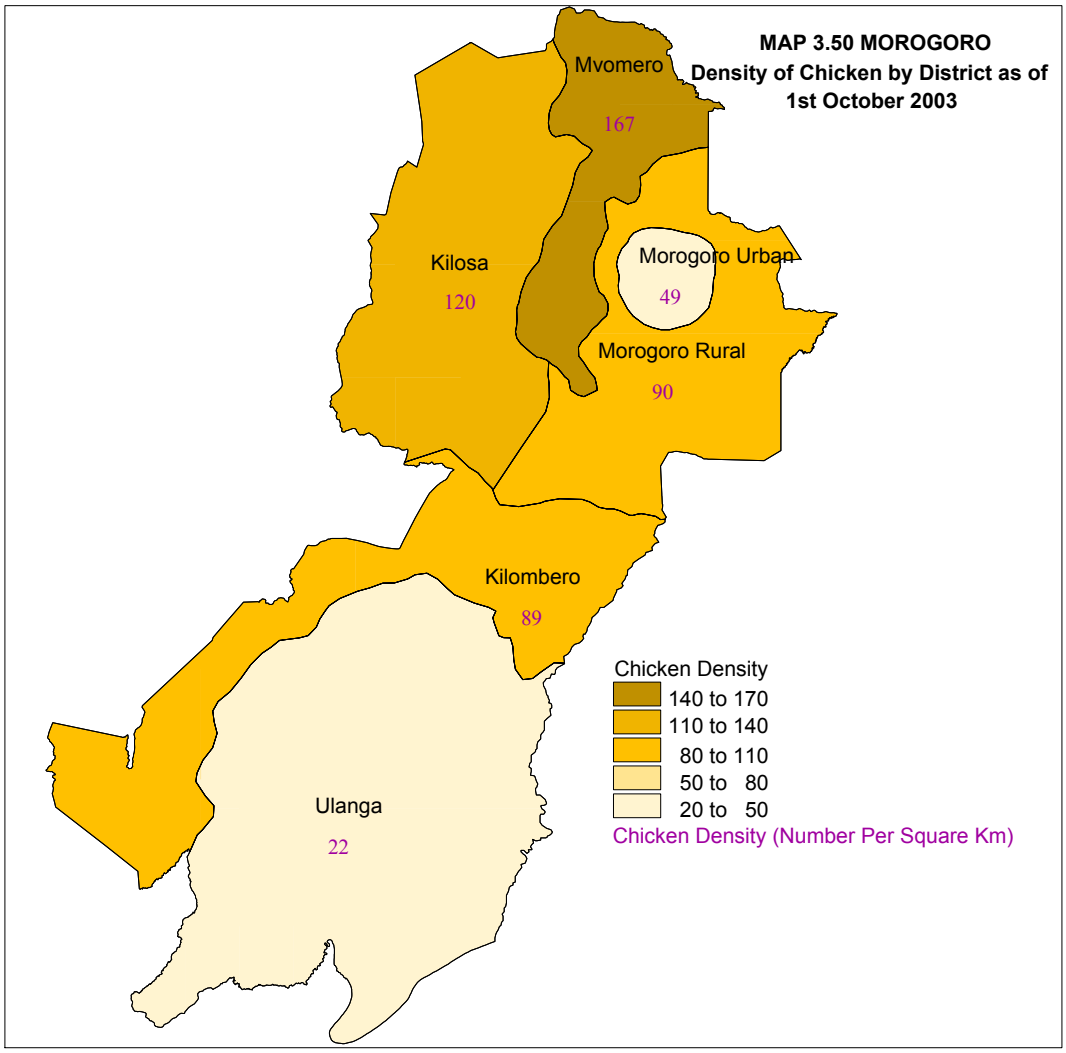
District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Kilosa	23754	11206	6955	0	0
Morogoro Rural	11558	0	0	0	12230
Kilombero	15311	0	0	0	0
Ulanga	9718	69612	385	0	1899
Morogoro Urb	246	862	97	0	0
Mvomero	16362	8047	1390	1892	126
Total	76948	89728	8828	1892	14255

3.12.6 Other Livestock

There were 76,948 ducks, 89,728 turkeys, 8,828 rabbits and 1,892 donkeys raised by rural agricultural households in Morogoro region. Table 3-14 indicates the number of livestock kept in each district. The biggest number of ducks in the region was found in Kilosa district (31% of all ducks in the region), followed by Mvomero (21%), Kilombero (20%), Morogoro Rural (15%), Ulanga (13%) and Morogoro Urban (0.3%). Turkeys were reported in Ulanga, Kilosa, Mvomero and Morogoro Urban only (Table 3.14).



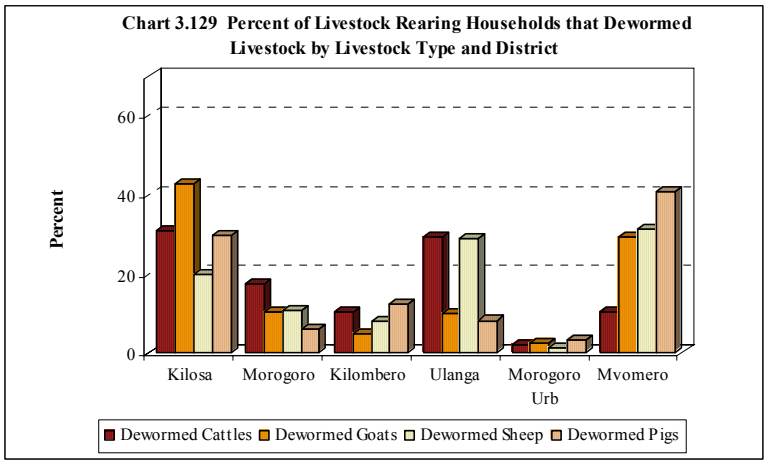

MAP 3.49 MOROGORO
Number of Chicken by District as of
1st October 2003
Mvomero
411,992
Kilosa
639,761
Morogoro Urban
30,947
Morogoro Rural
383,509
Kilombero
433,045
Ulanga
201,607
Number of Chicken
400,000 to 700,000
300,000 to 400,000
200,000 to 300,000
100,000 to 200,000
0 to 100,000
Chicken Population


MAP 3.50 MOROGORO
Density of Chicken by District as of
1st October 2003
Mvomero
167
Kilosa
120
Morogoro Urban
49
Morogoro Rural
90
Kilombero
89
Ulanga
22
Chicken Density
140 to 170
110 to 140
80 to 110
50 to 80
20 to 50
Chicken Density (Number Per Square Km)

3.12.7 Pest and Parasite Incidence and Control

The results indicate that 28 percent and 21 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. Chart 3.137 shows that there is a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Ulanga district but lowest in Mvomero district. (Map 3.51)

The most practiced method of tick control was spraying with 61 percent of all livestock-rearing households in the region using the method. Other methods used were dipping (5.6%), smearing (2.5%) and other traditional methods like hand picking (2.5%). However, 28.4 percent of livestock-keeping households did not use any method.



The most common method used to control tsetse flies was spraying which was practiced by 67.9 percent of livestock-rearing households this was followed by trapping (3.0%) and dipping (2.3%). However, 26.7 percent of the livestock rearing households did not use any of the three aforementioned methods.

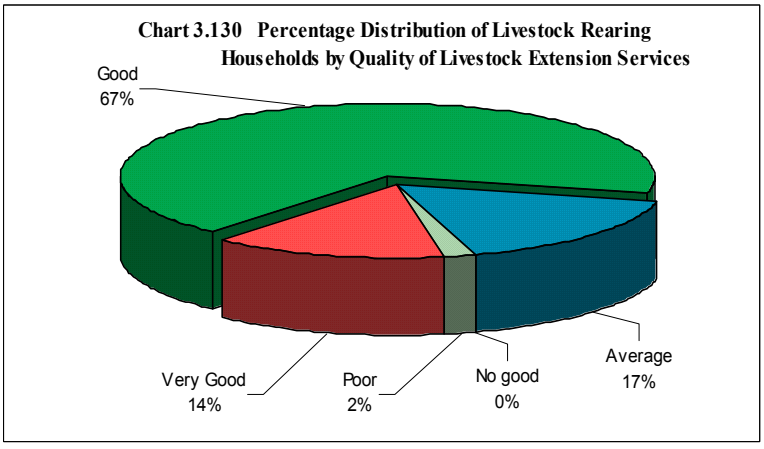
3.12.7.1 Deworming

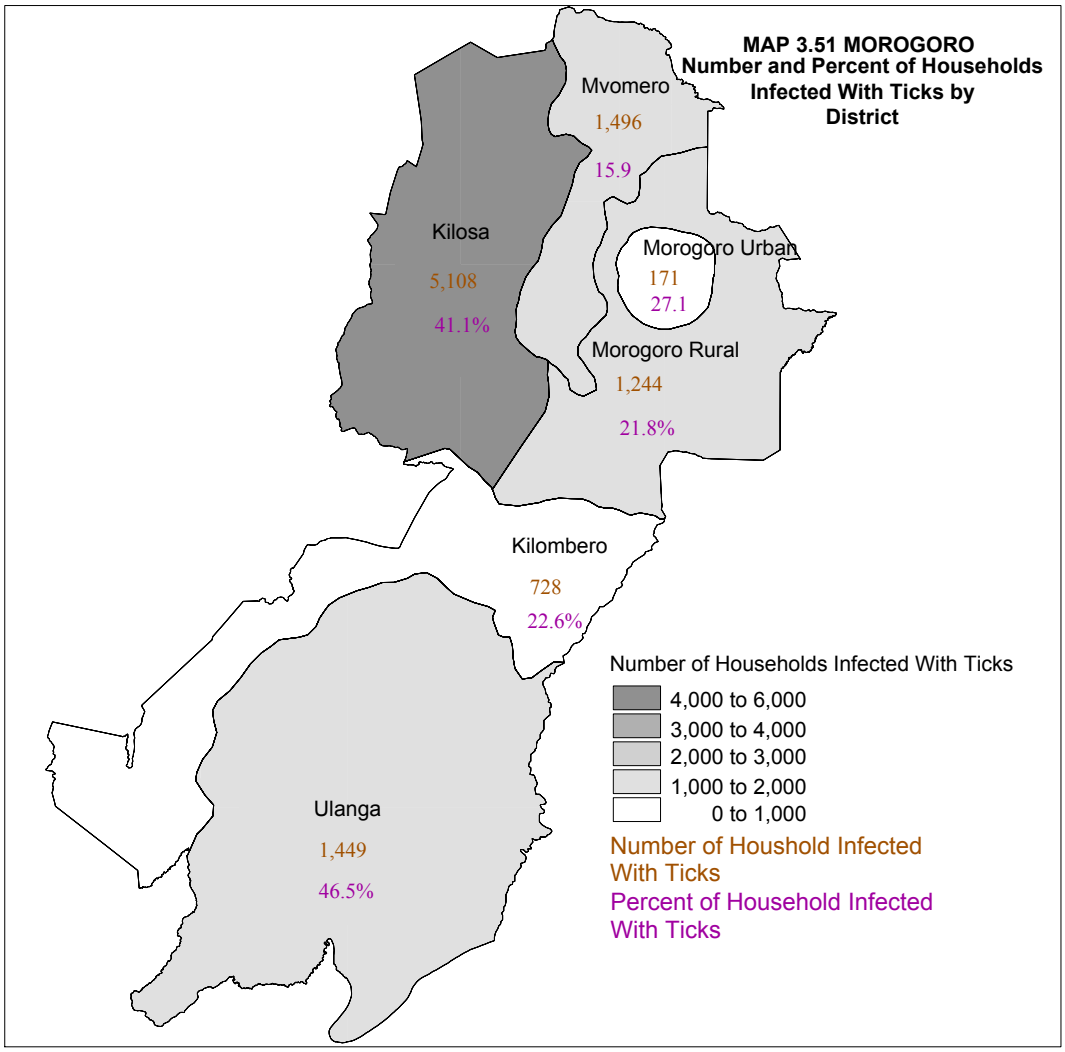
Livestock rearing households that dewormed their animals were 12,038 (33% of the total livestock rearing households in the region). The percentage of the households that dewormed cattle was 30 percent, goats (57%), sheep (27%) and pigs (31%) (Chart 3.129)

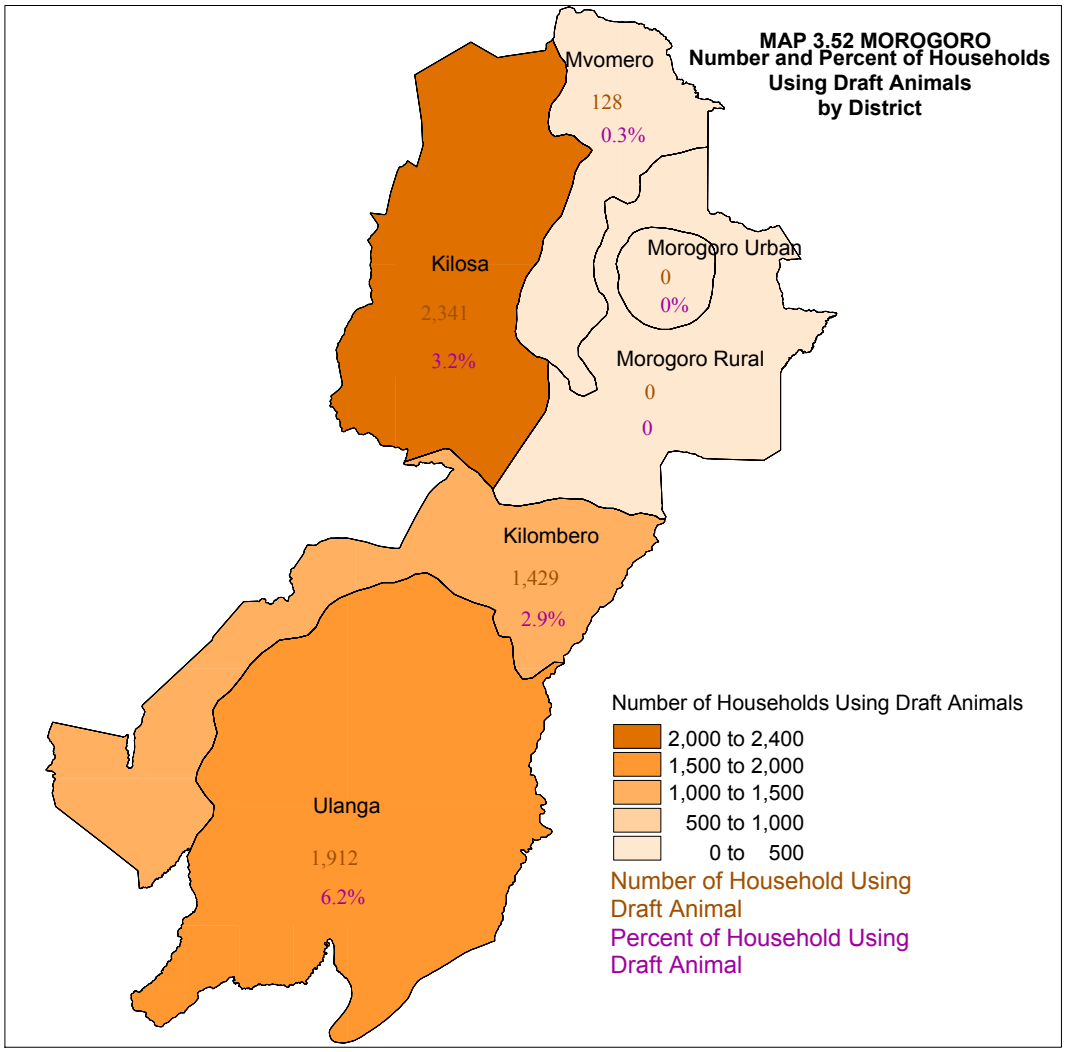
3.12.8. Access to Livestock Services

3.12.8.1 Access to Livestock Extension Services

The toal number of households that received livestock advice was 31,171 representing 85 percent of the total livestock-rearing households and 12 percent of the agricultural households in the region. The main livestock extension agent was the government which provided service to about 21 percent of all households receiving livestock extension services. The rest of the households got services from NGOs/development projects (3%) and large-scale farmers (2%).



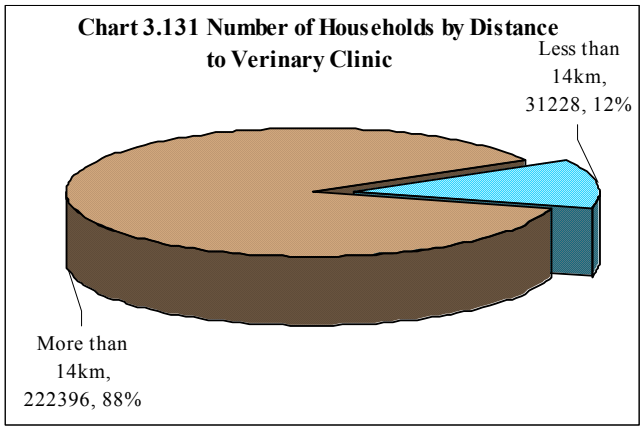

MAP 3.51 MOROGORO
Number and Percent of Households Infected With Ticks by District
Mvomero
1,496
15.9
Kilosa
5,108
41.1%
Morogoro Urban
171
27.1
Morogoro Rural
1,244
21.8%
Kilombero
728
22.6%
Ulanga
1,449
46.5%
Number of Households Infected With Ticks
4,000 to 6,000
3,000 to 4,000
2,000 to 3,000
1,000 to 2,000
0 to 1,000
Number of Houshold Infected With Ticks
Percent of Household Infected With Ticks

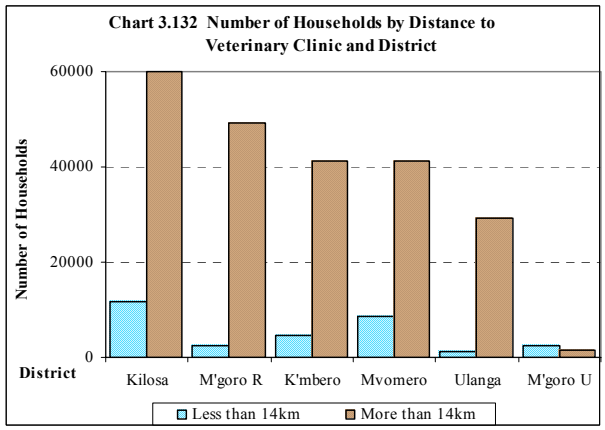

MAP 3.52 MOROGORO
Number and Percent of Households Using Draft Animals by District
Mvomero
128
0.3%
Kilosa
2,341
3.2%
Morogoro Urban
0
0%
Morogoro Rural
0
0
Kilombero
1,429
2.9%
Ulanga
1,912
6.2%
Number of Households Using Draft Animals
2,000 to 2,400
1,500 to 2,000
1,000 to 1,500
500 to 1,000
0 to 500
Number of Household Using Draft Animal
Percent of Household Using Draft Animal

About 67 percent of livestock rearing households described the general quality of livestock extension services as being good, 17 percent said they were average and 14 percent said they were very good. However, zero percent of the livestock rearing households said the quality was not good whilst 2 percent described them as poor (Chart 3.130).

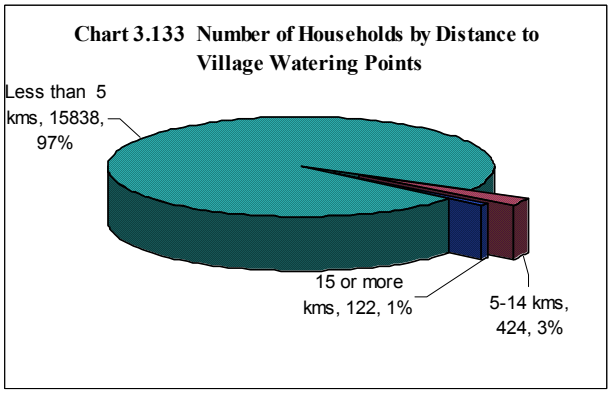
3.12.8.2 Access to Veterinary Clinic

Many veterinary clinics were located very far from livestock rearing households. About 88 percent of the livestock rearing households accessed the services, at a distance of more than 14 kms. Only 12 percent of them accessed the services within



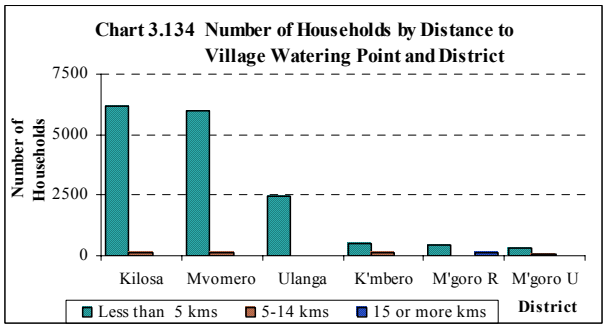


14 kms from their dwellings (Chart 3.140). The most affected districts was Ulanga and Morogoro Rural districts with almost over 95 % of livestock rearing households accessing the services at a distance of more than 14 kms. Mvomero district was the least affected because about 60 percent of the households could access the service within a distance of 14 kilometers. (Chart 3.132)



3.12.8.3 Access to Village Watering Points/dam

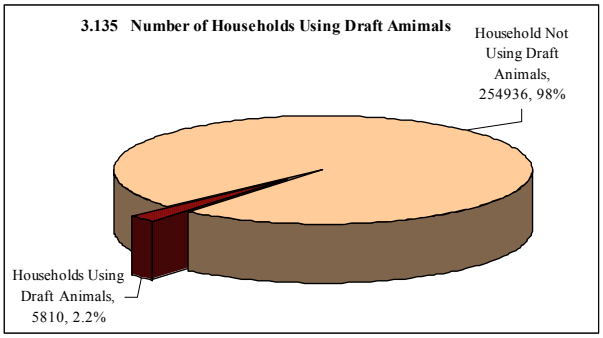
The number of livestock rearing households residing less than 5 kms from the nearest watering point was 15,838 (97% of livestock rearing households in Morogoro region) whilst 424 households (3%) resided between 5 and 14 kms. However, 122 households (1%) had to travel a distance of 15 or more kms to the nearest watering point. (Chart 3.133)

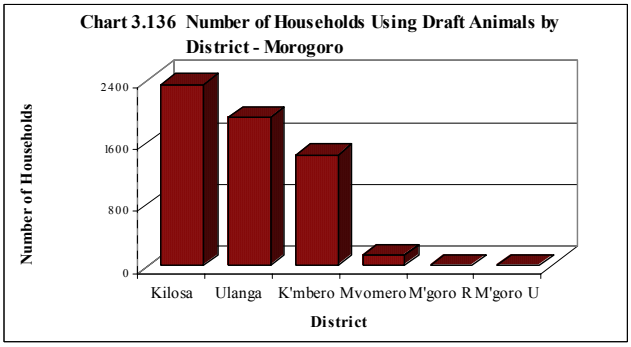


Kilosa district had the best livestock water supply with the majority of livestock rearing households residing within 5 kms from the nearest watering point. This is followed by Mvomero, Ulanga, Kilombero, Morogoro Rural and Morogoro Urban. In the region only 3% of the livestock rearing households had to travel a distance of more than five kilometers to the nearest watering point (Chart 3.134).

3.12.9 Animal Contribution to Crop Production

3.12.9.1 Use of Draft Power



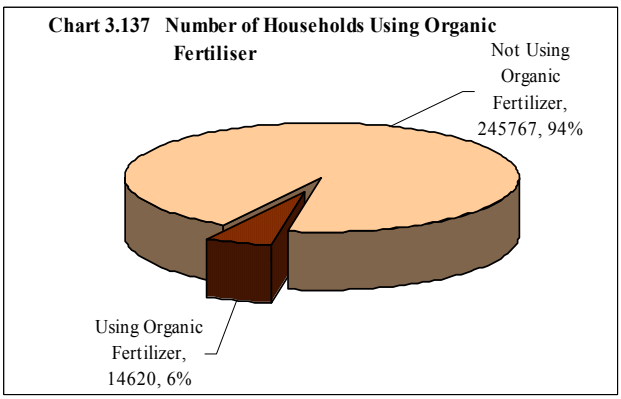


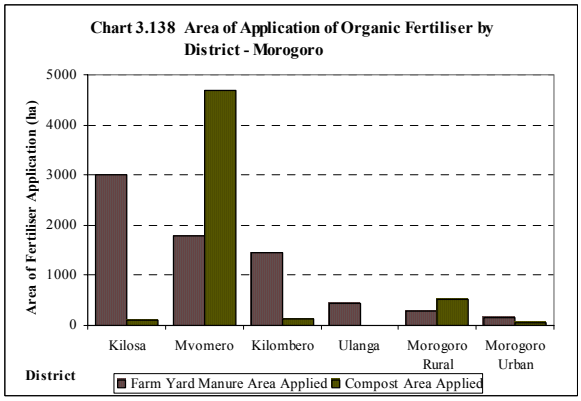
Use of draft animals to cultivate land in Morogoro region is very limited with only 5,810 households (0.90% of the total households in the region) using them (Chart 3.144). Draft animals were used in Kilosa, Ulanga, Kilombero and Mvomero districts only.

The number of households that used draft animals in Kilosa was 2,341 representing 40 percent of the households using draught animals in the region followed by Ulanga 33%, Kilombero 25%, and Mvomero 2%. Use of draft animals was not reported in the other districts (Chart 3.135) (Map 3.52).

The region had 20,104 oxen (Ulanga 10,281, Kilombero 6,466, Kilosa 2,591 and Mvomero 766) that were used to cultivate 17,218 hectares of land. This represents only 0.9 percent of the total oxen found on the Mainland. The largest area cultivated using oxen was found in Ulanga district (8,839 ha, 51.3% of the total area cultivated using oxen).

3.12.9.2 Use of Farm Yard Manure





The number of Households using organic fertilizer in Morogoro region was 14,620 (6% of total crop growing households in the region) (Chart 3.146). The total area applied with organic fertiliser was 12,613 ha of which 7,103 hectares (56% of the total area applied with organic fertiliser or 2.5% of the area planted with annual crops and vegetables in Morogoro region during the long rainy season) was applied with farm yard manure.

Only 5,511 ha (44% of the area of organic fertilizer application) was applied with compost. The largest area applied with farm yard manure was found in Kilosa district with 3,014 hectares (42% of the total area applied with farm yard manure) followed by Mvomero (1,775 ha, 25%), Kilombero (1,448 ha, 20%), Ulanga (440 ha, 6%), Morogoro Rural (286 ha, 4%), and Morogoro Urban (143 ha, 2%) (Chart 3.138)

3.5.0 Fish Farming

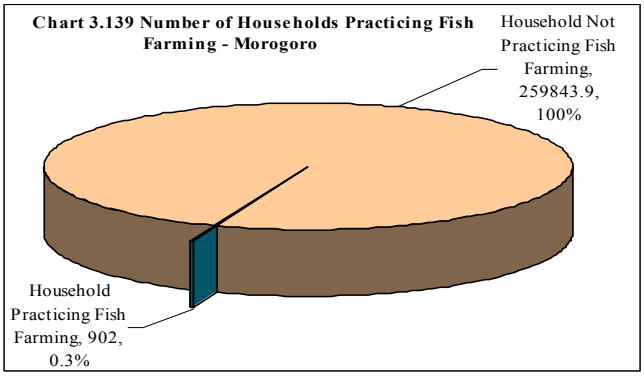


Chart 3.139 Number of Households Practicing Fish Farming - Morogoro

The number of households involved in fish farming in Morogoro region was 902 representing 0.3 percent of the total agricultural households in the region (Chart 3.139).

Kilombero was the leading district with 369 households (41% of agricultural households) involved in fish farming. This was followed by Morogor Rural (363 households, 40%), Kilosa (93 households, 10%) and Ulanga (76 households, 8%). Fish farming was not practiced in Morogoro Urban and Mvomero districts (Chart 3.140 and Map 3.53)).

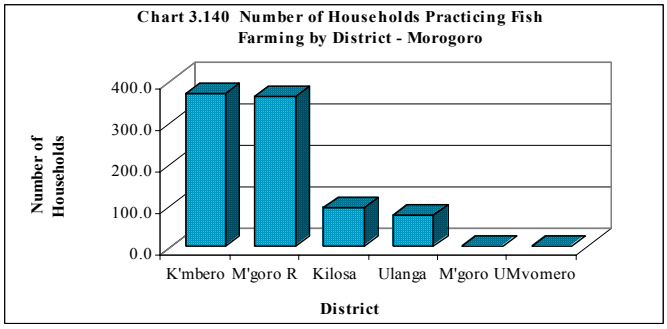


Chart 3.140 Number of Households Practicing Fish Farming by District - Morogoro

The main source of fingerings was the non governmental organizations and/or projects which provided fingering to 55 percent of the fish farming households. About 28 percent of households practicing fish farming got fingerings from their neighbours, 9 percent got them from private trader and 9 percent from other sources.

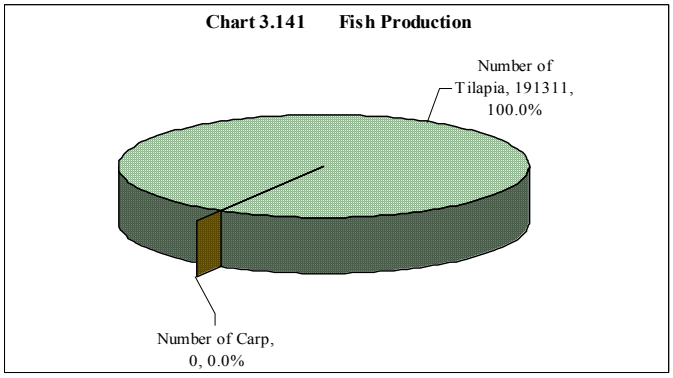


Chart 3.141 Fish Production

All fish farming households in the region used the dug-out-pond system and the main fish specie planted is Tilapia. The only type of fish harvested in Morogoro region was Tilapia 191,311 (Chart 3.141). About 72 percent of the fish farming households sold their fish while 28 percent did not sell. All fish were sold to their neighbours.

3.6.0 Access to Infrastructure and Other Services

The results indicate that among the evaluated services, regional capital was a service located very far from most of the household's dwellings than any other service. It was located at an average distance of 161.1 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were tarmac road (69.8), hospitals (54.2), secondary market (28.8), secondary school (23.7), primary market (19.7), tertiary

Table 3.15: Mean distances from Household Dwelling to Infrastructures and Services by District											
	Mean Distance to										
District	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	Regional Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmarc Roads
Kilosa	31.1	3.4	3.8	1.6	49.6	8.4	131.9	12.6	20.8	12.6	41.1
Morogoro	19.6	2.1	9.2	2.4	77.5	8.6	82.4	16.0	15.2	16.0	71.2
Kilombero	16.9	2.5	3.0	2.0	70.7	6.8	272.4	49.3	49.0	49.3	78.8
Ulanga	23.3	1.8	3.4	1.1	36.6	6.3	333.1	12.2	39.3	12.2	175.4
Morogoro Urb	9.1	3.9	2.6	1.6	12.0	8.2	14.1	9.0	10.1	9.0	6.8
Mvomero	25.5	1.8	8.2	1.1	34.9	5.7	85.9	11.1	30.6	11.1	42.1
Total	23.7	2.5	5.5	1.7	54.2	7.4	161.1	19.7	28.8	19.7	69.8

market (19.7), health clinics (7.4), all weather roads (5.5), primary schools (2.5) and feeder roads (1.7) (Table 3.15).

Only 4.7 percent of the agricultural households reported the available infrastructures and services as 'very good' whereas 14.5 percent reported them to be average. Forty two point six percent of the agricultural households said the infrastructure and services were poor were, and 13.8 percent said they were 'no good'.

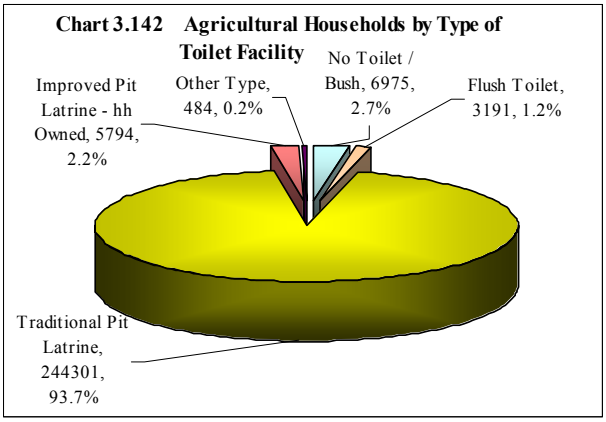
3.7. POVERTY INDICATORS

The agricultural census had some questions that aimed at getting an indication of the level of poverty that could be used as a base for tracking progress in poverty reduction strategies undertaken by the government.

3.7.1 Type of Toilets

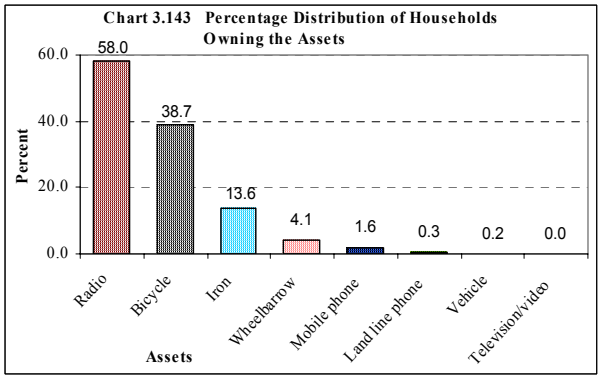
A large number of rural agricultural households use traditional pit latrines (244,301 households, 947% of all rural agricultural households) 5,794 households (2.2%) use improved pit latrine and 3,191 households (1.2%) use flush toilets. The remaining 484 household (0.2%) use other toilets facilities. However, 6,975 households (2.7%) in the region had no toilet facilities (Chart 3.142) (Map 3.54).

Chart 3.142 Agricultural Households by Type of Toilet Facility



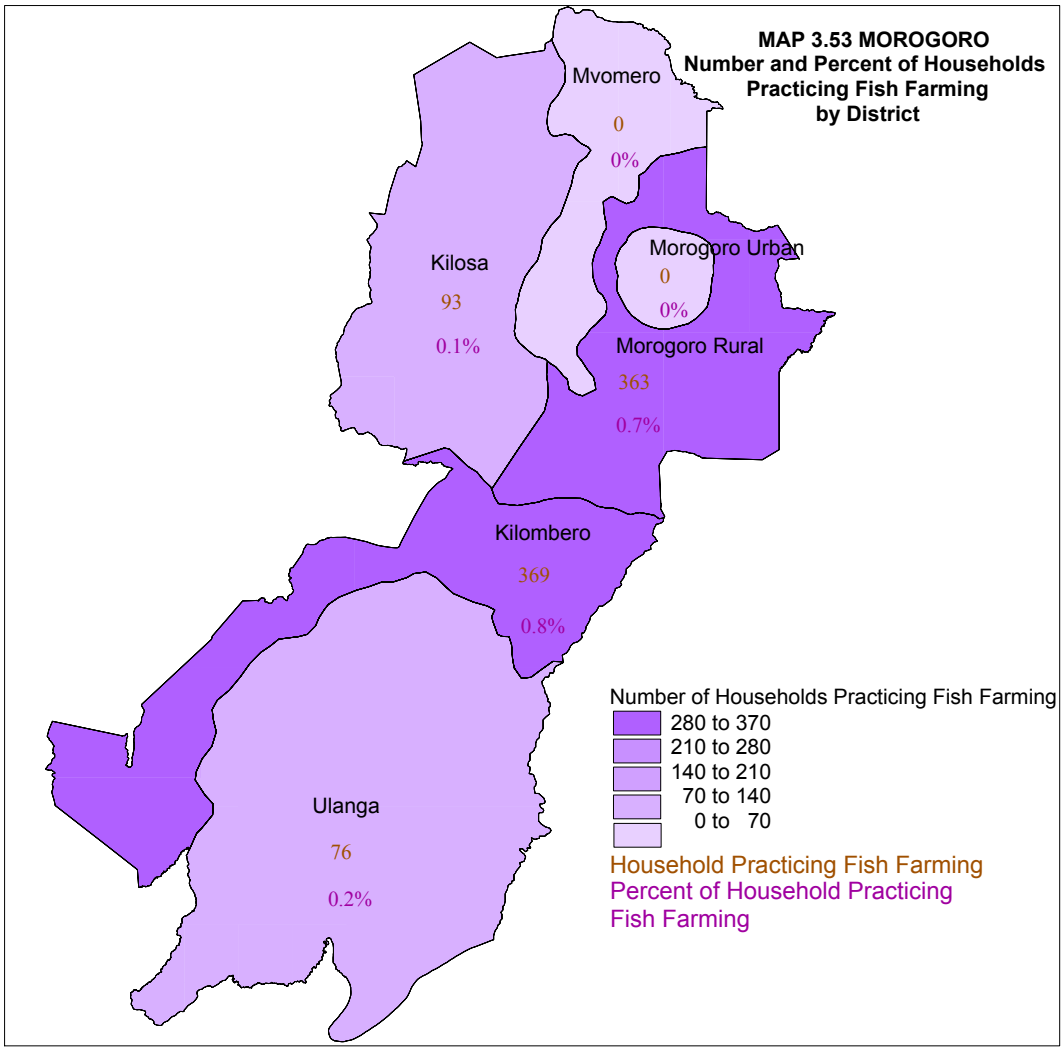
The distribution of the households without toilets within the region indicates that 45 percent of them were found in Kilosa district and 20 percent were from Kilombero. The percentages of households without toilets in other districts were as follows Ulanga (19%), Mvomero (9%), Morogoro Rural (4%), Morogoro Urban (3%).

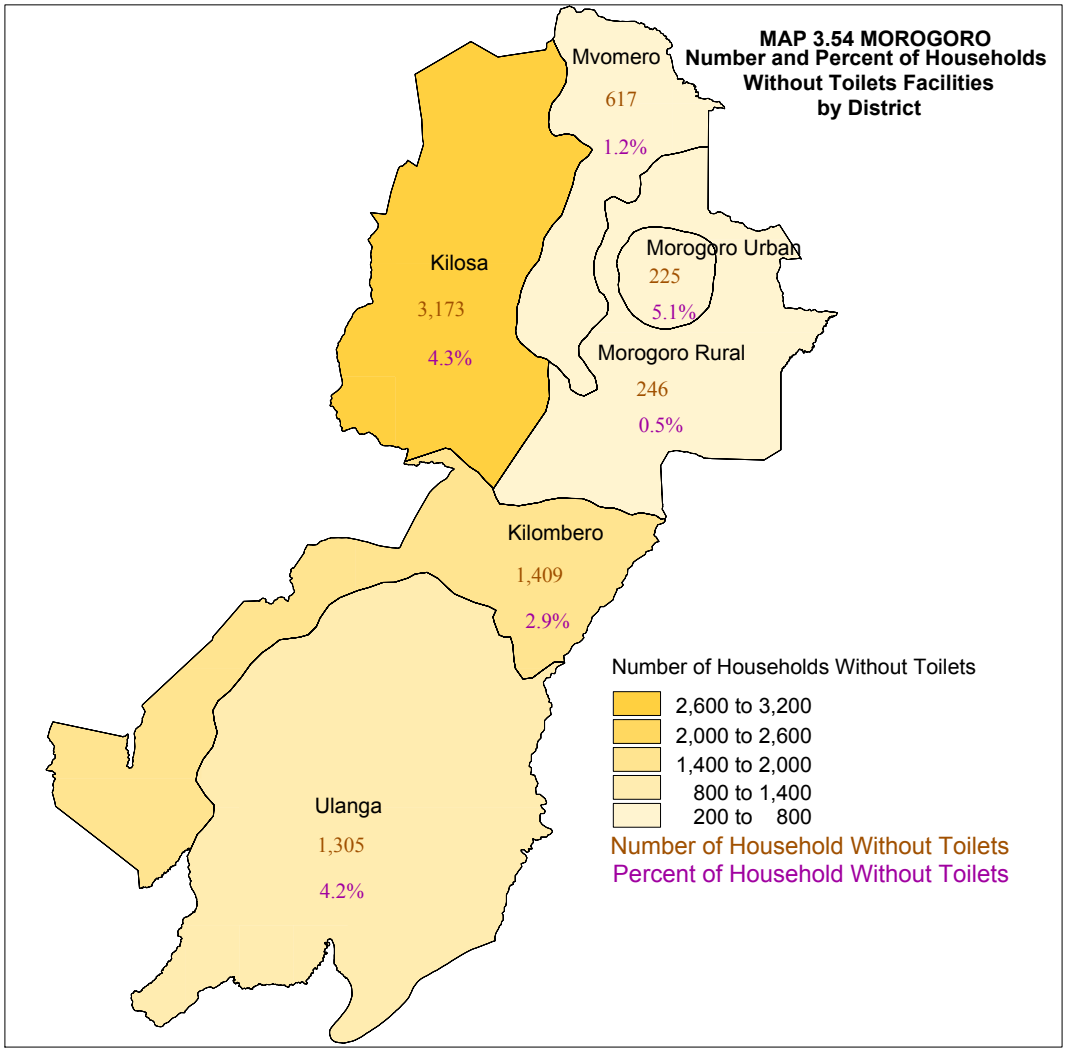
Chart 3.143 Percentage Distribution of Households Owning the Assets



3.7.2 Household's Assets

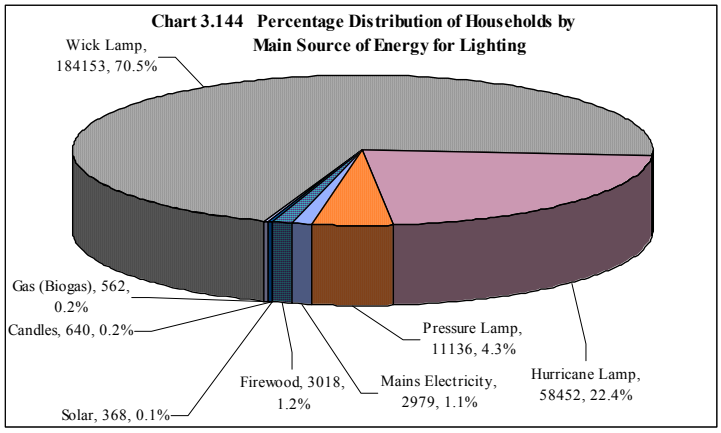
Radios are owned by most rural agricultural households in Morogoro region with 151,106 households (58% of the agriculture households in the region) owning the asset. followed by bicycle (101,029 households, 38.7%), iron (35,406 households, 13.6%), wheelbarrow (10,595 households, 4.1%), mobile phone (4,230 households, 1.6%), landline phone (889 households, 0.3%), vehicle (2,686 households, 0.2%) and television/video (1,966 households, 0.0%), (Chart 3.143).


MAP 3.53 MOROGORO
Number and Percent of Households
Practicing Fish Farming
by District
Mvomero
0
0%
Kilosa
93
0.1%
Morogoro Urban
0
0%
Morogoro Rural
363
0.7%
Kilombero
369
0.8%
Ulanga
76
0.2%
Number of Households Practicing Fish Farming
280 to 370
210 to 280
140 to 210
70 to 140
0 to 70
Household Practicing Fish Farming
Percent of Household Practicing
Fish Farming


MAP 3.54 MOROGORO
Number and Percent of Households
Without Toilets Facilities
by District
Mvomero
617
1.2%
Kilosa
3,173
4.3%
Morogoro Urban
225
5.1%
Morogoro Rural
246
0.5%
Kilombero
1,409
2.9%
Ulanga
1,305
4.2%
Number of Households Without Toilets
2,600 to 3,200
2,000 to 2,600
1,400 to 2,000
800 to 1,400
200 to 800
Number of Household Without Toilets
Percent of Household Without Toilets

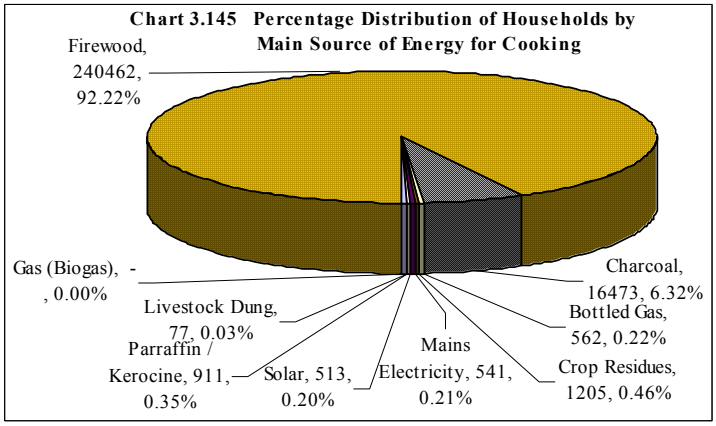
3.7.3 Sources of Lighting Energy

Wick lamp is the most common source of lighting energy in the region. It was estimated that about 70.5 percent of the total rural households used this source of energy followed by hurricane lamp (22.4%), pressure lamp (4.3%), mains electricity (1.1%), firewood (1.2%), solar (0.1%), candle (0.2%) and gas or biogas (0.2%) (Chart 3.144).

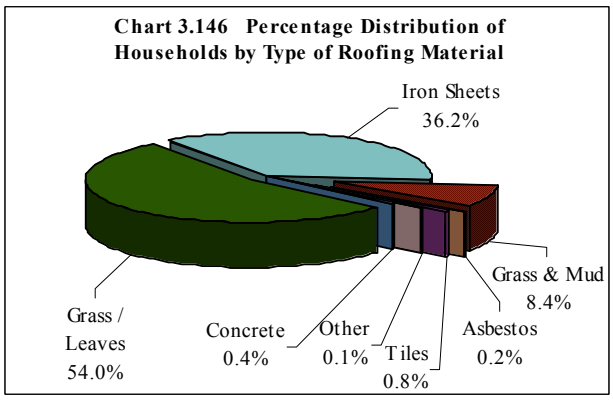


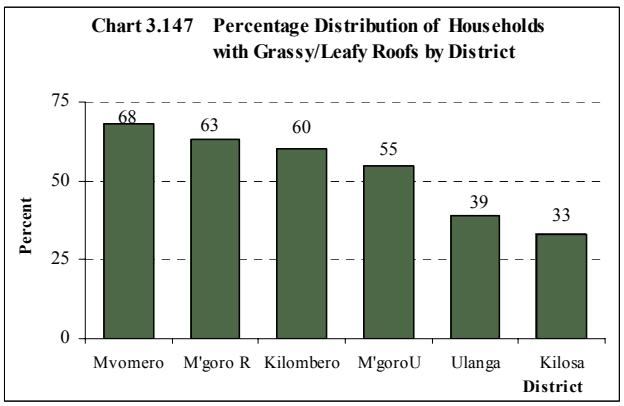
3.7.4 Sources of Energy for Cooking

The most prevalent source of energy for cooking was firewood, which was used by 92.2 percent of all rural agricultural households in Morogoro region. This is followed by charcoal (6.3%). The rest of energy sources accounted for 1.5 percent. These were bottled gas (0.22%), crop residues (0.46%), mains electricity (0.21%), solar (0.20%), livestock dung (0.03%), paraffin/kerosene (0.35%) and none for gas/biogas (Chart 3.145).



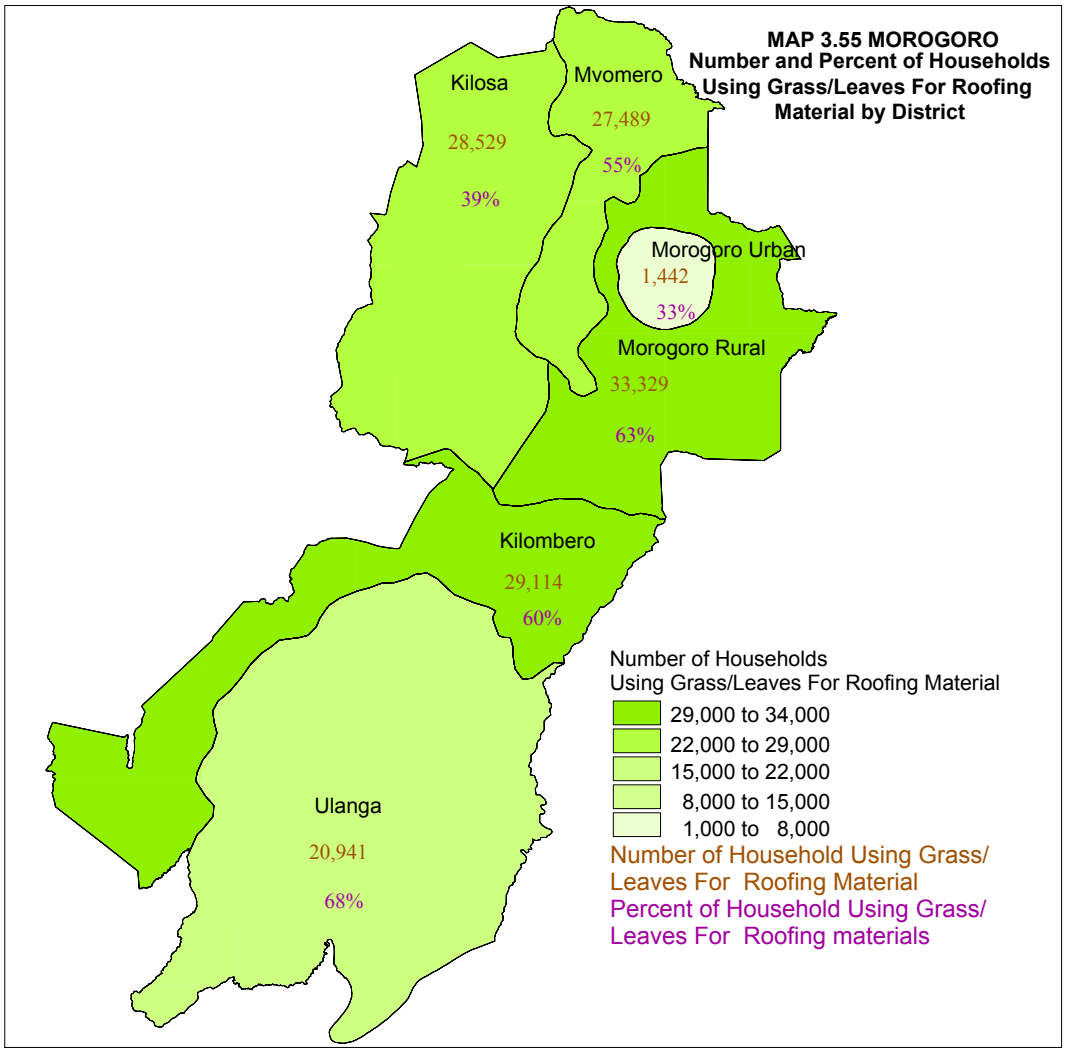
3.7.5 Roofing Materials

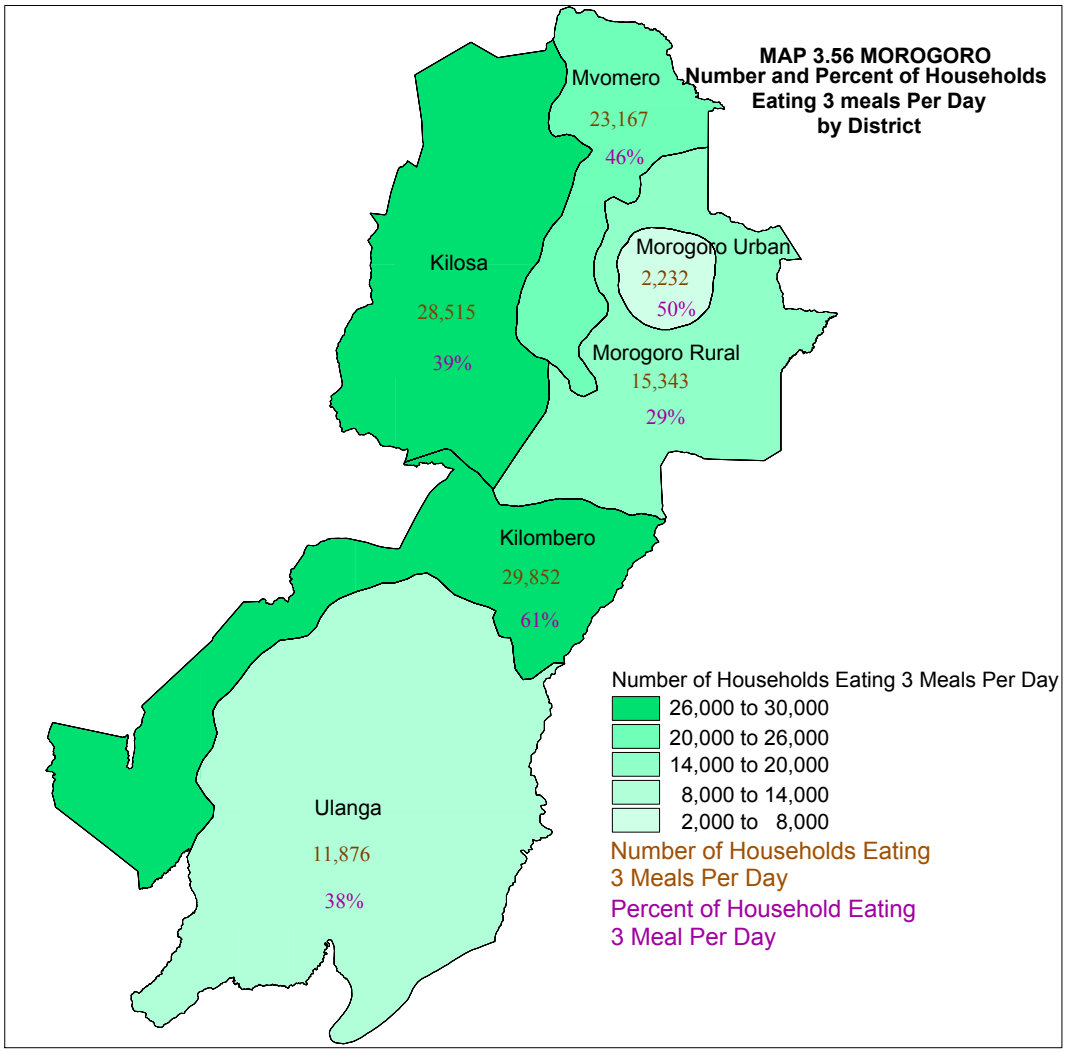




The most used roofing material (for the main dwelling) was grass and/or leaves and it was used by 54 percent of the rural agricultural households. This was closely followed by iron sheets (36.2%), grass/mud (8.4%), asbestos (0.2%), tiles (0.8%),

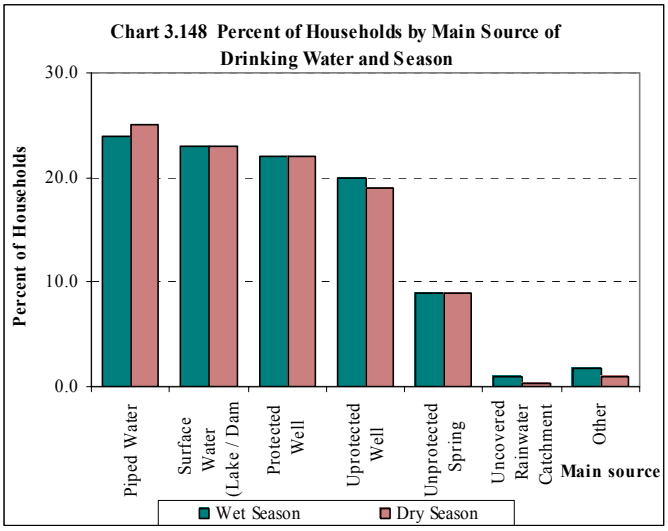
concrete (0.4%) and others (0.1%) (Chart 3.155). Mvomero district had the highest percentage of households whose roofing material for the main building was grass/leaves (68%) and was followed by Morogoro district.(63%), Kilombero (60%), Morogoro Urban (55%), Ulanga (39%) and Kilosa (Chart 3.147) (Map 3.55).

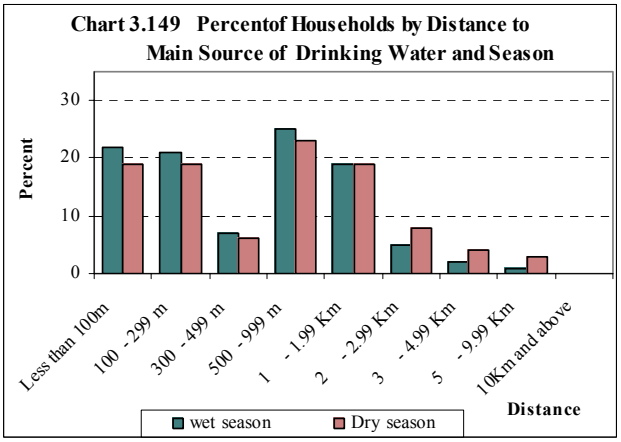

MAP 3.55 MOROGORO
Number and Percent of Households
Using Grass/Leaves For Roofing
Material by District
Kilosa
28,529
39%
Mvomero
27,489
55%
Morogoro Urban
1,442
33%
Morogoro Rural
33,329
63%
Kilombero
29,114
60%
Ulanga
20,941
68%
Number of Households
Using Grass/Leaves For Roofing Material
29,000 to 34,000
22,000 to 29,000
15,000 to 22,000
8,000 to 15,000
1,000 to 8,000
Number of Household Using Grass/
Leaves For Roofing Material
Percent of Household Using Grass/
Leaves For Roofing materials


MAP 3.56 MOROGORO
Number and Percent of Households
Eating 3 meals Per Day
by District
Mvomero
23,167
46%
Kilosa
28,515
39%
Morogoro Urban
2,232
50%
Morogoro Rural
15,343
29%
Kilombero
29,852
61%
Ulanga
11,876
38%
Number of Households Eating 3 Meals Per Day
26,000 to 30,000
20,000 to 26,000
14,000 to 20,000
8,000 to 14,000
2,000 to 8,000
Number of Households Eating
3 Meals Per Day
Percent of Household Eating
3 Meal Per Day

3.7.6 Access to Drinking Water

The main source of drinking water for rural agricultural households in Morogoro region was piped water with 24 percent of households using it as the main source during the wet season and 25 percent of the households during the dry seasons. This is followed by surface water (23% of households for each season), protected wells (22% of households for each season), unprotected well (20% of households in the wet season and 19% during dry season) and unprotected spring with 9 percent of households using the source for both seasons. Unprotected rainwater catchments was used as a main source by 0.9 percent of the households in wet season and by 0.3 percent in dry season Chart 3.149)



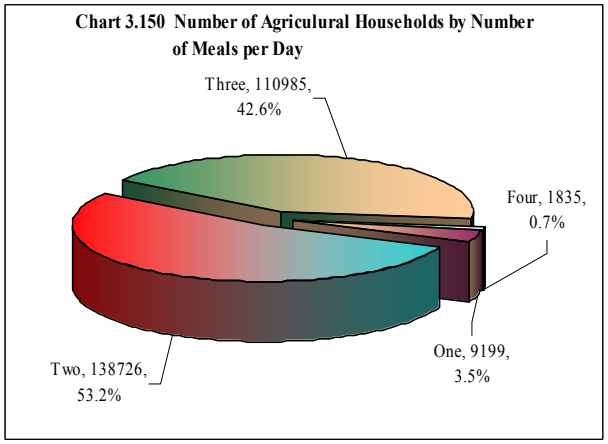


About 73 percent of the rural agricultural households in Morogoro region were getting drinking water within a distance of less than one kilometer during wet season compared to 66 of the households during the dry season. However, 27 percent of the agricultural households were getting drinking water from a distance of one or more kilometers during wet compared to 34 percent of households in the dry season. In general 92 percent and 85 percent of rural agricultural households in Morogoro region were getting their drinking water within a distance of 2 kms during the wet season dry season respectively (Chart 3.150).

3.7.7 Food Consumption Pattern

3.7.7.1 Number of Meals per Day

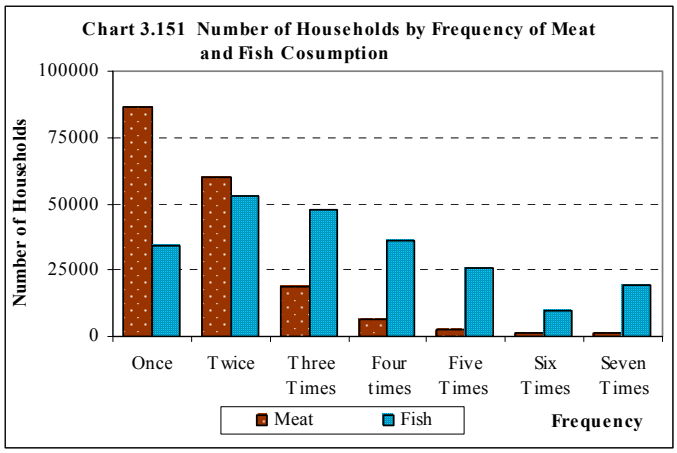
The majority of households in Morogoro region normally took 2 meals per day (53.2 percent of the households in the region), 42.6 percent took three meals, 3.5 percent took one meal and 0.7 percent took four meals per day (Chart 3.150)



Morogoro Rural district had the largest number of households that normally takes one meals per day whilst Kilombero had a relatively higher number of households that normally takes three meals per day. In Morogoro region, there were very few households that reported to have taken four meals per day (0.7% of the rural agricultural households) (Table 3.16) (Map 3.56).

3.7.7.2 Meat Consumption Frequencies

The number of agricultural households that had consumed meat during the week preceding the census was 164,669 (63% of the agricultural household in Morogoro region) with 79,176 households (48.1 % of those who consumed meat) consuming meat only once during the respective week. This was followed by those who had meat twice (33.8%), and three times (13.2%). Very few households had meat four or more times during the respective week. About 36.8 percent of the agricultural households in Morogoro region did not eat meat during the week preceding the census (Chart 3.151) (Map 3.57).



3.7.7.3 Fish Consumption Frequencies

The number of agricultural households that had consumed fish during the week preceding the census was 180,756 (69% of the total agricultural household in Morogoro region) with 68,222 households (37.7 % of those who consumed fish) consuming fish twice during the respective week. This was followed by those who had fish twice (30.6%). In general, the percentage of households that consumed fish twice or more during the week preceding the census in Morogoro region was 112,534 (62.3% of the agricultural households that ate fish in the region during the respective period). About 30.7 percent of the agricultural households in Morogoro region did not eat fish during the week preceding the census (Chart 3.160) (Map 3.58).

Table 3.16: Number of Households by Number of Meals the Household Normally Takes per Day and District

	Number of meals per day								
District	One	%	Two	%	Three	%	Four	%	Total
Kilosa	1640	2.2	41720	56.8	28515	38.8	1560	2.1	73435
Morogoro Rural	4707	8.9	33067	62.3	15343	28.9	0	0.0	53117
Kilombero	1006	2.1	17805	36.5	29852	61.2	119	0.2	48782
Ulanga	461	1.5	18416	59.6	11876	38.4	156	0.5	30908
Morogoro Urb	134	3.0	2068	46.6	2232	50.3	0	0.0	4434
Mvomero	1252	2.5	25650	51.2	23167	46.3	0	0.0	50069
Total	9199	3.5	138726	53.2	110985	42.6	1835	0.7	260746

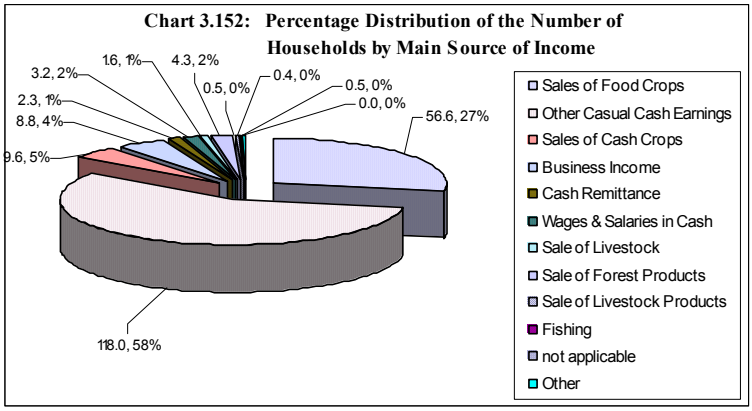
3.7.8 Food Security

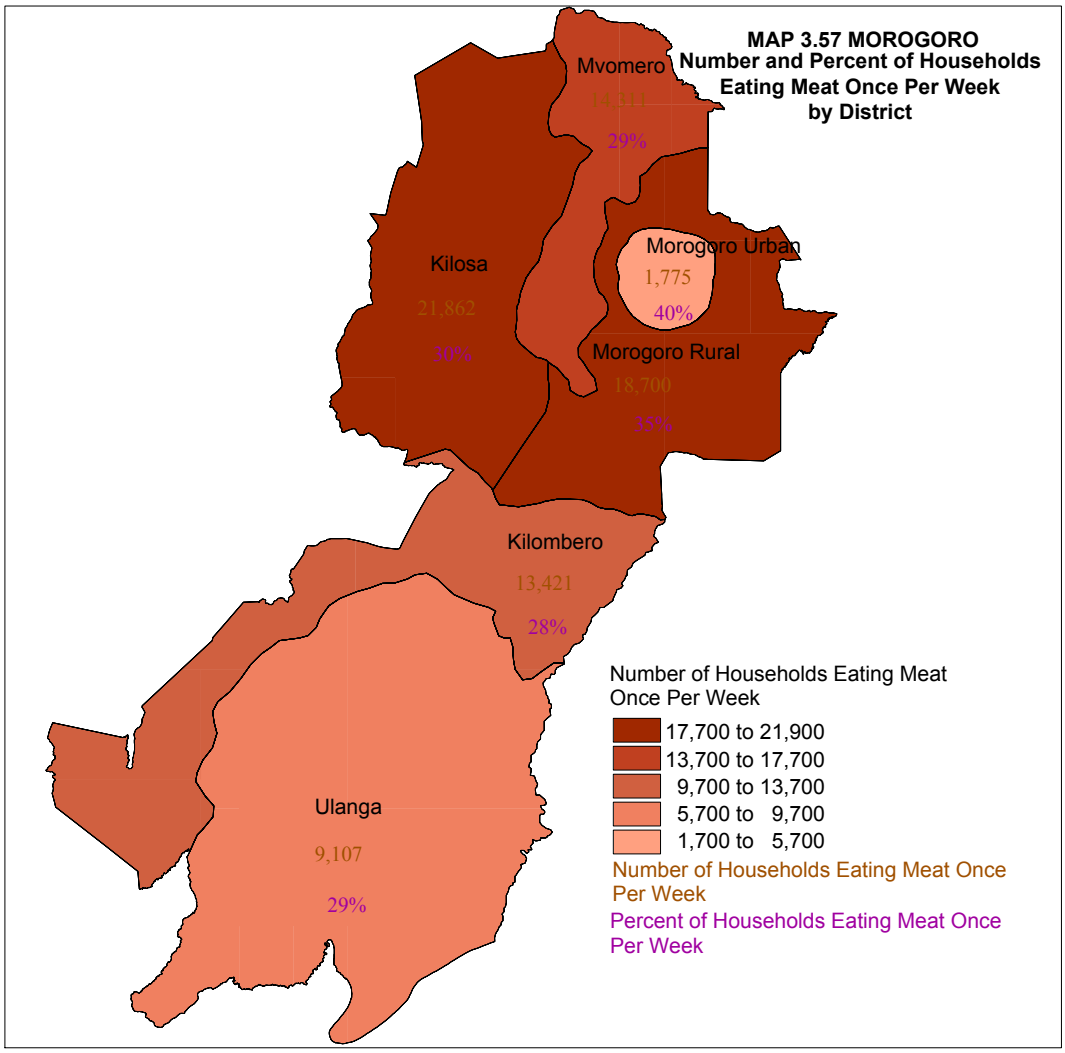
In Morogoro region, 90,859 households (34.8% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirements, whilst 21,083 (8.1%) said they sometimes experience problems. However, 11.2 percent of agricultural households in Morogoro region often experienced problems in satisfying their food needs and 8.7 percent of them said they always had problems. About 37.2 percent of the agricultural households said they did not experience any food sufficiency problems (Map 3.59).

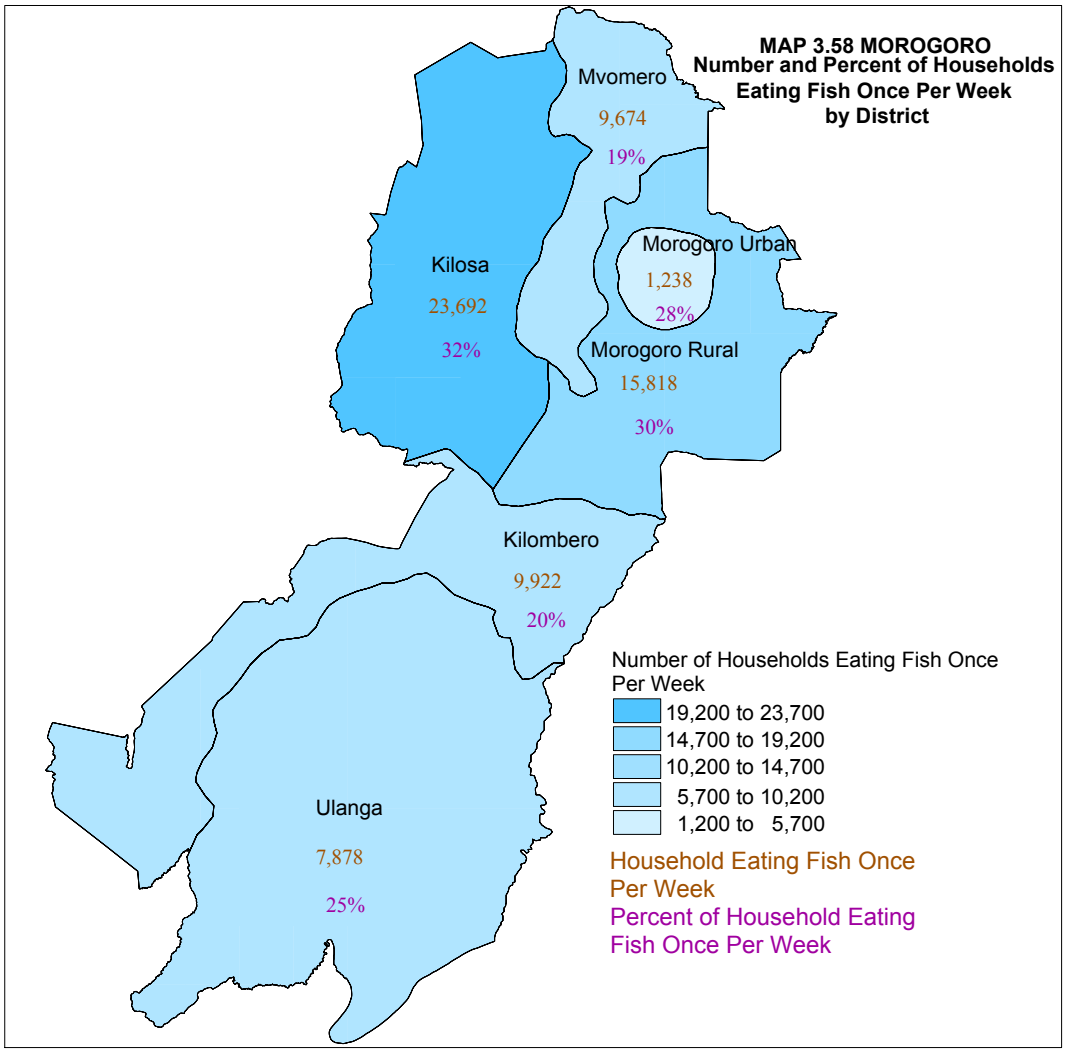
3.7.9 Main Sources of Cash Income

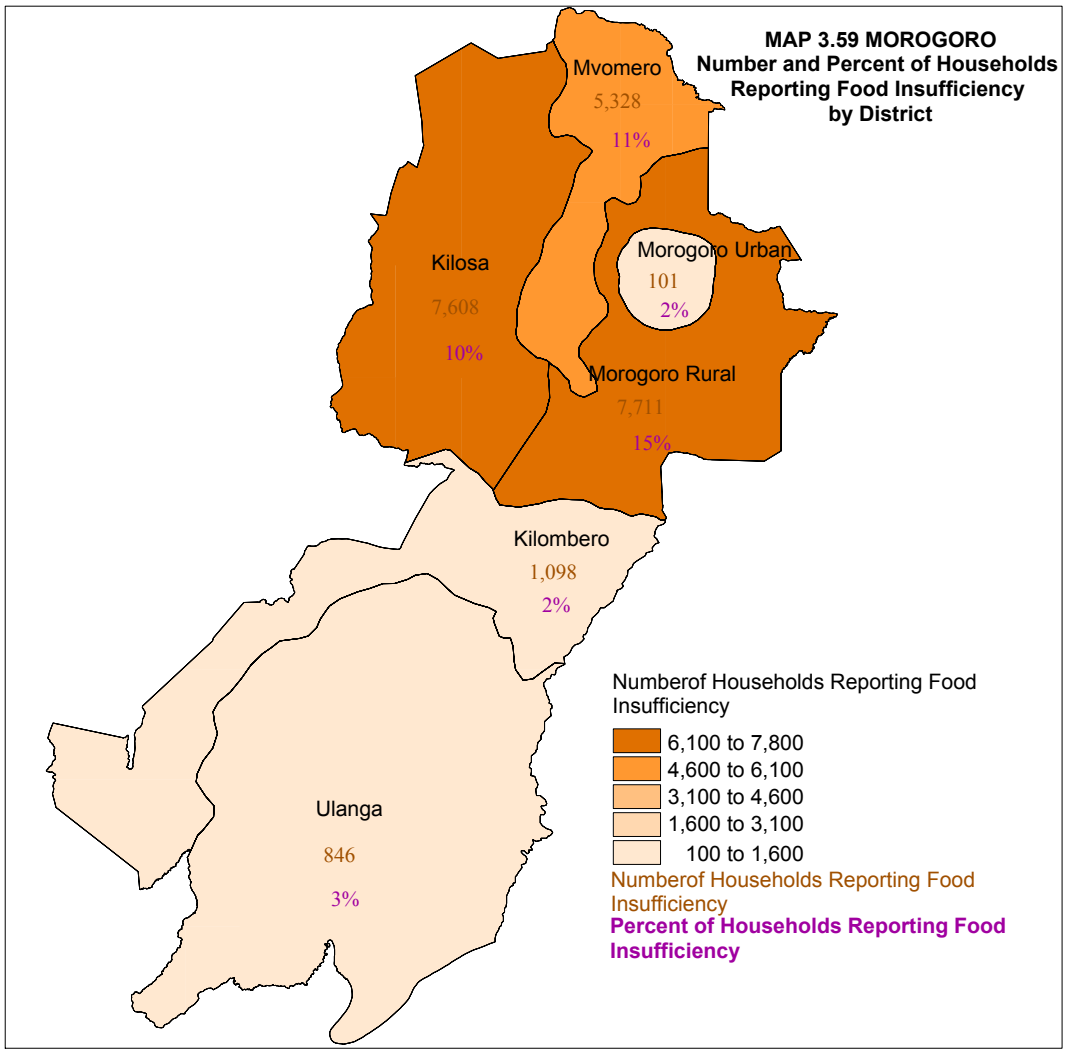
The results indicate that selling of food crops was the main cash income earning activity reported by 56.8 percent of all rural agricultural households, followed by casual labour (11.8%), selling of cash crops (9.6%), businesses (8.8%) and sale of forest products (4.3%). Other income earning activities were employment (3.2%), cash remittances (2.3%), sale of livestock (1.6%), sale of livestock products (0.5%) and fishing (0.4%) (Chart 3.152).

Chart 3.152: Percentage Distribution of the Number of Households by Main Source of Income




MAP 3.57 MOROGORO
Number and Percent of Households Eating Meat Once Per Week by District
Mvomero
14,311
29%
Kilosa
21,862
30%
Morogoro Urban
1,775
40%
Morogoro Rural
18,700
35%
Kilombero
13,421
28%
Ulanga
9,107
29%
Number of Households Eating Meat Once Per Week
17,700 to 21,900
13,700 to 17,700
9,700 to 13,700
5,700 to 9,700
1,700 to 5,700
Number of Households Eating Meat Once Per Week
Percent of Households Eating Meat Once Per Week


MAP 3.58 MOROGORO
Number and Percent of Households Eating Fish Once Per Week by District
Mvomero
9,674
19%
Kilosa
23,692
32%
Morogoro Urban
1,238
28%
Morogoro Rural
15,818
30%
Kilombero
9,922
20%
Ulanga
7,878
25%
Number of Households Eating Fish Once Per Week
19,200 to 23,700
14,700 to 19,200
10,200 to 14,700
5,700 to 10,200
1,200 to 5,700
Household Eating Fish Once Per Week
Percent of Household Eating Fish Once Per Week


MAP 3.59 MOROGORO
Number and Percent of Households Reporting Food Insufficiency by District
Mvomero
5,328
11%
Kilosa
7,608
10%
Morogoro Urban
101
2%
Morogoro Rural
7,711
15%
Kilombero
1,098
2%
Ulanga
846
3%
Numberof Households Reporting Food Insufficiency
6,100 to 7,800
4,600 to 6,100
3,100 to 4,600
1,600 to 3,100
100 to 1,600
Numberof Households Reporting Food Insufficiency
Percent of Households Reporting Food Insufficiency

MOROGORO PROFILES

This section presents the status of crops and livestock production, access to natural resources and services, demography and poverty for both the region as a whole and for each district.

4.1 Region Profile

The region profile describes the status of the Agriculture sector in the region and compares it with other regions in the country.

4.2 District Profiles

Thee following district profiles highlight the characteristics of each district and compares them in relation to Population, Main crops and livestock, production and productivity, access to services and resources and levels of poverty.

4.2.1 Kilosa

Kilosa district has the largest number of households in the region and it has one of the highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. It has a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Kilosa district is Annual Crop Farming, followed by Off farm Income and tree/forest resources. However, the district ranked third in percent of households with no off-farm activities and the highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Kilosa has a relatively high percent of female headed households (22.9%) and it has one of the second lowest average age of the household head. With an average household size of 4.3 members per household it is average for the region. Kilosa has a comparatively low literacy rate (fifth in the region) among smallholder households and this is reflected by the low level of school attendance in the region. The literacy rate for the heads of household is also moderately good (fifth in region).

It has the smallest utilized land area per household (1.8ha) and the allocated area is fully utilised indicating a high level of land pressure. The total planted area is greater than in other districts in the region due to the presence of good wet and dry seasons, however it has the fourth lowest planted area per household (1.8ha) attributed to the high number of smallholders in the district.

The district is important for maize production in the region with a planted area of over 72,420ha, however the planted area per household is the highest in the region. Paddy production is not important with a planted area of only 13,001 hectares and the production of bulrush millet and finger millets were very small. Kilosa is the only district in the region that produces wheat (238ha). Cassava production is low accounting for 11 percent of the quantity harvested in the region. The district has a large planted area of sweet potatoes (1,666 ha) and it produces irish potatoes and yams in small quantities. The production of beans in Kilosa is much higher than in other districts in the region with a planted area of 7,813ha. Oilseed crops are important in Kilosa accounting to (49 percent) of total production in the region. Vegetable production is important in the district. It has the largest planted area with pumpkins, tomatoes and onions (277 ha, 1,278 ha and 544 ha

respectively) than other districts in the region and accounts for 62 percent of the pumpkins production, 18 percent of the tomatoes production and 71 percent of the onions production in the region. Traditional cotton is the only cash crop grown in the district.

Compared to other districts in the region, Kilosa has a moderate planted area with permanent crops which is dominated by sugarcane (2,588 ha), banana (1,961 ha) and mango (1,433 ha) and coconut (1,397 ha). Other permanent crops are grown small quantities.

As with other districts in the region, most land clearing and preparation is done by hand, however very slightly more land preparation is done by oxen compared to most other districts.

The use of inputs in the region is very small, however district differences exist. Kilosa has the largest planted area with improved seed in Morogoro region and this is due to the higher planted area of vegetables. The district has the largest planted area with Farm yard manure compared to other districts in the region; Kilosa district has a moderate level of insecticide use. The use of fungicides was second high compared to other districts. It has the largest area with irrigation compared to other districts with 17,255 ha of irrigated land. The most common source of water for irrigation is from rivers using gravity. Flood and bucket are the most common means of irrigation water application and a very small amount of sprinkler irrigation is used.

The most common method of crop storage is in locally made traditional structures; however the proportion of households storing crops in the district is lower than other districts in the region. The district has the largest number of households selling crops, however for those who did not sell, the main reason for not selling is open market price too low. Kilosa district is the fourth district in the region with households processing crops and is almost all done by neighbour machine. The district also has a higher percent of households selling processed crops to marketing cooperatives than other districts and no sales are to secondary market and farmers association. Although very small, access to credit in the district is to male only and the main sources are commercial bank, trader/trade store and religious organisations/NGO/ projects.

A comparatively larger number of households receive extension services in Lushoto and all of this is from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming is important in KIlosa (with 604 planted trees) and is mostly Gravellis with some Senna spp and Leucena spp. Small proportion of households with erosion control and water harvesting structures is found in Kilosa district and is mostly erosion control bunds, however it also has the highest number of vetiver grass strips than other districts.

The district has the second largest number of cattle in the region and they are almost all indigenous. Goat production is higher compared to other districts, however it has moderate population of sheep in the region. It has the second largest number of pigs and with the highest number of chickens in the region. The district has the highest number of layers in the region. The district has the highest number of ducks and rabbits in the region. Donkeys were not found in the district. The highest number of households reporting Tsetse and tick problems was in Kilosa district and it had the largest number of households de-worming livestock. The use of draft animals in the district is very small and small number of households practice fish farming, however the district has the third largest number in the region.

It has amongst the best access to all weather road and primary schools to other districts. However, it has one of the worst access to secondary school, secondary school, health clinic and regional capital

Kilosa district has the highest percent of households with no toilet facilities, bicycles and mobile phones. It has the third highest number of households using mains electricity in the region. The most common source of energy for lighting is the wick lamp and practically all households use firewood for cooking. The district has almost equal number of households with grass roofs and iron sheets (39%) each. The most common source of drinking water is from surface water. It has high percent of households having two and three meals per day compared to other districts and the lowest percent with one and four meals per day. The district had the highest percent of households that did not eat meat or fish during the week prior to enumeration; however most households seldom or never had problems with food satisfaction.

4.2.2 Morogoro Rural

Morogoro Rural district has the fourth largest number of households in the region and it has a second highest percentage of households involved in smallholder agriculture. Most smallholders are involved in crop farming only, followed by crop and livestock farming. It has a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Morogoro Rural district is Annual Crop Farming, followed by Off farm Income. The district has the highest percent of households with no off-farm activities although it has the lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Morogoro Rural has the second highest percent of female headed households (21.8%) and it has one of the highest average age of the household head in the region. With a household size of 5 members per household it is average for the region. Morogoro Rural has a comparatively high literacy rate among smallholder households and this is reflected by the district having the highest level of school attendance in the region. The literacy rate for the heads of household is also high like other districts in the region.

It has a moderate utilized land area per household (1.6ha) and 90 percent of the allocated area is currently being utilised. The district has the fourth largest planted area in the region and the fifth largest planted area per household (1.4ha)

The district is important for maize production in the region with a planted area of over 32,425 ha, and the planted area per maize growing household is the lowest in the region. The district has a moderate planted area of paddy in the region with 15,910 hectares, however the district has the largest area under sorghum in the region (7,028 ha). Cassava production is high, accounting for 29 percent of the quantity harvested in the region. The production of beans in Morogoro Rural district is the third largest district in the region with a planted area of 1,262ha however the production of cowpeas is the highest than in other district in the region, with a planted area of 1,953ha. Morogoro Rural district has the largest simsim planted area in Morogoro Rural region with a planted area per simsim growing household of 0.47 ha. Vegetable production is moderately important in the district. It has the third largest planted area with tomatoes, chillies and cabbage (1,214 ha, 135 ha and 133 ha respectively) Traditional cash crop (e.g. tobacco) is grown in very small quantities.

Compared to other districts in the region, Morogoro Rural has the second largest planted area with permanent crops which is dominated by coconut (5,086 ha), orange (2,776 ha), banana (2,722 ha) pineapple (2,371 ha) and jack fruit 2,214 ha. Mango, coffee and sugarcane are also grown in smaller quantities.

As with other districts in the region, most land clearing is done by hand slashing; however there is a substantial area with no land clearing indicating bare ground before planting. Practically all Land preparation is done by hand, however a very small amount of land preparation is done by tractor.

The use of inputs in the region is very small, however district differences exist. Morogoro Rural has the fourth largest planted area with improved seed in the region with a least proportion of households using improved seeds. The district has the fourth highest planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), and most of this is with compost manure. Compared to other districts in the region, Morogoro Rural district has a moderate level of insecticide use. The use of fungicides and herbicides is relatively low. It has the third largest area with irrigation compared to other districts with 13,529 ha of irrigated land. The most common source of water for irrigation is from canal using hand bucket and gravity methods.

The most common method of crop storage in Morogoro Rural district is in sacks/open drum, however the proportion of households storing crops is relatively high. Morogoro Rural has slightly high number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Morogoro Rural is among the districts with the highest percent of households processing crops in Morogoro region and is almost all done by neighbours machine. The district also has the highest percent of households selling processed crops to neighbours than other districts and no sales are to marketing cooperative, large scale farms and trader at farm. Access to credit in the district is mainly to men, however women accounts to 35 percent of household that have access to credits.

A comparatively small number of households receive extension services in Morogoro Rural district and all of this is mainly from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming is less important in Morogoro Rural (with 499 planted trees) and is mostly Kyaya and Senna spp. The third highest proportion of households with erosion control and the second with water harvesting structures and is mostly terraces and water harvesting bunds, however it also has the a number of tree belts and vetiver grass.

The district has the fifth largest number of cattle in the region and they are almost all indigenous. Goat production is high compared to other districts; however it has the second lowest population of sheep in the region. It has a moderate number of pigs in the region and a moderate number of chickens. It has a moderate number ducks with no rabbits and donkeys. A number of households reported tsetse and tick problems and it has the second lowest number of households de-worming livestock. Draft animals are not used in the district. A small number of households practice fish farming, however the district has the second largest number in the region.

It has amongst the best worst access to secondary schools, secondary market and among the best access to primary schools compared to other districts. However, it has one of the worst access to regional capital.

The percentage of households without toilet facility in Morogoro Rural district is very low. It is amongst the districts with the lowest percent of households owning wheel barrows, vehicles, bicycles, and land line phones. Though small, the district has the largest number of households using mains electricity in the region. The most common source of energy for

lighting is the wick lamp and practically all households use firewood for cooking. The roofing material for most of the households in the district is grass/leaves (63%), however it has a moderate percent of households with iron sheet roofing (31%) compared to most other districts. The most common source of drinking water is from unprotected well. It is one of the districts with the highest percent of households having two meals per day. The district had fairly moderate percent of households that did not eat meat or fish during the week prior to enumeration and most households seldom had problems with food satisfaction.

4.2.3 Kilombero

Kilombero district has the second largest number of households in the region and it has a third highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. Household with livestock only and pastoralists were not found in the district.

The most important livelihood activity for smallholder households in Kilombero district is Annual Crop Farming, followed by off farm income. However, the district has the fourth highest percent of households with no off-farm activities and the second highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Kilombero has the lowest percent of female headed households (13.5%) and it has one of the highest average age of the household head in the region. With an average household size of 5.0 members per household it is slightly higher than average for the region. Kilombero district has the highest literacy rate among smallholder households and this is reflected by the concomitant relatively high level of school attendance in the region.

The land area utilized per household (1.9ha) is the second highest in the region and 78 percent of the allocated area is currently being utilized which is the lowest for the region. The district has the third largest planted area in the region, and the forth largest planted area per household (0.87ha in the long rainy season and 0.72ha in the short rainy season). The planted area in the long rainy season is almost double than that of the short rainy season.

The district is most important for paddy production in the region with a planted area of over 53,096 ha and the planted area per household is 1.2 ha which is above average for the region. Maize production is moderate important with a planted area of only 22,810 hectares, however it is the fourth highest in the region. Sorghum production is less important with a planted area of only 815 ha and is the fourth highest in the region. Irish potatoes and wheat are not produced in the district. The district has the fourth largest planted area of cassava accounting for 13 percent of the cassava planted area in the region. The production of beans in Kilombero district is much lower than in other districts in the region with a planted area of 74ha. Oilseed crops are less important in Kilombero with 16 percent of the groundnuts grown in the district. Vegetable production is not important and tobacco is not grown in the district.

Permanent crops are moderate important in Kilombero district (14% of the total permanent crop planted area in Morogoro region) and is the fourth highest important district in the region. The most prominent permanent crops in the district include sugarcane (5,086 ha), banana (2,776 ha), orange (2,722 ha) and mango (2,371 ha). It is the only district that produces malay apple (74 ha) and it has the highest area with sugarcane in the region (5,086 ha). Other permanent crops are grown in small to medium quantities.

As with other districts in the region, most land clearing is done by hand slashing, however it has the largest area cleared by burning and a relatively small area of bare ground before planting. Practically all Land preparation is done by hand, however small amount of land preparation is done and tractor and oxen.

The use of inputs in the region is very small, however district differences exist. Kilombero has the smallest planted area with improved seed in Morogoro region and this is due to the dominance of permanent crops which do not need frequent planting. The district also has a small planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), and mostly is with inorganic fertiliser. Compared to other districts in the region, Kilombero district has the smallest area of insecticide and fungicide use and the use of herbicides is relatively high. It has the fourth largest area with irrigation in the region with 9,019 ha of irrigated land. The most common source of water for irrigation is from rivers and wells and almost all water application is by gravity and using hand bucket.

The most common method of crop storage in Kilombero is sacks/open drum, and the proportion of households not storing crops in the district is the lowest for the region. The district has the highest percent of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Kilombero district has a second highest percent of households processing crops in the region and is almost done by machine from neighbours. Small quantities of processed crops are sold and very few households have access to credit.

A moderate number of households receive extension services in Kilombero district and almost all of this is from the government. The quality of extension services was rated good by the majority of the households.

Tree farming is less important in Kilombero district (with 240 planted trees) and is mostly Senna Spp with some Tectona Grandis and Gravellis. The least proportion of households with water harvesting bunds is found in Kilombero district and it also has the second least number of erosion control bunds.

The district has a moderate number of cattle in the region and they are almost all indigenous. Goat and sheep production is small compared to other districts. It has the second least number of pigs in the region and the second largest number of chickens, all of which are indigenous. Virtually layers are the only improved chicken found in the district. The district has the third largest number of ducks and rabbits and turkeys are not found in the district. A small number of households reported tsetse and tick problems in Kilombero district. A relative big amount of de-worming of livestock is practiced in the district no draft animals are used. Fish farming is practiced by a small number of households, however the district has the third largest number in the region.

It has amongst the best access to primary school and all weather road compared to other districts. However, it has one of the worst accesses to secondary school, health clinic, secondary market and the regional capital.

The percentage of households without toilet facility in Kilombero district is low for the region, however it has the second highest percent of households with no toilet facilities. It has the lowest percent of households owning land line phones, vehicles and Tv/video and wheel barrow. It has the second highest number of households using mains electricity in the region and the most common source of energy for lighting is the wick lamp and practically all households use firewood for cooking. The district has a high percent of households with grass roofs (60%) and only 37 percent of households have iron sheet roofing. The most common source of drinking water is from unprotected wells. Thirty eighty percent of the households in the district reported having one or two meals per day and only one percent of the households reported having more than three meals per day. The district had a moderate percent of households that did not eat meat and a small percent

of household that did not eat fish during the week prior to enumeration and most households seldom had problems with food satisfaction.

4.2.4 Ulanga

Ulanga district has the least number of households for the region and it has the second smallest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. Household with livestock only and pastoralists were not found in the district.

The most important livelihood activity for smallholder households in Ulanga district is annual crop farming followed by off farm income. It has the lowest percent of households with no off-farm activities and the fourth highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Ulanga district has a relatively high percent of female headed households (20.5%) and it has one of the highest average age of the household head. With an average household size of 5.2 members per household it is higher than the average for the region. Ulanga district has a comparatively lowest literacy rate among smallholder households and this is reflected by low level of school attendance in the region.

It has the fourth largest utilized land area per household (1.8 ha) and only 85 percent of the allocated land area is utilised. The total planted area is the second smallest in the region however it has the second highest planted area per household (0.63ha) in the long rainy season and 0.78ha in the short rainy season.

Ulanga district is less important for maize production in the region with a planted area of only 16,388 ha, and the planted area per household is among the lowest in the region. Paddy production is the second important in the region with a planted area of 30,662 hectares and the production of sorghum is small.

Cassava and bean production in Ulanga district was small and Irish potato and wheat are not grown. Oilseed crops and vegetables are not important in the district however, whist the district has second smallest planted area with tomatoes it is the least in terms of tomato planted area per household. Traditional cash crops (e.g. tobacco and cotton) are grown in small quantities in the district.

Compared to other districts in the region, Ulanga district has the second smallest planted area with permanent crops (5% of total permanent crop planted area) which is dominated by banana (2,573 ha), mango (1,330 ha) and coconut ((1,049 ha). Medium areas of pawpaw, sugarcane, palm oil are also grown while other cash crops are grown in small quantities.

As with other districts in the region, most land clearing and preparation is done by hand, however the smallest land preparation done by oxen is found in the district.

As with other districts in the region, land clearing by hand slashing is predominant and practically all land preparation is by hand.

The use of inputs in the region is very small, however district differences exist. Ulanga district has among the smallest planted area with improved seed; however it has the second highest planted area per household in the region. The district also has the smallest percent of planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), and most

of this is with inorganic fertiliser. Compared to other districts in the region, Ulanga district has a moderate area planted with insecticide but has the second highest percent of the total planted area in the region. The percent of planted area with herbicides is the second highest in the region and is amongst the lowest for fungicide and pesticide. It has one of the smallest area of irrigation 5,805 ha. The most common source of water for irrigation is from rivers using hand buckets/Bucket. Watering cans are the most common means of irrigation water application.

The most common method of crop storage is in sacks/open drum, however the proportion of households not storing crops in Ulanga district is the second lowest in the region. The number of households selling crops in the district is among the highest in the region, however for those who did not sell, the main reason for not selling is insufficient production. The second smallest percent of households processing crops in the region is found in Ulanga district and processing is mostly done by neighbours machine. The district has the fourth largest number of households processing crops on farm by machine. It also has the fourth largest number of households processing crops on farm by hand. Most households that sell crops sell to local market/trade store and no sales are to secondary market nor farmers association. Access to credit in the district is very small.

Although small, Ulanga has the highest percent of households receive extension services in the region and almost all of this is from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming is important in Ulanga district (with 2,168 planted trees) and all of them are Gravellis. The largest proportion of households in Ulanga district use erosion control bunds for erosion control.

Ulanga district has the highest number of cattle in the region and most of them are indigenous. It is one of the districts with the fourth highest number of goats in the region. Ulanga district has the highest number of sheep in the region and is also one of the districts with the smallest number of pigs and chicken, however it is the only district with broilers in the region. The district has the highest number of turkeys, moderate number of ducks, small number of rabbits and donkeys are not found in the district. The district has the highest percentage of households reported Tsetse and tick problems and it had one of the highest number of households de-worming livestock. Although small, the use of draft animals in the district is the highest and amongst the four regions that practice fish farming Ulanga district is the least.

It is amongst the districts with the best access to secondary schools, primary schools, feeder roads, all weather roads, health clinics, hospitals, regional capital, tarmac roads and tertiary markets compared to other districts. However, it has the worst access to primary and secondary markets.

Ulanga district has a small number of households with no toilet facilities. The district has low percent of households owning wheel barrows, vehicles and television/video, land line, bicycles and mobile phones and it has high percent of households with radio and the second highest with irons. It has the lowest number of households using mains electricity in the region. The most common source of energy for lighting is the wick lamp and practically all households use firewood for cooking. The district has the largest percent of households with grass roofs with only 23 percent of households having iron sheets. The most common source of drinking water is protected well and it has the second highest percent of households having two or three meal per day compared to other districts and the lowest percent with 3 meals per day. The

district had the highest percent of households that did not eat meat during the week prior to enumeration but has the second lowest percent of households that did not eat fish. Most households seldom had problems with food satisfaction.

4.5 Morogoro Urban

Morogoro Urban district has the second smallest number of households in the region and it has the lowest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. It has a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Morogoro Urban district is annual crop farming followed by tree and forest resources, and permanent crop farming. The district has amongst the lowest percent of households with no off-farm activities and the second smallest percent of households with more than one member with off-farm income. Compared to other districts in the region, Morogoro Urban has a second smallest percent of female headed households (17.4%) and it has one of the highest average age of the household head. With an average household size of 5.2 members per household it is slightly lower than the regional average. Morogoro Urban has the second highest literacy rate among smallholder households in the region and this is reflected by the concomitant relatively high level of school attendance. The rate of "Never Attended" is among the lowest in the region.

It has one of the smallest utilized land area per household (1.5 ha) which is slightly lower than the regional average of 1.8 ha per household. The district has smallest planted area in the region, however it has the fourth highest planted area per household (.63 ha) in the long rainy season.

The district is not important for maize production with a planted area of 2,889 ha, however the planted area per household is second lowest in the region. Paddy production is also not important with a planted area of only 497 hectares and the production of sorghum is very small. Wheat and finger millet are not grown in the district. The district has the lowest percent of cassava planted area in the region and it has virtually no Irish with small quantities of sweet potatoes. The production of beans in Morogoro Urban district is the second smallest in the region with a planted area of 1,116 ha and oil crops are not important in the district. Vegetable production is also not important in the district; however the district has second lowest planted area per tomato growing household. Traditional cash crops (e.g. tobacco and cotton) are not grown in the district.

Compared to other districts in the region, Morogoro Urban has a small planted area with permanent crops (571 ha) which is dominated by banana (950 ha) and pigeon pea (319ha), mango (246 ha). Other permanent crops are either not grown or are grown in very small quantities.

As with other districts in the region, most land clearing is done by hand slashing, however "no land clearing" is relatively high indicating bare land before cultivation. Practically all Land preparation is done by hand, however a very small amount of land preparation is done by tractor.

The use of inputs in the region is very small, however district differences exist. Morogoro Urban has one of the smallest planted area with improved seed in Morogoro region however it has the highest percent of planted area using improved

seed. The district has the smallest planted area with fertilizers and most of this is with inorganic fertiliser with small quantities of farm yard manure and compost. Compared to other districts in the region, Morogoro Urban district has the lowest percent of its planted area with insecticides in the region. The use of fungicides, herbicides and pesticide was lowest in the region. It has the smallest planted area with irrigation in the region with only 1,596 ha of irrigated land. Rivers, wells boreholes and canals is used as the source of irrigation water while gravity and hand bucket were the only methods for obtaining water. Buckets/Water cans are the most common means of irrigation water application and a very small amount of flood irrigation is used.

The most common method of crop storage is in locally sacks/open drum; however the proportion of households not storing crops in the district is the highest in the region. The district has the high number of households selling crops and the main reason for not selling is insufficient production. Morogoro Urban district has the highest percent of households processing crops on neighbours machine and a small percent of households selling processed crops mainly to neighbours and local market/trade store. No sales were made to secondary market and farmers association. Access to credit is moderate with women having the second highest percent in the region and the main reason for not using credit is lack of awareness.

A comparatively small number of households receive extension services in Morogoro Urban district and all of this is from the government. The quality of extension services was rated between good and very good by most of the households.

Tree farming is not important in Morogoro Urban (with only 1.084 planted trees) and is mostly with Senna Spp, Cyprus Spp with some Gravellis, Eucalyptus spp and Melicia excelsa. The smallest number of erosion control and water harvesting structures is found in Morogoro Urban district and they are erosion conrol bunds and terraces.

The district has the smallest number of cattle in the region and they are mostly all indigenous. Goat, sheep and pig production is smallest in the region. It has a comparatively smallest number of chickens. Small numbers of ducks, turkeys and rabbits are found while donkeys are not found in the district. A moderate number of households reported Tsetse and tick problems in Morogoro Urban district and has the moderate number of households de-worming livestock. The use of draft animals in the district is non existent and no fish farming is practiced in the district.

It is amongst the districts with the best access to primary schools and all weather roads however it has one of the worst access to regional capital, secondary markets, health clinics, primary markets, and tarmac roads.

Morogoro Urban district has the lowest percent of households with no toilet facilities. The district has the largest percent of households owning radios and Irons and very small number of households reported ownership of vehicles, mobile phones, wheel barrows and televisions/videos. It has the lowest number of households using mains electricity in the region. The most common source of energy for lighting is the wick lamp and practically all households use firewood for cooking. The district has the smallest percent of households with grass roofs and the highest 63 percent of households having iron sheets. The most common source of drinking water is from surface water, unprotected spring and piped water. It has a moderate percent of households having two or three meal per day compared to other districts. The district had the fourth highest percent of households that did not eat meat during the week prior to enumeration, however it is the least districts with percent of households that did not eat fish during the week. Most households in the district seldom had problems with food satisfaction.

4.6 Mvomero

Mvomero district has a moderate number of households in the region and it has the third highest percents of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. It has a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Mvomero district is Annual Crop Farming, followed by tree/forest resources, off farm income and keeping/herding. The district has the second lowest percent of households with no off-farm activities however it has the third highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Mvomero has the third highest percent of female headed households (20.8%) and it has one of the moderate average age of the household head. With an average household size of 4.7 members per household it is the average for the region. The literacy rate among smallholder households in Mvomero is low compared to other districts in the region and associated with this is a number of household members who have never attended school.

It has the largest utilized land area per household (1.9 ha) in Morogoro region. The total planted area is the second largest in the region and has the largest planted area in the long rainy season. However the planted area per household in the long rainy season was 0.68ha compared to 0.63 ha per household in the short rainy season.

The district is the second most important for maize production in the region with a planted area of 48,158 ha and the planted area per household is the second largest in the region. Paddy production is third for the region with a planted area of 13,360 hectares and the district has the third planted area per paddy growing household. Production of sorghum is low and there is no production of finger millet in the district. The district also has the largest planted area of beans (9,422 ha), cow peas (1,464 ha) and field peas (872 ha), however very little green gram and chick peas are produced. Cassava production is relatively high accounting for 29 percent of the total cassava planted area in the region. Oilseed crops are important in Mvomero district and has the fourth largest planted in the region. The area under sunflower is the second largest in the region (235 ha) and the third largest planted area of simsim. Vegetable production is not important in the district; however tomatoes, cabbage, onion, chillis, amaranths, carot, cucumber and pumpkins are produced in very small quantities. Mvomero is among the three districts that cultivates cotton although the planted area is small.
Compared to other districts in the region, Mvomero has the highest planted area with permanent crops which is dominated by mandarine (3,477 ha), sugarcane (2,795 ha), mango (1,983 ha) banana (1,256 ha) and pigeon peas (1,071 ha). Other permanent crops are either not grown or are grown in small quantities.

Most land clearing is done by hand slashing, however it has the highest Planted Area with “no land clearing” indicating the presence of a large area of bare land before cultivation. It has also the second largest area of bush clearance in the region. Most land preparation is done by hand, however it has the highest planted area cultivated by oxen. A very small amount of land preparation is done by tractor.

The use of inputs in the region is very small, however district differences exist. Mvomero has the highest planted area with improved seed in Morogoro region. The use of fertilizer is very small, however inorganic fertilizer is mostly used followed by farm yard manure and compost. Compared to other districts in the region, Mvomero district has the second largest

percentage of the planted area in the district with fungicides application and the highest amount of pesticide was used. It has the largest area with irrigation with a planted area of 17,481 ha under irrigation. The most common source of water for irrigation is from river and canal using gravity. Buckets/Watering cans is the only means of irrigation water application in the district.

The most common method of crop storage is in sacks/open drum; however the proportion of households not storing crops in the district is moderate to low when compared to other districts in Morogoro region. The district has a moderate number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Mvomero is among the districts in Morogoro region with a high percent of households processing crops and is mostly done using neighbours machines. The district also has a small percent of households selling processed crops mostly to neighbours and traders on farm. Access to credit by households in the district is small.

A comparatively small number of households receive extension services in Mvomero district and mostly from the government. The quality of extension services was rated between good and very good by the majority of the households.

Tree farming is the most important in Mvomero district compared to other district (with 17,103 planted trees) and are mostly Gravellis, Calophylum Inophyllum, Cyprus Spp with some Eucalyptus Spp and Moringa Spp. A small proportion of households with erosion control and water harvesting structures is found in Mvomero district and is mostly erosion control bunds, water harvesting bunds and tree belts, It also has a small number of drainage ditches for erosion control.

The district has the third largest number of cattle in the region and they are almost all indigenous. Goat population is also the second largest in the region, however it has one of the second largest population of sheep in the region. The district has the highest number of pigs in the region but it has the third largest chicken population, all of which are indigenous. The second largest numbers of ducks, third with turkeys and is the only district with donkeys and rabbits are also found in the district. It has the third highest proportion of households reporting Tsetse and second highest with tick problems in the region and it had a moderate to low number of households de-worming livestock compared to other districts. Draft animals are used to a very small number of household and fish farming is not practiced.

It is amongst the districts with the best access to primary schools and all weather roads, however it has one of the worst access to regional capital, secondary school, tertiary markets, tarmac roads, feeder roads, health clinics and primary markets.

Mvomero district has the fourth highest percent of households with no toilet facilities. Though small, it has the second highest percent of households with radio, however it is among the districts with a low percent of households owning vehicles and land line phones. It has a small number of households using mains electricity. The most common source of energy for lighting is the wick lamp and almost all households use firewood for cooking. The district has a moderate to high percent of households with grass roofs with and 29 percent of households have iron sheet roofing. The most common sources of drinking water are from unprotected wells and piped water. It has the highest percent of households having three meals per day compared to other districts and moderate percent with one or two meals per day. The district has a moderate to high percent of households that did not eat meat or fish during the week prior to enumeration; however most households seldom had problems with food satisfaction.

4. APPENDICES

APPENDIX I: CROP TABULATION

APPENDIX II: CROP TABLES

NUMBER OF AGRICULTURE HOUSEHOLDS

2.1 TYPE OF AGRICULTURE HOUSEHOLD: Number of Agriculture households by type of household and District during 2002/03 Agriculture Year

Agriculture, Non Agriculture and Urban Households								
District	Rural hosehold involved in Agriculture	% of Total rural households	Rural households NOT involed in Agriculture	% of Total rural households	Total rural households	% of Total rural households	Urban households	Total number of Household (from 2002 pop. Census)
	Number	%	Number	%	Number	%	Number	Number
Kilosa	73,435	94	4,869	6	78,304	74	27,331	105,635
Morogoro R	53,117	96	2,295	4	55,412	98	1,311	56,723
Kilombero	48,782	93	3,479	7	52,261	71	21,132	73,393
Ulanga	30,908	98	670	2	31,578	85	5,410	36,988
Morogoro U	4,434	90	494	10	4,928	9	49,279	54,207
Mvomero	50,069	97	1,604	3	51,673	89	6,641	58,314
Total	260,746	95	13,411	5	274,157	71	111,103	385,260

2.2 TYPE OF AGRICULTURE HOUSEHOLD:Number of Agriculture Households By Type of Holding and District, 2002/03 Agricultural Year

	Crops Only		Livestock Only		Crops & Livestock		Total Number of agriculture Household	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number	%	Number	%	Number	%			
Kilosa	60,162	82	371	1	12,902	18	73,435	73,064	13,273
Morogoro	47,421	89	364	1	5,332	10	53,117	52,753	5,696
Kilombero	45,555	93	0	0	3,227	7	48,782	48,782	3,227
Ulanga	27,639	89	0	0	3,269	11	30,908	30,908	3,269
Morogoro Urb	3,779	85	11	0	645	15	4,434	4,423	655
Mvomero	39,666	79	754	2	9,650	19	50,069	49,316	10,403
Total	224,222	86	1,500	1	35,024	13	260,746	259,246	36,524

3.0: Number of Agriculture Households and Average Household Size by Sex of the Head of Household and District, 2002/03 Agriculture Year

	Male			Female			Total		
District	Number of Households	%	Average Household Size	Number of Households	%	Average Household Size	Number of Households	%	Average Household Size
Kilosa	57,345	78	4	16,090	22	4	73,435	100	4
Morogoro R	41,550	78	5	11,567	22	5	53,117	100	5
Kilombero	42,217	87	5	6,565	13	5	48,782	100	5
Ulanga	24,582	80	5	6,326	20	4	30,908	100	5
Morogoro Urb	3,663	83	4	771	17	4	4,434	100	4
Mvomero	39,680	79	5	10,390	21	4	50,069	100	5
Total	209,037	80	5	51,709	20	4	260,746	100	5

Table 3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

	Livelihood Activity						
District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	1	5	4	2	6	7	3
Morogoro R	1	4	5	2	6	7	3
Kilombero	1	4	5	2	6	7	3
Ulanga	1	5	4	2	6	7	3
Morogoro Urb	1	3	5	4	6	7	2
Mvomero	1	5	4	3	6	7	2
Total	1	5	4	2	6	7	3

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES

3.1a RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: First Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	45,647	2,047	1,036	16,941	2,232	0	5,398
Morogoro	39,376	5,008	1,077	5,964	966	0	239
Kilombero	34,252	2,411	738	9,669	1,100	249	482
Ulanga	25,792	156	766	2,595	304	233	1,140
Morogoro Urban	1,689	1,360	61	902	143	55	187
Mvomero	40,841	3,020	618	4,347	497	0	745
Total	187,597	14,002	4,296	40,418	5,241	537	8,192

3.1b RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Second Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	21,590	5,070	10,072	24,430	3,344	386	7,757
Morogoro	9,433	14,576	3,686	20,588	2,914	122	2,635
Kilombero	11,414	4,981	2,455	23,506	757	879	5,035
Ulanga	4,736	2,128	1,229	16,283	1,607	1,003	4,151
Morogoro Urban	2,201	870	168	677	187	33	372
Mvomero	7,129	5,741	11,184	14,716	2,620	0	9,089
Total	56,502	33,367	28,794	100,200	11,430	2,424	29,039

3.1c RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Third Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	4,714	5,731	14,310	12,557	3,486	0	29,013
Morogoro	1,713	7,392	9,201	10,666	3,124	244	19,332
Kilombero	1,325	7,204	6,346	4,580	1,432	1,116	24,892
Ulanga	303	1,907	2,225	6,827	3,998	77	15,037
Morogoro Urban	457	476	571	633	207	45	1,876
Mvomero	745	7,744	7,438	6,032	2,582	251	21,979
Total	9,256	30,455	40,090	41,296	14,828	1,733	112,130

3.1d RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fourth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	905	5,385	14,381	5,573	2,354	228	18,992
Morogoro	733	3,190	10,864	6,490	3,162	122	18,744
Kilombero	719	10,668	11,519	1,325	758	488	12,334
Ulanga	78	3,578	8,483	1,457	1,981	78	7,582
Morogoro Urban	35	373	967	279	158	36	1,652
Mvomero	378	3,593	5,685	2,116	2,090	249	12,406
Total	2,847	26,787	51,899	17,241	10,502	1,200	71,711

3.1e RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fifth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	0	3,419	3,111	1,394	373	467	7,157
Morogoro	968	3,923	6,482	3,365	4,176	121	6,365
Kilombero	473	6,084	7,944	882	338	372	2,898
Ulanga	0	2,961	4,846	386	151	380	2,230
Morogoro Urban	0	292	766	214	78	20	210
Mvomero	252	2,305	1,367	870	248	121	3,341
Total	1,692	18,985	24,517	7,110	5,365	1,480	22,201

3.1f RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Sixth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	0	499	113	250	126	253	482
Morogoro	0	121	1,447	730	960	359	3,625
Kilombero	483	821	744	235	123	118	592
Ulanga	0	607	919	155	304	75	153
Morogoro Urban	11	11	90	12	24	12	38
Mvomero	0	0	118	124	128	0	0
Total	494	2,059	3,431	1,506	1,664	817	4,890

3.1g RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Seventh Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kilosa	0	0	0	130	0	0	512
Morogoro	245	0	0	0	0	365	359
Ulanga	0	77	0	0	231	0	0
Morogoro Urban	17	13	13	0	0	0	0
Mvomero	121	0	123	0	0	0	0
Total	382	90	136	130	231	365	871

HOUSEHOLDS DEMOGRAPHS

3.2 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year (row %)

	Sex					
	Male		Female		Total	
Age Group	Number	%	Number	%	Number	%
Less than 4	70,972	50	70,616	50	141,588	100
05 - 09	95,824	51	90,777	49	186,602	100
10 - 14	90,246	51	85,852	49	176,098	100
15 - 19	71,840	52	66,723	48	138,563	100
20 - 24	46,702	45	56,332	55	103,034	100
25 - 29	39,261	42	54,366	58	93,627	100
30 - 34	39,811	48	42,457	52	82,268	100
35 - 39	32,361	48	34,453	52	66,814	100
40 - 44	30,021	53	26,789	47	56,810	100
45 - 49	20,643	47	23,072	53	43,716	100
50 - 54	18,577	48	20,062	52	38,639	100
55 - 59	14,891	56	11,889	44	26,780	100
60 - 64	14,234	50	14,126	50	28,359	100
65 - 69	9,953	54	8,486	46	18,439	100
70 - 74	10,129	61	6,588	39	16,717	100
75 - 79	3,689	54	3,107	46	6,796	100
80 - 84	3,261	65	1,728	35	4,989	100
Above 85	2,037	36	3,700	64	5,737	100
Total	614,454	50	621,124	50	1,235,577	100

3.3 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year (col %)

	Sex					
	Male		Female		Total	
Age Group	Number	%	Number	%	Number	%
Less than 4	70,972	12	70,616	11	141,588	11
05 - 09	95,824	16	90,777	15	186,602	15
10 - 14	90,246	15	85,852	14	176,098	14
15 - 19	71,840	12	66,723	11	138,563	11
20 - 24	46,702	8	56,332	9	103,034	8
25 - 29	39,261	6	54,366	9	93,627	8
30 - 34	39,811	6	42,457	7	82,268	7
35 - 39	32,361	5	34,453	6	66,814	5
40 - 44	30,021	5	26,789	4	56,810	5
45 - 49	20,643	3	23,072	4	43,716	4
50 - 54	18,577	3	20,062	3	38,639	3
55 - 59	14,891	2	11,889	2	26,780	2
60 - 64	14,234	2	14,126	2	28,359	2
65 - 69	9,953	2	8,486	1	18,439	1
70 - 74	10,129	2	6,588	1	16,717	1
75 - 79	3,689	1	3,107	1	6,796	1
80 - 84	3,261	1	1,728	0	4,989	0
Above 85	2,037	0	3,700	1	5,737	0
Total	614,454	100	621,124	100	1,235,577	100

3.4 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Households Members By Sex and district for the 2002/03 Agricultural Year

	Sex					
	Male		Female		Total	
District	Number	%	Number	%	Number	%
Kilosa	255,669	81	59,003	19	314,672	100
M'goro R	209,641	80	53,357	20	262,999	100
Kilombero	215,905	88	29,830	12	245,735	100
Ulanga	132,065	82	28,280	18	160,345	100
M'goro Urb	15,829	83	3,143	17	18,972	100
Mvomero	190,109	82	42,747	18	232,855	100
Total	1,019,217	82	216,360	18	1,235,577	100

3.5 HOUSEHOLDS DEMOGRAPHS: Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District, 2002/03 Agricultural Year

	Read & Write									
	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	186,228	66	4,640	2	359	0	92,427	33	283,654	100
M'goro R	148,357	63	10,338	4	357	0	74,859	32	233,912	100
Kilombero	148,240	69	7,277	3	129	0	58,475	27	214,121	100
Ulanga	89,013	63	4,711	3	154	0	47,599	34	141,477	100
M'goro Urb	11,047	67	530	3	0	0	5,025	30	16,602	100
Mvomero	126,270	62	10,338	5	101	0	67,514	33	204,223	100
Total	709,155	65	37,834	3	1,102	0	345,898	32	1,093,989	100

3.6 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members 5 years and above By School Attendancy and District , 2002/03 Agricultural Year

	School Attendancy							
	Attending School		Completed		Never Attended to School		Total	
District	Number	%	Number	%	Number	%	Number	%
Kilosa	67,297	24	130,904	46	85,453	30	283,654	100
M'goro R	64,849	28	99,157	42	69,905	30	233,912	100
Kilombero	64,126	30	100,297	47	49,697	23	214,121	100
Ulanga	36,442	26	61,193	43	43,842	31	141,477	100
Morogoro	3,920	24	7,756	47	4,926	30	16,602	100
Mvomero	50,920	25	97,423	48	55,880	27	204,223	100
Total	287,555	26	496,730	45	309,704	28	1,093,989	100

3.7 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping /		Livestock Pastoralist		Fishing		Government /	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	158,010	56	3,345	1	130	0	230	0	1,839	1
M'goro R	87,012	37	1,398	1	122	0	0	0	2,416	1
Kilombero	122,583	57	1,125	1	94	0	250	0	1,244	1
Ulanga	71,529	51	3,689	3	153	0	619	0	1,297	1
M'goro Urb	9,114	55	154	1	51	0	81	0	162	1
Mvomero	119,887	59	3,625	2	0	0	0	0	1,341	1
Total	568,135	52	13,336	1	549	0	1,180	0	8,299	1

cont… HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

	Main Activity									
	Private - NGO / Mission /		Self Employed (Non		Self Employed (Non		Unpaid Family Helper		Not Working &	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	2,805	1	2,389	1	8,655	3	6,201	2	1,703	1
M'goro R	16,011	7	1,848	1	26,628	11	2,315	1	768	0
Kilombero	835	0	1,634	1	2,282	1	778	0	381	0
Ulanga	695	0	231	0	4,944	3	914	1	307	0
M'goro Urb	442	3	177	1	650	4	317	2	100	1
Mvomero	985	0	1,360	1	930	0	2,502	1	487	0
Total	21,773	2	7,638	1	44,089	4	13,027	1	3,746	0

cont...HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

	Main Activity											
	Not Working &		Housemaker /		Student		Unable to Work / Too		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	238	0	3,384	1	60,329	21	33,180	12	1,215	0	283,654	100
M'goro R	351	0	979	0	62,847	27	29,774	13	1,443	1	233,912	100
Kilombero	119	0	788	0	59,318	28	21,823	10	866	0	214,121	100
Ulanga	76	0	308	0	34,912	25	21,576	15	228	0	141,477	100
M'goro Urb	0	0	183	1	3,640	22	1,441	9	91	1	16,602	100
Mvomero	761	0	2,221	1	46,236	23	22,758	11	1,132	1	204,223	100
Total	1,545	0	7,864	1	267,282	24	130,552	12	4,975	0	1,093,989	100

3.8 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of involvement in Farming Activivty and District, 2002/03 Agricultural Year

	Involvement in Farming									
	Works Full-time on Farm		Works Part-time on		Rarely Works on Farm		Never Works on Farm		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	73,329	26	24,321	9	105,313	37	80,691	28	283,654	100
M'goro R	68,853	29	5,740	2	105,164	45	54,154	23	233,912	100
Kilombero	65,230	30	12,252	6	89,590	42	47,048	22	214,121	100
Ulanga	37,454	26	10,402	7	56,832	40	36,789	26	141,477	100
M'goro Urb	5,247	32	1,470	9	5,477	33	4,409	27	16,602	100
Mvomero	65,249	32	7,615	4	87,241	43	44,118	22	204,223	100
Total	315,361	29	61,800	6	449,618	41	267,211	24	1,093,989	100

3.9 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

	Education Level											
	Under Standard One		Standard One		Standard Two		Standard Three		Standard Four		Standard Five	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	128	0	376	0	1,605	1	3,273	3	13,500	10	3,391	3
M'goro R	103	0	244	0	1,585	2	1,403	1	12,053	12	1,437	1
Kilombero	620	1	615	1	2,501	2	4,240	4	12,506	12	2,895	3
Ulanga	0	0	829	1	1,295	2	2,211	4	8,615	14	1,535	3
M'goro Urb	12	0	91	1	304	4	214	3	979	13	213	3
Mvomero	1,477	2	881	1	1,891	2	1,448	1	15,084	15	1,363	1
Total	2,340	0	3,036	1	9,181	2	12,789	3	62,737	13	10,833	2

cont... HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

	Education Level											
	Standard Six		Standard Seven		Standard Eight		Training After Primary		Pre Form One		Form One	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	1,993	2	98,269	75	1,143	1	962	1	338	0	131	0
M'goro R	1,087	1	75,169	76	1,134	1	230	0	0	0	0	0
Kilombero	2,732	3	67,286	67	2,119	2	354	0	189	0	362	0
Ulanga	1,521	2	41,312	68	841	1	72	0	78	0	301	0
M'goro Urb	234	3	5,116	66	91	1	21	0	13	0	0	0
Mvomero	1,336	1	70,868	73	623	1	128	0	0	0	121	0
Total	8,904	2	358,021	72	5,951	1	1,767	0	618	0	915	0

cont... HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

	Education Level											
	Form Two		Form Three		Form Four		Form Six		Training After		University & Other	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	1,047	1	126	0	1,180	1	249	0	198	0	105	0
M'goro R	572	1	238	0	1,065	1	122	0	0	0	61	0
Kilombero	1,229	1	94	0	1,661	2	94	0	439	0	0	0
Ulanga	458	1	228	0	1,444	2	298	0	78	0	0	0
M'goro Urb	45	1	13	0	154	2	24	0	21	0	0	0
Mvomero	361	0	0	0	599	1	0	0	122	0	0	0
Total	3,713	1	698	0	6,103	1	788	0	858	0	167	0

cont... HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

	Education Level			
	Adult Education		Total	
District	Number	%	Number	%
Kilosa	2,888	2	130,904	100
M'goro R	2,655	3	99,157	100
Kilombero	360	0	100,297	100
Ulanga	78	0	61,193	100
M'goro Urb	210	3	7,756	100
Mvomero	1,122	1	97,423	100
Total	7,313	1	496,730	100

3.10 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Households and Average Household Size By Sex of the Head of Household and District, 2002/03 Agricultural Year

	Male			Female			Total		
District	Number	%	Average Household Size	Number	%	Average Household Size	Number	%	Average Household Size
Kilosa	57,345	78	553	16,090	22	455	73,435	100	531
Morogoro	41,550	78	600	11,567	22	551	53,117	100	589
Kilombero	42,217	87	622	6,565	13	559	48,782	100	613
Ulanga	24,582	80	410	6,326	20	341	30,908	100	396
Morogoro Urban	3,663	83	53	771	17	50	4,434	100	52
Mvomero	39,680	79	595	10,390	21	511	50,069	100	577
Total	209,037	80	558	51,709	20	481	260,746	100	543

3.11 HOUSEHOLD DEMOGRAPHS: Number of Agricultural Households Involved in Off Farm Income Generating Activity By Number of Off Farm Income Activities and District, 2002/03 Agricultural Year

	Off farm income							
	One Off Farm Income		Two Off Farm Income		More than Two Off Farm		Total	
District	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Kilosa	36,022	52	24,657	35	8,924	13	69,604	100
Morogoro	29,027	62	13,188	28	4,665	10	46,880	100
Kilombero	24,618	54	14,639	32	6,731	15	45,988	100
Ulanga	19,111	63	7,845	26	3,495	11	30,451	100
Morogoro Urban	2,836	65	1,081	25	429	10	4,346	100
Mvomero	27,495	56	17,807	36	3,781	8	49,083	100
Total	139,109	56	79,217	32	28,027	11	246,352	100

3.12 HOUSEHOLDS DEMOGRAPHS: Number of Heads of Agricultural Households By Maximum Education Level Attained and District, 2002/03 Agricultural Year

	Maximum Education Level Attained							
District	No Education	Primary Education	Post Primary Education	Secondary Education	Post Secondary Education	University & Equivalent Education	Adult Education	Total
Kilosa	21,075	48,796	261	1,397	93	105	1,707	73,435
Morogoro	13,273	36,483	118	1,137	0	61	2,044	53,117
Kilombero	8,422	37,344	235	2,234	187	0	360	48,782
Ulanga	5,206	23,806	72	1,746	78	0	0	30,908
Morogoro Urban	1,344	2,759	21	162	12	0	136	4,434
Mvomero	10,184	38,174	128	714	122	0	747	50,069
Total	59,504	187,363	835	7,391	492	167	4,995	260,746

3.13 HOUSEHOLDS DEMOGRAPHS: Mean, Meadian, Mode of Age of Head of Agricultural Household and District

	Male			Female			Total		
District	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Kilosa	43	40	30	46	45	45	44	41	45
Morogoro	44	40	35	45	45	50	44	41	35
Kilombero	43	41	40	45	43	50	44	42	40
Ulanga	42	40	30	43	39	32	42	40	30
Morogoro Urban	44	42	30	49	48	50	45	42	30
Mvomero	44	40	30	45	40	30	44	40	30
Total	43	40	30	45	43	50	44	41	30

3.14 Time Series of male and Female Headed Households

Type of Holding	NSCA 1994/95	EAS 1995/96	EAS 1996/97	IAS 1997/98	DIAS 1998/99	NSCA 2002/03
Male Headed (Number in Thousands)	169,145	195,367	206,387	216,532	189,972	209,037
Female Headed (Number in Thousands)	32,706	44,257	47,028	45,275	55,821	51,709
Total	201,851	239,624	253,415	261,807	245,793	260,746
Male Headed (Percentage)	84	82	81	83	77	80
Female Headed (Percentage)	16	18	19	17	23	20
Total	100	100	100	100	100	100

3.15 Literacy Rate of Heads of Households by Sex and District

District	Literacy								
	Know			Don't know			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Kilosa	97,708	93,519	191,227	40,682	51,745	92,427	138,391	145,263	283,654
Morogoro	86,653	72,400	159,053	26,353	48,506	74,859	113,006	120,905	233,912
Kilombero	82,094	73,552	155,646	26,475	32,000	58,475	108,569	105,552	214,121
Ulanga	49,347	44,531	93,878	21,084	26,515	47,599	70,432	71,045	141,477
Morogoro Urban	6,258	5,320	11,578	1,966	3,059	5,025	8,224	8,379	16,602
Mvomero	74,749	61,960	136,709	30,112	37,403	67,514	104,861	99,363	204,223
Total	396,809	351,282	748,091	146,672	199,226	345,898	543,481	550,508	1,093,989

LAND ACCESS/OWNERSHIP/TENURE

4.1 LAND ACCESS/OWNERSHIP: Number of Farming Households By Type of Land Ownership/Tenure and District or the 2002/03 agriculture Year

District	Land Access																Total Number of Households
	Leased/Certificate of Ownership		Owned Under Customary Law		Bought		Rented		Borrowed		Households with Area Shared Croped From Others		Households with Area under Other Forms of Tenure				
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%			
Kilosa	1,647	2	58,578	59	9,140	9	16,818	17	6,337	6	1,605	2	4,389	4			98,513
Morogoro R	4,473	6	39,781	55	10,482	15	7,961	11	6,817	9	1,285	2	1,438	2			72,236
Kilombero	11,292	17	24,776	37	11,017	17	7,921	12	4,160	6	2,123	3	5,019	8			66,308
Ulanga	7,172	18	22,690	57	1,524	4	3,983	10	2,889	7	382	1	1,504	4			40,144
Morogoro Urb	308	5	3,180	53	1,142	19	703	12	332	6	69	1	230	4			5,965
Mvomero	6,235	9	37,591	53	9,488	13	10,304	15	2,915	4	853	1	3,512	5			70,898
Total	31,126	9	186,595	53	42,792	12	47,689	13	23,452	7	6,317	2	16,092	5			354,064

4.2 LAND ACCESS/OWNERSHIP: Area of Land by type of Ownership/Tenure (Hectare) and District, 2002/03

District	Land Access/ Ownership (Hectare)							
	Area Leased/Certificate of Ownership	Area Owned Under Customary Law	Area Bought From Others	Area Rented	Area Borrowed	Area Shared Croped	Area under Other Forms of Tenure	Total
Kilosa	3,876	108,735	12,998	14,546	3,535	1,360	7,309	152,360
Morogoro	5,696	61,087	11,249	6,850	6,318	1,743	5,972	98,915
Kilombero	26,256	57,482	19,193	6,469	2,615	1,957	10,944	124,916
Ulanga	12,584	45,290	1,954	2,276	1,555	313	1,845	65,817
Morogoro Urban	725	4,564	1,211	448	255	38	473	7,713
Mvomero	16,740	72,406	17,313	8,169	1,596	346	3,309	119,880
Total	65,877	349,563	63,918	38,759	15,873	5,757	29,853	569,600
%	12	61	11	7	3	1	5	100

LAND USE

Table 5.1 LAND USE: Number of Agricultural Households By Type of Land Use and District, 2002/03 Agricultural Year

	Land Use												
District	Households with Area under Temporary Mono Crops	Households with Area under Temporary Mixed Crops	Households with Area under Permanent Mono Crops	Households with Area under Permanent Mixed Crops	Households with Area under Permanent / Annual Mix	Households with Area under Pasture	Households with Area under Fallow	Households with Area under Natural Bush	Households with Area under Planted Trees	Households with Area Rented to Others	Households with Area Unusable	Households with Area of Uncultivated Usable Land	Total Number of Household
Kilosa	66,886	15,760	8,968	5,392	4,432	891	1,987	631	1,280	1,463	3,030	17,467	128,186
Morogoro	44,266	10,267	15,987	8,631	10,908	122	1,325	727	1,434	1,803	2,639	4,544	102,653
Kilombero	46,578	3,057	13,039	3,868	2,873	610	1,952	726	1,073	3,530	1,099	13,984	92,390
Ulanga	28,784	5,087	2,532	1,899	4,354	77	1,147	149	918	1,288	763	6,993	53,991
Morogoro Urban	2,515	2,138	1,570	1,162	834	11	152	0	241	126	52	677	9,478
Mvomero	35,809	16,490	11,354	4,233	3,402	493	3,466	124	2,847	1,321	1,628	11,363	92,528
Total	224,838	52,799	53,451	25,185	26,801	2,205	10,029	2,356	7,793	9,531	9,210	55,028	479,226

Table 5.3 LAND SUFFICIENCY: Number of Agricultural Households by Whether All Land Available to the Household Was Used and District, 2002/03 Agricultural Year

	Was all Land Available to the Hh Used During 2002/03?					
	Yes		No		Total	
District	Number	Percent	Number	Percent	Number	Percent
Kilosa	52,391	72	20,673	28	73,064	100
Morogoro	40,810	77	11,943	23	52,753	100
Kilombero	28,969	59	19,813	41	48,782	100
Ulanga	21,241	69	9,667	31	30,908	100
Morogoro Urban	3,358	76	1,065	24	4,423	100
Mvomero	35,344	72	13,972	28	49,316	100
Total	182,114	70	77,132	30	259,246	100

Table 5.4 LAND SUFFICIENCY: Number of Agricultural Households by Whether they Consider Having Sufficient Land for the Household and District, 2002/03 Agricultural Year

	Do you Consider that you have sufficient land for the Hh?					
	Yes		No		Total	
District	Number	Percent	Number	Percent	Number	Percent
Kilosa	44,404	61	28,660	39	73,064	100
Morogoro	30,846	58	21,907	42	52,753	100
Kilombero	20,834	43	27,948	57	48,782	100
Ulanga	18,252	59	12,657	41	30,908	100
Morogoro Urban	2,809	64	1,614	36	4,423	100
Mvomero	31,534	64	17,782	36	49,316	100
Total	148,678	57	110,568	43	259,246	100

Table 5.5 LAND SUFFICIENCY: Number of Agricultural Households by whether Female Members of the Household Own or Have Customary Right to Land and District, 2002/03 Agricultural Year

	Do any Female Members of the Hh own or have customary right					
	Yes		No		Total	
District	Number	Percent	Number	Percent	Number	Percent
Kilosa	17,694	24	55,370	76	73,064	100
Morogoro	16,650	32	36,103	68	52,753	100
Kilombero	7,834	16	40,948	84	48,782	100
Ulanga	9,035	29	21,873	71	30,908	100
Morogoro Urban	1,329	30	3,094	70	4,423	100
Mvomero	22,658	46	26,658	54	49,316	100
Total	75,200	29	184,047	71	259,246	100

ACCESS AND USE OF RESOURCE

6.1 COMMUNAL RESOURCES: Average Distance (Km) from Agriculture Household to Communal Resources by Name of Communal Resource, Season and District, 2002/03 Agricultural Year

District	Communal Resource									
	Water for Humans		Water for Livestock		Communal Grazing		Communal Firewood		Wood for Charcoal	
	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season
Kilosa	0.5	1.1	0.8	1.3	1.8	2.7	2.3	2.3	2.5	2.5
Morogoro	0.4	0.9	0.8	1.5	1.8	2.7	2.5	2.6	2.7	2.8
Kilombero	0.2	0.4	0.7	1.4	2.3	3.3	1.8	1.9	2.7	2.7
Ulanga	0.3	0.6	2.2	3.5	5.5	6.4	3.0	3.0	3.8	3.7
Morogoro Urban	1.1	2.5	1.0	1.7	1.9	2.7	2.5	2.4	4.0	4.0
Mvomero	0.6	0.9	0.7	1.6	2.4	3.2	3.2	3.2	3.0	3.0
Total	0.4	0.9	0.9	1.7	2.4	3.3	2.5	2.5	2.8	2.9

cont…. COMMUNAL RESOURCES: Average Distance (Km) from Agriculture Household to Communal Resources by Name of Communal Resource, Season and District, 2002/03 Agricultural Year

District	Communal Resource							
	Building Poles		Forest for Bees (Honey)		Hunting (Animal Products)		Fishing (Fish)	
	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season
Kilosa	2.5	2.5	4.0	4.0	7.3	7.4	7.3	8.2
Morogoro	3.3	3.3	4.4	4.4	7.5	7.5	7.1	8.0
Kilombero	2.4	2.6	4.4	4.6	9.2	9.8	9.0	10.6
Ulanga	3.8	4.1	4.6	4.6	11.3	11.4	11.4	13.4
Morogoro Urban	3.7	3.6	5.2	5.0	7.6	7.6	7.5	8.4
Mvomero	3.5	3.4	4.6	4.7	7.5	7.5	7.4	8.2
Total	3.0	3.1	4.4	4.4	8.2	8.4	8.1	9.2

6.2 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Water for Humans by type of Utilization and District, 2002/03 Agricultural Year

District	Water for Humans				
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Village Market	Not Used by Household	Total
Kilosa	73,310	126	0	0	73,435
Morogoro	52,753	121	0	244	53,117
Kilombero	48,666	0	116	0	48,782
Ulanga	30,908	0	0	0	30,908
Morogoro Urban	4,421	0	0	13	4,434
Mvomero	50,069	0	0	0	50,069
Total	260,127	246	116	256	260,746

6.3 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Water for Livestock by type of Utilization and District, 2002/03 Agricultural Year

District	Water for Livestock							
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	22,429	223	130	93	131	18,789	31,641	73,435
Morogoro	8,545	122	0	0	0	8,487	35,963	53,117
Kilombero	11,017	119	0	0	0	12,381	25,265	48,782
Ulanga	4,063	75	0	0	0	10,589	16,181	30,908
Morogoro Urban	620	0	0	0	0	1,030	2,784	4,434
Mvomero	10,403	0	0	0	0	12,434	27,232	50,069
Total	57,077	539	130	93	131	63,710	139,066	260,746

6.4: COMMUNAL RESOURCES: Number of Agricultural Households with Access to Communal Grazing by type of Utilization and District, 2002/03 Agricultural Year

District	Communal Grazing						
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Local Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	7,899	231	117	131	21,146	43,911	73,435
Morogoro	3,220	61	0	0	3,016	46,819	53,117
Kilombero	1,621	119	119	125	5,694	41,103	48,782
Ulanga	1,839	0	0	0	10,253	18,817	30,908
Morogoro Urban	152	12	0	0	822	3,449	4,434
Mvomero	1,980	237	0	0	11,540	36,312	50,069
Total	16,711	661	236	256	52,471	190,411	260,746

6.5 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Communal Firewood by type of Utilization and District, 2002/03 Agricultural Year

District	Communal Firewood								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	68,355	741	261	612	93	0	1,463	1,910	73,435
Morogoro	49,794	1,218	0	0	118	0	367	1,620	53,117
Kilombero	46,310	603	0	0	0	0	1,511	358	48,782
Ulanga	30,149	223	0	0	0	0	536	0	30,908
Morogoro Urban	4,309	0	0	12	13	0	62	38	4,434
Mvomero	46,900	1,747	0	0	0	127	1,174	122	50,069
Total	245,817	4,532	261	624	224	127	5,113	4,048	260,746

6.6 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Wood for Charcoal by type of Utilization and District, 2002/03 Agricultural Year

District	Wood for Charcoal								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	16,379	2,432	1,939	327	776	130	23,892	27,561	73,435
Morogoro	5,488	4,071	706	359	2,403	0	30,926	9,164	53,117
Kilombero	5,469	612	1,204	129	0	0	13,562	27,807	48,782
Ulanga	3,630	148	0	0	154	850	22,491	3,637	30,908
Morogoro Urban	511	0	258	24	38	71	1,263	2,270	4,434
Mvomero	1,923	1,433	1,074	0	626	249	24,108	20,657	50,069
Total	33,399	8,695	5,180	839	3,996	1,299	116,241	91,096	260,746

6.7 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Building Poles by type of Utilization and District, 2002/03 Agricultural Year

District	Building Poles								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	54,306	1,901	131	728	117	0	9,519	6,734	73,435
Morogoro	39,386	304	229	0	121	0	8,939	4,139	53,117
Kilombero	26,494	364	0	0	0	0	10,834	11,090	48,782
Ulanga	24,371	224	0	0	0	0	6,158	155	30,908
Morogoro Urban	3,057	0	0	0	0	12	1,327	38	4,434
Mvomero	30,224	886	250	128	0	0	16,346	2,235	50,069
Total	177,837	3,679	610	856	238	12	53,123	24,391	260,746

6.8 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Forest For Bees Products by type of Utilization and District, 2002/03 Agricultural Year

District	Forest for Bees Products							
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	1,698	255	260	131	131	20,442	50,519	73,435
Morogoro	1,582	0	0	0	0	6,482	45,052	53,117
Kilombero	988	238	127	0	119	9,902	37,408	48,782
Ulanga	383	152	0	0	0	13,107	17,266	30,908
Morogoro Urban	0	0	0	0	0	26	4,408	4,434
Mvomero	474	124	0	0	0	8,087	41,384	50,069
Total	5,125	769	388	131	250	58,047	196,038	260,746

6.9 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Hunting Grounds by type of Utilization and District, 2002/03 Agricultural Year

District	Hunting Grounds				
	Home of Farm Consumption / Utilization	Sold to Neighbours	Not Used by Household	Not Available	Total
Kilosa	366	311	11,451	61,307	73,435
Morogoro	0	0	2,203	50,914	53,117
Kilombero	254	119	8,615	39,794	48,782
Ulanga	77	0	16,561	14,270	30,908
Morogoro Urban	12	5	374	4,043	4,434
Mvomero	497	124	8,728	40,721	50,069
Total	1,206	558	47,933	211,048	260,746

6.10 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Fishing Resources by type of Utilization and District, 2002/03 Agricultural Year

District	Fishing Resources								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Kilosa	994	485	258	0	0	0	6,796	64,902	73,435
Morogoro	585	240	0	0	0	0	4,353	47,939	53,117
Kilombero	1,563	366	0	379	129	117	14,202	32,027	48,782
Ulanga	382	851	231	153	0	0	14,332	14,958	30,908
Morogoro Urban	37	13	11	11	0	0	296	4,066	4,434
Mvomero	362	253	0	0	125	0	6,945	42,383	50,069
Total	3,923	2,208	500	543	254	117	46,924	206,276	260,746

TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION - LONG AND SHORT RAINY SEASON

Table 7.1 and 7.2a TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households PlantingCrops by Season and District

District	Short Rainy Season		Long Rainy Season		Total Area Planted (hectares)	% Area Planted in Short Rainy Season
	Number of Households	Area Planted	Number of Households	Area Planted		
Kilosa	28,856	14,219	133,717	98,900	113,119	13
Morogoro Rural	55,685	26,368	100,018	46,217	72,585	36
Kilombero	34,532	24,946	64,189	55,851	80,797	31
Ulanga	27,037	21,104	51,570	32,967	54,071	39
Morogoro Urban	2,860	950	10,276	3,984	4,934	19
Mvomero	62,803	40,016	70,818	48,628	88,644	45
Total	211,773	127,604	430,589	286,546	414,151	31

Table 7.1 and 7.2b TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Area Planted (ha) by Season and District

District	Short Rainy Season		Long Rainy Season		Total Number of Crop Growing Households	% Area Planted in Short Rainy Season
	Number of Households Growing Crops	Number of Households Not Growing Crops	Number of Household Growing Crops	Number of Household Not Growing		
Kilosa	28,856		133,717		73,064	314,672
Morogoro Rural	55,685		100,018		52,753	262,999
Kilombero	34,532		64,189		48,782	245,735
Ulanga	27,037		51,570		30,908	160,345
Morogoro Urban	2,860		10,276		4,423	18,972
Mvomero	62,803		70,818		49,316	232,855
Total	211,773		430,589		259,246	1,235,577

Table 7.1 and 7.2c TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Morogoro Region

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Cereal	**106,628**	**79,381**	**744**	**230,834**	**155,177**	**672**	**337,461**	**234,558**	**695**
Maize	75,654	55,292	731	119,436	60,278	505	195,090	115,570	592
Paddy	27,279	23,114	847	99,248	89,889	906	126,527	113,003	893
Sorghum	3,603	956	265	11,227	4,587	409	14,830	5,544	374
Bulrush Millet	39	19	494	416	70	169	455	89	197
Finger Millet	0	0	0	165	90	543	165	90	543
Wheat	0	0	0	238	223	936	238	223	936
Barley	53	0	0	104	40	382	157	40	254
Roots and Tubers	**2,179**	**2,681**	**1230**	**20,122**	**28,471**	**1415**	**22,301**	**31,152**	**1397**
Cassava	530	667	1258	16,644	22,958	1379	17,174	23,625	1376
Sweet Potatoes	436	705	1618	2,514	4,178	1662	2,950	4,883	1655
Irish Potatoes	63	263	4150	669	461	689	733	724	988
Yams	52	261	4999	24	60	2475	77	322	4195
Cocoyam	1,098	785	715	269	813	3021	1,367	1,598	1169
Pulses	**28556**	**11595**	**406**	**17,483**	**7,589**	**434**	**46,039**	**19,184**	**417**
Mung Beans	49	24	504	0	0.00	0	49	24	504
Beans	20407	8617	422	13,360	6,050	453	33,766	14,667	434
Cowpeas	6083	1948	320	3,096	1,095	354	9,179	3,043	332
Green Gram	954	174	182	441	118	267	1,395	292	209
Pigeon Peas	0	0	0	0	0	0	0	0	0
Chich Peas	65	8	119	0	0	0	65	8	119
Bambaranuts	52	8	151	52	8	151	104	16	151
Field Peas	947	816	861	535	318	594	1,482	1,134	765
Oil Seeds and Oil nuts	**2,477**	**751**	**303**	**10,258**	**3,415**	**333**	**12,735**	**4,167**	**327**
Sunflower	0	0	0	495	133	270	495	133	270
Simsim	2,159	582	269	7,362	2,170	295	9,521	2,752	289
Groundnuts	307	168	545	2,219	984	443	2,527	1,152	456
Soya Beans	11	2	198	54	12	215	65	14	212
Castor Seed	0	0	0	128	116	907	128	116	907
Fruit and Vegetables	**5,232**	**16,909**	**3232**	**7,167**	**25,320**	**3533**	**12,400**	**42,229**	**3406**
Okra	68	3	50	96	96	993	164	99	603
Radish	0	0	0	0	0	0	0	0	0
Turmeric	0	0	0	0	0	0	0	0	0
Bitter Aubergine	44	97	2208	49	47	969	93	145	1557
Garlic	0	0	0	0	0	0	0	0	0
Onions	305	1,057	3462	660	3,630	5499	965	4,687	4854
Ginger	0	0	0	0	0	0	0	0	0
Cabbage	667	3,965	5943	1,222	6,409	5246	1,889	10,374	5492
Tomatoes	2,685	9,700	3612	3,474	12,047	3468	6,159	21,747	3531
Spinnach	96	156	1628	88	191	2163	184	347	1884
Carrot	448	491	1096	30	34	1142	478	525	1099
Chillies	278	443	1595	255	530	2081	533	973	1828
Amaranths	90	273	3029	367	577	1571	457	849	1858
Pumpkins	237	282	1188	710	1,595	2246	947	1,877	1981
Cucumber	91	279	3078	61	33	541	152	312	2058
Egg Plant	75	84	1123	80	68	861	154	153	988
Water Mellon	99	54	545	51	38	741	151	92	612
Cauliflower	49	24	494	25	24	988	74	48	659
Cash Crops	**16**	**2**	**143**	**682**	**283**	**415**	**698**	**285**	**409**
Seaweed	0	0	0	0	0	0	0	0	0
Cotton	0	0	0	620	248	399	620	248	399
Tobacco	16	2	143	62	35	573	78	38	485
Pyrethrum	0	0	0	0	0	0	0	0	0
Jute	0	0	0	0	0	0	0	0	0
Total	**145,088**			**286,546**			**431,634**		

* The total area planted includes the sum of the planted area for both Long and Short Season and is an overestimation of the actual area due to being produced on the same land during the 2 seasons. Previous surveys have used the Ipno season to estimate physical land area under production to different crops

Table 7.1 and 7.2d TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Morogoro Region

Crop	Short Rainy Season		Long Rainy Season		Total Area Planted Short and Long Rainy Season	% Area Planted in Short Rainy Season
	Number of Households	Area Planted (ha)	Number of Households	Area Planted (ha)		
Cereal	**151,780**	**106,628**	**281,251**	**230,834**	**337,461**	**32**
Maize	118,288	75,654	148,561	119,436	195,090	**39**
Paddy	26,536	27,279	109,655	99,248	126,527	**22**
Sorghum	6,698	3,603	20,878	11,227	14,830	**24**
Bulrush Millet	128	39	623	416	455	**9**
Finger Millet	0	0	624	165	165	**0**
Wheat	0	0	653	238	238	**0**
Barley	130	53	257	104	157	**34**
Roots and Tubers	**5,595**	**2,179**	**49,417**	**20,122**	**22,301**	**10**
Cassava	2,318	530	39,432	16,644	17,174	**3**
Sweet Potatoes	1,237	436	6,511	2,514	2,950	**15**
Irish Potatoes	250	63	1,955	669	733	**9**
Yams	129	52	166	24	77	**68**
Cocoyam	1,660	1,098	1,353		1,098	**100**
Pulses	**30,881**	**28556**	**46,090**	**17,483**	**46,039**	**62**
Mung Beans	122	49	0	0	49	**100**
Beans	15,536	20407	29,182	13,360	33,766	**60**
Cowpeas	12,451	6083	13,446	3,096	9,179	**66**
Green Gram	1,512	954	1,852	441	1,395	**68**
Chich Peas	246	65	0	0	65	**100**
Bambaranuts	0	52	261	52	104	**50**
Field Peas	1,013	947	1,348	535	1,482	**64**
Oil Seeds and Oil nuts	**6,111**	**2,477**	**23,003**	**10,258**	**12,735**	**19**
Sunflower	0	0	1,303	495	495	**0**
Simsim	4,744	2,159	16,162	7,362	9,521	**23**
Groundnuts	1,261	307	4,885	2,219	2,527	**12**
Soya Beans	105	11	139	54	65	**16**
Castor Seed	0	0	515	128	128	**0**
Fruit and Vegetables	**17,332**	**5,232**	**29,209**	**7,167**	**12,400**	**42**
Okra	236	68	630	96	164	**41**
Bitter Aubergine	362	44	397	49	93	**47**
Onions	844	305	2,064	660	965	**32**
Cabbage	1,883	667	3,588	1,222	1,889	**35**
Tomatoes	7,972	2,685	11,777	3,474	6,159	**44**
Spinnach	558	96	455	88	184	**52**
Carrot	623	448	160	30	478	**94**
Chillies	984	278	1,257	255	533	**52**
Amaranths	828	90	3,017	367	457	**20**
Pumpkins	2,005	237	4,563	710	947	**25**
Cucumber	399	91	334	61	152	**60**
Egg Plant	376	75	718	80	154	**48**
Water Mellon	141	99	127	51	151	**66**
Cauliflower	121	49	121	25	74	**67**
Cash Crops	**76**	**16**	**1,619**	**682**	**698**	**2**
Cotton	0	0	1,254	620	620	**0**
Tobacco	76	16	365	62	78	**21**
Total		**145,088**		**286,546**	**431,634**	

Table 7.1 and 7.2e Total Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Means of Soil Preparation and District Long and Short Season, Morogoro Region

	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
District	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Kilosa	5,986	11,000	5,576	9,017	71,627	91,515	83,189	111,532
Morogoro R	1,584	2,463	2,247	1,896	74,926	62,961	78,757	67,321
Kilombero	14,671	17,234	3,363	10,000	54,154	51,679	72,188	78,913
Ulanga	4,208	7,793	4,876	12,017	31,231	32,803	40,314	52,613
Morogoro Urb	275	340	606	451	4,997	3,707	5,877	4,499
Mvomero	8,174	13,787	2,501	2,676	64,976	67,320	75,652	83,784
Total	34,898	52,617	19,168	36,058	301,911	309,985	355,976	398,661
%	10	13	5	9	85	78	100	100

7.1 1nd 7.2f Total Annual Crop amd Vegetable Production: Total Number of Agriculture Households and Planted Area by Fertilizer Use and District for the 2002/03 agriculture Year - Long and Short Rainy Season, Morogoro Region

	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
District	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Kilosa	4,971	5,450	471	575	2,664	6,021	75,719	101,074	83,824	113,119
Morogoro R	1,172	670	2,897	1,867	103	42	76,645	70,006	80,817	72,585
Kilombero	1,589	3,146	1,036	1,047	2,051	2,668	68,109	73,937	72,785	80,797
Ulanga	230	222	0	0	459	889	41,082	52,960	41,771	54,071
Morogoro Urb	178	200	77	96	320	192	5,432	4,445	6,006	4,934
Mvomero	3,760	4,889	3,463	3,355	7,258	10,155	61,797	70,246	76,278	88,644
Total	11,899	14,576	7,943	6,940	12,855	19,967	328,784	372,668	361,481	414,151

Table 7.1 and 7.2g Total Annual Crop and Vegetable Production: Total Numberof Agriculture Households and Planted Area by Irrigation Use and District for the 2002/03

	Irrigation Use						% of area planted under irrigation
	Households Using Irrigation		Households Not Using Irrigation		Total		
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	12,806	17,255	71,019	95,865	83,824	113,119	15.3
Morogoro R	14,787	13,529	66,029	59,057	80,817	72,585	18.6
Kilombero	6,813	9,019	65,971	71,778	72,785	80,797	11.2
Ulanga	5,962	5,805	35,810	48,267	41,771	54,071	10.7
Morogoro Urb	1,611	1,596	4,394	3,338	6,006	4,934	32.3
Mvomero	12,422	17,481	63,856	71,163	76,278	88,644	19.7
Total	54,401	64,685	307,080	349,466	361,481	414,151	15.6
%	15	16	85	84	100	100	15.6

Number of Households is an estimate due to the double counting of households growing crops in both long and short seasons. To compare previous surveys use Number of Long season planters only

Table 7.1 and 7.2h Totao annual Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Insecticide Use and District for the 2002/03 aggriculture year - Long and Short Rainy Season

	Pesticide Use						
	Households Using Pesticide		Households Not Using Pesticide		Total		% of Planted Area using Pesticide
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	5,982	11,353	77,842	101,767	83,824	113,119	10.0
Morogoro R	1,689	1,459	79,128	71,127	80,817	72,585	2.0
Kilombero	1,167	1,068	71,618	79,729	72,785	80,797	1.3
Ulanga	2,976	2,869	38,796	51,203	41,771	54,071	5.3
Morogoro Urb	363	295	5,643	4,638	6,006	4,934	6.0
Mvomero	12,189	18,858	64,089	69,786	76,278	88,644	21.3
Total	24,365	35,902	337,116	378,249	361,481	414,151	8.7
%	7	9	93	91	100	100	

Number of Households is an over estimate due to the double counting of households growing crops in both long and short seasons. To compare previuus surveys use Number of Long Season planters only.

Table 7.1 and 7.2i Total annual Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Herbicide Use and District for the 2002/03 aggriculture year - Long and Short Rainy Season, Morogoro Region

	Herbicide Use						
	Households Using Herbicide		Households Not Using Herbicide		Total		% of Planted area using Herbicide
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	1,931	2,581	81,894	110,538	83,824	113,119	2.3
Morogoro R	122	246	80,694	72,340	80,817	72,585	0.3
Kilombero	10,651	15,340	62,134	65,458	72,785	80,797	19.0
Ulanga	5,451	10,245	36,320	43,826	41,771	54,071	18.9
Morogoro Urb	121	104	5,885	4,830	6,006	4,934	2.1
Mvomero	2,398	3,279	73,880	85,365	76,278	88,644	3.7
Total	20,673	31,795	340,808	382,356	361,481	414,151	7.7
%	6	8	94	92	100	100	

Table 7.1 and 7.2j Total annual Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Fungicide Use and District for the 2002/03 aggriculture year - Long and Short Rainy Season, Morogoro Region

	Fungicide Use						
	Households Using Fungicide		Households Not Using Fungicide		Total		% of Planted area using Herbicide
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	3,486	6,573	80,338	106,546	83,824	113,119	5.8
Morogoro R	973	1,369	79,844	71,217	80,817	72,585	1.9
Kilombero	746	564	72,039	80,233	72,785	80,797	0.7
Ulanga	766	744	41,005	53,327	41,771	54,071	1.4
Morogoro Urb	349	274	5,657	4,660	6,006	4,934	5.5
Mvomero	4,920	4,656	71,358	83,987	76,278	88,644	5.3
Total	11,240	14,180	350,240	399,971	361,481	414,151	3.4
%	3	3	97	97	100	100	

Table 7.1 and 7.2k Total annual Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Improved Seed Use and District for the 2002/03 aggriculture year - Long and Short Rainy Season, Morogoro Region

	Improved Seed Use						
	Households Using		Households Not Using		Total		% of Planted area using Herbicide
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	8,117	9,729	75,072	101,803	83,189	111,532	8.7
Morogoro R	5,661	4,650	73,096	62,670	78,757	67,321	6.9
Kilombero	6,333	5,902	65,855	73,011	72,188	78,913	7.5
Ulanga	4,440	4,586	35,874	48,027	40,314	52,613	8.7
Morogoro Urb	2,153	1,756	3,723	2,743	5,877	4,499	39.0
Mvomero	22,710	29,518	52,942	54,266	75,652	83,784	35.2
Total	49,414	56,141	306,562	342,520	355,976	398,661	14.1
%	14	14	86	86	100	100	

ANNUAL CROP AND VEGETABLE PRODUCTION - SHORT RAINY SEASON

7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-LONG RAINY SEASON

District	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Kilosa	5,369	10,589	5,102	8,535	57,859	78,189	68,331	97,313
M'goro R	1,052	1,439	1,457	1,365	40,791	38,148	43,300	40,953
Kilombero	11,836	14,164	1,991	5,090	30,225	34,713	44,053	53,966
Ulanga	2,367	4,456	2,439	4,283	20,308	22,770	25,114	31,508
M'goro U	254	322	532	416	3,378	2,810	4,164	3,549
Mvomero	5,952	11,783	1,375	1,704	32,022	30,281	39,349	43,768
Total	26,830	42,753	12,896	21,393	184,583	206,911	224,310	271,056
%	12	16	6	8	82	76	100	100

7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fertilizer Use and District During 2002/03 Crop Year-LONG RAINY SEASON

District	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Kilosa	4,384	5,068	341	470	2,281	5,918	61,960	87,444	68,966	98,900
M'goro R	122	50	1,082	835	103	42	44,052	45,290	45,360	46,217
Kilombero	497	1,051	459	789	1,895	2,453	41,799	51,558	44,649	55,851
Ulanga	230	222	0	.	227	515	26,113	32,230	26,571	32,967
M'goro U	126	166	64	81	209	144	3,895	3,593	4,293	3,984
Mvomero	2,121	2,569	1,858	1,986	3,869	4,376	32,127	39,697	39,975	48,628
Total	7,480	9,126	3,803	4,161	8,584	13,448	209,946	259,812	229,814	286,546

Table 7.2c ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Irrigation Use						% of area planted under irrigation in long rainy season
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	9,665	15,381	59,301	83,519	68,966	98,900	15.6
M'goro R	13,470	12,886	31,891	33,331	45,360	46,217	27.9
Kilombero	6,216	8,754	38,433	47,097	44,649	55,851	15.7
Ulanga	5,660	5,468	20,911	27,499	26,571	32,967	16.6
M'goro U	1,468	1,548	2,825	2,435	4,293	3,984	38.9
Mvomero	9,664	13,837	30,311	34,791	39,975	48,628	28.5
Total	46,143	57,874	183,672	228,672	229,814	286,546	20.2

7.2d ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Herbicide Use					
	Households Using Herbicide		Households Not Using Herbicide		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Kilosa	1,802	2,478	67,164	96,423	68,966	98,900
Morogoro	0	.	45,360	46,217	45,360	46,217
Kilombero	7,447	12,013	37,202	43,838	44,649	55,851
Ulanga	2,146	4,480	24,424	28,487	26,571	32,967
Morogoro Urb	75	70	4,218	3,914	4,293	3,984
Mvomero	1,538	2,806	38,437	45,821	39,975	48,628
Total	13,009	21,847	216,806	264,700	229,814	286,546

7.2e ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Pesticide Use and District During 2002/03 Crop Year in LONG RAINY SEASON

	Pesticide Use					
	Households Using Pesticide		Households Not Using Pesticide		Total	
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Kilosa	5,288	11,047	63,678	87,853	68,966	98,900
Morogoro	959	700	44,401	45,517	45,360	46,217
Kilombero	692	748	43,957	55,103	44,649	55,851
Ulanga	2,826	2,764	23,744	30,203	26,571	32,967
Morogoro Urb	276	249	4,017	3,735	4,293	3,984
Mvomero	9,692	16,198	30,283	32,430	39,975	48,628
Total	19,733	31,705	210,081	254,841	229,814	286,546

Table 7.2j: Number of Crops Producing Households Reporting Selling Agricultural Produce by District; 2002/03 Agricultutal Year

	Households that Sold Produce		Households that Did not Sell Produce		Total Number of Households
	Number	%	Number	%	
Kilosa	43,822	59.7	29,613	40.3	73,435
Morogoro Rural	36,603	68.9	16,514	31.1	53,117
Kilombero	42,308	86.7	6,474	13.3	48,782
Ulanga	22,824	73.8	8,084	26.2	30,908
Morogoro Urban	3,357	75.7	1,077	24.3	4,434
Mvomero	33,987	67.9	16,082	32.1	50,069
Total	182,902	70.1	77,843	29.9	260,746

7.2f ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year LONG RAINY SEASON

	Fungicide Use						
	Households Using Fungicide		Households Not Using Fungicide		Total		% of Planted Area Using Fungicide
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	2,902	5,962	66,064	92,939	68,966	98,900	6.0
Morogoro	489	833	44,872	45,384	45,360	46,217	1.8
Kilombero	368	348	44,281	55,503	44,649	55,851	0.6
Ulanga	611	431	25,959	32,536	26,571	32,967	1.3
Morogoro Urb	247	212	4,046	3,771	4,293	3,984	5.3
Mvomero	3,943	4,009	36,032	44,619	39,975	48,628	8.2
Total	8,560	11,794	221,254	274,752	229,814	286,546	4.1
%	4	4	96	96	100	100	

7.2g ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Improved Seed Use and DistrictDuring 2002/03 Crop Year - LONG RAINY SEASON

	Improved Seed Use						
	Households Using Improved Seed		Households Not Using Improved Seed		Total		% of Planted Area Using Imroved Seed
District	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kilosa	5,280	7,163	63,051	90,150	68,331	97,313	7.4
Morogoro Rural	2,522	1,914	40,778	39,038	43,300	40,953	4.7
Kilombero	4,222	4,517	39,831	49,449	44,053	53,966	8.4
Ulanga	3,374	3,365	21,740	28,144	25,114	31,508	10.7
Morogoro Urban	1,427	1,321	2,737	2,228	4,164	3,549	37.2
Mvomero	13,384	19,975	25,965	23,793	39,349	43,768	45.6
Total	30,208	38,254	194,102	232,802	224,310	271,056	14.1
%	13	14	87	86	100	100	

7.2g ANNUAL CROP & VEGETABLE PRODUCTION: Planted Area and Number of Crop Growing Households in LONG RAINY SEASON During 2002/03 Crop Year By Method of Land Clearing By Crop

	Land Clearing													
	Mostly Bush Clearance		Mostly Hand Slashing		Mostly Tractor Slashing		Mostly Burning		No Clearing		Other		Total	
Crop	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Cereals		**12,402**		**165,656**		**307**		**12,588**		**38,786**		**342**		**230,081**
Maize	8,013	6,729	116,556	92,818	314	202	3,108	1,720	19,918	17,402	123	50	148,032	118,920
Paddy	6,727	4,755	76,790	63,574	238	96	10,515	10,711	14,840	19,715	242	292	109,352	99,143
Sorghum	1,395	918	16,272	8,721	12	10	473	157	2,515	1,289	0	.	20,668	11,094
Bulrush Millet	0	.	261	89	0	.	0	.	362	327	0	.	623	416
Finger Millet	0	.	493	112	0	.	0	.	131	53	0	.	624	165
Wheat	0	.	653	238	0	.	0	.	0	.	0	.	653	238
Barley	0	.	257	104	0	.	0	.	0	.	0	.	257	104
Roots and Tubers		**117**		**3,871**		**.**		**68**		**575**		**.**		**4,632**
Cassava	125	94	3,114	1,041	0	.	0	.	75	20	0	.	3,315	1,154
Sweet Potatoes	153	23	5,404	2,205	0	.	240	48	715	237	0	.	6,511	2,514
Irish Potatoes	0	.	1,305	354	0	.	0	.	650	315	0	.	1,955	669
Yams	0	.	154	22	0	.	0	.	12	2	0	.	166	24
Cocoyam	0	.	1,230	249	0	.	122	20	0	.	0	.	1,353	269
Pulses		**1,177**		**14,432**		**18**		**113**		**1,744**		**.**		**17,483**
Beans	1,587	833	24,550	11,219	0	.	125	13	2,920	1,294	0	.	29,182	13,360
Cowpeas	485	151	11,117	2,592	115	18	502	75	1,228	258	0	.	13,446	3,096
Green Gram	246	37	1,078	244	0	.	126	25	402	135	0	.	1,852	441
Bambaranuts	0	.	0	.	0	.	0	.	261	52	0	.	261	52
Field Peas	254	154	1,082	376	0	.	0	.	12	5	0	.	1,348	535
Oil seeds and Oil nuts		**631**		**8,013**		**105**		**24**		**1,447**		**.**		**10,221**
Sunflower	0	.	902	403	0	.	0	.	400	92	0	.	1,303	495
Simsim	691	554	14,528	6,475	0	.	122	15	728	281	0	.	16,070	7,325
Groundnuts	266	77	2,796	956	130	105	130	10	1,563	1,072	0	.	4,885	2,219
Soya Beans	0	.	128	52	0	.	0	.	12	2	0	.	139	54
Castor Seed	0	.	515	128	0	.	0	.	0	.	0	.	515	128
Fruits and Vegetables		**995**		**5,750**		**51**		**117**		**154**		**49**		**7,116**
Okra	76	18	554	78	0	.	0	.	0	.	0	.	630	96
Bitter Aubergine	76	18	321	31	0	.	0	.	0	.	0	.	397	49
Onions	0	.	1,943	636	0	.	121	25	0	.	0	.	2,064	660
Cabbage	890	515	2,443	694	0	.	0	.	254	13	0	.	3,588	1,222
Tomatoes	579	246	10,065	2,994	125	51	123	25	636	57	122	49	11,650	3,422
Spinnach	127	51	227	33	0	.	0	.	101	3	0	.	455	88
Carrot	0	.	39	5	0	.	121	25	0	.	0	.	160	30
Chillies	127	51	1,007	178	0	.	123	25	0	.	0	.	1,257	255
Amaranths	76	6	2,738	353	0	.	0	.	203	8	0	.	3,017	367
Pumpkins	0	.	3,768	644	0	.	75	18	720	48	0	.	4,563	710
Cucumber	75	6	136	30	0	.	0	.	123	25	0	.	334	61
Egg Plant	153	31	566	49	0	.	0	.	0	.	0	.	718	80
Water Mellon	127	51	0	.	0	.	0	.	0	.	0	.	127	51
Cauliflower	0	.	121	25	0	.	0	.	0	.	0	.	121	25
Cash Crops		**31**		**546**		**.**		**.**		**105**		**.**		**682**
Cotton	75	31	900	485	0	.	0	.	279	105	0	.	1,254	620
Tobacco	0	.	365	62	0	.	0	.	0	.	0	.	365	62
Total	**22,324**	**15,352**	**304,380**	**198,268**	**932**	**481**	**16,028**	**12,911**	**49,059**	**42,812**	**487**	**392**	**393,211**	**270,215**
%		**6**		**73**		**0**		**5**		**16**		**0**		**100**

Table 7.2.1 Number of Agricultural Households, Area Planted (ha) and Quantity of Maize Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Maize										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	11,925	7,735	4,774	0.617	61,466	64,685	29,443	0.455	72,420	34,217	0.472
Morogoro R	31,378	15,526	6,055	0.390	32,953	16,899	7,223	0.427	32,425	13,278	0.409
Kilombero	25,282	15,735	20,911	1.329	11,516	7,074	7,836	1.108	22,810	28,748	1.260
Ulanga	13,521	7,977	7,678	0.962	14,553	8,410	7,351	0.874	16,388	15,029	0.917
Morogoro Urb	1,490	697	458	0.657	3,845	2,192	1,260	0.575	2,889	1,718	0.595
Mvomero	34,692	27,983	15,416	0.551	24,228	20,175	7,165	0.355	48,158	22,581	0.469
Total	118,288	75,654	55,292	0.731	148,561	119,436	60,278	0.505	195,090	115,570	0.592

Table 7.2.2 Number of Agricultural Households, Area Planted (ha) and Quantity of Paddy Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Paddy										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	2,997	1,757	998	0.568	15,770	11,244	6,006	0.534	13,001	7,004	0.539
Morogoro R	7,550	4,706	1,064	0.226	20,006	11,204	2,817	0.251	15,910	3,880	0.244
Kilombero	4,878	7,991	9,073	1.135	41,272	45,105	60,333	1.338	53,096	69,406	1.307
Ulanga	8,557	11,689	11,634	0.995	18,089	18,973	16,130	0.850	30,662	27,764	0.905
Morogoro Urb	107	44	23	0.525	1,164	453	157	0.346	497	180	0.362
Mvomero	2,446	1,091	322	0.295	13,354	12,269	4,447	0.362	13,360	4,769	0.357
Total	26,536	27,279	23,114	0.847	109,655	99,248	89,889	0.906	126,527	113,003	0.893

Table 7.2.3 Number of Agricultural Households, Area Planted (ha) and Quantity of Sorghum Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sorghum										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	258	116	13	0.110	5,239	3,107	1,317	0.424	3,224	1,330	0.413
M'goro R	2,789	1,488	485	0.326	12,212	5,541	1,820	0.328	7,028	2,305	0.328
Kilombero	129	26	91	3.498	505	789	434	0.550	815	525	0.644
Ulanga	305	118	52	0.446	1,076	785	895	1.140	903	948	1.050
Morogoro Urb	0	0	0	0.000	283	144	45	0.316	144	45	0.316
Mvomero	3,218	1,855	315	0.170	1,563	861	75	0.087	2,716	390	0.144
Total	6,698	3,603	956	0.265	20,878	11,227	4,587	0.409	14,830	5,544	0.374

Table 7.2.4 Number of Agricultural Households, Area Planted (ha) and Quantity of Fingermillet Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Fingemillet										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	376	102	43	0.420	102	43	0.420
M'goro R	0	0	0	0	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0	248	63	47	0.741	63	47	0.741
Ulanga	0	0	0	0	0	0	0	0.000	0	0	0.000
Morogoro Urb	0	0	0	0	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0	0	0	0	0.000	0	0	0.000
Total	0	0	0	0	624	165	90	0.543	165	90	0.543

Table 7.2.5 Number of Agricultural Households, Area Planted (ha) and Quantity of Bulrushmillets Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bulrushmillets										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	522	406	65	0.161	406	65	0.161
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Morogoro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	128	39	19	0.494	101	10	5	0.494	49	24	0.494
Total	128	39	19	0.494	623	416	70	0.169	455	89	0.197

Table 7.2.6 Number of Agricultural Households, Area Planted (ha) and Quantity of Wheat Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Wheat										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	653	238	223	0.936	238	223	0.936
M'goro R	0	0	0	0	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0	0	0	0	0.000	0	0	0.000
Morogoro Urb	0	0	0	0	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0	0	0	0	0.000	0	0	0.000
Total	0	0	0	0	653	238	223	0.936	238	223	0.936

Table 7.2.7 Number of Agricultural Households, Area Planted (ha) and Quantity of Barley Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Barley										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	130	53	0	0.000	0	0	0	0.000	53	0	0.000
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	156	63	40	0.630	63	40	0.630
Morogoro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0.000	101	41	0	0.000	41	0	0.000
Total	130	53	0	0.000	257	104	40	0.382	157	40	0.254

Table 7.2.8 Number of Agricultural Households, Area Planted (ha) and Quantity of Cassava Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cassava										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	258	38	54	1.420	5,718	2,445	2,435	0.996	2,483	2,488	1.002
M'goro R	487	177	79	0.449	14,087	5,388	6,878	1.277	5,564	6,957	1.250
Kilombero	980	256	431	1.685	6,913	1,918	8,023	4.183	2,174	8,454	3.889
Ulanga	463	45	75	1.656	5,970	1,489	1,890	1.270	1,534	1,965	1.281
Morogoro Urb	9	2	5	3.004	1,417	445	1,037	2.332	446	1,042	2.335
Mvomero	123	12	22	1.778	5,327	4,961	2,696	0.544	4,973	2,718	0.547
Total	2,318	530	667	1.258	39,432	16,644	22,958	1.379	17,174	23,625	1.376

Table 7.2.9 Number of Agricultural Households, Area Planted (ha) and Quantity of Sweet potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sweet potatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	125	25	38	1.482	3,455	1,641	2,782	1.696	1,666	2,819	1.692
M'goro R	123	25	25	0.988	359	101	111	1.097	126	135	1.076
Kilombero	368	246	556	2.264	719	149	220	1.471	395	776	1.964
Ulanga	232	45	42	0.943	1,528	521	915	1.758	566	957	1.693
Morogoro Urb	18	4	14	3.978	77	15	27	1.771	19	41	2.191
Mvomero	372	91	30	0.327	372	88	124	1.417	179	154	0.862
Total	1,237	436	705	1.618	6,511	2,514	4,178	1.662	2,950	4,883	1.655

Table 7.2.10 Number of Agricultural Households, Area Planted (ha) and Quantity of Irish potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

	Irish potatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
District	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	1,955	669	461	0.689	669	461	0.689
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	0	0	129	0.000	0	0	0	0.000	0	129	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Morogoro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	63	263	0	0.000	0	0	0	0.000	263	0	0.000
Total	63	263	129	0.491	1,955	669	461	0.689	932	590	0.633

Table 7.2.11 Number of Agricultural Households, Area Planted (ha) and Quantity of Yams Harvested (tons) by Season and District; 2002/03 Agricultural Year

	Yams										
	Short Rainy bseason				Long Rainy bSeason				Total		
District	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	115	17	46	2.772	17	46	2.772
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	129	52	261	4.999	0	0	0	0.000	52	261	4.999
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Morogoro Urb	0	0	0	0.000	51	8	14	1.826	8	14	1.826
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	129	52	261	4.999	166	24	60	2.475	77	322	4.195

Table 7.2.11 Number of Agricultural Households, Area Planted (ha) and Quantity of Cocoyams Harvested (tons) by Season and District; 2002/03 Agricultural Year

	Cocoyams										
	Short Rainy bseason				Long Rainy bSeason				Total		
District	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	768	170	703	4.132	170	703	4.132
M'goro R	834	790	286	0.361	245	40	20	0.494	830	305	0.368
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	154	15	15	1.051	0	0	0	0	15	15	1.051
Morogoro Urb	50	15	30	1.958	218	34	90	2.612	50	120	2.411
Mvomero	622	278	454	1.636	122	25	0	0.000	302	454	1.502
Total	1,660	1,098	785	0.715	1,353	269	813	3.021	1,367	1,598	1.169

Table 7.2.12 Number of Agricultural Households, Area Planted (ha) and Quantity of Mungbeans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Mungbeans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	0	0	0	0	0	0	0
M'goro R	122	49	24	0.504	0	0	0	0	49	24	0.504
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	0	0	0	0	0	0	0	0	0	0	0
Morogoro Urb	0	0	0	0	0	0	0	0	0	0	0
Mvomero	0	0	0	0	0	0	0	0	0	0	0
Total	122	49	24	0.504	0	0	0	0	49	24	0.504

Table 7.2.13 Number of Agricultural Households, Area Planted (ha) and Quantity of Beans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Beans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	3,853	1,413	943	0.667	13,488	6,400	2,732	0.427	7,813	3,675	0.470
M'goro R	1,460	466	212	0.455	2,506	796	1,215	1.526	1,262	1,427	1.130
Kilombero	129	26	26	0.988	237	48	11	0.222	74	36	0.492
Ulanga	1,065	612	246	0.402	2,488	957	495	0.517	1,569	741	0.472
Morogoro Urb	286	60	32	0.536	829	207	75	0.363	267	107	0.402
Mvomero	8,742	4,470	1,109	0.248	9,633	4,952	1,522	0.307	9,422	2,631	0.279
Total	15,536	7,047	2,568	0.364	29,182	13,360	6,050	0.453	20,407	8,617	0.422

Table 7.2.14 Number of Agricultural Households, Area Planted (ha) and Quantity of Cowpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cowpeas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	1,592	314	122	0.389	4,381	983	154	0.156	1,298	276	0.213
M'goro R	4,531	1,182	412	0.349	3,722	771	186	0.242	1,953	599	0.307
Kilombero	893	252	119	0.473	818	146	64	0.435	397	182	0.459
Ulanga	991	117	55	0.465	1,841	601	514	0.855	719	569	0.791
Morogoro Urb	354	47	26	0.567	990	206	60	0.291	253	86	0.342
Mvomero	4,091	1,076	118	0.110	1,696	388	118	0.303	1,464	236	0.161
Total	12,451	2,987	853	0.285	13,446	3,096	1,095	0.354	6,083	1,948	0.320

Table 7.2.15 Number of Agricultural Households, Area Planted (ha) and Quantity of Greengram Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Greengram										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	130	26	12	0.445	577	99	31	0.315	126	43	0.342
M'goro R	722	269	23	0.084	595	154	24	0.155	423	47	0.110
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	152	55	17	0.312	154	23	17	0.725	79	34	0.434
Morogoro Urb	12	1	0	0.198	150	38	8	0.218	39	9	0.217
Mvomero	495	161	4	0.026	378	126	37	0.297	287	42	0.145
Total	1,512	513	56	0.109	1,852	441	118	0.267	954	174	0.182

Table 7.2.16 Number of Agricultural Households, Area Planted (ha) and Quantity of Chick peas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Chick peas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	0	0	0	0	0	0	0
M'goro R	0	0	0	0	0	0	0	0	0	0	0
Kilombero	119	24	5	0.217	0	0	0	0	24	5	0.217
Ulanga	0	0	0	0	0	0	0	0	0	0	0
Morogoro Urb	0	0	0	0	0	0	0	0	0	0	0
Mvomero	128	41	3	0.062	0	0	0	0	41	3	0.062
Total	246	65	8	0.119	0	0	0	0	65	8	0.119

Table 7.2.17 Number of Agricultural Households, Area Planted (ha) and Quantity of Bambaranuts Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bambanuts										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	#DIV/0!	261	52	8	0.151	52	8	0.151
M'goro R	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	#DIV/0!
Kilombero	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	#DIV/0!
Ulanga	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	#DIV/0!
Morogoro Urb	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	#DIV/0!
Mvomero	0	0	0	#DIV/0!	0	0	0	#DIV/0!	0	0	#DIV/0!
Total	0	0	0	#DIV/0!	261	52	8	0.151	52	8	0.151

Table 7.2.18 Number of Agricultural Households, Area Planted (ha) and Quantity of Fieldpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Fieldpeas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	0	0	0	0	0	0	0
M'goro R	0	0	0	0	121	25	24	0.988	25	24	0.988
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	0	0	0	0	74	45	4	0.082	45	4	0.082
M'goro Urb	0	0	0	0	12	5	3	0.642	5	3	0.642
Mvomero	1,013	411	497	1.209	1,141	461	287	0.623	872	785	0.899
Total	1,013	411	497	1.209	1,348	535	318	0.594	947	816	0.861

Table 7.2.19 Number of Agricultural Households, Area Planted (ha) and Quantity of Sunflower Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sunflower										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	627	236	90	0.381	236	90	0.381
M'goro R	0	0	0	0	0	0	0	0	0	0	0
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	0	0	0	0	0	0	0	0	0	0	0
M'goro Urb	0	0	0	0	61	24	7	0.300	24	7	0.300
Mvomero	0	0	0	0	614	235	37	0.155	235	37	0.155
Total	0	0	0	0	1,303	495	133	0.270	495	133	0.270

Table 7.2.20 Number of Agricultural Households, Area Planted (ha) and Quantity of Simsim Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Simsim										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	3,557	1,780	447	0.251	5,752	2,444	721	0.295	4,223	1,168	0.276
M'goro R	640	230	85	0.371	9,308	4,482	1,330	0.297	4,712	1,415	0.300
Kilombero	0	0	0	0	127	13	4	0.296	13	4	0.296
Ulanga	308	101	46	0.453	540	212	46	0.219	313	92	0.294
M'goro Urb	0	0	0	0	65	38	7	0.187	38	7	0.187
Mvomero	239	48	4	0.087	369	174	62	0.359	222	67	0.300
Total	4,744	2,159	582	0.269	16,162	7,362	2,170	0.295	9,521	2,752	0.289

Table 7.2.21 Number of Agricultural Households, Area Planted (ha) and Quantity of Groundnuts Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Groundnuts										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	715	156	64	0.407	3,556	1,670	607	0.364	1,826	671	0.367
M'goro R	119	12	12	0.988	0	0	0	0	12	12	0.988
Kilombero	0	0	0	0	703	398	330	0.830	398	330	0.830
Ulanga	304	126	55	0.435	601	144	44	0.307	271	99	0.366
M'goro Urb	0	0	0	0	25	7	2	0.267	7	2	0.267
Mvomero	124	13	37	2.964	0	0	0	0	13	37	2.964
Total	1,261	307	168	0.545	4,885	2,219	984	0.443	2,527	1,152	0.456

Table 7.2.22 Number of Agricultural Households, Area Planted (ha) and Quantity of Castor oil Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Castor oil										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0	515	128	116	0.907	128	116	0.907
M'goro R	0	0	0	0	0	0	0	0	0	0	0
Kilombero	0	0	0	0	0	0	0	0	0	0	0
Ulanga	0	0	0	0	0	0	0	0	0	0	0
M'goro Urb	0	0	0	0	0	0	0	0	0	0	0
Mvomero	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	515	128	116	0.907	128	116	0.907

Table 7.2.23 Number of Agricultural Households, Area Planted (ha) and Quantity of Soya beans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Soya beans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	105	11	2	0.198	128	52	11	0.222	62	14	0.218
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	0	0	0	0.000	12	2	0	0.049	2	0	0.049
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	105	11	2	0.198	139	54	12	0.215	65	14	0.212

Table 7.2.24 Number of Agricultural Households, Area Planted (ha) and Quantity of Okra Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Okra										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	102	21	6	0.296	21	6	0.296
M'goro R	122	61	0	0.000	0	0	0	0.000	61	0	0.000
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	78	5	2	0.494	305	51	33	0.635	56	35	0.623
M'goro Urb	36	2	1	0.615	223	24	57	2.343	26	58	2.231
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	236	68	3	0.050	630	96	96	0.993	164	99	0.603

Table 7.2.25 Number of Agricultural Households, Area Planted (ha) and Quantity of Bitter Aubergine Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bitter Aubergine										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	240	24	31	1.290	0	0	0	0.000	24	31	1.290
M'goro R	122	20	66	3.335	0	0	0	0.000	20	66	3.335
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	384	48	45	0.935	48	45	0.935
M'goro Urb	0	0	0	0.000	13	1	2	4.199	1	2	4.199
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	362	44	97	2.208	397	49	47	0.969	93	145	1.557

Table 7.2.26 Number of Agricultural Households, Area Planted (ha) and Quantity of Onion Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Onion										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	254	76	217	2.850	1,253	467	3,139	6.718	544	3,356	6.175
M'goro R	0	0	0	0.000	244	49	51	1.035	49	51	1.035
Kilombero	0	0	0	0.000	116	47	233	4.940	47	233	4.940
Ulanga	74	45	185	4.117	76	8	30	3.952	53	215	4.093
M'goro Urb	11	4	17	3.952	0	0	0	0.000	4	17	3.952
Mvomero	505	180	637	3.546	375	89	177	1.993	268	814	3.033
Total	844	305	1,057	3.462	2,064	660	3,630	5.499	965	4,687	4.854

Table 7.2.27 Number of Agricultural Households, Area Planted (ha) and Quantity of Cabbage Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cabbage										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	131	26	7	0.272	131	26	7	0.272	53	14	0.272
M'goro R	365	112	71	0.634	365	112	71	0.634	223	141	0.634
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	151	76	23	0.301	151	76	23	0.301	151	45	0.301
M'goro Urb	92	16	33	2.075	92	16	33	2.075	32	66	2.075
Mvomero	1,145	438	3,831	8.752	1,145	438	3,831	8.752	875	7,662	8.752
Total	1,883	667	3,965	5.943	1,883	667	3,965	5.943	1,334	7,930	5.943

Table 7.2.28 Number of Agricultural Households, Area Planted (ha) and Quantity of Tomatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Tomatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	1,685	557	1,082	1.944	3,132	722	2,985	4.137	1,278	4,067	3.182
M'goro R	2,774	852	3,852	4.521	1,310	362	617	1.706	1,214	4,469	3.683
Kilombero	733	211	652	3.093	501	61	528	8.706	271	1,180	4.347
Ulanga	77	16	6	0.395	1,068	131	742	5.642	147	748	5.088
M'goro Urb	222	42	138	3.268	292	53	143	2.691	95	281	2.947
Mvomero	2,482	1,008	3,969	3.938	5,473	2,146	7,033	3.278	3,154	11,002	3.489
Total	7,972	2,685	9,700	3.612	11,777	3,474	12,047	3.468	6,159	21,747	3.531

Table 7.2.29 Number of Agricultural Households, Area Planted (ha) and Quantity of Spinnach Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Spinnach										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	197	40	34	0.863	0	0	0	0.000	40	34	0.863
M'goro R	348	54	119	2.183	103	21	47	2.223	75	165	2.194
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	13	1	3	1.830	0	0	0	0.000	1	3	1.830
Mvomero	0	0	0	0.000	352	67	144	2.144	67	144	2.144
Total	558	96	156	1.628	455	88	191	2.163	184	347	1.884

Table 7.2.30 Number of Agricultural Households, Area Planted (ha) and Quantity of Carrot Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Carrot										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro R	123	50	27	0.543	121	25	24	0.988	74	51	0.690
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	0	0	0	0.000	39	5	10	1.853	5	10	1.853
Mvomero	500	398	464	1.165	0	0	0	0.000	398	464	1.165
Total	623	448	491	1.096	160	30	34	1.142	478	525	1.099

Table 7.2.31 Number of Agricultural Households, Area Planted (ha) and Quantity of Chillies Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Chillies										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	242	25	17	0.699	239	48	105	2.160	73	122	1.669
M'goro R	242	74	73	0.988	366	62	27	0.434	135	99	0.735
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	0	0	0	0.000	18	3	4	1.256	3	4	1.256
Mvomero	500	180	353	1.966	634	141	395	2.793	321	748	2.330
Total	984	278	443	1.595	1,257	255	530	2.081	533	973	1.828

Table 7.2.32 Number of Agricultural Households, Area Planted (ha) and Quantity of Amaranths Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Amaranths										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	230	9	2	0.247	592	94	44	0.466	103	46	0.446
M'goro R	346	42	137	3.247	448	45	58	1.282	88	195	2.229
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	227	12	3	0.247	12	3	0.247
M'goro Urb	0	0	0	0.000	39	3	5	1.716	3	5	1.716
Mvomero	253	38	133	3.462	1,710	212	466	2.195	251	600	2.390
Total	828	90	273	3.029	3,017	367	577	1.571	457	849	1.858

Table 7.2.33 Number of Agricultural Households, Area Planted (ha) and Quantity of Pumpkins Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Pumpkins										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	233	37	8	0.219	1,794	240	1,147	4.771	277	1,155	4.168
M'goro R	122	12	15	1.186	366	109	48	0.443	121	63	0.519
Kilombero	770	103	128	1.247	258	20	35	1.755	123	163	1.330
Ulanga	531	47	114	2.438	1,216	153	97	0.638	199	211	1.060
M'goro Urb	97	8	9	1.096	317	43	45	1.049	51	54	1.056
Mvomero	251	31	8	0.266	612	145	222	1.530	176	231	1.310
Total	2,005	237	282	1.188	4,563	710	1,595	2.246	947	1,877	1.981

Table 7.2.34 Number of Agricultural Households, Area Planted (ha) and Quantity of Cucumber Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cucumber										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro R	0	0	0	0.000	123	25	16	0.642	25	16	0.642
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	75	6	1	0.124	6	1	0.124
M'goro Urb	32	4	4	0.996	13	5	6	1.247	9	10	1.137
Mvomero	367	87	275	3.176	123	25	10	0.395	112	285	2.557
Total	399	91	279	3.078	334	61	33	0.541	152	312	2.058

Table 7.2.35 Number of Agricultural Households, Area Planted (ha) and Quantity of Eggplant Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Eggplant										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	119	0	1	1.235	0	1	1.235
M'goro R	122	25	13	0.519	122	12	6	0.474	37	19	0.504
Kilombero	123	25	45	1.803	0	0	0	0.000	25	45	1.803
Ulanga	0	0	0	0.000	460	61	49	0.798	61	49	0.798
M'goro Urb	13	1	3	2.075	18	6	13	2.377	7	16	2.319
Mvomero	118	24	24	0.988	0	0	0	0.000	24	24	0.988
Total	376	75	84	1.123	718	80	68	0.861	154	153	0.988

Table 7.2.36 Number of Agricultural Households, Area Planted (ha) and Quantity of Water Mellon Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Water Mellon										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro R	121	98	48	0.494	0	0	0	0.000	98	48	0.494
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	20	1	6	3.953	0	0	0	0.000	1	6	3.953
Mvomero	0	0	0	0.000	127	51	38	0.741	51	38	0.741
Total	141	99	54	0.545	127	51	38	0.741	151	92	0.612

Table 7.2.37 Number of Agricultural Households, Area Planted (ha) and Quantity of Cauliflower Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cauliflower										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro R	121	49	24	0.494	121	25	24	0.988	74	48	0.659
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	121	49	24	0.494	121	25	24	0.988	74	48	0.659

Table 7.2.38 Number of Agricultural Households, Area Planted (ha) and Quantity of Cotton Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cotton										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	513	311	111	0.357	311	111	0.357
M'goro R	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	0	0	0	0.000	613	258	121	0.470	258	121	0.470
M'goro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0.000	128	52	15	0.296	52	15	0.296
Total	0	0	0	0.000	1,254	620	248	0.399	620	248	0.399

Table 7.2.39 Number of Agricultural Households, Area Planted (ha) and Quantity of Tobacco Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Tobacco										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Kilosa	0	0	0	0.000	0	0	0	0.000	0	0	0.000
M'goro R	0	0	0	0.000	365	62	35	0.573	62	35	0.573
Kilombero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ulanga	76	16	2	0.143	0	0	0	0.000	16	2	0.143
M'goro Urb	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Mvomero	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	76	16	2	0.143	365	62	35	0.573	78	38	0.485

PERMANENT CROPS

Table 7.3 Production of Permanent Crops by crop type and Region - Morogoro

District/Crop		Planted Area (ha)	Area Harvested (ha)	Quantity Harvested (tons)	Yield (Kgs/ha
Kilosa	Pigeon Pea	533	577	222	384
	Star Fruit	94	0	10	0
	Palm Oil	402	0	46	0
	Coconut	1,397	637	4,275	6712
	Cashewnut	379	235	11	47
	Coffee	5	.	.	0
	Kapok	.	.	.	0
	Sugarcane	2,588	2,374	49,448	20833
	Tamarin	.	.	.	0
	Jack Fruit	94	0	10	0
	Mpesheni	.	0	.	0
	Banana	1,961	2,708	4,176	1542
	Avocado	0	0	1	0
	Mango	1,433	718	3,188	4442
	Pawpaw	106	94	306	3253
	Pineapple	13	47	121	2580
	Orange	421	10	462	45220
	Mandarine/Tangerine	95	0	24	0
	Guava	83	0	126	0
	Lime/Lemon	.	0	14	0
	District Total	9,604	7,399	62,443	8439
Morogoro Rural	Black Pepper	11	10	31	3196
	Pigeon Pea	167	141	65	460
	Palm Oil	2	0	.	0
	Coconut	5,086	1,413	4,968	3516
	Cashewnut	27	74	5	67
	Coffee	266	215	91	422
	Sugarcane	199	199	1,690	8497
	Cardamon	49	25	10	395
	Cinamon	49	49	22	442
	Cloves	194	175	80	459
	Mshelisheli	69	69	487	7035
	Jack Fruit	2,214	2,018	618	306
	Banana	2,722	2,483	17,000	6847
	Mango	889	462	3,220	6962
	Pawpaw	58	57	142	2507
	Pineapple	2,371	2,370	5,711	2409
	Orange	2,776	2,519	8,140	3232
	Grape Fruit	6	6	14	2280
	Mandarine/Tangerine	74	62	2,450	39382
	Guava	139	23	3	148
	Lime/Lemon	0	0	10	0
	District Total	17,368	12,370	44,756	3618
Kilombero	Malay Apple	0	0	29	0
	Palm Oil	172	0	1,893	0
	Coconut	296	12	7,263	605114
	Cashewnut	35	0	20	0
	Cocoa	11	0	25	0
	Sugarcane	2,573	2,570	74,956	29168
	Jack Fruit	6	0	13	0
	Mpesheni	0	0	1	0

Table 7.3 Production of Permanent Crops by crop type and Region - Morogoro

District/Crop		Planted Area (ha)	Area Harvested (ha)	Quantity Harvested (tons)	Yield (Kgs/ha
	Banana	1,330	897	15,415	17177
	Avocado	0	0	105	0
	Mango	615	118	34,734	294438
	Pawpaw	1	0	1,505	0
	Pineapple	0	0	346	0
	Orange	1,049	374	20,718	55455
	Grape Fruit	0	0	58	0
	Mandarine/Tan	0	0	273	0
	Guava	0	0	441	0
	Lime/Lemon	2	0	330	0
	District Total	6,093	3,971	158,123	39821
Ulanga	Sour Soup	.	.	5	0
	Pigeon Pea	20	22	20	916
	Malay Apple	20	20	3	124
	Palm Oil	101	81	68	842
	Coconut	246	68	506	7425
	Cashewnut	72	71	33	467
	Sugarcane	118	114	4,199	36891
	Tamarin	19	19	1	76
	Jack Fruit	1	0	3	0
	Mpesheni	.	.	1	0
	Banana	950	399	2,430	6085
	Avocado	0	0	5	0
	Mango	319	199	2,853	14359
	Pawpaw	122	1,852	263	142
	Pineapple	0	0	12	0
	Orange	97	68	361	5329
	Grape Fruit	0	0	11	0
	Mandarine/Tan	1	0	56	0
	Guava	22	22	46	2120
	Lime/Lemon	16	0	18	0
	District Total	2,125	2,935	10,894	3712
Morogoro Urban	Pigeon Pea	323	82	52	632
	Star Fruit	0	0	3	0
	Coconut	27	81	155	1916
	Cashewnut	32	33	3	95
	Sugarcane	56	52	658	12719
	Mshelisheli	1	0	8	0
	Jack Fruit	12	8	127	16337
	Mpesheni	1	1	1	1100
	Banana	1,177	1,640	5,206	3174
	Avocado	8	8	69	9095
	Mango	64	167	422	2524
	Pawpaw	14	13	5	397
	Pineapple	17	14	25	1791
	Orange	11	13	510	38218
	Grape	.	1	0	865
	Mandarine/Tan	3	3	113	35280
	Guava	2	2	6	2430
	Pears	.	.	0	0
	Pitches	0	0	0	0
	Lime/Lemon	1	0	20	0

Table 7.3 Production of Permanent Crops by crop type and Region - Morogoro

District/Crop		Planted Area (ha)	Area Harvested (ha)	Quantity Harvested (tons)	Yield (Kgs/ha
	Rambutan	.	.	.	0
	District Total	1,749	2,117	7,383	3487
Mvomero	Sour Soup	0	0	6	0
	Pigeon Pea	1,071	650	515	793
	Malay Apple	0	0	3	0
	Palm Oil	82	0	204	0
	Coconut	498	538	796	1480
	Cashewnut	25	0	609	0
	Coffee	102	132	160	1213
	Cocoa	937	357	260	730
	Sugarcane	2,795	2,108	82,605	39193
	Cardamon	194	88	16	183
	Jack Fruit	565	41	12	301
	Banana	1,256	800	3,188	3984
	Mango	1,983	846	5,074	5994
	Pawpaw	2	10	97	9927
	Pineapple	525	0	1	0
	Orange	195	88	693	7834
	Grape Fruit	30	0	.	0
	Mandarine/Tan	3,477	313	265	846
	Guava	0	0	57	0
	Plums	.	.	589	0
	Apples	.	.	57	0
	Pears	36	.	47	0
	Pitches	.	.	134	0
	Lime/Lemon	0	0	31	0
	District Total	13,773	5,971	95,419	15979
Region Total	Sour Soup	0	0	11	0
	Black Pepper	11	10	31	3196
	Pigeon Pea	2,113	1,471	873	593
	Malay Apple	21	20	34	1673
	Star Fruit	94	0	14	0
	Palm Oil	758	81	2,211	27254
	Coconut	7,550	2,749	17,963	6535
	Cashewnut	570	413	682	1649
	Coffee	373	347	251	723
	Cocoa	948	357	285	799
	Kapok	.	.	.	0
	Sugarcane	8,330	7,416	213,556	28798
	Cardamon	243	113	26	229
	Tamarin	19	19	1	76
	Cinamon	49	49	22	442
	Cloves	194	175	80	459
	Mshelisheli	70	69	495	7148
	Jack Fruit	2,892	2,067	783	379
	Mpesheni	1	1	3	4034
	Banana	9,396	8,928	47,415	5311
	Avocado	8	8	180	23789
	Mango	5,302	2,511	49,490	19713
	Pawpaw	303	2,026	2,319	1145
	Pineapple	2,926	2,431	6,216	2557
	Orange	4,549	3,072	30,883	10053

Table 7.3 Production of Permanent Crops by crop type and Region - Morogoro

District/Crop		Planted Area (ha)	Area Harvested (ha)	Quantity Harvested (tons)	Yield (Kgs/ha
	Grape Fruit	36	6	84	13354
	Grape	.	1	0	865
	Mandarine/Tan	3,651	379	3,180	8399
	Guava	248	47	679	14328
	Plums	.	.	589	0
	Apples	.	.	57	0
	Pears	36	.	47	0
	Pitches	0	0	134	0
	Lime/Lemon	19	0	423	0
	Rambutan	.	.	.	0
	Region Total	50,712	34,764	379,018	10903

Cont… Area Planted by crop type - Morogoro

Crop	Area Planted	%
Banana	9,396	18.5
Sugarcane	8,330	16.4
Coconut	7,550	14.9
Mango	5,302	10.5
Orange	4,549	9.0
Mandarine/Tangerine	3,651	7.2
Pineapple	2,926	5.8
Jack Fruit	2,892	5.7
Pigeon Pea	2,113	4.2
Cocoa	948	1.9
Palm Oil	758	1.5
Cashewnut	570	1.1
Coffee	373	0.7
Pawpaw	303	0.6
Guava	248	0.5
Cardamon	243	0.5
Cloves	194	0.4
Star Fruit	94	0.2
Mshelisheli	70	0.1
Cinamon	49	0.1
Grape Fruit	36	0.1
Pears	36	0.1
Malay Apple	21	0.0
Lime/Lemon	19	0.0
Tamarin	19	0.0
Black Pepper	11	0.0
Avocado	8	0.0
Mpesheni	1	0.0
Pitches	0	0.0
Sour Soup	0	0.0
Kapok	0	0.0
Grape	0	0.0
Plums	0	0.0
Apples	0	0.0
Rambutan	0	0.0
Region Total	50,712	100.0

AGROPROCESSING

8.0a Number of Crops Growing Houreported to have procesed Farm Products by District; 2002/03 agriculture Year

District	Did the Hh Process any of the products harvested during 2002					
	Households That Processed Product		Households That Did Not Process Product		Total	
	Number	%	Number	%	Number	%
Kilosa	62,088	85	11,348	15	73,435	100
Morogoro Rural	46,205	87	6,912	13	53,117	100
Kilombero	48,044	98	739	2	48,782	100
Ulanga	30,370	98	538	2	30,908	100
Morogoro Urban	3,718	84	716	16	4,434	100
Mvomero	41,714	83	8,356	17	50,069	100
Total	232,139	89	28,607	11	260,746	100

8.0b: Number of Crop Growing Households by Method of Processing and District; 2002/03 Agriculture Year

District	Method of Processing							
	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Co-operative Union	By Trader	Other	By Factory	Total
Kilosa	18,752	3,293	39,561	0	390	0	91	62,088
Morogoro Rural	20,526	4,732	20,948	0	0	0	0	46,205
Kilombero	8,383	2,155	37,262	119	125	0	0	48,044
Ulanga	6,866	1,684	21,744	0	0	77	0	30,370
Morogoro Urban	662	461	2,404	0	178	13	0	3,718
Mvomero	6,488	1,991	30,737	0	1,990	508	0	41,714
Total	61,677	14,316	152,655	119	2,684	597	91	232,139
%	26.57	6.17	65.76	0.05	1.16	0.26	0.04	100.00

Table 8.1.1a AGROPROCESSING: Number of Growing households Processing Crops During 2002/03 Agricultural Year By Location and Crop, Morogoro

Crop	Method of Processing							
	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Co-operative Union	By Trader	Other	By Factory	Total
Maize	39,065	13,663	139,657	119	2,440	266	91	195,302
Paddy	32,703	4,529	65,586	318	515	227	0	103,878
Sorghum	7,052	1,328	6,127	0	12	0	0	14,520
Bulrush Millet	261	0	131	0	0	0	0	392
Finger Millet	0	0	129	0	0	0	0	129
Wheat	131	0	131	0	0	0	0	261
Cassava	12,642	0	2,898	0	0	75	0	15,616
Sweet Potatoes	426	0	90	0	0	0	0	516
Beans	76	0	13	0	0	0	0	88
Cowpeas	38	115	128	0	0	0	0	280
Green Gram	11	0	0	0	0	0	0	11
Sunflower	12	0	105	0	11	0	0	128
Simsim	518	0	0	0	0	0	0	518
Groundnut	917	0	0	0	0	0	0	917
Oil Palm	1,493	0	0	0	0	151	0	1,644
Coconut	8,596	0	0	0	0	1,186	0	9,782
Cashewnut	285	0	0	0	0	0	0	285
Banana	155	0	0	0	0	0	0	155
Orange	0	0	129	0	0	0	0	129
Tomatoes	0	0	5	0	0	0	0	5
Total	104,382	19,634	215,128	437	2,978	1,905	91	344,556

Table 8.1.1b AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural Year By Use of Product and Crop, Morogoro Rgion

Crop	Product Use						
	Human	Cooking	Sale Only	Consumption	Did Not Use	Other	Total
Maize	190,925	486	1,558	593	1,605	135	195,302
Paddy	101,035	564	1,441	75	763	0	103,878
Sorghum	14,147	0	0	131	119	123	14,520
Bulrush Millet	392	0	0	0	0	0	392
Finger Millet	129	0	0	0	0	0	129
Wheat	261	0	0	0	0	0	261
Cassava	14,078	0	1,538	0	0	0	15,616
Sweet Potatoes	516	0	0	0	0	0	516
Beans	88	0	0	0	0	0	88
Cowpeas	166	0	115	0	0	0	280
Green Gram	11	0	0	0	0	0	11
Sunflower	128	0	0	0	0	0	128
Simsim	518	0	0	0	0	0	518
Groundnut	696	0	222	0	0	0	917
Oil Palm	1,440	0	205	0	0	0	1,644
Coconut	9,479	111	0	0	192	0	9,782
Cashewnut	285	0	0	0	0	0	285
Banana	155	0	0	0	0	0	155
Orange	0	0	129	0	0	0	129
Tomatoes	5	0	0	0	0	0	5
Total	334,454	1,162	5,206	798	2,678	258	344,556

Crop	Where Sold								
	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Did not Sell	Total
Maize	7,651	2,547	244	557	94	78	1,848	179,223	195,302
Paddy	4,864	2,165	207	243	223	142	1,532	92,421	103,878
Sorghum	480	197	0	0	0	0	131	13,712	14,520
Bulrush Millet	0	0	0	0	0	0	0	392	392
Finger Millet	0	0	0	0	0	0	0	129	129
Wheat	0	0	0	0	0	0	131	131	261
Cassava	1,854	609	0	124	0	0	245	12,783	15,616
Sweet Potatoes	0	0	0	0	0	0	0	516	516
Beans	0	0	0	0	0	0	0	88	88
Cowpeas	0	0	0	0	0	0	0	280	280
Green Gram	0	0	0	0	0	0	0	11	11
Sunflower	0	0	0	12	0	0	0	116	128
Simsim	0	0	0	0	118	0	0	400	518
Groundnut	0	222	0	0	0	0	0	696	917
Oil Palm	529	0	0	0	0	0	0	1,115	1,644
Coconut	396	476	0	0	0	0	9	8,901	9,782
Cashewnut	0	0	0	0	0	0	0	285	285
Banana	0	0	0	0	0	0	0	155	155
Orange	0	0	0	0	0	0	0	129	129
Tomatoes	0	0	0	0	0	0	0	5	5
Total	15,774	6,217	451	936	435	220	3,895	311,488	344,556

Table 8.1.1.c AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural Year By Location of Sale of Product and Crop, Morogoro Region

	Where Sold									
Crop[	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Maize	7,651	2,547	244	557	94	78	1,848	3,061	179,223	195,302
Paddy	4,864	2,165	207	243	223	142	1,532	2,080	92,421	103,878
Sorghum	480	197	0	0	0	0	131	0	13,712	14,520
Bulrush Millet	0	0	0	0	0	0	0	0	392	392
Finger Millet	0	0	0	0	0	0	0	0	129	129
Wheat	0	0	0	0	0	0	131	0	131	261
Cassava	1,854	609	0	124	0	0	245	0	12,783	15,616
Sweet Potatoes	0	0	0	0	0	0	0	0	516	516
Beans	0	0	0	0	0	0	0	0	88	88
Cowpeas	0	0	0	0	0	0	0	0	280	280
Green Gram	0	0	0	0	0	0	0	0	11	11
Sunflower	0	0	0	12	0	0	0	0	116	128
Simsim	0	0	0	0	118	0	0	0	400	518
Groundnut	0	222	0	0	0	0	0	0	696	917
Oil Palm	529	0	0	0	0	0	0	0	1,115	1,644
Coconut	396	476	0	0	0	0	9	0	8,901	9,782
Cashewnut	0	0	0	0	0	0	0	0	285	285
Banana	0	0	0	0	0	0	0	0	155	155
Orange	0	0	0	0	0	0	0	0	129	129
Tomatoes	0	0	0	0	0	0	0	0	5	5
Total	15,774	6,217	451	936	435	220	3,895	5,140	311,488	344,556

8.1.1d AGRO PROCESSING: Number of Crop Growing Households By Main Product During 2002/03 Agriculture Year and District

	Main Product						
District	Flour / Meal	Grain	Oil	Juice	Fiber	Other	Total
Kilosa	50,547	10,468	949	0	124	0	62,088
Morogoro Rural	30,897	13,638	1,322	0	0	349	46,205
Kilombero	20,356	26,936	751	0	0	0	48,044
Ulanga	15,487	14,811	72	0	0	0	30,370
Morogoro Urban	3,486	208	24	0	0	0	3,718
Mvomero	34,913	6,170	508	123	0	0	41,714
Total	155,687	72,230	3,626	123	124	349	232,139

8.1.1e AGRO PROCESSING: Number of Crop Growing Households By Use of Primary Processed Product During 2002/03 Agriculture Year and District

	Product Use						
District	Household / Human Consumption	Fuel for Cooking	Sale Only	Animal Consumption	Did Not Use	Other	Total
Kilosa	60,722	0	131	222	1,013	0	62,088
Morogoro Rural	43,547	121	1,938	0	476	123	46,205
Kilombero	47,419	123	0	0	502	0	48,044
Ulanga	29,999	0	296	75	0	0	30,370
Morogoro Urban	3,634	0	12	48	12	12	3,718
Mvomero	40,962	246	127	378	0	0	41,714
Total	226,283	490	2,504	723	2,003	135	232,139

Table 8.1.1f AGRO PROCESSING: Number of Crop Growing Households By Where Product Sold During 2002/03 Agriculture Year and District

	Where Sold									
District	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Kilosa	1,262	250	0	129	0	129	783	0	59,535	62,088
Morogoro Rural	2,299	1,559	122	0	118	0	0	0	42,107	46,205
Kilombero	2,234	258	129	0	94	0	1,375	2,204	41,750	48,044
Ulanga	1,749	1,987	0	76	0	78	464	0	26,016	30,370
Morogoro Urban	62	35	0	12	0	0	18	167	3,425	3,718
Mvomero	2,115	0	0	0	0	0	121	1,234	38,243	41,714
Total	9,722	4,089	252	217	212	207	2,760	3,605	211,075	232,139

8.1.1g AGRO PROCESSING: Number of Crop Growing Households By By-Product During 2002/03 Agriculture Year and District

	By Product									
District	Bran	Cake	Husk	Juice	Fiber	Pulp	Shell	No by-product	Other	Total
Kilosa	47,982	0	2,920	0	0	0	0	11,185	0	62,088
Morogoro Rural	31,728	1,457	3,703	0	0	0	360	8,842	115	46,205
Kilombero	30,478	246	16,448	117	258	0	116	381	0	48,044
Ulanga	15,443	1,285	12,114	0	0	0	77	1,451	0	30,370
Morogoro Urban	3,060	21	130	0	12	9	13	473	0	3,718
Mvomero	22,569	492	5,052	251	0	0	493	12,857	0	41,714
Total	151,260	3,501	40,367	368	270	9	1,059	35,190	115	232,139

MARKETING

10.1: Number of Crop Producing Households Reporting Selling Agricultural Products During 2003/04 By District

	Number of Households that Sold		Number of Households that Did not Sell		Total Number of Household
	Number	%	Number	%	
Kilosa	43,822	59.7	29,613	40.3	73,435
Morogoro Rural	36,603	68.9	16,514	31.1	53,117
Kilombero	42,308	86.7	6,474	13.3	48,782
Ulanga	22,824	73.8	8,084	26.2	30,908
Morogoro Urban	3,357	75.7	1,077	24.3	4,434
Mvomero	33,987	67.9	16,082	32.1	50,069
Total	182,902	70.1	77,843	29.9	260,746

10.2 MARETING: Number of Crop Producing Households Reporting Not Selling Agricultural Products During 2003/04 By Reason for Not Selling Crops By District

	Main Reasons for Not Selling Crops									
District	Price Too Low	Production Insufficient to Sell	Market Too Far	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Other	Not applicable	Total
Kilosa	881	27,441	125	0	769	633	126	3,139	37,246	70,359
Morogoro Rural	122	19,670	61	0	176	0	0	2,039	30,451	52,519
Kilombero	257	9,904	0	129	127	0	0	129	36,551	47,097
Ulanga	222	11,120	74	0	77	77	77	156	18,425	30,228
Morogoro Urban	25	2,030	0	26	0	0	36	38	2,017	4,172
Mvomero	372	16,264	0	0	249	0	0	1,431	28,510	46,826
Total	1,879	86,429	260	155	1,398	710	239	6,932	153,201	251,201

Table 10.3 Proportion of Households who Reported Main Reason for Not Selling Their Crops by district during 2002/03 agriculture

	Price Too Low	Production Insufficient to Sell	Market Too Far	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Other	Not applicable	Total
Kilosa	1.25	39.00	0.18	0.00	1.09	0.90	0.18	4.46	52.94	100.00
Morogoro Rural	0.23	37.45	0.12	0.00	0.33	0.00	0.00	3.88	57.98	100.00
Kilombero	0.55	21.03	0.00	0.27	0.27	0.00	0.00	0.27	77.61	100.00
Ulanga	0.73	36.79	0.24	0.00	0.26	0.25	0.26	0.52	60.95	100.00
Morogoro Urban	0.60	48.66	0.00	0.62	0.00	0.00	0.87	0.91	48.34	100.00
Mvomero	0.79	34.73	0.00	0.00	0.53	0.00	0.00	3.06	60.89	100.00
Total	0.75	34.41	0.10	0.06	0.56	0.28	0.10	2.76	60.99	100.00

IRRIGATION /EROSION CONTROL

Table 11.1: Number and Percent of Crop Growing Households Reporting of Practicing Irrigation During 2002/03 Agriculture Year By District

	Households Practicing Irrigation		Households not Practicing Irrigation		
	Number of Household	%	Number of Household	%	Total Number of household
Kilosa	8,916	12.1	64,519	87.9	73,435
Morogoro Rural	1,560	2.9	51,557	97.1	53,117
Kilombero	1,796	3.7	46,986	96.3	48,782
Ulanga	1,907	6.2	29,001	93.8	30,908
Morogoro Urban	281	6.3	4,152	93.7	4,434
Mvomero	7,231	14.4	42,838	85.6	50,069
Total	21,693	8.3	239,053	91.7	260,746

11.2: IRRIGATION: Area of Irrigated and Non Irrigatable (ha) Land By District

District	Irrigated Area	Area Irrigated Land this Year	%
Kilosa	4,877	4,406	90
Morogoro Rural	833	483	58
Kilombero	730	569	78
Ulanga	523	414	79
Morogoro Urban	122	87	71
Mvomero	4,368	3,372	77
Total	11,453	9,330	81

11.3: IRRIGATION: Number of Households Using Irrigation By Source of Irrigation Water During 2003/04 Agricultural Year By District

	Source of Irrigation Water						
District	River	Lake	Well	Borehole	Canal	Pipe water	Total
Kilosa	6,378	105	1,119	0	1,314	0	8,916
Morogoro Rural	472	0	0	0	1,088	0	1,560
Kilombero	915	0	635	0	129	116	1,796
Ulanga	835	0	686	0	0	386	1,907
Morogoro Urban	180	0	37	12	52	0	281
Mvomero	3,356	0	835	0	3,041	0	7,231
Total	12,136	105	3,313	12	5,624	502	21,693

11.4: IRRIGATION: Number of Households Using Irrigation By Method of Irrigation of Obtaining Water By District

	Method of Obtaining Water					
District	Gravity	Hand Bucket	Hand Pump	Motor Pump	Other	Total
Kilosa	6,528	1,866	131	392	0	8,916
Morogoro Rural	725	835	0	0	0	1,560
Kilombero	1,055	741	0	0	0	1,796
Ulanga	381	1,373	0	76	77	1,907
Morogoro Urban	180	101	0	0	0	281
Mvomero	4,266	2,722	0	243	0	7,231
Total	13,136	7,639	131	710	77	21,693

11.5: IRRIGATION: Number of Households by Method of Field Application of Irrigation Water and District for the 2002/03 agricultural Year

District	Method of Application				
	Flood	Sprinkler	Water Hose	Watering Can	Total
Kilosa	6,789	0	392	1,736	8,916
Morogoro Rural	122	0	0	1,439	1,560
Kilombero	927	0	0	868	1,796
Ulanga	381	0	76	1,450	1,907
Morogoro Urban	177	0	0	105	281
Mvomero	1,862	250	0	5,119	7,231
Total	10,258	250	467	10,717	21,693

11.6: IRRIGATION: Number of Households With Erosion Control/Water Harvesting Facilities on their Land By District

District	Presence of Erosion Control/Water Harvesting Facilities				
	Have facility		Does Not Have Facility		Number of Households
	Number	%	Number	%	
Kilosa	2,308	3	71,127	97	73,435
Morogoro Rural	1,781	3	51,336	97	53,117
Kilombero	982	2	47,800	98	48,782
Ulanga	768	2	30,140	98	30,908
Morogoro Urban	530	12	3,904	88	4,434
Mvomero	2,526	5	47,544	95	50,069
Total	8,894	3	251,852	97	260,746

11.7 EROSION CONTROL: Number of Erosion Control Harvesting Structures By Type and District

District	Type of Erosion Control								
	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Dam	Total number of Structures
Kilosa	.	7,961	.	1,697	375	2,249	.	.	12,281
Morogoro Rural	17,160	729	0	734	1,223	4,369	0	478	24,693
Kilombero	455	4,302	.	123	.	1,508	.	.	6,389
Ulanga	.	6,473	.	.	.	1,622	77	.	8,172
Morogoro Urban	828	2,737	364	232	381	486	147	.	5,175
Mvomero	.	47,465	.	.	5,220	9,932	759	.	63,376
Total	18,443	69,668	364	2,785	7,199	20,166	983	478	120,086

ACCESS TO FARM INPUTS AND IMPLEMENTS

12.1.1 ACCESS TO INPUTS: Number of Agricultural Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	4,288	6	69,147	94	73,435	100
Morogoro	328	1	52,554	99	52,882	100
Kilombero	4,103	8	44,679	92	48,782	100
Ulanga	533	2	30,375	98	30,908	100
Morogoro Urban	393	9	4,041	91	4,434	100
Mvomero	7,729	15	42,340	85	50,069	100
Total	17,374	7	243,137	93	260,511	100

12.1.2 ACCESS TO INPUTS: Number of Agricultural Households Using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	6,024	8	67,541	92	73,566	100
Morogoro	1,415	3	52,179	97	53,594	100
Kilombero	1,821	4	47,329	96	49,150	100
Ulanga	839	3	30,069	97	30,908	100
Morogoro Urban	208	5	4,251	95	4,459	100
Mvomero	4,630	9	45,440	91	50,069	100
Total	14,937	6	246,809	94	261,746	100

12.1.3 ACCESS TO INPUTS: Number of Agricultural Households Using COMPOST Manure by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	517	1	72,918	99	73,435	100
Morogoro	3,747	7	49,613	93	53,359	100
Kilombero	706	1	47,957	99	48,663	100
Ulanga	155	1	30,753	99	30,908	100
Morogoro Urban	75	2	4,359	98	4,434	100
Mvomero	2,220	4	47,849	96	50,069	100
Total	7,421	3	253,448	97	260,869	100

12.1.4 ACCESS TO INPUTS: Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	4,388	6	68,917	94	73,305	100
Morogoro	1,185	2	51,810	98	52,995	100
Kilombero	1,422	3	47,486	97	48,908	100
Ulanga	2,914	9	27,994	91	30,908	100
Morogoro Urban	318	7	4,104	93	4,421	100
Mvomero	10,597	21	39,473	79	50,069	100
Total	20,823	8	239,784	92	260,607	100

12.1.5 ACCESS TO INPUTS: Number of Agricultural Households Using Herbicides by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	1,094	1	72,341	99	73,435	100
Morogoro	115	0	52,766	100	52,881	100
Kilombero	10,707	22	37,830	78	48,537	100
Ulanga	7,598	25	23,311	75	30,908	100
Morogoro Urban	37	1	4,397	99	4,434	100
Mvomero	1,436	3	48,633	97	50,069	100
Total	20,987	8	239,278	92	260,265	100

12.1.6 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	7,497	10	65,938	90	73,435	100
Morogoro	3,702	7	49,411	93	53,113	100
Kilombero	5,531	11	43,122	89	48,653	100
Ulanga	3,432	11	27,477	89	30,908	100
Morogoro Urban	1,690	38	2,731	62	4,421	100
Mvomero	16,833	34	33,236	66	50,069	100
Total	38,684	15	221,916	85	260,600	100

12.1.7 ACCESS TO INPUTS: Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers		Local Market /		Secondary Market	
	Number	%	Number	%	Number	%	Number	%
Kilosa	210	0	0	0	3,711	5	0	0
Morogoro	0	0	0	0	328	1	0	0
Kilombero	0	0	94	0	2,984	6	0	0
Ulanga	0	0	0	0	533	2	0	0
Morogoro Urban	0	0	0	0	393	9	0	0
Mvomero	0	0	246	0	7,112	14	252	1
Total	210	0	340	0	15,061	6	252	0

cont... ACCESS TO INPUTS: Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Crop Buyers		Large Scale		Neighbour		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	248	0	0	0	119	0	69,147	94	73,435	100
Morogoro	0	0	0	0	0	0	52,554	99	52,882	100
Kilombero	210	0	815	2	0	0	44,679	92	48,782	100
Ulanga	0	0	0	0	0	0	30,375	98	30,908	100
Morogoro Urban	0	0	0	0	0	0	4,041	91	4,434	100
Mvomero	0	0	0	0	118	0	42,340	85	50,069	100
Total	458	0	815	0	237	0	243,137	93	260,511	100

12.1.8 ACCESS TO INPUTS: Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Local Market /		Secondary		Crop Buyers		Large Scale Farm		Locally	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	261	0	130	0	0	0	0	0	2,386	3
Morogoro	0	0	0	0	103	0	0	0	468	1
Kilombero	0	0	0	0	0	0	223	0	486	1
Ulanga	0	0	0	0	0	0	0	0	304	1
Morogoro Urban	12	0	0	0	0	0	0	0	121	3
Mvomero	0	0	128	0	0	0	0	0	2,648	5
Total	273	0	257	0	103	0	223	0	6,411	2

cont.... ACCESS TO INPUTS: Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	3,248	4	0	0	67,541	92	73,566	100
Morogoro	844	2	0	0	52,179	97	53,594	100
Kilombero	725	1	387	1	47,329	96	49,150	100
Ulanga	536	2	0	0	30,069	97	30,908	100
Morogoro Urban	75	2	0	0	4,251	95	4,459	100
Mvomero	1,854	4	0	0	45,440	91	50,069	100
Total	7,282	3	387	0	246,809	94	261,746	100

12.1.9 ACCESS TO INPUTS: Number of Agricultural Households and Source of COMPOST Manure by District, 2002/03 Agricultural

District	Co-operative		Local Market /		Large Scale Farm		Locally Produced by		Neighbour		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	0	0	0	0	130	0	387	1	72,918	99	73,435	100
Morogoro	0	0	121	0	0	0	3,503	7	122	0	49,613	93	53,359	100
Kilombero	0	0	0	0	119	0	587	1	0	0	47,957	99	48,663	100
Ulanga	0	0	0	0	0	0	155	1	0	0	30,753	99	30,908	100
Morogoro Urban	0	0	0	0	0	0	62	1	13	0	4,359	98	4,434	100
Mvomero	124	0	123	0	122	0	1,727	3	124	0	47,849	96	50,069	100
Total	124	0	244	0	241	0	6,165	2	647	0	253,448	97	260,869	100

12.1.10 ACCESS TO INPUTS: Number of Agricultural Households and Source of Pesticides/Fungicides by District,

District	Co-operative		Local Farmers		Local Market /		Secondary Market		Development		Crop Buyers	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	255	0	0	0	3,494	5	125	0	131	0	129	0
Morogoro	0	0	0	0	1,185	2	0	0	0	0	0	0
Kilombero	0	0	0	0	1,203	2	0	0	0	0	0	0
Ulanga	0	0	0	0	1,608	5	76	0	0	0	75	0
Morogoro Urban	0	0	0	0	306	7	0	0	0	0	0	0
Mvomero	251	1	125	0	8,583	17	377	1	380	1	0	0
Total	506	0	125	0	16,378	6	578	0	510	0	205	0

cont… ACCESS TO INPUTS: Number of Agricultural Households and Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Locally Produced		Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	254	0	0	0	68,917	94	73,305	100
Morogoro	0	0	0	0	0	0	51,810	98	52,995	100
Kilombero	0	0	125	0	94	0	47,486	97	48,908	100
Ulanga	153	0	926	3	75	0	27,994	91	30,908	100
Morogoro Urban	0	0	0	0	12	0	4,104	93	4,421	100
Mvomero	510	1	243	0	128	0	39,473	79	50,069	100
Total	664	0	1,547	1	309	0	239,784	92	260,607	100

12.1.11 ACCESS TO INPUTS: Number of Agricultural Households and Source of Herbicides by District,

District	Co-operative		Local Farmers		Local Market /		Secondary Market		Crop Buyers	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	0	0	717	1	128	0	119	0
Morogoro	0	0	0	0	115	0	0	0	0	0
Kilombero	0	0	188	0	10,066	21	114	0	210	0
Ulanga	0	0	0	0	5,983	19	155	1	922	3
Morogoro Urban	0	0	0	0	37	1	0	0	0	0
Mvomero	124	0	123	0	1,189	2	0	0	0	0
Total	124	0	311	0	18,108	7	396	0	1,251	0

cont… ACCESS TO INPUTS: Number of Agricultural Households and Source of Herbicides by District, 2002/03 Agricultural Year

District	Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	131	0	0	0	72,341	99	73,435	100
Morogoro	0	0	0	0	52,766	100	52,881	100
Kilombero	129	0	0	0	37,830	78	48,537	100
Ulanga	463	1	75	0	23,311	75	30,908	100
Morogoro Urban	0	0	0	0	4,397	99	4,434	100
Mvomero	0	0	0	0	48,633	97	50,069	100
Total	722	0	75	0	239,278	92	260,265	100

12.1.12 ACCESS TO INPUTS: Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers		Local Market /		Secondary Market		Development	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	130	0	0	0	4,589	6	0	0	247	0
Morogoro	0	0	0	0	3,354	6	0	0	103	0
Kilombero	0	0	0	0	2,017	4	128	0	238	0
Ulanga	0	0	151	0	1,135	4	0	0	460	1
Morogoro Urban	12	0	0	0	1,590	36	25	1	0	0
Mvomero	379	1	379	1	9,863	20	250	0	501	1
Total	521	0	530	0	22,548	9	403	0	1,549	1

12.1.12 ACCESS TO INPUTS: Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year

	Crop Buyers		Large Scale		Locally Produced		Neighbour		Other		Not applicable		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	235	0	391	1	1,906	3	0	0	65,938	90	73,435	100
Morogoro	0	0	0	0	122	0	122	0	0	0	49,411	93	53,113	100
Kilombero	188	0	327	1	0	0	2,539	5	94	0	43,122	89	48,653	100
Ulanga	75	0	0	0	78	0	1,532	5	0	0	27,477	89	30,908	100
Morogoro Urban	0	0	0	0	0	0	51	1	12	0	2,731	62	4,421	100
Mvomero	747	1	0	0	1,266	3	3,448	7	0	0	33,236	66	50,069	100
Total	1,010	0	562	0	1,857	1	9,598	4	106	0	221,916	85	260,600	100

12.1.13 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

	Less than 1 km		Between 1 and 3		Between 3 and		Between 10 and 20		20 km and		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	970	23	980	23	1,232	29	371	9	735	17	4,288	100
Morogoro	0	0	103	32	103	32	0	0	121	37	328	100
Kilombero	759	18	374	9	2,241	55	429	10	300	7	4,103	100
Ulanga	77	14	229	43	0	0	72	14	155	29	533	100
Morogoro Urban	0	0	26	7	254	64	114	29	0	0	393	100
Mvomero	2,090	27	1,884	24	1,891	24	1,372	18	492	6	7,729	100
Total	3,896	22	3,596	21	5,721	33	2,358	14	1,803	10	17,374	100

12.1.14 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Farm Yard Manure by District, 2002/03 Agricultural Year

	Less than 1 km		Between 1 and 3		Between 3 and		Between 10 and 20		20 km and		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	4,985	83	388	6	521	9	0	0	131	2	6,024	100
Morogoro	1,354	96	0	0	61	4	0	0	0	0	1,415	100
Kilombero	1,578	87	243	13	0	0	0	0	0	0	1,821	100
Ulanga	379	45	153	18	153	18	154	18	0	0	839	100
Morogoro Urban	159	76	0	0	25	12	24	12	0	0	208	100
Mvomero	3,645	79	730	16	0	0	255	6	0	0	4,630	100
Total	12,099	81	1,515	10	760	5	433	3	131	1	14,937	100

12.1.15 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of COMPOST Manure by District, 2002/03 Agricultural Year

	Less than 1 km		Between 1 and 3		Between 3 and		20 km and Above		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	387	75	130	25	0	0	0	0	517	100
Morogoro	3,626	97	0	0	0	0	121	3	3,747	100
Kilombero	468	66	119	17	119	17	0	0	706	100
Ulanga	155	100	0	0	0	0	0	0	155	100
Morogoro Urban	75	100	0	0	0	0	0	0	75	100
Mvomero	2,220	100	0	0	0	0	0	0	2,220	100
Total	6,932	93	249	3	119	2	121	2	7,421	100

12.1.16 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3		Between 3 and		Between 10 and 20		20 km and		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	846	19	259	6	902	21	386	9	1,995	45	4,388	100
Morogoro	123	10	103	9	103	9	0	0	855	72	1,185	100
Kilombero	251	18	348	24	363	26	213	15	248	17	1,422	100
Ulanga	844	29	842	29	233	8	78	3	917	31	2,914	100
Morogoro Urban	0	0	13	4	181	57	124	39	0	0	318	100
Mvomero	3,734	35	1,873	18	2,249	21	1,628	15	1,111	10	10,597	100
Total	5,798	28	3,439	17	4,031	19	2,429	12	5,125	25	20,823	100

12.1.17 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Herbicides by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3		Between 3 and		Between 10 and 20		20 km and		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	374	34	115	11	349	32	256	23	0	0	1,094	100
Morogoro	0	0	0	0	0	0	0	0	115	100	115	100
Kilombero	2,267	21	755	7	3,397	32	2,230	21	2,057	19	10,707	100
Ulanga	2,696	35	1,609	21	1,619	21	298	4	1,376	18	7,598	100
Morogoro Urban	0	0	13	35	13	35	11	29	0	0	37	100
Mvomero	243	17	619	43	473	33	0	0	101	7	1,436	100
Total	5,580	27	3,111	15	5,851	28	2,795	13	3,650	17	20,987	100

12.1.18 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Improved Seeds by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3		Between 3 and		Between 10 and 20		20 km and		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	2,208	29	636	8	1,934	26	777	10	1,942	26	7,497	100
Morogoro	471	13	103	3	103	3	122	3	2,901	78	3,702	100
Kilombero	2,048	37	1,062	19	1,457	26	347	6	617	11	5,531	100
Ulanga	1,452	42	460	13	463	13	229	7	828	24	3,432	100
Morogoro Urban	62	4	26	2	676	40	888	53	39	2	1,690	100
Mvomero	7,576	45	3,234	19	3,071	18	1,717	10	1,235	7	16,833	100
Total	13,817	36	5,521	14	7,704	20	4,081	11	7,562	20	38,684	100

12.1.19 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Remittances		Bank Loan		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	2,145	50	1,586	37	115	3	442	10	4,288	100
Morogoro	328	100	0	0	0	0	0	0	328	100
Kilombero	3,124	76	767	19	118	3	94	2	4,103	100
Ulanga	455	85	78	15	0	0	0	0	533	100
Morogoro Urban	262	67	107	27	25	6	0	0	393	100
Mvomero	6,748	87	734	9	247	3	0	0	7,729	100
Total	13,061	75	3,272	19	505	3	535	3	17,374	100

12.1.20 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Farm Yard Manure by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	5,270	87	365	6	390	6	0	0	6,024	100
Morogoro	485	34	391	28	478	34	61	4	1,415	100
Kilombero	1,180	65	0	0	125	7	516	28	1,821	100
Ulanga	457	54	78	9	229	27	75	9	839	100
Morogoro Urban	146	70	24	12	12	6	25	12	208	100
Mvomero	3,773	81	476	10	128	3	253	5	4,630	100
Total	11,312	76	1,334	9	1,361	9	931	6	14,937	100

12.1.21 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying COMPOST Manure by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Produced on		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	517	100	0	0	0	0	0	0	517	100
Morogoro	1,332	36	358	10	123	3	1,933	52	3,747	100
Kilombero	706	100	0	0	0	0	0	0	706	100
Ulanga	0	0	78	50	0	0	78	50	155	100
Morogoro Urban	75	100	0	0	0	0	0	0	75	100
Mvomero	1,234	56	616	28	0	0	370	17	2,220	100
Total	3,865	52	1,052	14	123	2	2,380	32	7,421	100

12.1.22 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Remittances		Produced on form		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	4,010	91	377	9	0	0	0	0	0	0	4,388	100
Morogoro	1,062	90	123	10	0	0	0	0	0	0	1,185	100
Kilombero	1,050	74	372	26	0	0	0	0	0	0	1,422	100
Ulanga	1,454	50	1,073	37	387	13	0	0	0	0	2,914	100
Morogoro Urban	223	70	95	30	0	0	0	0	0	0	318	100
Mvomero	8,405	79	1,704	16	246	2	118	1	123	1	10,597	100
Total	16,204	78	3,744	18	633	3	118	1	123	1	20,823	100

12.1.23 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Herbicides by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Remittances		Bank Loan		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	617	56	243	22	0	0	234	21	0	0	1,094	100
Morogoro	115	100	0	0	0	0	0	0	0	0	115	100
Kilombero	8,573	80	1,534	14	506	5	94	1	0	0	10,707	100
Ulanga	3,681	48	3,152	41	460	6	75	1	229	3	7,598	100
Morogoro Urban	37	100	0	0	0	0	0	0	0	0	37	100
Mvomero	1,211	84	225	16	0	0	0	0	0	0	1,436	100
Total	14,234	68	5,154	25	966	5	403	2	229	1	20,987	100

12.1.24 ACCESS TO INPUTS: Number of Agricultural households and Source of Finance for buying Improved Seeds by District, 2002/03 Agricultural Year

District	Sale of Farm		Other Income		Remittances		Bank Loan		Produced on		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	5,020	67	1,958	26	260	3	130	2	0	0	130	2	7,497	100
Morogoro	2,096	57	1,181	32	240	6	0	0	0	0	184	5	3,702	100
Kilombero	4,669	84	768	14	0	0	94	2	0	0	0	0	5,531	100
Ulanga	1,596	47	1,375	40	461	13	0	0	0	0	0	0	3,432	100
Morogoro Urban	1,079	64	527	31	63	4	0	0	9	1	12	1	1,690	100
Mvomero	12,182	72	3,298	20	1,108	7	0	0	0	0	245	1	16,833	100
Total	26,641	69	9,106	24	2,133	6	224	1	9	0	572	1	38,684	100

12.1.25 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	13,303	19	42,896	62	1,413	2	256	0	6,134	9	4,890	7
Morogoro	15,899	30	27,073	52	366	1	224	0	2,664	5	6,208	12
Kilombero	1,745	4	36,404	81	491	1	0	0	0	0	6,039	14
Ulanga	8,082	27	13,637	45	389	1	74	0	388	1	7,729	25
Morogoro Urban	220	5	3,128	77	12	0	0	0	117	3	502	12
Mvomero	4,531	11	26,250	62	734	2	496	1	5,008	12	4,578	11
Total	43,782	18	149,389	61	3,405	1	1,050	0	14,311	6	29,945	12

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	254	0	69,147	100
Morogoro	0	0	119	0	52,554	100
Kilombero	0	0	0	0	44,679	100
Ulanga	0	0	76	0	30,375	100
Morogoro Urban	12	0	50	1	4,041	100
Mvomero	125	0	618	1	42,340	100
Total	137	0	1,118	0	243,137	100

12.1.26 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	18,151	27	11,130	16	22,627	34	4,888	7	6,928	10	3,308	5
Morogoro	26,566	51	11,501	22	4,204	8	794	2	6,520	12	1,868	4
Kilombero	29,132	62	7,052	15	5,121	11	129	0	594	1	5,302	11
Ulanga	16,107	54	926	3	3,230	11	0	0	3,907	13	5,820	19
Morogoro Urban	2,126	50	500	12	1,243	29	120	3	63	1	133	3
Mvomero	15,241	34	3,721	8	13,397	29	1,194	3	6,282	14	5,114	11
Total	107,323	43	34,830	14	49,822	20	7,125	3	24,294	10	21,545	9

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	509	1	67,541	100
Morogoro	119	0	608	1	52,179	100
Kilombero	0	0	0	0	47,329	100
Ulanga	0	0	78	0	30,069	100
Morogoro Urban	0	0	66	2	4,251	100
Mvomero	0	0	491	1	45,440	100
Total	119	0	1,751	1	246,809	100

12.1.27 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	6,817	9	14,196	19	27,600	38	2,862	4	15,809	22	5,257	7
Morogoro	9,736	20	12,594	25	8,888	18	668	1	13,907	28	1,990	4
Kilombero	6,261	13	6,918	14	27,241	57	775	2	1,494	3	5,023	10
Ulanga	7,319	24	1,157	4	7,813	25	464	2	9,032	29	4,660	15
Morogoro Urban	512	12	556	13	1,880	43	375	9	830	19	155	4
Mvomero	3,253	7	2,990	6	16,441	34	1,430	3	17,296	36	5,832	12
Total	33,898	13	38,410	15	89,862	35	6,575	3	58,367	23	22,916	9

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	378	1	72,918	100
Morogoro	738	1	1,093	2	49,613	100
Kilombero	0	0	245	1	47,957	100
Ulanga	0	0	308	1	30,753	100
Morogoro Urban	13	0	38	1	4,359	100
Mvomero	0	0	608	1	47,849	100
Total	750	0	2,671	1	253,448	100

12.1.28 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	6,280	9	42,693	62	3,816	6	0	0	9,131	13	6,747	10
Morogoro	13,304	26	26,527	51	823	2	0	0	7,644	15	3,272	6
Kilombero	2,479	5	37,623	79	2,236	5	126	0	881	2	4,142	9
Ulanga	3,396	12	16,588	59	388	1	74	0	767	3	6,173	22
Morogoro Urban	26	1	3,271	80	47	1	12	0	101	2	621	15
Mvomero	4,401	11	22,777	58	994	3	452	1	6,510	16	3,603	9
Total	29,885	12	149,480	62	8,304	3	663	0	25,034	10	24,557	10

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	249	0	68,917	100
Morogoro	0	0	242	0	51,810	100
Kilombero	0	0	0	0	47,486	100
Ulanga	77	0	530	2	27,994	100
Morogoro Urban	0	0	25	1	4,104	100
Mvomero	124	0	613	2	39,473	100
Total	202	0	1,660	1	239,784	100

12.1.29 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	8,574	12	40,091	55	2,654	4	0	0	13,016	18	7,628	11
Morogoro	11,587	22	27,088	51	576	1	123	0	6,985	13	6,165	12
Kilombero	2,009	5	33,149	88	371	1	0	0	129	0	2,056	5
Ulanga	2,639	11	17,942	77	233	1	0	0	153	1	1,735	7
Morogoro Urban	62	1	3,413	78	60	1	0	0	126	3	710	16
Mvomero	4,905	10	23,175	48	572	1	123	0	10,599	22	8,520	18
Total	29,776	12	144,858	61	4,467	2	246	0	31,007	13	26,815	11

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	377	1	72,341	100
Morogoro	0	0	242	0	52,766	100
Kilombero	0	0	116	0	37,830	100
Ulanga	0	0	610	3	23,311	100
Morogoro Urban	0	0	25	1	4,397	100
Mvomero	124	0	616	1	48,633	100
Total	124	0	1,986	1	239,278	100

12.1.30 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Improved Seeds by

District	Not Available		Price Too High		No Money to Buy		Too Much Labour		Do not Know		Input is of No	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	15,485	23	44,969	68	2,205	3	0	0	2,223	3	676	1
Morogoro	27,139	55	20,126	41	224	0	350	1	840	2	723	1
Kilombero	10,368	24	29,896	69	1,352	3	127	0	374	1	635	1
Ulanga	12,132	44	14,205	52	150	1	0	0	0	0	839	3
Morogoro Urban	36	1	2,478	91	23	1	0	0	13	0	131	5
Mvomero	6,997	21	20,590	62	0	0	0	0	3,910	12	996	3
Total	72,157	32	132,265	60	3,955	2	477	0	7,360	3	3,999	2

cont… ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year

District	Locally Produced		Other		Total	
	Number	%	Number	%	Number	%
Kilosa	0	0	379	1	65,938	100
Morogoro	0	0	119	0	49,522	100
Kilombero	0	0	370	1	43,122	100
Ulanga	0	0	152	1	27,477	100
Morogoro Urban	0	0	50	2	2,731	100
Mvomero	125	0	618	2	33,236	100
Total	125	0	1,689	1	222,027	100

12.1.31 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	1,196	28	2,660	62	313	7	119	3	4,288	100
Morogoro	224	68	103	32	0	0	0	0	328	100
Kilombero	489	12	3,486	85	129	3	0	0	4,103	100
Ulanga	229	43	154	29	150	28	0	0	533	100
Morogoro Urban	236	60	141	36	16	4	0	0	393	100
Mvomero	3,369	44	4,359	56	0	0	0	0	7,729	100
Total	5,743	33	10,903	63	609	4	119	1	17,374	100

12.1.32 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	2,834	47	2,800	46	391	6	6,024	100
Morogoro	549	39	748	53	119	8	1,415	100
Kilombero	123	7	1,573	86	125	7	1,821	100
Ulanga	304	36	384	46	151	18	839	100
Morogoro Urban	37	18	160	77	11	5	208	100
Mvomero	2,389	52	2,241	48	0	0	4,630	100
Total	6,235	42	7,905	53	797	5	14,937	100

12.1.33 ACCESS TO INPUTS: Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year

	Excellent		Good		Average		Total	
District	Number	%	Number	%	Number	%	Number	%
Kilosa	130	25	130	25	257	50	517	100
Morogoro	1,086	29	1,936	52	725	19	3,747	100
Kilombero	223	32	483	68	0	0	706	100
Ulanga	0	0	78	50	78	50	155	100
Morogoro Urban	0	0	50	67	25	33	75	100
Mvomero	1,477	67	493	22	250	11	2,220	100
Total	2,916	39	3,170	43	1,335	18	7,421	100

12.1.34 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year

	Excellent		Good		Average		Poor		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	641	15	3,264	74	483	11	0	0	4,388	100
Morogoro	103	9	1,081	91	0	0	0	0	1,185	100
Kilombero	252	18	1,171	82	0	0	0	0	1,422	100
Ulanga	767	26	1,914	66	232	8	0	0	2,914	100
Morogoro Urban	146	46	141	44	31	10	0	0	318	100
Mvomero	2,861	27	7,484	71	128	1	124	1	10,597	100
Total	4,769	23	15,055	72	874	4	124	1	20,823	100

12.1.35 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year

	Excellent		Good		Average		Poor		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	845	77	249	23	0	0	0	0	1,094	100
Morogoro	0	0	115	100	0	0	0	0	115	100
Kilombero	889	8	9,051	85	638	6	129	1	10,707	100
Ulanga	2,161	28	5,053	67	384	5	0	0	7,598	100
Morogoro Urban	37	100	0	0	0	0	0	0	37	100
Mvomero	587	41	602	42	246	17	0	0	1,436	100
Total	4,519	22	15,071	72	1,268	6	129	1	20,987	100

12.1.36 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year

	Excellent		Good		Average		Total	
District	Number	%	Number	%	Number	%	Number	%
Kilosa	2,322	31	4,784	64	392	5	7,497	100
Morogoro	974	26	2,189	59	540	15	3,702	100
Kilombero	1,310	24	3,969	72	251	5	5,531	100
Ulanga	1,229	36	1,978	58	225	7	3,432	100
Morogoro Urban	585	35	969	57	136	8	1,690	100
Mvomero	8,181	49	8,184	49	468	3	16,833	100
Total	14,600	38	22,073	57	2,011	5	38,684	100

12.1.37 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	9,136	12	64,300	88	73,435	100
Morogoro	4,939	9	47,943	91	52,882	100
Kilombero	11,307	23	37,475	77	48,782	100
Ulanga	5,654	18	25,254	82	30,908	100
Morogoro Urban	790	18	3,644	82	4,434	100
Mvomero	15,481	31	34,588	69	50,069	100
Total	47,307	18	213,204	82	260,511	100

12.1.38 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Farm Yard Manure by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	14,531	20	59,034	80	73,566	100
Morogoro	8,465	16	45,129	84	53,594	100
Kilombero	1,955	4	47,195	96	49,150	100
Ulanga	1,821	6	29,087	94	30,908	100
Morogoro Urban	304	7	4,155	93	4,459	100
Mvomero	12,492	25	37,577	75	50,069	100
Total	39,568	15	222,178	85	261,746	100

12.1.39 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year COMPOST Manure by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	2,030	3	71,405	97	73,435	100
Morogoro	9,816	18	43,543	82	53,359	100
Kilombero	1,562	3	47,101	97	48,663	100
Ulanga	1,523	5	29,385	95	30,908	100
Morogoro Urban	375	8	4,059	92	4,434	100
Mvomero	11,270	23	38,799	77	50,069	100
Total	26,577	10	234,292	90	260,869	100

12.1.40 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	11,792	16	61,513	84	73,305	100
Morogoro	6,053	11	46,942	89	52,995	100
Kilombero	5,610	11	43,298	89	48,908	100
Ulanga	8,815	29	22,094	71	30,908	100
Morogoro Urban	597	14	3,824	86	4,421	100
Mvomero	20,571	41	29,498	59	50,069	100
Total	53,438	21	207,169	79	260,607	100

12.1.41 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Herbicides by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	4,367	6	69,068	94	73,435	100
Morogoro	3,754	7	49,127	93	52,881	100
Kilombero	15,026	31	33,512	69	48,537	100
Ulanga	17,186	56	13,722	44	30,908	100
Morogoro Urban	107	2	4,327	98	4,434	100
Mvomero	5,640	11	44,429	89	50,069	100
Total	46,080	18	214,185	82	260,265	100

12.1.42 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Number of		Number of		Total	
	Number	%	Number	%	Number	%
Kilosa	24,823	34	48,613	66	73,435	100
Morogoro	11,503	22	41,610	78	53,113	100
Kilombero	10,575	22	38,078	78	48,653	100
Ulanga	17,498	57	13,410	43	30,908	100
Morogoro Urban	2,205	50	2,217	50	4,421	100
Mvomero	29,014	58	21,055	42	50,069	100
Total	95,618	37	164,982	63	260,600	100

12.2.1 ACCESS TO EQUIPMENT: Number of Equipment/Assets Owned/ Rented by the Household During 2002/03

District	Implement / Asset Name									
	Hand Hoe		Sprayer		Oxen		Ox Plough		Ox Seed Planter	
	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented
Kilosa	253,236	5,389	3,774	3,018	2,591	5,607	1,555	2,348	0	0
Morogoro	160,398	1,215	535	242	0	0	0	0	0	0
Kilombero	172,198	1,781	3,576	9,387	10,400	1,290	2,106	365	0	0
Ulanga	110,211	1,045	3,630	7,819	12,904	4,546	2,906	1,233	0	0
Morogoro Urban	13,942	335	228	65	0	0	0	0	0	0
Mvomero	149,921	6,536	3,582	7,087	766	0	128	0	0	0
Total	859,905	16,301	15,324	27,617	26,660	11,443	6,694	3,947	0	0

cont… ACCESS TO EQUIPMENT: Number of Equipment/Assets Owned/ Rented by the Household During 2002/03

District	Implement / Asset Name											
	Ox Cart		Tractor		Tractor Plough		Tractor Harrow		Threshers / Shellers		Total	
	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented
Kilosa	3,104	5,588	126	4,276	126	3,988	1,391	2,571	131	116	266,034	32,900
Morogoro	0	0	122	1,095	122	1,156	0	123	0	0	161,177	3,831
Kilombero	0	0	450	11,595	332	11,582	94	1,974	0	0	189,156	37,974
Ulanga	620	307	0	4,525	0	4,501	0	230	0	0	130,270	24,207
Morogoro Urban	0	0	0	193	0	123	0	9	0	0	14,170	724
Mvomero	0	255	728	8,242	0	8,612	0	863	0	0	155,124	31,596
Total	3,724	6,150	1,427	29,926	580	29,962	1,485	5,769	131	116	915,931	131,232

12.2.2 ACCESS TO EQUIPMENT: Number of Agricultural Households that used Farm Implements/Assets in 2002/03 by District, 2002/03 Agricultural Year

District	Implement / Asset Name								
	Hand Hoe	Hand Powered Sprayer	Oxen	Ox Plough	Ox Cart	Tractor	Tractor Plough	Tractor Harrow	Threshers / Shellers
Kilosa	73,180	6,337	2,213	2,212	5,311	4,402	4,114	2,697	247
Morogoro	52,449	657	0	0	0	1,095	1,156	123	0
Kilombero	48,539	11,769	1,222	1,345	0	11,926	11,795	2,068	0
Ulanga	30,908	9,822	2,218	2,294	772	4,370	4,423	230	0
Morogoro Urban	4,408	280	0	0	0	193	123	9	0
Mvomero	49,820	8,078	128	128	255	8,362	8,490	863	0
Total	259,304	36,943	5,781	5,979	6,338	30,348	30,100	5,989	247

12.2.3 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using Hand Hoe by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Equipment / Asset		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	131	34	130	34	126	33	0	0	0	0	386	100
Morogoro	123	16	423	53	0	0	122	15	123	16	792	100
Kilombero	116	32	246	68	0	0	0	0	0	0	362	100
Morogoro Urban	13	50	13	50	0	0	0	0	0	0	26	100
Mvomero	0	0	125	50	0	0	124	50	0	0	250	100
Total	383	21	936	52	126	7	247	14	123	7	1,815	100

12.2.4 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using Hand Powered Sprayer by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	11,815	18	28,362	42	13,288	20	126	0	13,507	20	0	0	67,098	100
Morogoro	14,900	28	26,510	51	7,850	15	123	0	2,465	5	610	1	52,457	100
Kilombero	1,772	5	22,282	60	11,026	30	0	0	2,055	6	116	0	37,252	100
Ulanga	6,140	29	8,957	42	4,248	20	0	0	1,437	7	380	2	21,163	100
Morogoro Urban	76	2	2,730	66	713	17	26	1	621	15	0	0	4,166	100
Mvomero	5,161	12	19,689	47	10,156	24	0	0	7,103	17	128	0	42,237	100
Total	39,865	18	108,529	48	47,280	21	276	0	27,189	12	1,234	1	224,372	100

12.2.5 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OXEN by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	29,143	41	18,073	25	21,735	31	620	1	1,651	2	0	0	71,222	100
Morogoro	16,045	30	22,391	42	6,872	13	1,231	2	3,170	6	3,408	6	53,117	100
Kilombero	23,919	50	14,333	30	7,501	16	258	1	1,672	4	0	0	47,683	100
Ulanga	17,724	62	3,314	12	6,721	23	0	0	777	3	153	1	28,690	100
Morogoro Urban	1,322	30	1,075	24	763	17	13	0	1,235	28	13	0	4,421	100
Mvomero	13,948	28	6,265	13	6,001	12	485	1	23,119	46	123	0	49,942	100
Total	102,101	40	65,452	26	49,594	19	2,608	1	31,624	12	3,697	1	255,075	100

12.2.6 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX Plough by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	27,642	39	16,635	23	23,913	34	883	1	2,150	3	0	0	71,223	100
Morogoro	12,273	23	24,388	46	9,081	17	488	1	3,479	7	3,288	6	52,997	100
Kilombero	23,051	49	13,744	29	8,862	19	364	1	1,415	3	0	0	47,437	100
Ulanga	17,951	63	2,854	10	6,801	24	77	0	855	3	76	0	28,614	100
Morogoro Urban	1,312	30	864	19	917	21	18	0	1,324	30	0	0	4,434	100
Mvomero	13,828	28	7,391	15	4,492	9	485	1	23,500	47	246	0	49,942	100
Total	96,057	38	65,875	26	54,066	21	2,316	1	32,725	13	3,609	1	254,647	100

12.2.7 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX SEED PLANTER by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	32,305	44	16,933	23	21,357	29	781	1	2,060	3	0	0	73,435	100
Morogoro	12,126	23	24,406	46	8,420	16	668	1	4,210	8	3,288	6	53,117	100
Kilombero	25,155	52	14,090	29	7,630	16	116	0	1,664	3	0	0	48,655	100
Ulanga	22,785	74	1,922	6	4,342	14	0	0	1,860	6	0	0	30,908	100
Morogoro Urban	1,233	28	906	20	879	20	0	0	1,403	32	13	0	4,434	100
Mvomero	13,901	28	7,771	16	4,852	10	118	0	23,180	46	246	0	50,069	100
Total	107,505	41	66,028	25	47,479	18	1,683	1	34,377	13	3,547	1	260,618	100

12.2.8 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX CART by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	28,040	41	16,952	25	20,219	30	648	1	2,265	3	0	0	68,124	100
Morogoro	12,852	24	23,420	44	8,807	17	1,333	3	3,540	7	3,288	6	53,239	100
Kilombero	22,900	47	15,759	32	8,469	17	116	0	1,674	3	0	0	48,918	100
Ulanga	18,338	61	2,696	9	6,021	20	0	0	2,775	9	307	1	30,137	100
Morogoro Urban	1,197	27	819	18	961	22	0	0	1,457	33	0	0	4,434	100
Mvomero	13,680	28	6,388	13	6,324	13	235	0	22,813	46	246	0	49,686	100
Total	97,007	38	66,033	26	50,801	20	2,333	1	34,524	14	3,840	2	254,538	100

12.2.9 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	11,602	17	31,373	45	23,451	34	128	0	2,386	3	92	0	69,033	100
Morogoro	6,670	13	27,368	52	13,607	26	604	1	486	1	3,410	7	52,144	100
Kilombero	5,014	14	18,105	49	12,337	34	0	0	1,156	3	125	0	36,737	100
Ulanga	6,286	24	2,853	11	16,479	62	0	0	767	3	153	1	26,538	100
Morogoro Urban	86	2	1,362	32	1,074	25	0	0	1,718	41	0	0	4,241	100
Mvomero	3,606	9	9,134	22	12,579	30	0	0	16,288	39	101	0	41,708	100
Total	33,263	14	90,195	39	79,528	35	733	0	22,801	10	3,881	2	230,401	100

12.2.10 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR PLOUGH by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	10,676	15	31,517	45	24,052	35	128	0	2,855	4	92	0	69,321	100
Morogoro	6,756	13	26,663	51	14,230	27	481	1	422	1	3,410	7	51,961	100
Kilombero	3,879	11	18,742	51	12,958	35	0	0	1,156	3	125	0	36,860	100
Ulanga	6,672	25	2,846	11	15,968	60	0	0	768	3	231	1	26,485	100
Morogoro Urban	73	2	1,420	33	1,120	26	5	0	1,693	39	0	0	4,311	100
Mvomero	3,508	8	9,007	22	11,220	27	1,215	3	16,529	40	101	0	41,580	100
Total	31,564	14	90,195	39	79,549	35	1,828	1	23,423	10	3,959	2	230,518	100

12.2.11 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR HARROW by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	11,679	17	29,619	42	22,095	31	258	0	6,995	10	92	0	70,739	100
Morogoro	5,772	11	26,878	51	15,174	29	176	0	1,461	3	3,410	6	52,872	100
Kilombero	4,989	11	24,136	52	15,535	33	0	0	1,804	4	250	1	46,715	100
Ulanga	7,745	25	2,617	9	16,631	54	0	0	3,378	11	231	1	30,602	100
Morogoro Urban	43	1	1,292	29	1,173	27	0	0	1,917	43	0	0	4,425	100
Mvomero	4,253	9	10,098	21	13,729	28	1,092	2	19,791	40	126	0	49,089	100
Total	34,481	14	94,640	37	84,339	33	1,526	1	35,346	14	4,109	2	254,440	100

12.2.12 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using THRESHERS/SHELLERS by Main Reason for NOT using and District

	Not Available		Price Too High		No Money to Buy /		Too Much Labour		Equipment / Asset of		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	18,898	26	27,887	38	18,467	25	258	0	7,549	10	0	0	73,058	100
Morogoro	7,828	15	28,608	54	9,737	18	182	0	4,565	9	2,074	4	52,995	100
Kilombero	18,462	38	18,255	38	9,080	19	0	0	1,979	4	764	2	48,540	100
Ulanga	14,543	47	4,329	14	5,788	19	75	0	6,173	20	0	0	30,908	100
Morogoro Urban	117	3	1,716	39	875	20	0	0	1,726	39	0	0	4,434	100
Mvomero	11,719	23	12,668	25	7,273	15	1,340	3	16,947	34	124	0	50,069	100
Total	71,567	28	93,462	36	51,220	20	1,854	1	38,939	15	2,961	1	260,005	100

12.2.13 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning Hand Hoes by Source of Finance and District

	Sale of Farm Products		Other Income		Remittances		Bank Loan		Credit		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	44,634	61	24,457	33	1,639	2	548	1	258	0	1,645	2	73,180	100
Morogoro	35,726	68	14,599	28	1,581	3	123	0	0	0	420	1	52,449	100
Kilombero	36,935	76	10,235	21	627	1	369	1	0	0	374	1	48,539	100
Ulanga	19,545	63	9,525	31	1,532	5	76	0	0	0	231	1	30,908	100
Morogoro Urban	3,185	72	993	23	195	4	0	0	0	0	35	1	4,408	100
Mvomero	36,110	73	11,014	22	1,360	3	0	0	0	0	853	2	49,338	100
Total	176,134	68	70,822	27	6,934	3	1,116	0	258	0	3,558	1	258,822	100

12.2.14 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning Hand Powered Sprayer by Source of Finance and District

	Sale of Farm Products		Other Income		Bank Loan		Total	
District	Number	%	Number	%	Number	%	Number	%
Kilosa	2,978	84	575	16	0	0	3,554	100
Morogoro	111	21	423	79	0	0	535	100
Kilombero	1,904	76	598	24	0	0	2,502	100
Ulanga	1,460	61	925	39	0	0	2,385	100
Morogoro Urban	191	84	26	11	11	5	228	100
Mvomero	2,485	74	854	26	0	0	3,339	100
Total	9,131	73	3,401	27	11	0	12,543	100

12.2.15 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OXEN by Source of Finance and District

District	Sale of Farm Products		Other Income		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	518	100	0	0	0	0	0	0	518	100
Kilombero	986	89	117	11	0	0	0	0	1,103	100
Ulanga	910	57	386	24	231	14	77	5	1,603	100
Mvomero	128	100	0	0	0	0	0	0	128	100
Total	2,541	76	502	15	231	7	77	2	3,352	100

12.2.16 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OX Plough by Source of Finance and District

District	Sale of Farm Products		Other Income		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	908	100	0	0	0	0	908	100
Kilombero	986	89	117	11	0	0	1,103	100
Ulanga	987	65	463	30	77	5	1,527	100
Mvomero	128	100	0	0	0	0	128	100
Total	3,008	82	580	16	77	2	3,665	100

Warnings

No cases were input to this procedure. Either there are no cases in the working data file or all of them have been filtered out.
This command is not executed.

12.2.18 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OX CART by Source of Finance and District

District	Sale of Farm Products		Other Income		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	1,937	94	0	0	130	6	0	0	2,067	100
Ulanga	153	33	234	50	0	0	77	17	464	100
Total	2,090	83	234	9	130	5	77	3	2,531	100

12.2.19 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR by Source of Finance and District

District	Sale of Farm Products		Other Income		Credit		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	126	100	0	0	126	100
Morogoro	122	100	0	0	0	0	122	100
Kilombero	119	27	237	53	94	21	450	100
Mvomero	243	100	0	0	0	0	243	100
Total	485	51	363	39	94	10	942	100

12.2.20 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR PLOUGH by Source of Finance and District

District	Sale of Farm Products		Other Income		Credit		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	0	0	126	100	0	0	126	100
Morogoro	122	100	0	0	0	0	122	100
Kilombero	119	36	119	36	94	28	332	100
Total	242	42	245	42	94	16	580	100

12.2.21 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR HARROW by Source of Finance and District

District	Sale of Farm Products		Other Income		Credit		Total	
	Number	%	Number	%	Number	%	Number	%
Kilosa	105	31	231	69	0	0	337	100
Kilombero	0	0	0	0	94	100	94	100
Total	105	24	231	54	94	22	431	100

12.2.22 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning THRESHERS/SHELLERS by Source of Finance and District

District	Sale of Farm Products		Total	
	Number	%	Number	%
Kilosa	131	100	131	100
Total	131	100	131	100

AGRICULTURE CREDIT

13.1a AGRICULTURE CREDIT: Number of Households Reporting the Main reasons for Not Using Credit by District 2002/03 Agriculture Year

	Not needed	Not available	Did not want to go into debt	Interest rate/cost too high	Did not know how to get credit	Difficult bureaucracy procedure	Credit granted too late	Other	Don't know about credit	Total
Kilosa	2,438	13,294	5,516	2,333	26,713	3,496	128	93	18,416	72,428
Morogoro Rural	2,068	9,151	2,755	586	21,559	1,958	103	244	7,794	46,218
Kilombero	1,012	5,588	3,433	2,581	25,752	3,191	324	116	4,628	46,625
Ulanga	149	2,972	3,118	78	14,833	612	77	0	8,308	30,148
Morogoro Urban	274	699	891	308	1,482	98	13	0	669	4,434
Mvomero	3,941	14,042	6,564	1,958	12,572	841	751	121	8,647	49,437
Total	9,883	45,746	22,278	7,844	102,911	10,196	1,397	574	48,462	249,289

13.1b AGRICULTURE CREDIT: Number of Credits Received By Main Purpose of Credit and District the 2002/03 Agriculture Year

	Labour	Seeds	Fertilizers	Agro-chemicals	Tools / Equipment	Livestock	Other	Total Credits
Kilosa	512	457	329	232	186	0	131	1,846
Morogoro Rural	3,262	4,477	0	122	119	0	0	7,979
Kilombero	1,922	633	514	304	188	0	118	3,681
Ulanga	307	77	0	531	0	0	0	914
Mvomero	0	128	0	128	0	128	377	759
Total	6,003	5,771	843	1,317	492	128	626	15,180

13.2a AGRICULTURE CREDIT: Number of Agriculture Households Receiving Credit By Sex of Household head and district During the 2002/03 Agriculture Year

	Male		Female		
District	Number	%	Number	%	Total
Kilosa	1,007	100	0	0	1,007
Morogoro Rural	4,484	65	2,415	35	6,899
Kilombero	1,596	74	561	26	2,157
Ulanga	456	60	305	40	761
Mvomero	255	40	377	60	632
Total	7,799	68	3,658	32	11,457
%	68		32		

13.2b AGRICULTURE CREDIT: Number of Households Receiving Credits By Main Source of Credit By District During the 2002/03 agriculture Year

	Family, Friend and Relative	Commercial Bank	Co-operative	Saving & Credit Society	Trader / Trade Store	Private Individual	Religious Organisation / NGO / Project	Other	Total
Kilosa	93	419	117	117	131	0	131	0	1,007
Morogoro Rural	4,588	0	0	0	1,583	728	0	0	6,899
Kilombero	495	365	0	935	116	118	128	0	2,157
Ulanga	0	0	0	77	607	0	0	77	761
Mvomero	0	125	0	128	128	0	252	0	632
Total	5,176	909	117	1,256	2,565	847	510	77	11,457
%	45	8	1	11	22	7	4	1	100

TREE FARMING AND AGROFORESTRY

14.1TREE FARMING / Agroforestry

District	Did your Hh have any Planted Trees on your land during 2002/					
	Households Having Planted Trees		Households Not Having Planted Trees		Total	
	Number	%	Number	%	Number	%
Kilosa	5,864	8	67,572	92	73,435	100
Morogoro Rural	1,929	4	51,188	96	53,117	100
Kilombero	3,557	7	45,225	93	48,782	100
Ulanga	2,973	10	27,935	90	30,908	100
Morogoro Urban	687	15	3,747	85	4,434	100
Mvomero	3,174	6	46,895	94	50,069	100
Total	18,184	7	242,562	93	260,746	100

14.2 TREE FARMING: Number of Households with Planted Trees on their Land and and Number of Trees by Planting Location and District

District	Where Planted							
	Mostly on Field / Plot Boundaries		Mostly Scattered in Field		Mostly in Plantation / Coppice		Total	
	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees
Kilosa	4,858	26,908	483	9,950	522	39,413	5,864	76,271
Morogoro Rural	1,570	42,316	240	9,626	119	8,310	1,929	60,252
Kilombero	2,873	19,279	684	8,419	0	.	3,557	27,697
Ulanga	2,207	147,519	689	7,810	76	9,164	2,973	164,494
Morogoro Urban	508	9,998	166	2,885	12	24	687	12,907
Mvomero	1,483	211,692	681	124,735	1,011	1,819,441	3,174	2,155,868
Total	13,500	457,712	2,944	163,425	1,740	1,876,354	18,184	2,497,490

14 ON FARM TREE PLANTING: Number of Planted Trees By Species and District

District	Senna Spp	Gravellis	Afzelia Quanzensis	Acacia Spp	Pinus Spp	Eucalyptus Spp	Cyprus Spp	Calophylum Inophyllum	Melicia excelsa	Casurina Equisetfilia	Tectona Grandis
Kilosa	23,710	25,639	1,407	392	119	3,066	5,088	522	379	116	1,958
Morogoro Rural	9,040	.	.	6,041	.	7,290	.	.	1,580	.	.
Kilombero	11,142	2,076	.	.	.	848	187	751	592	239	5,520
Ulanga	7,301	139,452	690	.	.	.	.	.	155	931	13,296
Morogoro Urban	4,047	2,346	.	.	.	714	3,026	.	178	.	79
Mvomero	10,340	2,001,645	.	893	.	23,859	34,118	50,653	.	.	12,318
Total	65,581	2,171,157	2,097	7,326	119	35,777	42,418	51,926	2,883	1,286	33,170

Cont…….. 14 ON FARM TREE PLANTING: Number of Planted Trees By Species and District

District	Terminalia Catapa	Terminalia Ivorensis	Leucena Spp	Syszygium Spp	Azadritachta Spp	Jakaranda Spp	Albizia Spp	Kyaya Spp	Moringa Spp	Saraca Spp	Trichilia Spp	Total
Kilosa	223	.	6,134	738	3,123	131	.	2,729	521	279	.	76,271
Morogoro Rural	.	.	.	.	.	.	.	36,301	.	.	.	60,252
Kilombero	239	.	341	.	1,023	.	.	476	595	2,561	1,108	27,697
Ulanga	232	.	.	777	1,276	.	.	.	383	.	.	164,494
Morogoro Urban	13	18	81	139	296	.	54	1,834	83	.	.	12,907
Mvomero	.	.	.	128	.	.	.	1,250	20,666	.	.	2,155,868
Total	707	18	6,556	1,782	5,718	131	54	42,590	22,249	2,839	1,108	2,497,490

14 TREE FARMING: Main Use of Trees By District

	Main Use							
District	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	Total
Kilosa	2,397	579	93	420	5,109	315	0	8,913
Morogoro Rural	1,568	483	0	122	0	0	0	2,172
Kilombero	1,852	250	0	936	1,230	249	239	4,756
Ulanga	1,770	230	0	384	1,515	153	76	4,128
Morogoro Urban	451	39	0	202	192	0	45	930
Mvomero	1,117	355	0	1,769	330	0	432	4,003
Total	9,156	1,936	93	3,833	8,376	717	791	24,902

14 TREE FARMING: Second Use of Trees By District

	Second Use							
District	Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	Total
Kilosa	870	2,306	0	3,701	1,114	620	210	8,821
Morogoro Rural	122	1,328	0	600	122	0	0	2,172
Kilombero	355	805	0	1,914	953	248	481	4,756
Ulanga	154	534	0	2,073	155	373	762	4,051
Morogoro Urban	37	37	0	583	143	0	129	930
Mvomero	764	1,132	128	974	574	203	229	4,003
Total	2,302	6,143	128	9,845	3,061	1,444	1,811	24,733

14.3 TREE FARMING: Number of Households By Whether Village Have a Community Tree Planting Scheme By District

District	does your village have a Community Tree Planting Scheme					
	Have a Community Tree Planting Scheme		Does not Have a Community Tree Planting Scheme		Total	
	Number	%	Number	%	Number	%
Kilosa	2,433	3	69,802	97	72,235	100
Morogoro Rural	5,391	10	47,726	90	53,117	100
Kilombero	1,519	3	46,759	97	48,278	100
Ulanga	7,129	23	23,625	77	30,754	100
Morogoro Urban	458	10	3,938	90	4,396	100
Mvomero	1,627	3	48,191	97	49,818	100
Total	18,556	7	240,042	93	258,597	100

14.3 TREE FARMING: Number of Households By Distance to Community Planted Forest (Km) By District

District	Distance to Community Planted Forest (km)						
	0-9	1-19	05-29	30-39	40-49	60+	Total
Kilosa	1,821	0	92	261	131	128	2,433
Morogoro Rural	5,391	0	0	0	0	0	5,391
Kilombero	1,519	0	0	0	0	0	1,519
Ulanga	2,858	1,443	918	451	0	1,459	7,129
Morogoro Urban	338	59	23	12	0	25	458
Mvomero	1,250	0	255	121	0	0	1,627
Total	13,177	1,502	1,288	846	131	1,612	18,556

14.3 TREE FARMING: Number of Households Involved in Community Tree Planting Scheme By Main Use and District

District	Main use during 2002/03							
	Poles	Timber Logs	Charcoal	Firewood	Not Ready to Use	Not Allowed to Use	Other	Total
Kilosa	0	1,245	0	0	875	1,044	131	3,295
Morogoro Rural	0	119	0	1,616	2,113	1,543	0	5,391
Kilombero	258	94	188	877	242	119	0	1,777
Ulanga	0	2,479	0	0	4,649	78	0	7,206
Morogoro Urban	24	35	0	59	44	295	0	458
Mvomero	0	1,013	0	490	0	250	0	1,753
Total	282	4,985	188	3,041	7,923	3,330	131	19,879

CROP EXTENSION

15.3 CROP EXTENSION: Number of Agriculture Households Receiving Extension Messages by District During the 2002/03 Agriculture Year, Morogoro Region By Source of Extension Messages By District

	Households Receiving Extension Advice		Households Not Receiving Extension Advice		Total Number of Households
	Number	%	Number	%	
Kilosa	15,318	21	58,117	79	73,435
Morogoro R	6,915	13	46,202	87	53,117
Kilombero	15,455	32	33,328	68	48,782
Ulanga	11,461	37	19,447	63	30,908
Morogoro Urb	464	10	3,970	90	4,434
Mvomero	17,756	35	32,313	65	50,069
Total	67,368	26	193,377	74	260,746

15.2 CROP EXTENSION: Number of Households By Quality of Extension Services and District During the 2002/03 AGRICULTURE Year, Morogoro Region

	Very Good		Good		Average		Poor		No Good		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	1,035	6.8	11,453	75.4	2,597	17.1	0	0.0	102	0.7	15,187	100.0
Morogoro R	604	8.7	4,613	66.7	1,457	21.1	242	3.5	0	0.0	6,915	100.0
Kilombero	1,000	6.5	13,272	85.9	1,088	7.0	94	0.6	0	0.0	15,455	100.0
Ulanga	1,240	10.9	8,140	71.5	2,004	17.6	0	0.0	0	0.0	11,384	100.0
Morogoro Urban	103	22.3	257	55.4	104	22.4	0	0.0	0	0.0	464	100.0
Mvomero	5,557	31.3	7,436	41.9	3,887	21.9	876	4.9	0	0.0	17,756	100.0
Total	9,539	14.2	45,171	67.3	11,138	16.6	1,211	1.8	102	0.2	67,161	100.0

15.3 CROP EXTENSION: Number of Agriculture Households By Source of Crop Extension Messages and District During the 2002/03 agriculture Year

	Government		NGO / Development Project		Cooperative		Large Scale Farm		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kilosa	14,464	94.4	259	1.7	117	0.8	363	2.4	0	0.0	115	0.8	15,318	100.0
Morogoro R	5,737	85.9	708	10.6	0	0.0	122	1.8	111	1.7	0	0.0	6,678	100.0
Kilombero	14,281	94.7	557	3.7	0	0.0	125	0.8	0	0.0	119	0.8	15,082	100.0
Ulanga	10,929	97.3	0	0.0	0	0.0	77	0.7	77	0.7	149	1.3	11,231	100.0
Morogoro Urban	391	86.7	25	5.5	11	2.4	13	2.9	12	2.6	0	0.0	451	100.0
Mvomero	16,002	90.1	758	4.3	121	0.7	751	4.2	0	0.0	125	0.7	17,756	100.0
Total	61,803	92.9	2,306	3.5	248	0.4	1,451	2.2	200	0.3	508	0.8	66,516	100.0

Table 15.4 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Plant Spacing by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Spacing								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	14,243	259	117	248	0	115	14,981	95,869	16
Morogoro R	4,646	587	0	122	111	0	5,467	24,319	22
Kilombero	13,452	557	0	125	0	119	14,253	82,872	17
Ulanga	9,475	0	0	0	0	149	9,623	59,430	16
Morogoro Urban	314	0	11	0	12	0	336	1,917	18
Mvomero	15,151	631	121	250	0	125	16,278	100,305	16
Total	57,281	2,033	248	745	123	508	60,938	364,713	17

Table 15.5 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agrochemicals by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Use of Agrochemicals								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	6,808	126	117	0	0	504	7,555	95,869	8
Morogoro R	1,202	121	0	0	0	111	1,434	24,319	6
Kilombero	7,338	210	0	0	0	0	7,548	82,872	9
Ulanga	5,358	0	0	153	72	299	5,882	59,430	10
Morogoro Urban	167	0	11	0	0	0	178	1,917	9
Mvomero	7,689	1,391	121	619	0	128	9,948	100,305	10
Total	28,561	1,848	248	772	72	1,043	32,545	364,713	9

Table 15.6 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Erosion Control by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Erosion Control							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	3,373	900	248	0	616	5,137	95,869	5.4
Morogoro R	1,438	1,032	0	0	0	2,470	24,319	10.2
Kilombero	4,591	0	0	114	0	4,704	82,872	5.7
Ulanga	1,300	0	0	0	305	1,605	59,430	2.7
Morogoro Urban	120	0	11	0	0	131	1,917	6.8
Mvomero	2,478	1,399	0	0	128	4,005	100,305	4.0
Total	13,300	3,331	258	114	1,049	18,052	364,713	4.9

Table 15.7 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Organic Fertilizer Use by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Organic Fertilizer Use							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	6,931	261	124	130	993	8,439	95,869	8.8
Morogoro R	1,680	115	122	0	0	1,916	24,319	7.9
Kilombero	4,653	0	0	0	0	4,653	82,872	5.6
Ulanga	1,535	0	0	75	383	1,993	59,430	3.4
Morogoro Urban	45	12	0	0	11	68	1,917	3.5
Mvomero	5,330	1,271	0	123	253	6,977	100,305	7.0
Total	20,173	1,659	245	328	1,640	24,046	364,713	6.6

Table 15.8 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Inorganic Fertilizer Use by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Inorganic Fertilizer Use							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	5,148	388	489	0	641	6,666	95,869	7.0
Morogoro R	1,186	0	0	0	0	1,186	24,319	4.9
Kilombero	6,617	329	0	125	0	7,071	82,872	8.5
Ulanga	2,199	0	0	0	539	2,738	59,430	4.6
Morogoro Urban	175	0	11	0	26	212	1,917	11.1
Mvomero	5,595	1,266	121	991	128	8,100	100,305	8.1
Total	20,921	1,984	620	1,116	1,333	25,973	364,713	7.1

Table 15.9 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Use of Improved Seed								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	9,570	387	0	115	0	376	10,448	95,869	11
Morogoro R	3,114	122	0	0	0	121	3,357	24,319	14
Kilombero	8,357	443	0	125	0	125	9,049	82,872	11
Ulanga	4,046	0	0	0	77	460	4,582	59,430	8
Morogoro Urban	293	25	11	13	0	0	341	1,917	18
Mvomero	12,149	889	0	499	0	626	14,163	100,305	14
Total	37,528	1,866	11	752	77	1,707	41,941	364,713	11

Table 15.10 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Mechanisation/ LST by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Mechanisation / LST								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	3,311	0	124	625	0	636	4,696	95,869	5
Morogoro R	1,401	121	0	0	0	0	1,522	24,319	6
Kilombero	6,165	582	0	0	0	0	6,747	82,872	8
Ulanga	2,992	0	0	230	144	604	3,970	59,430	7
Morogoro Urban	43	0	11	0	0	0	54	1,917	3
Mvomero	6,192	127	245	615	0	125	7,305	100,305	7
Total	20,104	830	380	1,470	144	1,365	24,293	364,713	7

Table 15.11 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Irrigation Technology by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Irrigation Technology								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	5,213	0	482	233	0	635	6,563	95,869	7
Morogoro R	1,059	0	0	0	0	0	1,059	24,319	4
Kilombero	4,086	0	0	0	0	0	4,086	82,872	5
Ulanga	2,519	0	0	0	77	76	2,672	59,430	4
Morogoro Urban	97	0	11	0	0	0	108	1,917	6
Mvomero	4,330	1,649	121	744	0	124	6,968	100,305	7
Total	17,305	1,649	613	977	77	834	21,456	364,713	6

Table 15.12 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Crop Storage by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Crop Storage								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	10,663	259	117	117	0	243	11,399	95,869	12
Morogoro R	1,652	122	0	0	111	0	1,886	24,319	8
Kilombero	7,602	227	0	0	0	0	7,829	82,872	9
Ulanga	9,350	0	0	0	0	147	9,497	59,430	16
Morogoro Urban	185	0	0	0	0	0	185	1,917	10
Mvomero	9,721	1,014	0	128	0	375	11,238	100,305	11
Total	39,173	1,623	117	245	111	765	42,034	364,713	12

Table 15.13 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Vermin Control by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Vermin Control								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	7,243	131	117	117	0	504	8,112	95,869	8
Morogoro R	941	241	0	0	0	0	1,182	24,319	5
Kilombero	4,849	114	0	114	0	0	5,076	82,872	6
Ulanga	3,958	0	78	377	149	461	5,023	59,430	8
Morogoro Urban	125	0	0	0	0	0	125	1,917	7
Mvomero	5,230	1,144	123	250	0	247	6,994	100,305	7
Total	22,346	1,630	317	858	149	1,212	26,512	364,713	7

Table 15.14 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-processing by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Agro-progressing								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	1,986	259	351	116	0	728	3,439	95,869	4
Morogoro R	694	0	0	122	111	0	928	24,319	4
Kilombero	5,505	114	119	0	0	0	5,738	82,872	7
Ulanga	7,676	0	0	0	0	150	7,826	59,430	13
Morogoro Urban	78	39	0	0	0	0	118	1,917	6
Mvomero	2,712	505	123	373	0	625	4,337	100,305	4
Total	18,651	916	593	611	111	1,503	22,385	364,713	6

Table 15.15 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-forestry by Source and District During the 2002/03 Agriculture Year, Morogoro Region

	Agro-forestry								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	1,603	770	0	117	0	765	3,255	95,869	3
Morogoro R	593	119	0	0	0	0	712	24,319	3
Kilombero	4,857	94	0	0	125	0	5,076	82,872	6
Ulanga	1,226	228	0	0	0	148	1,601	59,430	3
Morogoro Urban	24	26	0	0	0	0	50	1,917	3
Mvomero	1,491	377	121	0	0	251	2,240	100,305	2
Total	9,794	1,613	121	117	125	1,164	12,934	364,713	4

Table 15.16 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Beekeeeping by Source and District During the 2002/03 Agriculture Year, Morogoro Region

District	Beekeeping					
	Government	NGO / Development Project	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	1,636	247	504	2,387	95,869	2.5
Morogoro R	123	122	0	245	24,319	1.0
Kilombero	119	123	0	242	82,872	0.3
Ulanga	687	75	226	988	59,430	1.7
Morogoro Urban	0	0	0	0	1,917	0.0
Mvomero	497	0	124	621	100,305	0.6
Total	3,063	567	854	4,484	364,713	1.2

Table 15.17 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Fish Farming by Source and District During the 2002/03 Agriculture Year, Morogoro Region

District	Fish Farming					
	Government	NGO / Development Project	Not applicable	Total	Total Number of Households	% of total number of households
Kilosa	1,391	116	504	2,012	95,869	2.1
Morogoro R	246	245	0	491	24,319	2.0
Kilombero	123	246	0	369	82,872	0.4
Ulanga	452	0	226	678	59,430	1.1
Morogoro Urban	0	0	0	0	1,917	0.0
Mvomero	0	0	124	124	100,305	0.1
Total	2,213	607	854	3,673	364,713	1.0

Table 15.18: CROP EXTENSION: Number of Agriculture Hoseholds Receiving and Adopting Extension Messages by Type of Messages and District (Part I) During the 2002/03 agriculture Year, Morogoro Region

District	Spacing			Use of Agrochemicals			Erosion Control		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kilosa	14,736	13,057	89	6,662	3,865	58	4,650	1,993	43
Morogoro R	5,467	5,344	98	1,434	842	59	2,470	1,881	76
Kilombero	14,253	12,624	89	7,677	5,109	67	4,704	1,093	23
Ulanga	9,474	7,343	78	5,349	3,370	63	1,070	613	57
Morogoro Urban	325	276	85	166	115	69	120	107	90
Mvomero	16,153	15,413	95	9,450	5,723	61	3,887	2,250	58
Total	60,408	54,057	89	30,739	19,024	62	16,900	7,939	47

Table 15.19 CROP EXTENSION: Number of Agriculture Hoseholds Receiving and Adopting Extension Messages by Type of Messages and District (Part 2) During the 2002/03 agriculture Year, Morogoro Region

District	Organic Fertilizer Use			Inorganic Fertilizer Use			Use of Improved Seed		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kilosa	7,704	3,927	51	5,789	2,644	46	10,332	4,655	45
Morogoro R	1,916	1,457	76	1,186	482	41	3,357	2,048	61
Kilombero	4,530	678	15	7,071	1,736	25	9,049	3,572	39
Ulanga	1,610	307	19	2,351	154	7	4,275	1,600	37
Morogoro Urban	57	34	59	188	141	75	330	255	77
Mvomero	6,849	4,504	66	7,976	5,120	64	14,410	11,190	78
Total	22,668	10,907	48	24,562	10,277	42	41,753	23,321	56

Table 15.20 CROP EXTENSION: Number of Agriculture Hoseholds Receiving and Adopting Extension Messages by Type of Messages and District (Part 3) During the 2002/03 agriculture Year, Morogoro Region

District	Mechanisation / LST			Irrigation Technology			Crop Storage		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kilosa	4,058	1,166	29	5,928	3,800	64	11,156	10,898	98
Morogoro R	1,522	469	31	1,059	956	90	1,886	1,548	82
Kilombero	6,747	3,646	54	3,967	825	21	7,829	6,324	81
Ulanga	3,521	2,074	59	2,131	611	29	9,116	9,119	100
Morogoro Urban	54	22	42	96	54	56	185	151	82
Mvomero	6,667	5,076	76	6,474	5,115	79	11,109	9,865	89
Total	22,569	12,452	55	19,655	11,360	58	41,281	37,904	92

Table 15.21 CROP EXTENSION: Number of Agriculture Hoseholds Receiving and Adopting Extension Messages by Type of Messages and District (Part 4) During the 2002/03 agriculture Year, Morogoro Region

District	Vermin Control			Agro-progressing			Agro-forestry		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kilosa	7,738	7,499	97	2,594	1,981	76	2,751	1,857	68
Morogoro R	1,182	1,078	91	928	824	89	712	363	51
Kilombero	4,951	4,329	87	5,743	5,256	92	5,076	1,535	30
Ulanga	4,411	3,492	79	7,908	7,907	100	1,375	618	45
Morogoro Urban	125	116	93	118	118	100	50	50	100
Mvomero	6,620	5,981	90	3,831	3,964	103	2,371	1,999	84
Total	25,027	22,497	90	21,123	20,050	95	12,335	6,423	52

Table 15.22 CROP EXTENSION: Number of Agriculture Hoseholds Receiving and Adopting Extension Messages by Type of Messages and District (Part 5) During the 2002/03 agriculture Year, Morogoro Region

District	Beekeeping			Fish Farming		
	Received	Adopted	%	Received	Adopted	%
Kilosa	1,883	886	47	1,507	510	34
Morogoro R	245	0	0	491	245	50
Kilombero	242	242	100	369	494	134
Ulanga	692	0	0	310	0	0
Morogoro Urban	0	0	0	0	0	0
Mvomero	245	123	50	0	0	0
Total	3,307	1,251	38	2,677	1,250	47

ANIMAL CONTRIBUTION TO CROP PRODUCTION

Table 17.1 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Number of Agriculture Households Using Draft Animal to Cultivate Land By District during 2002/03 agriculture year

	Households Using Draft Animals		Household Not Using Draft Animals		
	Number of household	%	Number of household	%	Total households
Kilosa	2,341	3	71,094	97	73,435
Morogoro R	0	0	53,117	100	53,117
Kilombero	1,429	3	47,354	97	48,782
Ulanga	1,912	6	28,996	94	30,908
Morogoro Urb	0	0	4,434	100	4,434
Mvomero	128	0	49,942	100	50,069
Total	5,810	2	254,936	98	260,746

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owened, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year, Morogoro Region

	Type of Craft											
	Oxen			Bulls			Cows			Total		
District	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)
Kilosa	2,591	7,677	2,768	648	777	0	1,036	1,295	105	4,275	9,750	2,873
Kilombero	6,466	7,756	5,353	1,229	0	0	9,347	0	0	17,043	7,756	5,353
Ulanga	10,281	14,373	8,839	1,228	153	310	4,460	0	0	15,969	14,526	9,149
Mvomero	766	766	258	.	.	.	.	.	.	766	766	258
Total	20,104	30,572	17,218	3,105	930	310	14,843	1,295	105	38,052	32,798	17,633

Table 17.3 ANIMAL CONTRIBUTION TO CROPS: Number of Crop Growing households using organic fertilezer By District during 2002/03 Agriculture Year, Morogoro Year

	Did you apply organic fertilizer during 2002/03?				
	Fertilizer		Fertilizer		Total
District	Number	%	Number	%	Number
Kilosa	5,302	36.3	68,003	27.7	73,305
Morogoro R	1,962	13.4	51,155	20.8	53,117
Kilombero	1,440	9.8	47,342	19.3	48,782
Ulanga	764	5.2	30,067	12.2	30,831
Morogoro Urb	147	1.0	4,261	1.7	4,408
Mvomero	5,004	34.2	44,939	18.3	49,943
Total	**14,620**	**100.0**	**245,767**	**100.0**	**260,386**

17.4 ANIMAL CONTRIBUTION TO CROPS: Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year

	Farm Yard Manure Area Applied		Compost Area Applied		Total Area Applied with Organic Fertilizers	
District	Area (%)	%	Area (%)	%	Area (%)	%
Kilosa	3,014	42.4	116	2.1	3,129	24.8
Morogoro R	282	4.0	517	9.4	799	6.3
Kilombero	1,448	20.4	123	2.2	1,572	12.5
Ulanga	440	6.2	6	0.1	446	3.5
Morogoro Urb	143	2.0	58	1.0	201	1.6
Mvomero	1,775	25.0	4,691	85.1	6,466	51.3
Total	7,103	100.0	5,511	100.0	12,613	100.0

CATTLE PRODUCTION

18.1 CATTLE PRODUCTION: Total Number of Household rearing Cattle by District

District	Household Rearing Cattle		Cattle		Total Agriculture Household	Livestock Keeping
	Number	%	Number	%		
Kilosa	13,273	18	77,655		73,064	13,273
Morogoro R	5,696	11	21,601		52,753	5,696
Kilombero	3,227	7	71,511		48,782	3,227
Ulanga	3,269	11	213,593		30,908	3,269
Morogoro Urb	655	15	4,716		4,423	655
Mvomero	10,403	21	71,988		49,316	10,403
Total	36,524	14	461,063		259,246	36,524

18.2 CATTLE PRODUCTION: Number of Cattle By Type and District as of 1st October, 2003

District	Indigenous		Improved Beef		Improved Dairy		Total Cattle	
	Number of Households	Number of Cattle	Number of Households	Number of Cattle	Number of Households	Number of Cattle	Number of Households	Number of Cattle
Kilosa	4,869	77,131	0	0	208	524	4,974	77,655
Morogoro Rural	429	18,115	0	0	674	3,486	1,104	21,601
Kilombero	1,103	71,294	0	0	217	217	1,320	71,511
Ulanga	1,608	213,515	0	0	78	78	1,685	213,593
Morogoro Urban	71	4,558	13	26	24	132	84	4,716
Mvomero	747	71,372	0	0	246	616	870	71,988
Total	8,826	455,985	13	26	1,447	5,052	10,037	461,063

18.3 CATTLE PRODUCTION: Total Number of Households Rearing Cattle by Districts

Herd Size	Cattle Rearin Household		Heads of Cattle		Average Number Per Household
	Number of Household	%	Number of Cattle	%	
1-5	3,471	35	10,370	2	3
6-10	1,694	17	12,490	3	7
11-15	780	8	10,919	2	14
16-20	1,136	11	19,950	4	18
21-30	461	5	11,062	2	24
31-40	406	4	14,113	3	35
41-50	388	4	17,600	4	45
51-60	280	3	15,803	3	56
61-100	607	6	45,382	10	75
101-150	206	2	26,306	6	128
151+	609	6	277,069	60	455
Total	10,037	100	461,063	100	46

18.4 CATTLE PRODUCTION: Total Number of Cattle by Category and Type of Cattle; on 1st October 2003

Total	Indigenous		Improved Beef		Improved Dairy		Total Cattle	
	Number of Cattle	%	Number of Cattle	%	Number of Cattle	%	Number of Cattle	%
Kilosa	77,131	99	0	0	524	0.7	77,655	16.8
Morogoro R	18,115	84	0	0	3,486	16.1	21,601	4.7
Kilombero	71,294	100	0	0	217	0.3	71,511	15.5
Ulanga	213,515	100	0	0	78	0.0	213,593	46.3
Morogoro Urb	4,558	97	26	1	132	2.8	4,716	1.0
Mvomero	71,372	99	0	0	616	0.9	71,988	15.6
Total	455,985	99	26	0	5,052	1.1	461,063	100.0

18.5 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Indigenous						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kilosa	7,340	30,847	6,324	11,063	9,482	12,075	77,131
Morogoro R	1,228	6,207	1,350	3,068	3,255	3,007	18,115
Kilombero	3,623	24,158	11,303	16,947	7,440	7,822	71,294
Ulanga	11,407	69,049	26,150	53,634	22,301	30,973	213,515
Morogoro Urb	287	2,291	389	546	536	508	4,558
Mvomero	8,700	24,093	5,217	11,237	9,394	12,730	71,372
Total	32,585	156,645	50,734	96,495	52,409	67,116	455,985

18.6 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Improved Beef Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kilosa	.	.	.	.	.	.	.
Morogoro R	.	.	.	.	.	.	.
Kilombero	.	.	.	.	.	.	.
Ulanga	.	.	.	.	.	.	.
Morogoro Urb	.	13	.	.	13	.	26
Mvomero	.	.	.	.	.	.	.
Total	.	13	.	.	13	.	26

18.7 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Improved Dairy Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kilosa	105	105	.	102	105	105	524
Morogoro R	510	1,358	.	545	606	468	3,486
Kilombero	.	.	.	217	.	.	217
Ulanga	.	.	.	78	.	.	78
Morogoro Urb	.	13	.	43	32	43	132
Mvomero	.	246	.	123	123	123	616
Total	615	1,723	.	1,108	867	739	5,052

18.8 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Total Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kilosa	7,445	30,953	6,324	11,165	9,587	12,180	77,655
Morogoro R	1,738	7,565	1,350	3,613	3,861	3,475	21,601
Kilombero	3,623	24,158	11,303	17,164	7,440	7,822	71,511
Ulanga	11,407	69,049	26,150	53,712	22,301	30,973	213,593
Morogoro Urb	287	2,317	389	589	582	552	4,716
Mvomero	8,700	24,339	5,217	11,361	9,517	12,853	71,988
Total	33,200	158,381	50,734	97,604	53,289	67,855	461,063

GOATS PRODUCTION

19.1 GOAT PRODUCTION: Total Number of Goats by Type and District as of 2st October, 2003

District	Indigenous			Improved for Meat			Improved Dairy			Total Goat	
	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goat
Kilosa	9,787	101,115	97	0	0	0	616	3,087	3	9,918	104,202
Morogoro R	7,718	41,665	100	0	0	0	0	0	0	7,718	41,665
Kilombero	1,453	12,431	99	0	0	0	123	123	1	1,453	12,554
Ulanga	1,531	21,181	100	0	0	0	0	0	0	1,531	21,181
Morogoro Urb	560	5,100	93	26	104	2	23	297	5	560	5,501
Mvomero	6,403	55,569	96	123	862	1	378	1,641	3	6,530	58,073
Total	27,452	237,061	97	149	966	0	1,141	5,147	2	27,710	243,175

19.2 Number of Households Rearing Goats and Heads of Goats by herd Size on 1st October, 2003

Herd Size	Number of Household	%	Number of Goat	%	Average Number Per Household
1-4	9,739	35	24,498	10	3
5-9	9,931	36	65,462	27	7
10-14	3,166	11	36,516	15	12
15-19	1,330	5	21,223	9	16
20-24	1,519	5	32,085	13	21
25-29	1,327	5	34,657	14	26
30-39	597	2	19,551	8	33
40+	101	0	9,183	4	91
Total	27,710	100	243,175	100	9

19.3 GOAT PRODUCTION: Total Number of Goats by Category and Type of Goat as of 1st October, 2003 and District

Category	Indigenous Goats		Improved Meat Goats		Improved Dairy Goats		Total Goat	
	Number	%	Number	%	Number	%	Number	%
Billy Goat	42,936		382		985		44,304	
Castrated Goat	9,485		.		800		10,285	
She Goat	124,101		285		2,113		126,500	
Male Kid	25,494		259		866		26,619	
She Kid	35,044		39		383		35,466	
Total	237,061		966		5,147		243,175	

19.4: Total Number of Indigenous Goat by Category and District as of 1st October, 2003

District	Number of Indigenous					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kilosa	15,424	5,123	53,759	12,057	14,753	101,115
Morogoro R	11,146	758	23,005	2,678	4,077	41,665
Kilombero	2,623	842	5,794	1,353	1,819	12,431
Ulanga	3,464	1,550	9,076	2,690	4,401	21,181
Morogoro Urb	767	345	2,650	478	860	5,100
Mvomero	9,513	867	29,817	6,238	9,134	55,569
Total	42,936	9,485	124,101	25,494	35,044	237,061

19.5: Number of Improved Meat Goat by Category and District as of 1st October, 2003

District	Number of Improved for Meat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kilosa	.	.	.	.	.	.
Morogoro R	.	.	.	.	.	.
Kilombero	.	.	.	.	.	.
Ulanga	.	.	.	.	.	.
Morogoro Urb	13	.	39	13	39	104
Mvomero	370	.	246	246	.	862
Total	382	.	285	259	39	966

19.6 GOAT PRODUCTION: Number of Total Goat by Category and District as of 1st October, 2003

District	Total Goat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kilosa	16,040	5,889	55,204	12,316	14,753	104,202
Morogoro R	11,146	758	23,005	2,678	4,077	41,665
Kilombero	2,746	842	5,794	1,353	1,819	12,554
Ulanga	3,464	1,550	9,076	2,690	4,401	21,181
Morogoro Urb	780	379	2,723	719	900	5,501
Mvomero	10,129	867	30,697	6,863	9,517	58,073
Total	44,304	10,285	126,500	26,619	35,466	243,175

SHEEP PRODUCTION

20.1:Total Number of Sheep by breed Type on 1st October, 2002/03

Breed	Number of Indigeneous	%	Number of Improved for Mutton	%	Total Sheep	%
Ram	14,877	100	0	0	14,877	16
Castrated Sheep	5,681	85	985	15	6,666	7
She Sheep	44,583	100	0	0	44,583	47
Male Lamb	11,865	98	257	2	12,122	13
She Lamb	16,726	96	705	4	17,431	18
Total	93,733	98	1,947	2	95,680	100

20.2 SHEEP PRODUCTION: Number of Households Rearing Sheep by District as of 1st October, 2002/03 Agriculture Year

District	Did the household own, raise or manage any Sheep?					
	Households Raising Sheep		Households Not Raising Sheep		Total	
	Number	%	Number	%	Number	%
Kilosa	2,531	3	70,905	97	73,435	100
Morogoro R	817	2	52,300	98	53,117	100
Kilombero	1,061	2	47,722	98	48,782	100
Ulanga	1,379	4	29,529	96	30,908	100
Morogoro Urb	23	1	4,411	99	4,434	100
Mvomero	1,633	3	48,437	97	50,069	100
Total	7,443	3	253,302	97	260,746	100

20.3 SHEEP PRODUCTION: Number of Sheep by Type of Sheep and District as of 1st October, 2002/03

District	Number of Indigenous	%	Number of Improved for Mutton	%	Total Sheep	%
Kilosa	14,973	96	634	4	15,607	16.3
Morogoro R	5,096	100	0	0	5,096	5.3
Kilombero	7,723	97	234	3	7,956	8.3
Ulanga	49,745	100	78	0	49,823	52.1
Morogoro Urb	138	100	0	0	138	0.1
Mvomero	16,058	94	1,001	6	17,059	17.8
Total	93,733	98	1,947	2	95,680	100.0

20.4 SHEEP PRODUCTION: Number of Households Rearing Sheep, Herd of Sheep and Average Herd Per Household by Herd Size as of 1st October, 2002/03

Herd Size	Total Sheep				
	Number of Household	%	Number of Sheep	%	Average Number Per Household
1-4	1,663	22	3,333	3	2
5-9	3,244	44	19,161	20	6
10-14	1,110	15	11,916	12	11
15-19	718	10	11,528	12	16
20-24	122	2	2,449	3	20
25-29	77	1	1,914	2	25
30-39	154	2	4,845	5	32
40+	355	5	40,534	42	114
Total	7,443	100	95,680	100	13

20.5 SHEEP PRODUCTION: Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Number of Indigenous					Number of Indigenous
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Kilosa	2,962	515	8,022	908	2,567	14,973
Morogoro R	1,079	452	2,830	490	245	5,096
Kilombero	931	234	3,651	633	2,274	7,723
Ulanga	7,493	4,111	22,400	6,594	9,148	49,745
Morogoro Urb	23	.	78	12	24	138
Mvomero	2,388	370	7,602	3,229	2,469	16,058
Total	**14,877**	**5,681**	**44,583**	**11,865**	**16,726**	**93,733**

20.6 SHEEP PRODUCTION: Total Number of Improved Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Number of Improved for Mutton					Number of Improved for Mutton
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Kilosa	.	.	.	257	377	634
Morogoro R	.	.	.	.	.	.
Kilombero	.	234	.	.	.	234
Ulanga	.	.	.	.	78	78
Morogoro Urb	.	.	.	.	.	.
Mvomero	.	751	.	.	250	1,001
Total	.	985	.	257	705	1,947

20.7 SHEEP PRODUCTION: Total Number of Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Total Sheep					Total Sheep
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Kilosa	2,962	515	8,022	1,165	2,943	15,607
Morogoro R	1,079	452	2,830	490	245	5,096
Kilombero	931	467	3,651	633	2,274	7,956
Ulanga	7,493	4,111	22,400	6,594	9,226	49,823
Morogoro Urb	23	.	78	12	24	138
Mvomero	2,388	1,121	7,602	3,229	2,719	17,059
Total	14,877	6,666	44,583	12,122	17,431	95,680

PIGS PRODUCTION

21.1 PIG PRODUCTION: Number of Households Rearing Pigs, Herd of Pigs aand Average Head of per Household by Herd Size as of 1st October, 2003

Herd Size	Number of Household	%	Number of Pig	%	Average Number Per Household
1-4	15,687	88	27,714	62	2
5-9	1,521	9	8,997	20	6
10-14	679	4	8,275	18	12
Total	17,887	100	44,986	100	3

21.2 PIG PRODUCTION: Number of Households Raising Pig by District during 2002/03 Agriculture Year

District	Number of Household	Number of Pig	Average Number Per Household
Kilosa	3,531	11,432	3
Morogoro R	3,272	6,496	2
Kilombero	613	1,330	2
Ulanga	1,064	2,870	3
Morogoro Urb	177	604	3
Mvomero	9,230	22,254	2
Total	17,887	44,986	3

21.3 PIG POPULATION: Total Number of Pigs by Category of Pigs and District as of 1st October, 2003

District	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	Total
Kilosa	2,546	1,424	4,136	1,410	1,917	11,432
Morogoro R	1,928	225	3,130	241	971	6,496
Kilombero	179	117	1,034	0	0	1,330
Ulanga	299	609	987	233	741	2,870
Morogoro Urb	115	32	277	51	128	604
Mvomero	7,319	0	9,358	2,916	2,662	22,254
Total	12,386	2,408	18,922	4,851	6,418	44,986

LIVESTOCK PEST & PARASITE CONTROL

22.1 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have dewormed animals during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year

District	Deworming Livestock		Not deworming Livestock		Total
	Number of houehold	%	Number of houehold	%	
Kilosa	4,139	35	7,604	65	11,743
Morogoro R	1,227	22	4,469	78	5,696
Kilombero	1,294	40	1,932	60	3,227
Ulanga	1,603	50	1,589	50	3,192
Morogoro Urban	272	42	370	58	642
Mvomero	3,502	37	6,017	63	9,520
Total	12,038	35	21,983	65	34,021

22.2 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have dewormed animals during 2002/03 Agriculture Year by District and type of dewormed Livestock

District	Dewormed Goats		Dewormed Cattles		Dewormed		Dewormed Pigs	
	Yes		Yes		Yes		Yes	
	Number	%	Number	%	Number	%	Number	%
Kilosa	2,933	43	1,114	31	640	20	1,097	30
Morogoro R	716	10	636	18	347	11	225	6
Kilombero	340	5	369	10	258	8	457	12
Ulanga	693	10	1,069	29	924	29	304	8
Morogoro Urban	171	2	72	2	36	1	125	3
Mvomero	1,997	29	369	10	1,001	31	1,512	41
Total	6,849	100	3,628	100	3,206	100	3,719	100

22.3 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have encountered tick problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year

District	Number of		Number of		Total
	Number	%	Number	%	
Kilosa	5,108	41	7,333	59	12,441
Morogoro R	1,244	22	4,452	78	5,696
Kilombero	728	23	2,499	77	3,227
Ulanga	1,449	47	1,666	53	3,115
Morogoro Urban	171	27	460	73	630
Mvomero	1,496	16	7,897	84	9,393
Total	10,196	30	24,307	70	34,503

22.4 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households by Method of Tick Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year

	Method of Tick Control										
	None		Spraying		Dipping		Smearing		Other		
District	Number	% age	Number	% age	Number	% age	Number	% age	Number	% age	Total
Kilosa	2,185	43	2,404	47	261	5	258	5	0	0	5,108
Morogoro R	306	25	514	41	306	25	0	0	119	10	1,244
Kilombero	0	0	728	100	0	0	0	0	0	0	728
Ulanga	76	5	1,374	95	0	0	0	0	0	0	1,449
Morogoro Urban	75	44	83	48	0	0	0	0	13	8	171
Mvomero	254	17	1,119	75	0	0	0	0	124	8	1,496
Total	2,895	28	6,221	61	567	6	258	3	256	3	10,196

22.5 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have encountered tsetse flies problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year

	Number of		Number of		
District	Number	% age	Number	% age	Total
Kilosa	2,904	24	9,251	76	12,155
Morogoro R	819	14	4,877	86	5,696
Kilombero	1,156	36	2,071	64	3,227
Ulanga	1,602	50	1,590	50	3,192
Morogoro Urban	84	13	571	87	655
Mvomero	1,246	13	8,400	87	9,646
Total	7,811	23	26,760	77	34,572

22.6 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households by Method of Tsetse flies Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year

	Method of Tsetse Flies Control									
	None		Spray		Dipping		Trapping		Total	
District	Number	% age	Number	% age	Number	% age	Number	% age	Number	% age
Kilosa	1,531	53	1,373	47	0	0	0	0	2,904	100
Morogoro R	184	22	452	55	184	22	0	0	819	100
Kilombero	0	0	922	80	0	0	234	20	1,156	100
Ulanga	76	5	1,526	95	0	0	0	0	1,602	100
Morogoro Urban	48	57	36	43	0	0	0	0	84	100
Mvomero	250	20	996	80	0	0	0	0	1,246	100
Total	2,088	27	5,306	68	184	2	234	3	7,811	100

OTHER LIVESTOCK

23a OTHER LIVESTOCK: Total Number of Other Livestock by Breed and Type

Breed Type	Current Number
Indigenous Chicken	2,018,227
Layer	82,168
Broiler	466
Ducks	76,948
Turkeys	89,728
Rabbits	8,828
Donkeys	1,892
Horse	0
Other	14,255
Total	2,292,512

23b OTHER LIVESTOCK: Number of households with chicken and Category of Chicken by Flock Size

Flock Size	Chicken Type				Number of Households with Chicken
	Indigenous Chicken	Layer	Broiler	Total	
1 - 4	100,543	383	.	100,926	38,527
5 - 9	270,143	1,180	466	271,789	41,837
10 - 19	538,660	.	.	538,660	42,306
20 - 29	385,418	2,301	.	387,719	16,841
30 - 39	228,874	.	.	228,874	7,212
40 - 49	113,122	.	.	113,122	2,717
50 - 99	289,911	.	.	289,911	4,786
100+	91,555	78,304	.	169,859	624
Total	2,018,227	82,168	466	2,100,861	154,850

23c OTHER LIVESTOCK: Number of households with chicken and Category of Chicken by Flock Size

Flock Size	Chicken Type				Number of Households with Chicken
	Indigenous Chicken	Layer	Broiler	Total	
1 - 4	100,543	383	.	100,926	38,527
5 - 9	270,143	1,180	466	271,789	41,837
10 - 19	538,660	.	.	538,660	42,306
20 - 29	385,418	2,301	.	387,719	16,841
30 - 39	228,874	.	.	228,874	7,212
40 - 49	113,122	.	.	113,122	2,717
50 - 99	289,911	.	.	289,911	4,786
100+	91,555	78,304	.	169,859	624
Total	2,018,227	82,168	466	2,100,861	154,850

23d OTHER LIVESTOCK: Number of Households Rearing and number of Other Livestock by Type and District

District	Ducks		Turkeys		Rabbits		Donkeys		Other	
	Number	Number of Households	Number	Number of Households	Number	Number of Households	Number	Number of Households	Number	Number of Households
Kilosa	23,754	4,009	11,206	258	6,955	231	.	0	.	0
Morogoro	11,558	1,341	.	0	.	0	.	0	12,230	122
Kilombero	15,311	1,643	.	0	.	0	.	0	.	0
Ulanga	9,718	1,224	69,612	77	385	154	.	0	1,899	231
Morogoro Urban	246	93	862	26	97	12	.	0	.	0
Mvomero	16,362	2,368	8,047	249	1,390	254	1,892	252	126	126
Total	76,948	10,679	89,728	610	8,828	652	1,892	252	14,255	479

23e OTHER LIVESTOCK: Number of Chicken by Type and District

	Chicken Type			
	Layer	Broiler	Total	
District				
Kilosa	80,605	.	80,605	246
Kilombero	714	.	714	119
Ulanga	466	466	932	78
Mvomero	383	.	383	128
Total	82,168	466	82,634	570

Table 23f LIVESTOCK/POULTRY POPULATION TREND

Livestock cartegory	1994/95	1998/99	2002/03
Catle PopulationTrend	237857	102,165	461,063
Improved Catle	0	231	5052
Dairy cattle pop[trend	0	0	5,052
Beef	0	0	26
Goat Population Trend	272162	228,461	243,175
Sheep Population Trend	97871	57,259	95,680
Pig Population Trend	15682	50,449	44,986
Chicken Population Trend	1519844	1,547,504	2,100,861
Layers Population Trend	0	7300	82,168
Broiler pop trend	34080	15,842	466

LIVESTOCK PRODUCT

25.1 LIVESTOCK PRODUCTS: Number of Eggs, Hides and Skins Sold/Consumed/Utlilized by the household By District, during 2002/03 Agricultural Year

District	Product Name					
	Eggs		Hides		Skins	
	Sold	Consumed / Utilised	Sold	Consumed / Utilised	Sold	Consumed / Utilised
Kilosa	2,291,652	1,067,907	5,922	1,028	2,051	1,168
Morogoro	1,329,532	496,951	2,068	0	365	616
Kilombero	2,639,503	1,811,807	2,454	0	1,285	0
Ulanga	1,248,669	854,500	3,559	303	6,224	379
Morogoro Urban	29,003	27,591	314	0	1,543	0
Mvomero	2,854,033	2,055,640	2,410	0	250	0
Total	10,392,391	6,314,396	16,727	1,331	11,717	2,163

ACCESS TO FUNCTIONAL LIVESTOCK STRUCTURES

27.1 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Cattle Dip and District

	Distance to Nearest Cattle Dip							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	5,882	261	0	0	0	0	0	6,143
Morogoro	551	121	0	0	122	122	0	915
Kilombero	129	0	467	0	0	0	129	725
Ulanga	2,295	77	0	0	0	0	0	2,372
Morogoro Urban	324	24	0	39	0	0	0	388
Mvomero	6,128	123	0	0	0	0	0	6,251
Total	15,309	605	467	39	122	122	129	16,794

27.2 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Spray Raced and District

	Distance to Nearest Spray Raced				
District	<5	5 - 9	10 - 14	50+	Total
Kilosa	5,621	0	0	0	5,621
Morogoro	0	0	0	122	122
Kilombero	363	0	0	0	363
Ulanga	2,372	0	0	0	2,372
Morogoro Urban	324	0	39	0	364
Mvomero	5,877	123	0	0	5,999
Total	14,556	123	39	122	14,841

27.3 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Hand Powered Sprayer and District

	Distance to Nearest Hand Powered Sprayer				
District	<5	5 - 9	10 - 14	30 - 49	Total
Kilosa	6,402	246	131	0	6,778
Morogoro	1,021	243	0	0	1,264
Kilombero	1,093	0	258	0	1,351
Ulanga	3,450	0	0	72	3,522
Morogoro Urban	347	0	52	0	399
Mvomero	6,744	0	0	0	6,744
Total	19,057	489	441	72	20,058

27.4 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Cattle Crush and District

District	Distance to Nearest Cattle Crush				
	<5	5 - 9	10 - 14	15 - 19	Total
Kilosa	5,622	131	0	0	5,753
Morogoro	984	0	0	0	984
Kilombero	978	0	0	0	978
Ulanga	2,680	0	0	0	2,680
Morogoro Urban	360	0	26	13	400
Mvomero	6,247	0	0	0	6,247
Total	16,871	131	26	13	17,041

27.5 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Primary Market and District

District	Distance to Nearest Primary Market							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	6,528	1,166	1,558	128	131	130	131	9,771
Morogoro	0	207	371	306	245	119	0	1,248
Kilombero	0	251	379	1,004	0	0	258	1,892
Ulanga	2,825	1,082	303	230	230	0	0	4,670
Morogoro Urban	324	0	0	11	0	0	0	335
Mvomero	3,375	2,004	0	123	0	377	3,132	9,011
Total	13,052	4,710	2,612	1,801	605	627	3,520	26,927

27.6 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Secondary Market and District

District	Distance to Nearest Secondary Market							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	5,257	0	651	0	125	768	0	6,801
Morogoro	0	103	0	122	0	243	0	468
Kilombero	0	0	0	0	0	0	129	129
Ulanga	2,448	0	0	0	0	0	0	2,448
Morogoro Urban	288	11	36	64	0	0	0	399
Mvomero	3,139	2,387	0	0	0	125	3,228	8,879
Total	11,132	2,502	686	186	125	1,136	3,357	19,124

27.7 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Abattoir and District

District	Distance to Nearest Abattoir							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	5,512	0	0	0	259	130	385	6,286
Morogoro	0	103	0	0	0	242	122	468
Kilombero	119	123	0	0	0	0	258	500
Ulanga	2,372	0	0	0	0	75	0	2,447
Morogoro Urban	301	0	74	75	0	13	0	464
Mvomero	5,769	243	0	0	0	2,767	101	8,880
Total	14,073	469	74	75	259	3,227	867	19,044

27.8 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Slaughter Slab and District

District	Distance to Nearest Slaughter Slab							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	5,620	503	392	0	128	131	0	6,773
Morogoro	1,022	592	0	122	0	0	0	1,737
Kilombero	804	125	387	239	1,124	0	129	2,808
Ulanga	2,295	153	0	0	0	72	0	2,521
Morogoro Urban	336	39	24	0	0	0	0	399
Mvomero	4,579	3,469	1,567	124	0	0	128	9,867
Total	14,657	4,881	2,369	486	1,253	203	257	24,105

27.9 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Hide/ Skin Shade and District

District	Distance to Nearest Hide/ Skin Shade							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	5,518	247	0	0	0	0	254	6,019
Morogoro	842	227	0	0	61	119	122	1,371
Kilombero	0	123	258	125	750	0	129	1,385
Ulanga	2,520	77	0	0	0	0	0	2,597
Morogoro Urban	303	13	111	75	0	0	0	502
Mvomero	3,386	1,418	241	1,567	0	124	0	6,736
Total	12,568	2,104	610	1,767	811	244	506	18,610

27.10 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Input Supply and District

District	Distance to Nearest Input Supply							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	6,363	1,461	652	0	1,668	652	383	11,178
Morogoro	639	0	0	0	306	119	367	1,432
Kilombero	628	1,849	1,817	1,689	1,767	119	1,596	9,464
Ulanga	1,844	231	233	225	735	1,589	452	5,309
Morogoro Urban	280	116	222	97	0	0	0	715
Mvomero	3,234	5,572	994	1,567	125	124	243	11,860
Total	12,987	9,229	3,918	3,578	4,601	2,604	3,042	39,958

27.11 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Veterinary Clinic and District

District	Distance to Nearest Veterinary Clinic							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Kilosa	6,489	696	392	0	256	0	379	8,212
Morogoro	532	0	0	122	0	0	537	1,191
Kilombero	246	123	258	253	1,124	0	375	2,379
Ulanga	1,919	78	0	0	0	1,826	1,101	4,923
Morogoro Urban	298	115	143	113	11	0	0	680
Mvomero	5,775	101	0	0	0	249	250	6,376
Total	15,259	1,113	793	488	1,391	2,075	2,642	23,761

27.12 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Village Holding Gound and District

District	Distance to Nearest Village Holding Gound				
	<5	5 - 9	10 - 14	50+	Total
Kilosa	5,387	0	0	0	5,387
Morogoro	61	0	0	122	184
Kilombero	119	0	0	0	119
Ulanga	2,295	0	0	0	2,295
Morogoro Urban	324	24	24	0	372
Mvomero	5,877	128	0	0	6,004
Total	14,063	152	24	122	14,361

27.13 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Village Watering Point/ Dam and District

District	Distance to Nearest Village Watering Point/ Dam				
	<5	5 - 9	10 - 14	50+	Total
Kilosa	6,170	0	126	0	6,296
Morogoro	428	0	0	122	551
Kilombero	480	0	117	0	596
Ulanga	2,445	0	0	0	2,445
Morogoro Urban	313	35	23	0	372
Mvomero	6,001	123	0	0	6,124
Total	15,838	158	266	122	16,384

27.14 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Drencher and District

District	Distance to Nearest Drencher				
	<5	5 - 9	10 - 14	20 - 29	Total
Kilosa	5,988	371	259	0	6,618
Morogoro	3,945	122	0	0	4,066
Kilombero	2,416	0	609	0	3,025
Ulanga	2,675	77	0	76	2,828
Morogoro Urban	438	39	12	0	489
Mvomero	6,615	255	0	0	6,870
Total	22,076	864	880	76	23,896

FISH FARMING

28.1a FISH FARMING: Number of Agricultural Households by Fish Farming and District, 2002/03 Agricultural Year

District	Households Doing Fish		Households NOT Doing		Total	
	Number	%	Number	%	Number	%
Kilosa	93	0.1	73,342	99.9	73,435	100.0
Morogoro	363	0.7	52,754	99.3	53,117	100.0
Kilombero	369	0.8	48,413	99.2	48,782	100.0
Ulanga	76	0.2	30,832	99.8	30,908	100.0
Morogoro Urban	0	0.0	4,434	100.0	4,434	100.0
Mvomero	0	0.0	50,069	100.0	50,069	100.0
Total	902	0.3	259,844	99.7	260,746	100.0

28.2a FISH FARMING: Number of Agricultural Households By System of Farming and District, 2002/03 Agricultural Year

District	Fish Farming System	
	Dug out Pond	Total
Morogoro	363	363
Kilombero	369	369
Ulanga	153	153
Total	885	885

28.2b FISH FARMING: Number of Agricultural Households By Source of Fingerings and District, 2002/03 Agricultural Year

District	Source of Fingerling				
	NGOs / Project	Neighbour	Private Trader	Other	Total
	Number	Number	Number	Number	Number
Morogoro	119	244	0	0	363
Kilombero	369	0	0	0	369
Ulanga	0	0	76	76	153
Total	489	244	76	76	885

28.2c FISH FARMING: Number of Agricultural Households By Location of Selling Fish and District, 2002/03 Agricultural Year

District	Neighbor	Did not Sell	Total
	Number	Number	Number
Morogoro	241	122	363
Kilombero	246	123	369
Ulanga	153	0	153
Total	640	245	885

28.2d FISH FARMING: Total Number of Fish Harvested by Type and District, 2002/03 Agricultural Year

District	Number of Tilapia	Number of Carp	Number of Others
Kilosa	.	.	.
Morogoro	86,890	0	0
Kilombero	73,872	0	0
Ulanga	30,548	0	0
Total	191,311	0	0

LIVESTOCK EXTENSION

29.1a LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Advice By Type of Service Provider and District, 2002/03 Agricultural Year

	Received livestock advice		Did not Receive Livestock advice		Total
	Number	%	Number	%	Number
Kilosa	4,725	6	68,711	94	73,435
Morogoro	1,614	3	51,503	97	53,117
Kilombero	4,501	9	44,281	91	48,782
Ulanga	1,530	5	29,378	95	30,908
Morogoro Urban	177	4	4,257	96	4,434
Mvomero	9,833	20	40,236	80	50,069
Total	22,380	9	238,366	91	260,746

291b LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding By Source and District, 2002/03 Agricultural Year

	Source of Advice			
District	Government	NGO / Development Project	Other	Total
Kilosa	1,700	0	0	1,700
Morogoro	1,267	0	0	1,267
Kilombero	2,673	0	0	2,673
Ulanga	920	0	78	997
Morogoro Urban	47	11	0	58
Mvomero	4,724	499	0	5,223
Total	11,332	510	78	11,919

29.1c LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year

	Source of Advice			Total Number of House hold raising Livestock	% receiving advice of total
District	Government	NGO / Development Project	Total		
Kilosa	1,001	0	1,001	13,273	8
Morogoro	552	0	552	5,696	10
Kilombero	248	123	371	3,227	12
Ulanga	305	0	305	3,269	9
Morogoro Urban	11	11	23	655	3
Mvomero	0	246	246	10,403	2
Total	2,118	381	2,499		

29.1d LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Milk Hygene By Source and District, 2002/03 Agricultural Year

	Source of Advice			Total Number of House hold raising Livestock	% receiving advice of total
District	Government	NGO / Development Project	Total		
Kilosa	871	0	871	13,273	7
Morogoro	552	0	552	5,696	10
Kilombero	248	0	248	3,227	8
Ulanga	305	0	305	3,269	9
Morogoro Urban	11	11	23	655	3
Mvomero	246	123	369	10,403	4
Total	2,233	135	2,368		

29.1e LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year

District	Source of Advice					Total Number of House hold raising	% receiving advice of total
	Government	NGO / Development Project	Large Scale Farmer	not applicable	Total		
Kilosa	2,933	0	0	0	2,933	13,273	22
Morogoro	1,021	0	0	0	1,021	5,696	18
Kilombero	1,267	0	0	0	1,267	3,227	39
Ulanga	845	0	0	0	845	3,269	26
Morogoro Urban	46	11	0	0	57	655	9
Mvomero	2,969	749	253	124	4,095	10,403	39
Total	9,080	761	253	124	10,218		

29.1f LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total Number of House hold raising Livestock	% receiving advice of total
	Government	NGO / Development Project	Total		
Kilosa	611	0	611	13,273	5
Morogoro	575	0	575	5,696	10
Kilombero	429	0	429	3,227	13
Ulanga	540	0	540	3,269	17
Morogoro Urban	26	0	26	655	4
Mvomero	246	246	493	10,403	5
Total	2,428	246	2,674		

29.1g LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice				Total Number of House hold raising	% receiving advice of total
	Government	NGO / Development Project	Large Scale Farmer	Total		
Kilosa	481	0	0	481	13,273	4
Morogoro	391	0	0	391	5,696	7
Kilombero	248	0	0	248	3,227	8
Ulanga	77	0	0	77	3,269	2
Morogoro Urban	13	11	0	24	655	4
Mvomero	123	123	123	369	10,403	4
Total	1,333	135	123	1,591		

29.1h LIVESTOCK EXTENSION: Number of Agricultural Households Receiving

District	Source of Advice				Total Number of House hold raising	% receiving advice of total
	Government	NGO / Development Project	not applicable	Total		
Kilosa	1,113	0	0	1,113	13,273	8
Morogoro	433	0	0	433	5,696	8
Kilombero	800	0	0	800	3,227	25
Ulanga	463	0	0	463	3,269	14
Morogoro Urban	11	0	0	11	655	2
Mvomero	1,116	251	124	1,490	10,403	14
Total	3,936	251	124	4,310		

29.1i LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total Number of House hold raising Livestock	% receiving advice of total
	Government	NGO / Development Project	Total		
Kilosa	1,261	0	1,261	13,273	9
Morogoro	779	0	779	5,696	14
Kilombero	119	246	366	3,227	11
Ulanga	76	0	76	3,269	2
Mvomero	123	123	246	10,403	2
Total	2,357	369	2,727		

29.1j LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Use of Improved Bulls By Source and District, 2002/03 Agricultural Year

District	Source of Advice				Total Number of House hold raising	% receiving advice of total
	Government	NGO / Development Project	Other	Total		
Kilosa	742	0	0	742	13,273	0
Morogoro	717	0	0	717	5,696	0
Kilombero	311	123	0	434	3,227	0
Ulanga	76	0	0	76	3,269	0
Morogoro Urban	26	0	13	39	655	0
Mvomero	491	497	0	987	10,403	0
Total	2,362	620	13	2,995		

29.1k LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year

Total	Source of Advice					Total Number of House hold raising	% receiving advice of total
	Government	NGO / Development Project	Large Scale Farmer	not applicable	Total		
Kilosa	2,939	0	0	0	2,939	13,273	22
Morogoro	1,389	0	0	0	1,389	5,696	24
Kilombero	3,288	123	0	0	3,411	3,227	106
Ulanga	1,074	0	0	0	1,074	3,269	33
Morogoro Urban	96	11	0	0	108	655	16
Mvomero	6,835	378	378	122	7,713	10,403	74
Total	15,622	512	378	122	16,634		

29.1l LIVESTOCK EXTENSION: Number of Agricultural Households By Quality of Extension Services and District, 2002/03 Agricultural Year

District	Quality of Service										
	Very Good		Good		Average		Poor		No Good		
	Number	%	Number	%	Number	%	Number	%	Number	%	Total
Kilosa	953	11	2,630	31	931	11	2,687	31	1,345	16	8,547
Morogoro	306	12	1,888	76	305	12	0	0	0	0	2,499
Kilombero	429	12	3,104	85	119	3	0	0	0	0	3,652
Ulanga	0	0	1,381	67	77	4	616	30	0	0	2,075
Morogoro Urban	37	22	92	55	11	7	26	15	0	0	166
Mvomero	5,346	38	6,115	43	1,374	10	890	6	507	4	14,231
Total	7,071	23	15,211	49	2,818	9	4,220	14	1,851	6	31,171

29.1m LIVESTOCK EXTENSION: Number of Agricultural Households By Source of Extension Services and District, 2002/03 Agricultural Year

	Extension Provider										
	Government		NGO / Development		Co-operative		Large Scale		Other		
District	Number	%	Number	%	Number	%	Number	%	Number	%	Total
Kilosa	4,725	20	4,725	20	4,725	20	4,725	20	4,725	20	23,624
Morogoro	1,614	32	938	19	835	17	835	17	835	17	5,056
Kilombero	4,501	21	4,133	20	4,133	20	4,133	20	4,133	20	21,034
Ulanga	1,530	20	1,530	20	1,530	20	1,530	20	1,530	20	7,651
Morogoro Urban	177	20	177	20	177	20	177	20	177	20	886
Mvomero	9,710	20	9,586	20	9,586	20	9,586	20	9,586	20	48,054
Total	22,257	21	21,090	20	20,986	20	20,986	20	20,986	20	106,305

29.1n LIVESTOCK EXTENSION: Number of Agricultural Households with/ without Contact farmers/ Group Member and District, 2002/03 Agricultural Year

	Number of Agricultural		Number of Agricultural		
District	Number	%	Number	%	Total
Kilosa	750	6	11,634	94	12,385
Morogoro	1,088	34	2,150	66	3,238
Kilombero	2,683	59	1,844	41	4,527
Ulanga	455	11	3,535	89	3,990
Morogoro Urban	23	4	548	96	571
Mvomero	3,898	21	14,557	79	18,455
Total	8,898	21	34,269	79	43,166

GOVERNMENT REGULATORY PROBLEMS

30.1 GOVERNMENT REGULATORY PROBLEMS: Number of Agricultural Households by Whether Face Problems with Governmet Regulation During 2003/04 by District, 2002/03 Agricultural Year

District	Did you face problems with Govt regulations during 02/03?					
	Yes		No		Total	
	Number	%	Number	%	Number	%
Kilosa	1,076	1	72,098	99	73,174	100
Morogoro	299	1	52,818	99	53,117	100
Kilombero	125	0	48,657	100	48,782	100
Ulanga	229	1	30,679	99	30,908	100
Morogoro Urb	96	2	4,338	98	4,434	100
Mvomero	229	0	49,718	100	49,947	100
Total	2,053	1	258,309	99	260,362	100

LABOUR USE

31.1 LABOUR USE: Number of Households by type of Household member and Activity during the 2002/03 Agriculture Year

Activity	Type of Household Member									
	Head of Household Alone	Adults Males	Adult Female	Adults	Boys	Girls	Boys & Girls	All Household Members	Hired Labour	Total
Land Clearing	112,198	12,775	2,860	55,190	886	117	119	35,145	17,007	236,298
Soil Preparation by Hand	65,049	5,066	4,709	90,753	327	201	124	62,092	19,229	247,549
Soil Preparation bu Oxen / Tractor	18,167	1,234	508	7,818	605	0	259	2,575	7,705	38,872
Planting	30,931	1,696	5,893	93,898	337	255	1,027	105,468	15,088	254,594
Weeding	28,767	1,670	5,546	96,756	245	263	0	103,533	19,128	255,908
Crop Protection	28,522	1,551	19,945	61,339	1,909	616	9,402	67,090	7,766	198,141
Harvesting	29,184	2,147	9,581	90,566	364	168	602	102,335	15,504	250,451
Crop Processing	32,730	3,625	121,092	22,493	2,659	6,697	5,610	24,238	2,335	221,478
Crop Marketing	146,831	4,086	6,351	34,483	518	394	509	16,515	238	209,925
Cattle Rearing	7,307	697	368	835	124	0	201	2,030	261	11,823
Cattle Herding	1,706	1,043	116	562	3,609	12	1,112	843	995	9,999
Cattle Marketing	8,862	374	119	334	321	0	0	122	0	10,132
Goat & Sheep Rearing	10,012	874	776	4,618	1,225	0	251	8,010	498	26,263
Goat & Sheep Herding	4,023	1,273	518	2,897	8,237	154	2,874	5,502	1,687	27,164
Goat & Sheep Marketing	16,619	726	154	2,014	715	0	0	1,898	0	22,124
Milking	1,225	519	3,193	1,518	794	94	630	361	352	8,685
Pig Rearing	6,034	376	1,616	2,149	252	75	476	7,889	0	18,867
Poultry Keeping	35,029	1,825	48,780	21,533	341	714	981	46,739	218	156,161
Collecting Water	30,270	5,607	159,384	11,017	1,148	13,303	8,147	22,160	1,061	252,097
Collecting Firewood	43,027	8,229	136,145	24,918	1,135	5,614	7,384	23,332	2,945	252,728
Pole Cutting	111,369	30,493	4,453	6,039	1,923	129	460	4,079	9,147	168,092
Timber Wood Cutting	9,218	1,152	381	503	0	0	88	121	131	11,593
Building / Maintaining Houses	125,863	30,830	3,644	7,053	2,028	574	144	5,418	18,735	194,287
Making Beer	14,301	1,827	34,021	1,691	511	248	78	1,207	325	54,208
Beekeeping	2,396	321	121	119	0	0	0	129	0	3,085
Fishing	7,846	889	11	416	218	0	0	129	11	9,519
Fish Farming	1,119	122	244	199	122	127	0	248	0	2,181
Off - farm Income Generation	144,797	7,373	18,961	49,257	1,704	355	395	13,349	760	236,951

31.2 LABOUR USE: Number of Households by type of Household member and Activity during the 2002/03 Agriculture Year

Activity	Type of Household Member									
	Head of Household Alone	Adults Males	Adult Female	Adults	Boys	Girls	Boys & Girls	All Household Members	Hired Labour	Total
Land Clearing	47	5	1	23	0	0	0	15	7	100
Soil Preparation by Hand	26	2	2	37	0	0	0	25	8	100
Soil Preparation bu Oxen / Tractor	47	3	1	20	2	0	1	7	20	100
Planting	12	1	2	37	0	0	0	41	6	100
Weeding	11	1	2	38	0	0	0	40	7	100
Crop Protection	14	1	10	31	1	0	5	34	4	100
Harvesting	12	1	4	36	0	0	0	41	6	100
Crop Processing	15	2	55	10	1	3	3	11	1	100
Crop Marketing	70	2	3	16	0	0	0	8	0	100
Cattle Rearing	62	6	3	7	1	0	2	17	2	100
Cattle Herding	17	10	1	6	36	0	11	8	10	100
Cattle Marketing	87	4	1	3	3	0	0	1	0	100
Goat & Sheep Rearing	38	3	3	18	5	0	1	30	2	100
Goat & Sheep Herding	15	5	2	11	30	1	11	20	6	100
Goat & Sheep Marketing	75	3	1	9	3	0	0	9	0	100
Milking	14	6	37	17	9	1	7	4	4	100
Pig Rearing	32	2	9	11	1	0	3	42	0	100
Poultry Keeping	22	1	31	14	0	0	1	30	0	100
Collecting Water	12	2	63	4	0	5	3	9	0	100
Collecting Firewood	17	3	54	10	0	2	3	9	1	100
Pole Cutting	66	18	3	4	1	0	0	2	5	100
Timber Wood Cutting	80	10	3	4	0	0	1	1	1	100
Building / Maintaining Houses	65	16	2	4	1	0	0	3	10	100
Making Beer	26	3	63	3	1	0	0	2	1	100
Beekeeping	78	10	4	4	0	0	0	4	0	100
Fishing	82	9	0	4	2	0	0	1	0	100
Fish Farming	51	6	11	9	6	6	0	11	0	100
Off - farm Income Generation	61	3	8	21	1	0	0	6	0	100

ACCESS TO INFRASTRUCTURE & OTHER SERVICES

33.2 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Secondary School and District, 2002/03

District	Distance (Kilometer) to Secondary School											Mean Distance
	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	1,377	1.9	1,109	1.5	13,964	19.0	14,931	20.3	42,053	57.3	73,435	31.1
Morogoro	2,278	4.3	1,665	3.1	10,715	20.2	15,528	29.2	22,932	43.2	53,117	19.6
Kilombero	1,280	2.6	5,005	10.3	11,969	24.5	14,355	29.4	16,174	33.2	48,782	16.9
Ulanga	1,071	3.5	3,772	12.2	6,528	21.1	4,521	14.6	15,015	48.6	30,908	23.3
Morogoro Urban	76	1.7	73	1.6	2,360	53.2	1,877	42.3	48	1.1	4,434	9.1
Mvomero	1,729	3.5	2,093	4.2	17,378	34.7	10,904	21.8	17,965	35.9	50,069	25.5
Total	7,812	3.0	13,716	5.3	62,914	24.1	62,116	23.8	114,187	43.8	260,746	23.7

33.1 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Primary School and District, 2002/03 Agricultural Year

District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	Mean Distance
Kilosa	22,067	30.0	31,331	42.7	18,171	24.7	1,168	1.6	698	1.0	73,435	3.4
Morogoro	16,789	31.6	21,589	40.6	13,536	25.5	1,203	2.3	0	0.0	53,117	2.1
Kilombero	17,787	36.5	16,370	33.6	13,145	26.9	986	2.0	494	1.0	48,782	2.5
Ulanga	12,609	40.8	12,977	42.0	4,714	15.3	455	1.5	152	0.5	30,908	1.8
Morogoro Urban	875	19.7	1,852	41.8	1,369	30.9	326	7.4	12	0.3	4,434	3.9
Mvomero	16,076	32.1	22,323	44.6	10,434	20.8	1,114	2.2	122	0.2	50,069	1.8
Total	86,203	33.1	106,442	40.8	61,368	23.5	5,254	2.0	1,479	0.6	260,746	2.5

33.3 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Health Clinic School and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Health Clinic											
	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	6,460	8.8	11,548	15.7	38,543	52.5	12,420	16.9	4,464	6.1	73,435	8.4
Morogoro	5,137	9.7	11,175	21.0	24,589	46.3	6,546	12.3	5,671	10.7	53,117	8.6
Kilombero	7,330	15.0	14,201	29.1	14,027	28.8	8,838	18.1	4,387	9.0	48,782	6.8
Ulanga	3,592	11.6	11,227	36.3	13,877	44.9	1,754	5.7	458	1.5	30,908	6.3
Morogoro Urban	148	3.3	1,024	23.1	1,910	43.1	1,262	28.5	90	2.0	4,434	8.2
Mvomero	6,861	13.7	12,077	24.1	24,873	49.7	4,907	9.8	1,351	2.7	50,069	5.7
Total	29,527	11.3	61,252	23.5	117,819	45.2	35,727	13.7	16,421	6.3	260,746	7.4

33.4 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Hospital School and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Hospital											
	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	358	0.5	506	0.7	9,686	13.2	11,563	15.7	51,323	69.9	73,435	49.6
Morogoro	2,880	5.4	119	0.2	123	0.2	535	1.0	49,460	93.1	53,117	77.5
Kilombero	242	0.5	2,366	4.9	5,796	11.9	4,474	9.2	35,905	73.6	48,782	70.7
Ulanga	155	0.5	834	2.7	5,064	16.4	994	3.2	23,863	77.2	30,908	36.6
Morogoro Urban	0	0.0	25	0.6	1,402	31.6	2,594	58.5	413	9.3	4,434	12.0
Mvomero	609	1.2	1,975	3.9	9,809	19.6	7,467	14.9	30,208	60.3	50,069	34.9
Total	4,244	1.6	5,825	2.2	31,879	12.2	27,626	10.6	191,172	73.3	260,746	54.2

33.5 ACCESS TO SERVICES: Number of Agricultural Households by Distance to District Capital and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to District Capital											
	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	0	0.0	125	0.2	3,567	4.9	4,205	5.7	65,538	89.2	73,435	98.3
Morogoro	486	0.9	0	0.0	242	0.5	61	0.1	52,328	98.5	53,117	82.4
Kilombero	492	1.0	1,981	4.1	5,045	10.3	123	0.3	41,141	84.3	48,782	78.2
Ulanga	0	0.0	444	1.4	2,674	8.7	383	1.2	27,407	88.7	30,908	75.6
Morogoro Urban	0	0.0	13	0.3	1,293	29.2	2,704	61.0	425	9.6	4,434	12.7
Mvomero	126	0.3	0	0.0	121	0.2	366	0.7	49,455	98.8	50,069	69.5
Total	1,104	0.4	2,563	1.0	12,942	5.0	7,842	3.0	236,295	90.6	260,746	81.6

33.6 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Districtal Capital and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Districtal Capital											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	310	0.4	0	0.0	0	0.0	102	0.1	73,022	99.4	73,435	131.9
Morogoro	845	1.6	0	0.0	0	0.0	0	0.0	52,272	98.4	53,117	82.4
Kilombero	891	1.8	126	0.3	246	0.5	0	0.0	47,519	97.4	48,782	272.4
Ulanga	77	0.2	0	0.0	0	0.0	0	0.0	30,831	99.8	30,908	333.1
Morogoro Urban	20	0.5	23	0.5	1,206	27.2	2,705	61.0	481	10.8	4,434	14.1
Mvomero	126	0.3	0	0.0	121	0.2	245	0.5	49,577	99.0	50,069	85.9
Total	2,270	0.9	149	0.1	1,573	0.6	3,052	1.2	253,702	97.3	260,746	161.1

33.7 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Feeder Road and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Feeder Road											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	46,774	63.7	17,253	23.5	6,295	8.6	2,729	3.7	384	0.5	73,435	1.6
Morogoro	29,222	55.0	13,481	25.4	9,331	17.6	604	1.1	479	0.9	53,117	2.4
Kilombero	37,948	77.8	6,836	14.0	3,249	6.7	503	1.0	246	0.5	48,782	2.0
Ulanga	25,356	82.0	3,124	10.1	2,121	6.9	77	0.2	230	0.7	30,908	1.1
Morogoro Urban	2,373	53.5	989	22.3	951	21.4	121	2.7	0	0.0	4,434	1.6
Mvomero	33,379	66.7	10,739	21.4	5,572	11.1	252	0.5	126	0.3	50,069	1.1
Total	175,053	67.1	52,422	20.1	27,519	10.6	4,287	1.6	1,465	0.6	260,746	1.7

33.8 ACCESS TO SERVICES: Number of Agricultural Households by Distance to All Weather Road and District, 2002/03 Agricultural Year

	Distance (Kilometer) to ALL Wealther Road											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	39,164	53.3	13,486	18.4	13,746	18.7	2,614	3.6	4,425	6.0	73,435	3.8
Morogoro	15,681	29.5	7,039	13.3	14,153	26.6	6,648	12.5	9,595	18.1	53,117	9.2
Kilombero	26,779	54.9	10,027	20.6	7,241	14.8	3,601	7.4	1,134	2.3	48,782	3.0
Ulanga	15,280	49.4	7,845	25.4	4,702	15.2	917	3.0	2,164	7.0	30,908	3.4
Morogoro Urban	1,741	39.3	1,206	27.2	1,263	28.5	224	5.0	0	0.0	4,434	2.6
Mvomero	21,658	43.3	8,445	16.9	13,404	26.8	755	1.5	5,808	11.6	50,069	8.2
Total	120,303	46.1	48,048	18.4	54,510	20.9	14,758	5.7	23,126	8.9	260,746	5.5

33.9 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Tarmac Road and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Tarmac Road											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	8,516	11.6	3,292	4.5	10,725	14.6	10,251	14.0	40,651	55.4	73,435	41.1
Morogoro	419	0.8	1,315	2.5	3,589	6.8	1,548	2.9	46,245	87.1	53,117	71.2
Kilombero	1,001	2.1	1,786	3.7	2,370	4.9	5,837	12.0	37,788	77.5	48,782	78.8
Ulanga	0	0.0	0	0.0	77	0.2	0	0.0	30,831	99.8	30,908	175.4
Morogoro Urban	622	14.0	509	11.5	2,083	47.0	1,210	27.3	11	0.2	4,434	6.8
Mvomero	3,264	6.5	1,308	2.6	3,912	7.8	4,727	9.4	36,859	73.6	50,069	42.1
Total	13,822	5.3	8,210	3.1	22,755	8.7	23,573	9.0	192,385	73.8	260,746	69.8

33.10 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Primary Market and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Primary Market											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	15,472	21.1	8,893	12.1	25,908	35.3	14,967	20.4	8,195	11.2	73,435	12.6
Morogoro	4,771	9.0	4,205	7.9	23,480	44.2	9,739	18.3	10,921	20.6	53,117	16.0
Kilombero	3,879	8.0	3,023	6.2	9,944	20.4	8,031	16.5	23,905	49.0	48,782	49.3
Ulanga	3,747	12.1	6,723	21.8	9,680	31.3	2,383	7.7	8,375	27.1	30,908	12.2
Morogoro Urban	254	5.7	321	7.2	1,774	40.0	2,035	45.9	50	1.1	4,434	9.0
Mvomero	7,374	14.7	7,881	15.7	18,694	37.3	9,552	19.1	6,568	13.1	50,069	11.1
Total	35,499	13.6	31,046	11.9	89,479	34.3	46,707	17.9	58,015	22.2	260,746	19.7

33.11 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Secondary Market and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Secondary Market											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	9,335	12.7	6,864	9.3	17,974	24.5	23,523	32.0	15,740	21.4	73,435	20.8
Morogoro	6,461	12.2	3,233	6.1	17,185	32.4	12,040	22.7	14,197	26.7	53,117	15.2
Kilombero	3,393	7.0	3,268	6.7	10,597	21.7	8,813	18.1	22,711	46.6	48,782	49.0
Ulanga	833	2.7	3,466	11.2	8,917	28.9	3,694	12.0	13,998	45.3	30,908	39.3
Morogoro Urban	231	5.2	12	0.3	1,590	35.9	2,569	57.9	32	0.7	4,434	10.1
Mvomero	2,106	4.2	1,713	3.4	12,451	24.9	8,995	18.0	24,805	49.5	50,069	30.6
Total	22,360	8.6	18,556	7.1	68,713	26.4	59,634	22.9	91,482	35.1	260,746	28.8

33.12 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Tertiary Market and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Tertiary Market											
District	Less than 1	%	1 - 2.9	%	3 - 9 9	%	10 - 19.9	%	Above 20	%	Total	
Kilosa	12,022	16.4	2,594	3.5	11,298	15.4	8,423	11.5	39,098	53.2	73,435	44.0
Morogoro	2,760	5.2	1,839	3.5	7,315	13.8	6,909	13.0	34,293	64.6	53,117	51.6
Kilombero	1,385	2.8	2,887	5.9	11,693	24.0	9,650	19.8	23,167	47.5	48,782	49.1
Ulanga	1,749	5.7	2,439	7.9	6,008	19.4	1,454	4.7	19,259	62.3	30,908	48.5
Morogoro Urban	52	1.2	0	0.0	1,319	29.8	2,617	59.0	446	10.1	4,434	12.3
Mvomero	2,607	5.2	2,585	5.2	6,419	12.8	2,485	5.0	35,974	71.8	50,069	50.3
Total	20,575	7.9	12,343	4.7	44,052	16.9	31,538	12.1	152,238	58.4	260,746	47.7

33.13 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Veterinary Clinic and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Veterinary Clinic															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	1,235	1.7	6,294	8.8	4,075	5.7	2,455	3.4	6,822	9.5	11,416	16.0	39,242	54.9	71,539	74.1
Morogoro	2,298	4.4	246	0.5	0	0.0	1,714	3.3	3,801	7.3	4,578	8.9	39,082	75.6	51,719	76.3
Kilombero	2,982	6.5	1,261	2.8	242	0.5	1,600	3.5	1,743	3.8	7,298	16.0	30,617	66.9	45,743	88.3
Ulanga	1,226	4.0	0	0.0	154	0.5	2,087	6.8	1,058	3.5	5,132	16.8	20,943	68.4	30,600	206.7
Morogoro Urban	483	11.5	1,034	24.6	1,016	24.1	1,129	26.8	402	9.6	0	0.0	143	3.4	4,208	13.6
Mvomero	8,072	16.2	610	1.2	0	0.0	372	0.7	4,692	9.4	3,866	7.8	32,203	64.6	49,815	69.9
Total	16,297	6.4	9,445	3.7	5,487	2.2	9,358	3.7	18,518	7.3	32,290	12.7	162,230	64.0	253,624	91.1

33.14 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Extension Center

	Distance (Kilometer) to Extension Center															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	8,714	17.0	19,967	39.0	11,694	22.8	3,360	6.6	4,320	8.4	1,968	3.8	1,184	2.3	51,208	11.0
Morogoro	1,578	3.8	11,028	26.4	4,197	10.0	363	0.9	4,900	11.7	5,578	13.4	14,118	33.8	41,763	37.0
Kilombero	10,882	32.8	4,346	13.1	4,076	12.3	1,765	5.3	3,157	9.5	2,417	7.3	6,513	19.6	33,157	20.9
Ulanga	1,274	7.0	5,680	31.3	1,923	10.6	922	5.1	967	5.3	4,529	25.0	2,856	15.7	18,151	26.0
Morogoro Urban	95	2.6	1,884	50.6	998	26.8	689	18.5	33	0.9	12	0.3	16	0.4	3,727	9.5
Mvomero	12,641	35.9	7,106	20.2	1,643	4.7	1,389	3.9	3,988	11.3	253	0.7	8,210	23.3	35,230	26.8
Total	35,184	19.2	50,011	27.3	24,530	13.4	8,489	4.6	17,365	9.5	14,758	8.1	32,898	18.0	183,236	22.9

33.15 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Research Station and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Research Station															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	123	0.2	813	1.1	3,970	5.4	6,430	8.8	3,234	4.4	6,223	8.5	52,221	71.5	73,014	100.5
Morogoro	5,728	10.9	362	0.7	0	0.0	0	0.0	1,039	1.4	236	0.3	45,262	62.0	52,628	90.1
Kilombero	119	0.3	3,229	7.1	385	0.5	0	0.0	125	0.2	8,281	11.3	33,228	45.5	45,367	82.3
Ulanga	74	0.2	151	0.5	0	0.0	226	0.3	1,023	1.4	2,269	3.1	27,165	37.2	30,908	159.5
Morogoro Urban	431	10.3	1,121	26.7	867	1.2	1,106	1.5	38	0.1	0	0.0	627	0.9	4,190	19.8
Mvomero	7,822	15.7	4,103	8.2	128	0.2	1,850	2.5	4,467	6.1	2,783	3.8	28,791	39.4	49,944	51.3
Total	14,298	5.6	9,779	3.8	5,349	7.3	9,612	13.2	9,927	13.6	19,792	27.1	187,294	256.5	256,052	91.2

33.16 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Plant Protection Lab and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Plant Protection Lab															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	383	0.5	918	1.3	3,175	4.3	4,758	6.5	2,213	3.0	6,215	8.5	55,561	75.9	73,224	101.7
Morogoro	6,406	12.1	0	0.0	119	0.2	0	0.0	121	0.2	2,765	3.8	43,706	59.7	53,117	82.8
Kilombero	252	0.6	3,352	7.4	385	0.5	0	0.0	252	0.3	8,162	11.1	33,200	45.3	45,603	81.6
Ulanga	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3,216	4.4	27,692	37.8	30,908	140.9
Morogoro Urban	472	11.1	997	23.5	932	1.3	1,058	1.4	63	0.1	0	0.0	718	1.0	4,239	21.6
Mvomero	7,826	15.6	2,864	5.7	0	0.0	368	0.5	4,575	6.2	2,357	3.2	32,080	43.8	50,069	65.2
Total	15,338	6.0	8,131	3.2	4,611	6.3	6,184	8.4	7,224	9.9	22,715	31.0	192,958	263.5	257,160	90.4

33.17 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Land Registration Office and District, 2002/03 Agricultural Year

	Distance (Kilometer) to Land Registration Office															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	0	0.0	2,134	2.9	3,813	5.2	1,644	2.2	4,706	6.4	11,363	15.5	49,542	67.7	73,203	100.5
Morogoro	1,821	3.4	0	0.0	119	0.2	0	0.0	2,751	3.8	5,534	7.6	42,892	58.6	53,117	85.8
Kilombero	123	0.3	1,643	2.2	128	0.2	1,724	2.4	1,743	2.4	7,408	10.1	32,473	44.4	45,242	79.4
Ulanga	0	0.0	1,151	1.6	153	0.2	153	0.2	962	1.3	9,062	12.4	17,534	24.0	29,015	77.6
Morogoro Urban	118	2.8	1,222	1.7	1,214	1.7	1,208	1.6	390	0.5	0	0.0	45	0.1	4,196	12.4
Mvomero	7,829	15.6	121	0.2	0	0.0	245	0.3	5,064	6.9	4,361	6.0	32,448	44.3	50,069	70.7
Total	9,890	3.9	6,272	8.6	5,428	7.4	4,973	6.8	15,615	21.3	37,729	51.5	174,936	239.0	254,842	83.6

33.18 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Livestock Development Center

	Distance (Kilometer) to Livestock Development Center															
District	<5	%	5 - 9	%	10 - 14	%	15 - 19	%	20 - 29	%	30 - 49	%	50 +	%	Total	
Kilosa	616	0.8	2,145	2.9	516	0.7	1,169	1.6	963	1.3	4,992	6.8	62,805	85.8	73,206	112.3
Morogoro	6,668	12.8	0	0.0	0	0.0	0	0.0	1,833	2.5	3,987	5.4	39,711	54.2	52,199	76.3
Kilombero	3,080	6.8	1,268	1.7	128	0.2	1,724	2.4	126	0.2	5,240	7.2	33,914	46.3	45,480	138.3
Ulanga	385	1.3	914	1.2	153	0.2	153	0.2	77	0.1	4,475	6.1	23,563	32.2	29,719	267.0
Morogoro Urban	525	12.5	899	1.2	986	1.3	1,073	1.5	403	0.6	0	0.0	318	0.4	4,204	18.5
Mvomero	8,324	16.7	243	0.3	0	0.0	369	0.5	5,057	6.9	4,243	5.8	31,706	43.3	49,942	69.6
Total	19,597	7.7	5,470	7.5	1,783	2.4	4,487	6.1	8,459	11.6	22,938	31.3	192,016	262.3	254,750	118.4

33.19 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Veterinary Clinic and District, 2002/03 Agricultural Year

	Satisfaction of Using Veterinary Clinic											
District	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Not applicable	Total
Kilosa	1,038	0.2	10,988	2.5	6,838	1.6	65,255	14.8	12,884	2.9	343,607	440,611
Morogoro	550	0.2	8,263	2.6	5,057	1.6	3,861	1.2	3,624	1.1	297,346	318,702
Kilombero	496	0.2	7,873	2.7	2,372	0.8	2,442	0.8	1,922	0.7	277,588	292,693
Ulanga	986	0.5	11,498	6.2	5,248	2.8	2,848	1.5	154	0.1	164,716	185,449
Morogoro Urban	107	0.4	210	0.8	79	0.3	628	2.4	453	1.7	25,127	26,604
Mvomero	5,094	1.7	5,077	1.7	6,882	2.3	13,559	4.5	9,119	3.0	260,683	300,415
Total	8,272	0.5	43,910	2.8	26,476	1.7	88,592	5.7	28,157	1.8	1,369,068	1,564,475

33.20 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Extension Center and District, 2002/03 Agricultural Year

	Satisfaction of Using Extension Center										
District	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total
Kilosa	1,038	4.5	7,946	34.7	3,566	15.6	8,957	39.1	1,402	6.1	22,908
Morogoro	367	1.6	3,609	44.2	2,740	33.6	842	10.3	604	7.4	8,163
Kilombero	377	1.6	6,199	78.3	965	12.2	126	1.6	248	3.1	7,915
Ulanga	680	3.0	6,768	66.9	2,518	24.9	151	1.5	0	0.0	10,118
Morogoro Urban	48	0.2	90	29.0	5	1.5	95	30.7	73	23.6	311
Mvomero	4,717	20.6	4,327	27.4	4,989	31.6	753	4.8	1,019	6.4	15,805
Total	7,227	31.5	28,940	44.4	14,783	22.7	10,924	16.7	3,346	5.1	65,220

33.21 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Research Station and District, 2002/03 Agricultural Year

District	Satisfaction of Using Research Station										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total
Kilosa	0	0	1,245	8.4	764	5.1	10,900	73.3	1,968	13.2	14,878
Morogoro	0	0	861	32.2	609	22.8	604	22.5	604	22.6	2,678
Kilombero	0	0	338	23.2	258	17.7	603	41.4	258	17.7	1,456
Ulanga	0	0	2,085	66.0	538	17.0	538	17.0	0	0.0	3,161
Morogoro Urban	26	9	39	13.9	13	4.6	128	45.8	73	26.3	279
Mvomero	0	0	127	2.7	254	5.5	2,634	56.8	1,620	34.9	4,636
Total	26	0	4,695	17.3	2,437	9.0	15,407	56.9	4,523	16.7	27,088

33.22 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Plant Protection Lab and District, 2002/03 Agricultural Year

District	Satisfaction of Using Plant Protection Lab										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total
Kilosa	0	0.0	564	3.9	637	4.4	11,062	75.7	2,347	16.1	14,609
Morogoro	0	0.0	861	35.4	365	15.0	604	24.8	604	24.8	2,434
Kilombero	0	0.0	244	19.7	258	20.9	478	38.6	258	20.8	1,237
Ulanga	153	12.5	148	12.0	231	18.9	693	56.6	0	0.0	1,225
Morogoro Urban	0	0.0	0	0.0	12	6.6	92	52.0	73	41.4	177
Mvomero	123	2.5	250	5.1	379	7.8	2,509	51.4	1,620	33.2	4,881
Total	276	1.1	2,067	8.4	1,882	7.7	15,438	62.8	4,901	20.0	24,564

33.23 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Land Registration Office and District, 2002/03 Agricultural Year

District	Satisfaction of Using Land Registration Office										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total
Kilosa	0	0.0	369	2.5	878	6.0	11,023	75.4	2,347	16.1	14,618
Morogoro	0	0.0	842	30.2	735	26.4	604	21.7	604	21.7	2,785
Kilombero	119	7.4	477	29.5	510	31.5	126	7.8	387	23.9	1,618
Ulanga	76	2.7	981	34.9	829	29.5	846	30.1	78	2.8	2,811
Morogoro Urban	0	0.0	12	5.0	12	4.9	128	53.9	86	36.2	238
Mvomero	0	0.0	246	5.3	377	8.1	2,393	51.6	1,620	34.9	4,636
Total	196	0.7	2,927	11.0	3,341	12.5	15,120	56.6	5,122	19.2	26,705

33.24 TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Livestock Development Center

District	Satisfaction of Using Livestock Development Center										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total
Kilosa	0	0.0	113	0.8	379	2.6	11,388	78.8	2,576	17.8	14,456
Morogoro	61	2.4	1,045	40.9	242	9.5	604	23.6	604	23.6	2,556
Kilombero	0	0.0	371	23.0	258	16.0	468	29.0	515	32.0	1,612
Ulanga	0	0.0	1,363	51.4	905	34.1	310	11.7	77	2.9	2,655
Morogoro Urban	0	0.0	24	10.7	25	10.9	104	45.9	73	32.5	226
Mvomero	127	2.7	0	0.0	377	7.9	2,636	55.4	1,620	34.0	4,760
Total	188	0.7	2,917	11.1	2,186	8.3	15,509	59.0	5,465	20.8	26,266

HOUSEHOLD FACILITIES

34.1: HOUSEHOLD FACILITIES: Number of hoseholds reporting average number of rooms and type of Roofing Materials by District, 2002/03 Agricultural Year

District	Number of rooms	Iron Sheets	Tiles	Concrete	Asbestos	Grass/Leaves	Grass & Mud	Other	Total
Kilosa	3	28,621	861	386	254	28,529	14,784	0	73,435
Morogoro	3	16,296	364	122	119	33,329	2,763	122	53,117
Kilombero	3	18,291	495	258	118	29,114	382	123	48,782
Ulanga	3	7,224	75	155	0	20,941	2,512	0	30,908
Morogoro Urban	3	2,787	25	0	21	1,442	159	0	4,434
Mvomero	3	21,066	249	0	0	27,489	1,266	0	50,069
Total	3	94,284	2,070	922	512	140,845	21,867	245	260,746

34.2 HOUSEHOLD FACILITIES: Number of Agricultural Households reporting ownership of Assets by District, 2002/03 Agricultural Year

District	Radio			Landline phone			Mobile phone			Iron		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Kilosa	39,605	33,830	73,435	223	73,213	73,435	1,167	72,268	73,435	10,393	63,042	73,435
Morogoro	34,074	19,043	53,117	307	52,810	53,117	961	52,156	53,117	5,583	47,534	53,117
Kilombero	28,414	20,368	48,782	123	48,659	48,782	1,055	47,727	48,782	7,865	40,917	48,782
Ulanga	16,024	14,884	30,908	77	30,832	30,908	461	30,447	30,908	4,720	26,188	30,908
Morogoro Urban	2,901	1,533	4,434	37	4,397	4,434	91	4,343	4,434	476	3,958	4,434
Mvomero	30,087	19,982	50,069	123	49,946	50,069	495	49,575	50,069	6,369	43,700	50,069
Total	151,106	109,640	260,746	889	259,857	260,746	4,230	256,516	260,746	35,406	225,340	260,746

cont… HOUSEHOLD FACILITIES: Number of Agricultural Households reporting ownership of Assets by District, 2002/03 Agricultural Year

District	Wheelbarrow			Bicycle			Vehicle			Television / Video		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Kilosa	4,201	69,234	73,435	29,628	43,807	73,435	455	72,980	73,435	407	73,028	73,435
Morogoro	1,293	51,824	53,117	14,879	38,238	53,117	655	52,461	53,117	942	52,175	53,117
Kilombero	2,850	45,932	48,782	25,806	22,976	48,782	744	48,039	48,782	116	48,666	48,782
Ulanga	1,382	29,526	30,908	10,696	20,212	30,908	307	30,602	30,908	228	30,680	30,908
Morogoro Urban	250	4,184	4,434	1,524	2,910	4,434	36	4,398	4,434	22	4,412	4,434
Mvomero	618	49,451	50,069	18,495	31,574	50,069	489	49,580	50,069	251	49,818	50,069
Total	10,595	250,151	260,746	101,029	159,717	260,746	2,686	258,060	260,746	1,966	258,779	260,746

34.3 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Main Source of Energy for Lighting by District, 2002/03 Agricultural Year

District	Mains Electricity	Solar	Hurricane Lamp	Pressure Lamp	Wick Lamp	Candles	Firewood	Total
Kilosa	685	0	16,058	2,008	53,296	259	1,129	73,435
Morogoro	1,021	120	7,741	2,726	40,290	0	1,219	53,117
Kilombero	913	247	12,202	1,149	34,029	242	0	48,782
Ulanga	72	0	8,403	693	21,355	0	385	30,908
Morogoro Urban	44	0	1,753	99	2,488	13	37	4,434
Mvomero	245	0	12,296	4,460	32,694	126	248	50,069
Total	2,979	368	58,452	11,136	184,153	640	3,018	260,746

34.4 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Main Source of Energy for Cooking by District, 2002/03 Agricultural Year

District	Mains Electricity	Solar	Bottled Gas	Parraffin / Kerocine	Charcoal	Firewood	Crop Residues	Livestock Dung	Total
Kilosa	218	130	220	130	4,596	67,635	507	0	73,435
Morogoro	245	120	122	0	2,519	50,111	0	0	53,117
Kilombero	0	255	119	328	3,304	44,156	621	0	48,782
Ulanga	78	0	78	77	1,531	28,990	77	77	30,908
Morogoro Urban	0	9	24	12	193	4,196	0	0	4,434
Mvomero	0	0	0	365	4,331	45,374	0	0	50,069
Total	541	513	562	911	16,473	240,462	1,205	77	260,746

34.5 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year

District	Piped Water	Protected Well	Protected / Covered Spring	Uprotected Well	Unprotected Spring	Surface Water (Lake / Dam / River / Stream)	Covered Rainwater Catchment	Uncovered Rainwater Catchment	Water Vendor	Other	Total
Kilosa	20,888	14,383	131	6,275	8,095	22,294	261	1,109	0	0	73,435
Morogoro	8,095	6,530	121	16,143	5,702	15,860	245	242	61	118	53,117
Kilombero	15,020	14,114	370	16,313	478	2,239	0	246	0	0	48,782
Ulanga	8,247	13,165	1,118	3,747	1,289	3,033	77	232	0	0	30,908
Morogoro Urban	715	184	38	594	728	1,816	36	324	0	0	4,434
Mvomero	9,009	9,074	378	8,089	8,464	14,681	0	124	252	0	50,069
Total	61,975	57,450	2,155	51,160	24,757	59,923	618	2,276	313	118	260,746

34.6 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Distance to Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year

District	Less than 100m	100-299 m	300-499 m	500-999 m	1-1.99 Km	2-2.99 Km	3-4.99 Km	5-9.99 Km	10Km and above	Total
Kilosa	13,490	9,287	4,450	20,674	18,070	4,971	1,538	955	0	73,435
Morogoro	14,382	7,849	2,394	13,450	11,135	1,806	1,077	1,023	0	53,117
Kilombero	11,875	14,150	4,011	10,538	6,329	1,259	621	0	0	48,782
Ulanga	4,129	12,218	3,129	7,773	2,816	458	155	230	0	30,908
Morogoro Urban	602	1,505	276	804	853	252	95	35	12	4,434
Mvomero	12,450	8,723	2,813	10,665	10,113	3,112	1,699	370	124	50,069
Total	56,927	53,733	17,072	63,904	49,317	11,857	5,186	2,614	136	260,746

34.7 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year

District	Less than 10	10-19 Minutes	20-29 Minutes	30-39 Minutes	40-49 Minutes	50-59 Minutes	above one Hour	Total
Kilosa	471	16,349	10,845	22,113	6,137	5,707	11,813	73,435
Morogoro	11,601	14,090	5,283	11,183	3,080	1,263	6,618	53,117
Kilombero	8,491	16,965	8,416	5,302	1,355	4,405	3,848	48,782
Ulanga	834	11,492	4,597	5,202	1,605	4,125	3,052	30,908
Morogoro Urban	573	1,026	656	907	112	425	735	4,434
Mvomero	1,599	17,421	7,926	10,308	1,367	5,515	5,934	50,069
Total	23,569	77,343	37,724	55,015	13,655	21,441	31,999	260,746

34.8 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year

District	Piped Water	Protected Well	Protected / Covered Spring	Uprotected Well	Unprotected Spring	Surface Water (Lake / Dam / River / Stream)	Covered Rainwater Catchment	Uncovered Rainwater Catchment	Water Vendor	Total HH
Kilosa	22,592	16,731	516	4,983	7,724	20,263	0	500	126	73,435
Morogoro	8,812	6,533	121	14,097	5,575	16,939	123	121	795	53,117
Kilombero	15,271	14,579	370	15,344	360	2,858	0	0	0	48,782
Ulanga	8,325	10,635	1,041	6,275	1,289	3,188	0	155	0	30,908
Morogoro Urban	1,167	235	38	433	751	1,762	12	36	0	4,434
Mvomero	8,277	9,435	500	7,616	8,214	15,780	0	0	247	50,069
Total	64,444	58,148	2,587	48,749	23,913	60,790	135	812	1,168	260,746

34.9 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Distance to Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year

District	Less than 100m	100-299 m	300-499 m	500-999 m	1-1.99 Km	2-2.99 Km	3-4.99 Km	5-9.99 Km	10Km and above	Total
Kilosa	12,822	7,993	3,704	18,897	16,922	6,735	2,933	3,430	0	73,435
Morogoro	11,843	7,129	1,922	11,811	10,951	4,486	2,120	2,381	473	53,117
Kilombero	10,787	12,638	3,847	9,804	6,662	3,525	1,425	94	0	48,782
Ulanga	4,050	11,147	3,053	7,098	3,579	920	310	751	0	30,908
Morogoro Urb	412	1,421	266	787	806	279	220	119	125	4,434
Mvomero	10,014	7,985	2,322	10,924	10,456	4,108	2,669	1,466	124	50,069
Total	49,927	48,313	15,114	59,322	49,376	20,054	9,678	8,240	722	260,746

34.10 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year

District	Less than 10 Minutes	10 - 19 Minutes	20 - 29 Minutes	30 - 39 Minutes	40 - 49 Minutes	50 - 59 Minutes	above one Hour	Total
Kilosa	728	14,727	8,296	18,596	6,867	5,590	18,631	73,435
Morogoro	10,151	11,472	4,932	8,425	4,032	1,140	12,964	53,117
Kilombero	7,523	14,546	8,670	4,746	2,025	4,530	6,742	48,782
Ulanga	835	10,670	4,589	4,275	1,455	3,902	5,181	30,908
Morogoro Urban	426	883	570	680	225	419	1,230	4,434
Mvomero	2,103	13,720	6,716	11,035	2,351	4,169	9,975	50,069
Total	21,766	66,018	33,773	47,759	16,955	19,749	54,724	260,746

34.11 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting type of TOILET the household normally use by District, 2002/03 Agricultural Year

District	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine - hh Owned	Other Type	Total
Kilosa	3,173	1,327	68,175	759	0	73,435
Morogoro	246	712	51,362	674	123	53,117
Kilombero	1,409	352	44,053	2,969	0	48,782
Ulanga	1,305	155	29,224	224	0	30,908
Morogoro Urban	225	20	4,139	50	0	4,434
Mvomero	617	625	47,348	1,117	362	50,069
Total	6,975	3,191	244,301	5,794	484	260,746

34.12 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Number of meals the household normally has per day by District, 2002/03 Agricultural Year

District	One	Two	Three	Four	Total
Kilosa	1,640	41,720	28,515	1,560	73,435
Morogoro	4,707	33,067	15,343	0	53,117
Kilombero	1,006	17,805	29,852	119	48,782
Ulanga	461	18,416	11,876	156	30,908
Morogoro Urban	134	2,068	2,232	0	4,434
Mvomero	1,252	25,650	23,167	0	50,069
Total	9,199	138,726	110,985	1,835	260,746

34.13 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Number of days the household Consumed Meat during the Preceeding Week by District, 2002/03 Agricultural Year

District	Not Eaten	One	Two	Three	Four	Five	Six	Seven	Total
Kilosa	22,524	21,862	22,185	4,160	1,969	259	347	129	73,435
Morogoro	17,855	18,700	10,471	5,399	477	0	111	103	53,117
Kilombero	18,585	13,421	10,400	4,634	883	735	0	125	48,782
Ulanga	15,318	9,107	3,802	2,140	309	78	154	0	30,908
Morogoro Urban	1,605	1,775	758	176	90	21	0	9	4,434
Mvomero	20,189	14,311	8,042	5,155	854	510	765	244	50,069
Total	96,077	79,176	55,659	21,664	4,581	1,603	1,377	609	260,746

34.14 HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Number of days the household Consumed Fish during the Preceeding Week by District, 2002/03 Agricultural Year

District	Not Eaten	One	Two	Three	Four	Five	Six	Seven	Total
Kilosa	22,113	23,692	16,684	7,746	1,953	642	218	385	73,435
Morogoro	18,473	15,818	11,155	4,534	1,699	717	353	367	53,117
Kilombero	8,618	9,922	10,639	9,237	5,424	2,437	1,336	1,169	48,782
Ulanga	7,978	7,878	7,320	3,983	2,152	917	452	228	30,908
Morogoro Urban	1,302	1,238	876	525	211	163	13	106	4,434
Mvomero	21,505	9,674	8,583	5,442	3,009	1,107	502	247	50,069
Total	79,990	68,222	55,258	31,467	14,448	5,984	2,875	2,503	260,746

APPENDIX III QUESTIONNAIRES

UNITED REPUBLIC OF TANZANIA

Confidential

Page Number …………………

Agriculture Sample Census 2002/03

ACLF 1: Sub-village leader listing form

Region ________________ Code ☐☐	Ward ______________ Code ☐☐☐
District ____________________ Code ☐☐	Village ______________Code ☐☐

Name of Village Chairman:………………………………………………………………………………………..

Sub-village leader number	Name of sub-village leader	Number of households		Comments
		From office register	After enumeration	
(1)	(2)	(3)	(4)	(5)
	Total			

Name of enumerator……………………………… Signature ……………………………. Date…………….

Name of supervisor……………………………… Signature ……………………………. Date…………….

UNITED REPUBLIC OF TANZANIA

Confidential

Interval ☐☐
Starting point ☐☐

Page Number……………….

Agriculture Sample Census 2002/03

ACLF: 2 Household listing form - form for listing household heads and their agriculture activities

Region ________________	Code ☐☐	Name of Sub-village Leaader ______________________________	
District ________________	Code ☐		Subvillage leader code ☐☐
Ward ________________	Code ☐☐☐		
Village ________________	Code ☐☐	Name of Sub-village ______________________________	

Household Number	Household head name	Number of	Cattle									✓ if the respodent qualifies to be a farmer *	Farmer Serial Numbers
		Fields +	Total Number	Adult male cattle	Adult female cattle	Calves	Goats	Sheep	Pigs	poultry/ducks	Rabbit		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Totals												

* **NOTE:** (Column 13) Place a "✓" if the household has at least 1 field over 25m^2 and/or keeps at least 1 Cow, 5 Goats/Sheep/Pigs or 50 Chicken/poultry or ducks

+(Column 3) A field must be at least 25 m^2

Name of enumerator…………………………………….. Signature …………………………… Date……………………..….

Name of supervisor………………………………… Signature …………………………… Date……………..……….

UNITED REPUBLIC OF TANZANIA

Confidential

National Agriculture Sample Census 2002/03

ACLF: 3 Household listing of 15 selected farmers

Region _____ Code ☐☐

District _____ Code ☐☐

Ward _____ Code ☐☐☐

Village _____ Code ☐☐

S/N	Sub village leader number	Name of sub-village leader	Agriculture hh serial number	Name of selected head of household	Number of						
					Fields	Cattle	Goat	Sheep	Pig	Poultry /ducks	Rabbits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)
01			☐☐☐								
02			☐☐☐								
03			☐☐☐								
04			☐☐☐								
05			☐☐☐								
06			☐☐☐								
07			☐☐☐								
08			☐☐☐								
09			☐☐☐								
10			☐☐☐								
11			☐☐☐								
12			☐☐☐								
13			☐☐☐								
14			☐☐☐								
15			☐☐☐								

Name of Enumerator:_____Signature_____Date_____

Name of Supervisor_____Signature_____Date_____

Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development, Ministry of Cooperatives and Marketing and the National Bureau of Statistics

United Republic of Tanzania

ACQ 1 **CONFIDENTIAL**

Small holder/Small Scale Farmer Questionnaire

Agriculture Sample Census

2002/2003

Enumerator Name ..... Signature .....

Date Enumerated ☐☐ / ☐☐ / ☐☐ (d d / m m / y y)

	Hour	Minutes
Start time	☐☐	☐☐
End time	☐☐	☐☐

Field level checking by:

District Supervisor:	Name	signature	Date / /	*To be completed by the supervisor **ONLY** after field/farm level checking of the enumeration process. This should be countersigned by the enumerator.*
Regional Supervisor:	Name	signature	Date / /	
National Supervisor:	Name	signature	Date / /	

District checking in Office:

District Supervisor	Name	signature	Date / /	*All questionnaires must be checked at the district office.*

For Use at National Level only:

Data Entered by	Name	signature	Date / /	*See back page for details of query*
Queried	Name	signature	Date / /	

Executed by the Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development,
Ministry of Cooperatives and Marketing
and
National Bureau of Statistics

1.0 IDENTIFICATION DETAILS

1.1 Location

S/N	Location Name	Codes
1.1.1	Region ……	
1.1.2	District ……	
1.1.3	Ward ……	
1.1.4	Village ……	

1.2 Details of the **respondent** and **household head**

S/N		Codes
1.2.1	Name & number of **local leader** ……..	
1.2.2	Name & number of **household head** ……..	
1.2.3	**Sex** of household head (Male = 1, Female = 2)	
1.2.4	Name of **respondent** ……..	
1.2.5	**Relationship of Respondent** to Household Head	

Relationship to household head codes (Q 1.2.5)

Head of Household……1 Son/Daughter ……...3 Grandson/Granddaughter ……5 Other (friend, employee, etc)…8
Spouse ……..….2 Father/Mother ……..…4 Other relative……...6

2.0 ACTIVITIES OF THE HOUSEHOLD

2.1 **Type** of Agriculture Household

Agriculture household codes(Q2.1)

Crops only……...1 Livestock only ……..2 Pastoralist……...3 Crops and Livestock ……..4

2.2 **Rank the following livelihood activities/source of income** of the household in order of importance

S/N	Livelihood/source of income activity.	Rank in order of importance 1=most 7=least	How important are each of these activities expressed in percentage.
	(1)	*(2)*	*(3)*
2.2.1	**Annual Crop** farming		%
2.2.2	**Permanent** crop farming		%
2.2.3	**Livestock** keeping/herding		%
2.2.4	**Off Farm Income**		%
2.2.5	**Remittances**		%
2.2.6	**Fishing/hunting** and gathering		%
2.2.7	**Tree/forest** resources (eg honey, firewood, timber,etc)		%
			1 0 0 %

Definition and working page for page 1

General Definitions

Small holder hh/small scale farm:
Should have between 25sq metres and 20 Hectares under production, and/or between 1 and 50 head of Cattle, and/or between 5 and 100 head of Sheep/Goats/Pigs, and/or between 50 and 1000 chickens/turkeys/ducks/rabbits.

Household: A group of people who occupy the whole or part of one or more housing units and makes joint provisions for food and/or other essentials for living.

Household Head: A person who is acknowledged by all other members of the household either by virtue of his age or standing in the household as the head. He/she should be a permanent resident of the house and he/she is the main person responsible for making decissions.

Agricultural Holding: This is an economic unit of agricultural production under single management. It consists of all livestock kept and all land used for agricultural production without regard to title. For the purpose of this survey, the agricultural holdings are restricted to those which meet one of the following conditions:

- Having or operated at least 25 sq meter of arable land
- Own or keep at least one head of cattle or five goats/sheep/pigs or fifty chicken/ducks/turkeys during the agricultural year 2002/03 (October 2002 to September 2003) .

Question Specific Definitions:

Type of Agriculture Holdings Codes (Q2.1):

- Crops only: A holding is referred to be a crops only holding if it has cultivated a piece of land equal or exceeding 25 sq Meter. This also applies to all households owning or have kept livestock whose number does not qualify such household to be an agricultural holding (No cattle, less than 5 goats/sheep/pigs, less than 50 chickens/turkeys/ducks/rabbits)

- Livestock only: A holding is referred to be a Livestock only holding if it has exercised Livestock husbandry only during the agricultural year. The livestock can be herded in search for areas of pasture, but the core household unit always remains in the same place and the herder is rarely away from this place for long periods at a time.

- Livestock pastoralism: This refers to a household which practices livestock production as its major income generating activity and a means of subsistence, but moves from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they have no permanent place of residence.

For both livestock only and pastoralism , the number of livestock has to be at least 1 head of cattle, 5 goats/sheep/pigs or 50 chickens/turkeys/ ducks/rabbits. This also applies to all households owning or have cultivated a piece of land less than 25 sq meter, which does not qualify such household be an agricultural holding.

- Both crops and livestock: A holding is referred to be a both crops and livestock if it has cultivated a piece of land equal or exceeding 25 sq meter and if such households is owning or have kept livestock whose number qualify such household be an agricultural holding.

Important livelihood activities/source of income (Q 2.2):

- Crop farming: This refers to a household where crop production is its major means of subsistence and income generation.

- Livestock farming/herding/pastoralism: This refers to a household where livestock farming/herding is its major means of subsistence & income generation.

- Off Farm Income This refers to cash generated from activities other than from the households holding. This can be from permanent employment (eg government/other), temporary employment/labouring and includes cash generated from working on other farmers farms.

-**Remittances:** Assistance from family members who are not currently part of the household, or from a relative or family friend. This assistance is usually in the form of cash but it can also be in-kind (eg food, clothes, building material, farm tools, etc). The money is a gift and is not paid back.

-Fishing/hunting and gathering The use of non farmed resources for food eg fishing, hunting wildlife and gathering mushrooms, berries, wild honey roots from uncultivated land.

Procedures for Questions:

Q 2.1 Type of agriculture household/holding

1. Using the options under the question classify the type of agriculture hh/holding

Note: If the hh had 1 acre of crops and raised 40 chickens during 2002/03 it is classified as **'Crops only'** as the number of chickens do not qualify the hh as keeping livestock.

Q 2.2 Important hh livelihood activities /source of income

1. Read the list in column 1 to the respondent and ask him to rank them in order of importance during the reference year.

2. In column 2 Indicate the importance of each activity by placing **'1'** against the most important, **'2'** against the second most important, etc until you reach **'7'** the least important activity/source of income.

Note: You must attempt to fill in all boxes. Most households will carry out these activities to a greater or lesser degree. You will normally have to probe to get remittances.

If the hh did not undertake an activity during the 2002/2003 agriculture year then mark the appropriate box in column 2 with an 'X'.

3. For each activity/source of income assign a percentage. The enumerator should assist the respondent in assigning the percentage based on the information provided by the farmer.

4. After completing column 3 make sure the percentages add up to 100.

Note: It is not essential to be 100% accurate. This question is just to give the relative importance of the different items in general terms

3.0 HOUSEHOLD INFORMATION

3.1 Give details of personal **particulars** of all household members beginning with the head of the household

S/N	Names of household members	Relation-ship to head	Sex M=1 F=2	Age (if age is above 99 years then write 99)	Survival of Parents		Not applicable for children under 5 years of age: Read & Write	Education Status	Education Level reached	Involvemen in farmin	Main activity (for aged 5 & above)	Off-farm Income Yes=1 No=2
					Mother	Father						
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*
3.1.1	……	1										
3.1.2	……											
3.1.3	……											
3.1.4	……											
3.1.5	……											
3.1.6	……											
3.1.7	……											
3.1.8	……											
3.1.9	……											
3.1.10	……											
3.1.11	……											
3.1.12	……											
3.1.13	……											
3.1.14	……											
3.1.15	……											
3.1.16	……											

Relation to head (Col 2)
Head of household ……1
Spouse ……2
Son/daughter ……3
Father/Mother ……4
Grandson/granddaughter .5
Other Relative ……6
Others ……8

Survival of Parents (Col 5 & 6)
Yes ……1
No ……2
Don't know ……3

Read & Write (Col 7)
Swahili ……1
English ……2
Swahili & English ……3
Any other language ……4
Don't Read/ Write ……5

Education Status (Col 8)
Attending School ……1
Completed ……2
Never attended School ……3

Involvement in farming activities (Col 10)
Works full time on farm …1
Works part-time on farm 2
Rarely works on farm ….3
Never works on farm……4

Education Level Reached (Col 9)

Primary Education
Not of school age ……NA
Under Standard One …. 00
Standard One ……01
Standard Two ……02
Standard Three ……03
Standard Four ……04
Standard Five ……05
Standard Six ……06
Standard Seven ……07
Standard Eight ……08
Training after Primary Education ……09
Pre Form One ……10

Secondary Education
Form one ……11
Form two ……12
Form three ……13
Form four ……14
Form five ……15
Form six ……16
Training after Secondary Education ……17
University & other tertiary Education ……18
Adult Education ……19
Not applicable ……99

Main activity (Col 11)
Crop Farming ……01
Livestock Keeping/Herding..02
Livestock Pastoralism……03
Fishing ……04
Paid employment:
- Government/parastatal ….05
- Private- NGO/mission/etc .06
Self employed (non farming)
- with employees ……07
- without employees ……08
Unpaid family helper (non agriculture) ……09
Not working & available……10
Not working & unavailable…11
Housemaker/housewife ……12
Student ……13
Unable to work /too old/ Retired/sick/disabled)……14
Other ……98

Definition and working page for page 2

Question Specific Definitions:

Relation to head (Col 2):

- Household Head: A person who is acknowledged by all other members of the household either by virtue of their age or standing as the household head.

Read and Write (Col 7):

- Any other language: Must be a written language.

For someone who can read and write in Swahili and any other language apart from English, the correct code is 1. For one who can read and write in English and any other language apart from Swahili the correct code is 2. Code 4 should only be used for another language but not English or Swahili

Education Level Reached (Col 9):

Indicate the highest level only. For those still attending school fill in the last year reached before the survey period. For example if a hh member is currently in standard 7 this year his highest grade reached is standard 6

Main Activity (Col 11):

- Crop farming: The persons main activity is crop production. This can be annual crops, vegetables, permanent crops or tree farming.

- Livestock farming/herding: The persons main activity is livestock farming/herding. The livestock can be herded in search for areas of pasture, but the core household unit always remains in the same place and the herder is rarely away from this place for long periods at a time. This category also includes fish farming but not fishing.

- Livestock pastoralism: The persons main activity is in moving livestock from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they may have no permanent place of residence.

-Paid employment - In full time employment earning a cash income

- Government/Parastatal - In full time employment for a government Ministry, Department or Board that is controlled by the Government
- Private/NGO/Mission/etc - employed by Non public/government organisation

-Self employee - works for own business for cash income

- With employees - Works for own business for cash and employs other workers
- Without employees - Works for own business for cash but does not employ other workers

- Not working but available to work - No productive activity but would like to have one.

- Not working & nor available for work - No productive activity and does not want to have one.

- Unable to work too old, too young, retired, disabled, etc

Off-farm Income (Col 12) - Income made from activities NOT on the HH's farming activities. This can be any off farm income generation activity and includes working for cash on other peoples farms.

Indicate whether each member was involved in an off farm income generating activity during 2002/03

Overview to section 3.0

Section 3.0 - Preliminary note

1. Make sure that you define the hh properly to ensure that all the members of the hh are included. Make sure you stress that the hh is not just the hh heads direct family and that it includes other people living and eating together with the family.

2. If you notice that his house is large or you see many people around his house and he has only given you small number of hh members enquire further until you are sure that you have captured all the hh members.

Procedures for questions

Section 3.0 - Household Information

1. For each household member complete columns 1, 2 & 3.

2. After completing columns 1, 2 & 3 for each household member go back to the first household member and complete the remaining columns for that member.

3. Repeat step 2 for the rest of the household members

IMPORTANT NOTE:
Cross check responses in columns 11 and 12 with section 2 especially in relation to:

off-farm income - if a hh member was involved in off farm income then there should be a response in question 2.2.4 and vice versa.

4.0 LAND ACCESS/OWNERSHIP/TENURE

4.1 Details of **area "owned" by the household** in the 2002/03 agricultural year. Give area reported by the respondent in **"acres".**

		Area in Acres
4.1.1	Area **Leased/Certificate of ownership**	
4.1.2	Area owned under **Customary Law**	
4.1.3	Area **Bought** from others	
4.1.4	Area **Rented** from others	
4.1.5	Area **Borrowed** from others	
4.1.6	Area **Share -cropped** from others	
4.1.7	Area under **Other** forms of tenure ……	
	Total area	

4.2 Was all land available to the hh used during 2002/03 (Yes=1, No=2) ☐

4.3 Do you consider that you have sufficient land for the hh (Yes=1, No=2) ☐

4.4 Do any female members of the hh own or have customary right to land (Yes=1, No=2) ☐

5.0 LAND USE

5.1 Area operated by household under **different forms of land use** during 2002/03 agriculture year. Give area reported by the respondent in **"acres"**.

		Area in Acres	Calculation area
5.1.1	Area under **Temporary Mono-crops**		
5.1.2	Area under **Temporary Mixed** crops (eg Maize & beans)		
5.1.3	Area under **Permanent Mono-crops**		
5.1.4	Area under **Permanent Mixed** crops (eg bananas, coffee & trees)		
5.1.5	Area under **Permanent/temporary mix** (eg bananas & maize)		
5.1.6	Area under **Pasture**		
5.1.7	Area under **Fallow**		
5.1.8	Area under **Natural Bush**		
5.1.9	Area under **Planted Trees**		
5.1.10	Area **Rented** to others		
5.1.11	Area **Unusable**		
5.1.12	Area of **Uncultivated Usable** land (excluding fallow)		
	Total area		

6.0 ACCESS AND USE OF RESOURCES

6.1 In the following table indicate the distance to the different fields used by the household

S/N	Field Number	Distance (in kilometres) from field to: Homestead	Nearest road	Nearest Market
6.1.1	1			
6.1.2	2			
6.1.3	3			

Distance codes

less than 100m ……1 between 2 and 3km ….6
between 100 and 300m .2 between 3 and 5km …..7
between 300 and 500m .3 between 5 and 10 km ..8
between 500 and 1km....4 Over 10 km ……....9
between 1 and 2km ……5

6.2 In the following table indicate the distance and use of the following communal resources

S/N	Communal Resource	Distance to resource (km) dry season	wet season	Main hh use
	(1)	*(2)*	*(3)*	*(4)*
6.2.1	Water for **humans**			
6.2.2	Water for **livestock**			
6.2.3	Communal **Grazing**			
6.2.4	Communal **Firewood**			
6.2.5	Wood for **Charcoal**			
6.2.6	**Building** poles			
6.2.7	Forest for **bees (honey)**			
6.2.8	**Hunting(animal products)**			
6.2.9	**Fishing (Fish)**			

Instructions for distance to resource (Col 2 and 3):
If under 1km, write 0
If above 1km round to whole numbers
eg 1.5km= 2km, 1.25km= 1km

Main hh use (Col 4)

Home or farm Consumption/utilisation…..1
Sold to Neighbours……2
Sold to trader on the farm……3
Sold to village market ……4
Sold to local wholesale market……5
Sold to major wholesale market ……6
Not used by household……7
Not available ……8

Definition and working page for page 3

Question Specific Definitions

Section 4.1 - Land Access/Ownership

Lease/Certificate of Ownership Area under lease/certificate of ownership refers to the area for which the household possesses a government issued leasehold title or certificate of ownership. The land will normally be officially surveyed and boundaries marked. This includes leased land bought from others where the lease/certificate of ownership has been transferred.

Customary Law: This refers to the land which the hh does not have an official government title to but its right of use is granted by the traditional leaders. This user-right agreement does not have to be granted directly by the village leaders as right of access may be passed on through heredity.

Bought: This refers to the area of customary land that has been bought from others. This land does not have an official title and therefore is not leasehold.

Rented from others: Land rented from others for Cash or for a fixed amount in crop produce (eg fixed number of bags at harvest).

Borrowed: Use granted by land owner free of charge. Land owner can either be a lease holder or has right of access through customary law.

Share Cropping: where the hh is permitted to use land which is then paid for from a percentage of the harvested crop.

Section 5.0 Land Use

- Temporary crops: are sown and harvested during the same agricultural year

- **Permanent crops:** are sown or planted once and then , they occupy the land for some years and need not to be replanted after each annual harvest. Permanent crops are mainly trees (e.g., apples) but also bushes and shrubs (e.g., berries), palms (e.g., dates), vines (e.g., grapes), herbaceous stems (e.g., bananas) and stemless plants (e.g., pineapples).

- **Mixed Crops:** This is a mixture of two or more crops planted together and mixed in the same plot/field. The two crops can either be randomly planted together or they can be planted in a particular patterm eg intercropping (1 row of maize and 1 row of beans). A field that has been divided into plots for different crops is not mixed. This is further subdivided into:

Permanent Mixed -two or more permanent crops grown together,
Permanent/Temporary Mix - permanent crop and annual crop together,
Temporary Mixed - two or more temporary, annual crops grown together.

- **Pasture Land:** This is an area of owned/allocated land which is set aside for livestock grazing. It can be improved pasture where the farmer has planted grass, applied fertilized or applied other production increasing technologies to improve the grazing. Or it can be rough pasture.

- **Fallow:** This is the area of land that is normally used for crop production, but is not used for crop production during a year or a number of years. This is normally to allow for self generation of fertility/soil structure and is often an integral part of the crop rotation system.

- **Natural Bush:** Land which is considered productive but is not under cultivation or used extensively for livestock production and has naturally growing shrubs and trees.

-**Planted trees:** Land which is used for planting trees for poles or timber

- **Unusable:** Land that is known to be non-productive for agriculture purposes

Uncultivated Usable: This is land that was not used for reasons other than fallow. The reasons could be lack of inputs/money/rainfall/etc

Distance to fields (Q6.1):

-fields A field is a contiguous piece of land holding which the farmer considers as a single entity. The field may be divided into plots for growing different crops. A holding may consist of one or more fields in different localities.

Use of Communal Resources (Q6.2):

-Communal resources - refers to the place on which all individual households can have access to. It is not individually owned or controlled by one hh.

NOTE: The listed resources refers to communal resources and not those individually owned or part shared. The resource has to be freely accessible to the whole village

Overview to section 4

Section 4.0 - Preliminary note

Land Access/ Ownership

Access/Ownership refers to the area utilized by the members of the household. This does not include communal land where the resources are shared between households. It does include official communal land that the hh has sole access to eg a plot for crop farming in the communal area.

Procedures for Questions

Section 4.0 - Land Ownership

1. Ask the respondent if he knows the total area of land the household has sole access to. If he knows make a note in the calculation space

2. Ask the respondent the area of the different land ownership categories the household has sole access to (Q4.1.1 to 4.1.7) and record in the appropriate spaces.

3. Add up the area of the different categories of land and compare it with the total area obtained in step 1 (if the respondent provided the information).

4. If the total area is different find out which one is correct and make amendments where appropriate.

Section 5.0 - Land Use

1. Ask the respondent the area of the different landuse categories the household has sole access to (Q5.1.1 to 5.1.12) and record in the appropriate spaces.

2. Add up the area of the different categories of land and compare it with the total area obtained in section 4.0. The total area should be the same.

3. If the total area is different find out which one is correct and make amendments where appropriate.

Section 6.2 Communal resources

Note: the code "Not available" means that the resource does not exist. The code "Not Used" means that the resource does exist but is not used by the hh.

7.0 ANNUAL CROP AND VEGETABLE PRODUCTION - SHORT RAINY SEASON

7.1.1 Did the hh **plant** any crops during the **Short Rainy** season? (Yes = 1, No=2) ☐ *If the response is **'NO'** give main reason* ☐ *Then go to section 7.2*

Main Reason (Above) *No rains.....1 Rains came too late .....2 Does not plant annual crops .....3 No money 4 Don't get Vuli season ..5 Illness/social problems .....6 Has irrigation & does not follow season (give annual production in Masika) 7*

7.1.2 For each crop planted during 2002/03 **Short Rainy** season provide the following information

				Planting		Inputs						Harvesting & Storage						Marketing	
Crop Name	Crop Code	Land Clea-ring	Soil prep-arat-ion	Planned area (acres)	Actual Planted area (acres)	% impr-oved seed	Irrig-at-ion use	Fer-til-iser use	Her-bic-ide use	Fun-gic-ide use	Pest-tic-ide use	How harv ested	How thres hed	Area Harvested (acres)	main prod-uct code	Quantity harvested (Kgs)	Quantity Stored (kgs)	Quantity sold (kgs)	Mostly sold to
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
Total Planned/Planted												**Total area harvested**							

7.1.3 Main reason for difference between **Area Planned** and **Area Planted** ☐

7.1.4 Main reason for difference between **Area Planted** and **Area Harvested** ☐

Land Clearing (Col 3)
Mostly bush clearance ...1
Mostly hand slashing 2
Mostly tractor slashing ...3
Mostly burning 4
No land clearing.....5

Soil preparation Method (Col 4)
Mostly tractor ploughing .1
Mostly Oxen ploughing ..2
Mostly Hand cultivation ..3

Improved seed Use (Col 7)
all Improved 1
approx 3/4 improved.....2
approx 1/2 improved.....3
approx 1/4 improved.....4
less than 1/4 improved ..5
No improved seed used.6

Irrigation Use (Col 8)
Used on all crop 1
Used on 3/4 of crop 2
Used on 1/2 of crop.....3
Used on 1/4 of crop 4
Used on less than 1/4....5
Not used 6

Fertiliser codes (Col 9)
Mostly Farm Yard Manure 1
Mostly Compost 2
Mostly Inorganic fertiliser ..3
No fertiliser applied 4

Agrochemical use codes (Col 10,11 &12)
Used on all crop 1
Used on 3/4 of crop 2
Used on 1/2 of crop.....3
Used on 1/4 of crop 4
Used on less than 1/4 5
Not used 6

Threshed/harvested (Col13 & 14)
By hand 1
By draft animal 2
By human powered tool.....3
By engine driven machine...4
Not applicable 9

Main product (Col 16)
Dry Grain.....1
Green cob/green pod.....2
Green leaves & Stem.....3
Straw, dry stems etc 4
Root, tuber, etc 5
Flower eg pyrethrum 6
Fruit/bunch 7
Other.....8
Not harvested yet 9

Mostly sold to (Col 20)
Neighbour.....01
Local market/trade store 02
Secondary Market..03
Tertiary Market 04
Marketing Coop 05
Farmer Association06
Largescale farm 07
Trader at Farm 08
Contract Partner ...09
Did not sell 10
Other 98

Reason for difference between area planned and planted (Q7.1.3)
Drought 1
Floods 2
Access to land preparation tools (Draft animal/tractors).3
Credit 4
Access to seeds/planting material.....5
Access to other inputs 6
Other 8
Not applicable 9

Reason for difference between area planted and harvested (Q7.1.4)
Drought 1
Rain/flood damage 2
Fire damage 3
Pest damage 4
Animal damage 5
Theft 6
Illness/social problems 7
Other 8
Not applicable 9

Definitions and working page for page 4

Working table for the calculation of area occupied by annual crop in a mixture

Crop mixture 1	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Permanent crop 1			0.00		0.
Permanent crop 2			0.00		0.
Permanent crop 3			0.00		0.
Permanent crop 4			0.00		0.
Total Area of permanent crops in mix					0.
REMAINING AREA UNDER TEMPORARY CROPS					.
				crop%	crop area
Temporary/permanent crop name 1					.
Temporary/permanent crop name 2					.
Temporary/permanent crop name 3					.
Total area check	.			Crop total check	.

Crop mixture 2	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Permanent crop 1			0.00		0.
Permanent crop 2			0.00		0.
Permanent crop 3			0.00		0.
Permanent crop 4			0.00		0.
Total Area of permanent crops in mix					0.
REMAINING AREA UNDER TEMPORARY CROPS					.
				crop%	crop area
Temporary/permanent crop name 1					.
Temporary/permanent crop name 2					.
Temporary/permanent crop name 3					.
Total area check	.			Crop total check	.

Land Clearing: Refers to removing trees/bush/grass prior to ploughing
Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc)
Planned Area: Area in **Acres** the household planned to plant before the season started
Actual Planted Area: The area in **Acres** the household was able to plant.
Area Harvested: The area in **Acres** that produced a harvest. This is the same as the area planted minus the area that was destroyed by major flood/pest/ animal/etc damage.

Temporary/Annual Crop:
Crops which are planted and harvested within a period of 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.

Cash Crop Codes:

Code	Crop
50	Cotton
51	Tobacco
53	Pyrethrum
62	Jute
19	Seaweed

Crop Codes (Cereals /tubers/roots):

Code	Crop
11	Maize
12	Paddy
13	Sorghum
14	Bulrush Millet
15	Finger Millet
16	Wheat
17	Barley
22	Sweet Potatos
23	Irish potatos
24	Yams
25	Cocoyams
26	Onions
27	Ginger

Vegetable Codes:

Co -de	Crop
86	Cabbage
87	Tomatoes
88	Spinach
89	Carrot
90	Chillies
91	Amaranths
92	Pumpkins
93	Cucumber
94	Egg Plant
95	Water Mellon
96	Cauliflower

Crop Codes Legumes Oil & fruit:

Code	Crop
31	Beans
32	Cowpeas
33	Green gram
35	Chick peas
36	Bambara nuts
37	Field peas
41	Sunflower
42	Simsim
43	Groundnut
47	Soyabeans
48	Caster seed

Instructions for calculating the area of mixed crops in a mixture.

A. If the mixed crop is mixed annual only enter the total area of the field in the REMAINING AREA UNDER TEMPORARY CROPS. and goto step 1 of these instructions.

B. If the mixed crop is mixed permanent and annual try to get the % occupied by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix, Step C

C. Number of trees method to calculate annual crop areas in a peranent-annual crop mix/

(i) list each of the permanent crops in column b and enter the ground area per acre for each permanent crop (from instructions for page 6) in column 'd'.

(ii) obtain the number of permanent trees in the mix from the respondent and enter the number in column 'e'.

(iii) calculate the area occupied by each crop by multiplying column 'd' with column 'e' and sum these to obtain the total area of permanent crops in the mix.

(iv) subtract the total area of permanent crops in the mix from the total area of mix and enter the result in the total area under temporary crops.

(v) proceed to step 1 to calculate the area under each temporary crop.

1. Enter the name of each annual crop in the mix & estimate the percentage of each crop.
2. Using the percentages for each crop calculate the area of each crop from the REMAINING AREA UNDER TEMPORARY CROPS.
3. After completing this exercise for all fields, sum the area of each crop in the mix plus any monocrops and enter totals in section 7.1 col 6.
4. Obtain an estimate of the planned area for each crop and enter it in column 5
5. If the area harvested is different to the area planted estimate the harvest area
6. Once the quantity harvested is obtained calculate the Yield (Metric tonnes/acre) & compare the figure with the norms given in the crop codes box. If it is excessively different check the area and the amount harvested.

7.2 ANNUAL CROP AND VEGETABLE PRODUCTION - LONG RAINY SEASON

7.2.1 Did the hh **plant** any crops during the **LONG RAINY** season? (Yes=1 No=2) ☐ *If the response is **'NO'** give main reason* ☐ *Then go to section 7.3*

Main Reason (Above) *No rains.....1 Rains came too late .....2 Does not plant annual crops .....3 No money 4 Illness/social problems ..5*

7.2.2 For each crop planted during 2002/03 **Long Rainy** season provide the following information

				Planting		Inputs							Harvesting & Storage					Marketing	
Crop Name	Crop Code	Land Clea-ring	Soil prep-arat-ion	Planned area (acres)	Actual Planted area (acres)	% impr-oved seed	Irrig-at-ion use	Fer-til-iser use	Her-bic-ide use	Fun-gic-ide use	Pest-tic-ide use	How harv ested	How thres hed	Area Harvested (acres)	main prod-uct code	Quantity harvested (Kgs)	Quantity Stored (Kgs)	Quantity sold (kgs)	mostly sold to
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
.....																			
Total Planned/Planted												**Total area harvested**							

7.2.3 Main reason for difference between **Area Planned** and **Area Planted** ☐

7.2.4 Main reason for difference between **Area Planted** and **Area Harvested** ☐

Land Clearing (Col 3)
Mostly bush clearance ...1
Mostly hand slashing 2
Mostly tractor slashing ...3
Mostly burning 4
No land clearing 5

Soil preparation Method (Col 4)
Mostly tractor ploughing .1
Mostly Oxen ploughing ..2
Mostly Hand cultivation ..3

Improved seed Use (Col 7)
all Improved 1
approx 3/4 improved.....2
approx 1/2 improved.....3
approx 1/4 improved.....4
less than 1/4 improved ..5
No improved seed used.6

Irrigation Use (Col 8)
Used on all crop 1
Used on 3/4 crop 2
Used on 1/2 crop 3
Used on 1/4 of crop.....4
Used on less than 1/4 ...5
Not used 6

Fertiliser codes (Col 9)
Mostly Farm Yard Manure 1
Mostly Compost 2
Mostly Inorganic fertiliser ..3
No fertiliser applied 4

Agrochemical use codes (Col 10,11 &12)
Used on all crop 1
Used on 3/4 of crop 2
Used on half of crop.....3
Used on 1/4 of crop 4
Used on less than 1/4 5
Not used 6

Threshed/harvested (Col13 & 14)
By hand 1
By draft animal 2
By human powered tool.....3
By engine driven machine...4
Not applicable 9

Main product (Col 16)
Dry Grain.....1
Green cob/green pod.....2
Green leaves & Stem.....3
Straw, dry stems etc 4
Root, tuber, etc 5
Flower eg pyrethrum 6
Fruit/bunch.....7
Others 8
Not harvested yet 9

Mostly sold to (Col 20)
Neighbour.....01
Local market/trade store 02
Secondary Market..03
Tertiary Market 04
Marketing Coop 05
Farmer Association06
Largescale farm 07
Trader at Farm 08
Contract Partner ...09
Did not sell 10
Other 98

Reason for difference between area planned and planted (Q7.2.3)
Drought 1
Floods 2
Access to land preparation tools (Draft animal/tractors).3
Credit 4
Access to seeds/planting material.....5
Access to other inputs 6
Other 8
Not applicable 9

Reason for difference between area planted and harvested (Q7.2.4)
Drought 1
Rain/flood damage 2
Fire damage 3
Pest damage 4
Animal damage 5
Theft 6
Illness/social problems 7
Other 8
Not applicable.....9

Definitions and working page for page 5

Working table for the calculation of area occupied by annual crop in a mixture

Crop mixture 1	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Permanent crop 1			0.00		0.
Permanent crop 2			0.00		0.
Permanent crop 3			0.00		0.
Permanent crop 4			0.00		0.
Total Area of permanent crops in mix					0.
REMAINING AREA UNDER TEMPORARY CROPS					.
				Temp crop%	Temp crop area
Permanent/Temporary crop name 1					.
Permanent/Temporary crop name 2					.
Permanent/Temporary crop name 3					.
Total area check	.		Temoporary crop total check		.

Crop mixture 2	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Permanent crop 1			0.00		0.
Permanent crop 2			0.00		0.
Permanent crop 3			0.00		0.
Permanent crop 4			0.00		0.
Total Area of permanent crops in mix					0.
REMAINING AREA UNDER TEMPORARY CROPS					.
				Temp crop%	Temp crop area
Temporary/permanent crop name 1					.
Temporary/permanent crop name 2					.
Temporary/permanent crop name 3					.
Total area check	.		Temoporary crop total check		.

Land Clearing: Refers to removing trees/bush/grass prior to ploughing
Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc)
Planned Area: Area in **Acres** the household planned to plant before the season started
Actual Planted Area: The area in **Acres** the household was able to plant.
Area Harvested: The area in **Acres** that the household got most of its production from. This is the same as the area planted minus the area that was destroyed by major flood/pest/ animal/etc damage

Temporary/Annual Crop: Crops which are planted and harvested within a period of 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.

Cash Crop Codes:

Code	Crop
50	Cotton
51	Tobacco
53	Pyrethrum
62	Jute
19	Seaweed

Crop Codes (Cereals /tubers/roots):

Code	Crop
11	Maize
12	Paddy
13	Sorghum
14	Bulrush Millet
15	Finger Millet
16	Wheat
17	Barley
22	Sweet Potatos
23	Irish potatos
24	Yams
25	Cocoyams
26	Onions
27	Ginger

Vegetable Codes:

Code	Crop
27	Ginger
86	Cabbage
87	Tomatoes
88	Spinach
89	Carrot
90	Chillies
91	Amaranths
92	Pumpkins
93	Cucumber
94	Egg Plant
95	Water Mellon
96	Cauliflower
20	Garlic

Crop Codes Legumes Oil & fruit:

Code	Crop
31	Beans
32	Cowpeas
33	Green gram
35	Chick peas
36	Bambara nuts
37	Field peas
41	Sunflower
42	Simsim
43	Groundnut
47	Soyabeans
48	Caster seed

Instructions for calculating the area of mixed crops in a mixture.

A. If the mixed crop is mixed annual only enter the total area of the field in the REMAINING AREA UNDER TEMPORARY CROPS. and goto step 1 of these instructions.

B. If the mixed crop is mixed permanent and annual try to get the % occupied by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix (Step C).

C. Number of trees method to calculate annual crop areas in a peranent-annual crop mix
- (i) list each of the permanent crops in column b and enter the ground area per acre for each permanent crop (from instructions for page 6) in column 'd'.
- (ii) obtain the number of permanent trees in the mix from the respondent and enter the number in column 'e'.
- (iii) calculate the area occupied by each crop by multiplying column 'd' with column 'e' and sum these to obtain the total area of permanent crops in the mix.
- (iv) subtract the total area of permanent crops in the mix from the total area of mix and enter the result in the total area under temporary crops.
- (v) proceed to step 1 to calculate the area under each temporary crop.

1. Enter the name of each annual crop in the mix & estimate the percentage of each crop.
2. Using the percentages for each crop calculate the area of each crop from the REMAINING AREA UNDER TEMPORARY CROPS.
3. After completing this exercise for all fields, sum the area of each crop in the mix plus any monocrops and enter totals in section 7.1 col 6.
4. Obtain an estimate of the planned area for each crop and enter it in column 5
5. If the area harvested is different to the area planted estimate the harvest area
6. Once the quantity harvested is obtained calculate the Yield (Metric tonnes/acre) & compare the figure with the norms given in the crop codes box. If it is excessively different check the area and the amount harvested.

7.3 PERMANENT/PERENNIAL CROPS AND FRUIT TREE PRODUCTION

7.3.1 Does your household have any **permanent/perennial crops or fruit trees** (Yes=1, No=2) [1]

7.3.2 For each of the **permanent crops and fruit trees** owned by the household provide the following informatior

		Size of production unit			Inputs					Harvesting & Storage						Marketing	
		MONOCROP	MIXED CROP														
Perm-anent Crop Name	Perman-ent crop/ fruit tree crop Code	Area of Plants/ trees/Bushes in MONO CROP (acres)	Area covered by Permanent Crop in a MIXED CROP (acre)	Number of permanent Plants/trees in a MIXED CROP	Irrig-at-ion use	Fert-ilis-er use	Herb-ic-ide use	Fun-gic-ide use	Pest-ici-de use	Area Harvested (acres)	Number of mature plants	main prod-uct code	Quantity harvested (kgs)	If no harvest give re-ason	Quantity Stored (Kgs)	Quantity sold (kgs)	mostly sold to
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
……																	
……																	
……																	
……																	
……																	
……																	
……																	
……																	
……																	

Irrigation Use (Col 6)
Used on all crop ……..1
Used on most crop ……..2
Used on half crop ……..3
Used on small amount of crop..4
Not used on crop ……..5

Fertiliser codes (Col 7)
Mostly Farm Yard Manure……1
Mostly Compost ……..2
Mostly Inorganic fertiliser …….3
No fertiliser applied ……..4

Agrochemical use codes (Col 8, 9 & 10)
Used on all crop ……1
Used on 3/4 of crop ……..2
Used on 1/2..of crop……..3
Used on 1/4 of crop ……..4
less than 1/4 of crop …….5
Not used ……6

Main product (Col 13)
Dry Grain……..…..1
Green cob/green pod..2
Green leaves & Stem..3
Straw, dry stems etc ...4
Root, tuber, etc ……..5
Flower ……..6
Fruit/bunch……..…7
Other ……..8
Not harvested yet …..9

Main Reason for no harvest(Col 15)
Crop not harvested yet ……..1
Drought ……..2
Rain/flood damage ……..3
Fire damage ……..4
Pest damage ……..5
Animal damage ……..6
Theft ……..7
Other ……..8
Not applicable ……..9

Mostly sold to (Col 18)
Neighbour……..…..01
Local market/trade store…..02
Secondary Market ……..03
Tertiary Market ……..04
Marketing Coop ……..05
Farmer Association ……..06
Largescale farm ……..07
Trader at farm ……..08
Contract Partner ……..09
Did not sell ……..10
Other ……..98

Definitions and working page for page 6

Permanent Crop:
Permanent crops: are sown or planted once and then , they occupy the land for some years and neec not to be replanted after each annual harvest. Permanent crops are mainly trees (e.g., apples) but also bushes and shrubs (e.g., berries), palms (e.g., dates), vines (e.g., grapes), herbaceous stems (e.g., bananas) and stemless plants (e.g., pineapples).

Total number of plants:
This includes both mature harvestable plants and immature non harvestable plants.

Number of mature plants: This is the number of plants which bared harvest.

Instructions for Permanent crop mono stands and mixtures

A. For fields that are **monocrop permanent, ONLY** enter the **area of plants in column 3.**

B. For fields that are **mixed permanent** calculate the area of each crop based on the **% occupied by each crop method** (NOT using the number of trees method) and **ONLY** enter the area in **column 4**

C. For fields that are **mixed permanent/annual** either:
- **ONLY** enter the **area** in **column 4** if the area of the permanent crop was based on the **% occupied by each crop method**

OR

- **ONLY** enter the **number** of trees in **column 5** if the number of permanent crop plants was provided

Permanent crops (oils):

Code	Crop	Ground area/plant
44	Palm Oil	0.00049
45	Coconut	0.00037
46	Cashewnut	0.00062

Permanent (Cash crops)

Code	Crop	Ground area/plant
53	Sisal	0.00012
54	Coffee	0.00049
55	Tea	0.00037
56	Cocoa	0.00049
57	Rubber	0.00099
58	Wattle	0.00099
59	Kapok	0.00124
60	Sugar Cane	0.00012
61	Cardamom	0.00049
63	Tamarin	0.00099
64	Cinamon	0.00124
65	Nutmeg	0.00099
66	Clove	0.00074
18	Black Pepper	0.00037
34	Pigeon pea	0.00025
21	Cassava	0.00019
75	Pineapple	0.00006

Permanent Crops:

Code	Crop	Ground area/plant
70	Passion Fruit	0.00074
71	Banana	0.00037
72	Avocado	0.00099
73	Mango	0.00099
74	Papaw	0.00037
76	Orange	0.00074
77	Grapefruit	0.00074
78	Grapes	0.00012
79	Mandarin	0.00074
80	Guava	0.00074
81	Plums	0.00074
82	Apples	0.00074
83	Pears	0.00074
84	Peaches	0.00074
85	Lime/lemon	0.00074
68	Pomelo	0.00099
69	Jack fruit	0.00074
97	Durian	0.00074
98	Bilimbi	0.00074
99	Rambutan	0.00074
67	Bread fruit	0.00099
38	Malay apple	0.00074
39	Star fruit	0.00074

Working Area/calculation space

7.4 Main use of **Secondary Products**

7.5 Did you use **Secondary Products** from any of your crops during the 2002/03 year. (Yes=1, No=2) ☐

*If the response is **'NO'** go to section 8.0*

7.6 List the **main crops** with **secondary products** and provide the following details:

S/N	Crop name	Crop Code	Secondary product	Prod code	Used for	Unit	Total no of Units	No of units sold	Total value of sold units (Tsh.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.6.1	……		……						
7.6.2	……		……						
7.6.3	……		……						
7.6.4	……		……						
7.6.5	……		……						
7.6.6	……		……						

Main product (Col 4)
Green leaves & Stem..1 Flower …4
Straw, dry stems etc …2 Fruit ……5
Root, tuber, etc ……..3 Other …..8

Mainly used for (Col 5)
Feeding to livestock ..1 Consumed by hh ……4
Building material ……2 Sold ……5
Fuel for cooking ….. 3 Did not use……6

Unit (Col 6)
Loose Bundle/bunch ……1 kg ……5
Compressed bunch/Bail….2 Stems ……6
Tin …… 3 Sack ……7
Bucket ……4 Other ……8

8.0 AGROPROCESSING AND BY-PRODUCTS

8.1 Did the household **process** any of the products harvested on the farm during 2002/03 (Yes=1, No=2) ☐

*If the response is **'NO'** go to section 9.0*

8.2 List the **main crops processed** and provide the following details:

S/N	Crop name	Crop Code	Proc-ess-ed	Main Prod-uct code	Used for	Unit	Quantity of main product	Quantity Sold	Whe-re sold	By-Prod-uct code	Used for	Unit	Quantity of by-product	Quan-tity Sold
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
8.2.1	…….													
8.2.2	…….													
8.2.3	…….													
8.2.4	…….													
8.2.5	…….													
8.2.6	…….													

Processed (Col 3)
On farm by hand…..……1
On farm by machine…….2
By neighbours machine...3
By farmers association …4
By Cooperative union …..5
By trader ……...6
On Large scale farm ……7
By factory ……..……9
Other 8

Main product code (Col 4)
Flour/meal……..1
Grain……2
Oil .. ……3
Juice……4
Fiber……..5
Pulp ……6
Sheet ……..……7
Other ……8

Used for (Col 5 & 11)
Household/human consumption ..1
Fuel for cooking ……..2
Sale ……..……..3
Animal consumption……..4
Did not use ……5
Other ……..……..8

Unit (Col 6 & 12)
Loose bundle/bunch ……1
Compressed bunch/bail….2
Tin ……..……..3
Bucket ……..4
kg ……..……..5
litre ……..6
Other ……..8

Where sold (Col 9)
Neighbour……..…..1
Local market/trade store ……2
Secondary Market …..3
Marketing Coop ……..4
Farmer Association …..5
Largescale farm ……6
Trader at farm ……..7
Did not sell ……9
Other ……..……..8

By-product code (Col 10)
Bran ……...01
Cake ……...02
Husk ……...03
Juice ……...04
Fiber ……...05
Pulp ……...06
Oil ……...07
Shell ……...08
Other ……..……98

Definition and working page for page 7

Temporary/annual crop codes for section 7.4 col 2

Crop Code	Crop Name	Secondary Product Question 7.4	Agroprocessing & bi-products Main Products (Section 8.0)	Bi-product (Sect 8.0) 1	2
11	Maize	Stems/straw	Flour	Bran	
12	Paddy	Stems/straw	polished rice grain	husk	
13	Sorghum	Stems/straw	flour		
14	Bulrush Millet	Stems/straw	flour		
15	Finger Millet	Stems/straw	flour		
16	Wheat	Stems/straw	flour	Bran	
17	Barley	Stems/straw	flour	Bran	
21	Cassava	Leaves/stems	flour		
22	Sweet Potatoes	Leaves			
23	Irish potatoes				
24	Yams				
25	Cocoyams				
26	Onions				
27	Ginger				
31	Beans	straw/stems			
32	Cowpeas	straw			
33	Green gram	straw			
34	Pigeon peas	stems			
35	Chick peas	straw			
36	Bambara nuts	straw/stems	oil	cake	
41	Sunflower	Stems	oil	Cake	
42	Simsim	straw	oil	Cake	
43	Groundnut	straw	oil	Cake	
47	Soya beans	straw	oil	Cake	
48	Caster seed	straw	oil	Cake	
75	Pineapple		Juice		
50	Cotton	straw	fibre/seed	oil	cake
51	Tobacco				
53	Pyrethrum	straw	insecticide		
62	Jute		fibre		
86	Cabbage				
87	Tomatoes				
88	Spinach				
89	Carrot				
90	Chillies		dried powder		
91	Amaranths				
92	Pumpkins	leaves			
93	Cucumber				
94	Egg Plant				
95	Water Mellon				
96	Cauliflower				
44	Oil Palm	leaves	oil outer	oil inner	cake
45	Coconut	leaves/husk	milk		
46	Cashewnut	Fruit	fruit juice	shell liquid	
52	Sisal	stems	fibre	oil	
54	Coffee	stems	beans	husks	
55	Tea	stems			
56	Cocoa	stems	cocoa	cocoa butter	
57	Rubber	stems			
58	Wattle	stems			
59	Kapok	stems			
60	Sugar Cane		sugar/juice	molasses	ethanol
61	Cardamom				
71	Banana	leaves/stems	juice		
72	Avocado	stems			
73	Mango	stems	Juice		
74	Paw paw		Juice		
76	Orange	stems	Juice		
77	Grape fruit	stems	Juice		
78	Grapes	stems	Juice		
79	Mandarin	stems	Juice		
80	Guava	stems			
81	Plums	stems			
82	Apples	stems			
83	Pears	stems			
84	Pitches	stems			
85	Lime/Lemon	stems	juice		

General Definition for Section 7.4

Secondary Products: Second most important product from a crop. Eg a household may consider the grain from maize as the primary product and the stems/straw as the secondary product.

Note: Secondary products are NOT the same as bi-products. By-products are the result of a processing activity and are dealt with in section 8.0.

Procedures for Questions

Q 7.6 Details of Secondary Products:

1. From the list of crops in Q 7.1.2, 7.2.2 & 7.3.2, ask the respondent if the hh used any secondary products. List the crop names and codes in column 1 and 2 for those crops that the hh used secondary products.
2. For the listed crops give details of the secondary products used.
3. If no units were sold, enter "0" in columns 8 & 9.

Q 8.0 Agroprocessing & bi-products:

1. From the list of crops in Q 7.1.2, 7.2.2 & 7.3.2, ask the respondant if the hh processed any of these crops during the 2002/03 agriculture year. List the crop names and codes in column 1 and 2 for those crops that were processed by the hh.
2. For the listed crops give details of the secondary crops used.
3. If no main product or bi-product was sold enter "0" in columns 8 & 14.
4. If no bi-product was produced enter "0" in columns 10, 11, 12, 13 &14.

Question Specific Definitions

Agroprocessing and bi-products (Q 8.2) (Note: Agroprocessing refers to the processing of crops for hh utilisation and for sale)

Main Product (Col 5):
Main Product after processing. Eg for Paddy it may be the polished grain. For Maize it may be flour.
Bi-Product code (Col 11): is the secondary residue after processing, eg for rice it may be the husk. for maize it may be the bran.

Mainly used for (Col 5 & 11):
- **Consumed by household** can mean eaten or utilised in another way (eg by animals) by the hh.

9.0 CROP STORAGE

9.1 Did the household **store** any crops during the 2002/03 agriculture year? (Yes =1, No=2) ☐

*If the response is **'NO'** go to section 10.0*

9.2 For **each** of the listed crops provide the following details on **storage**

S/N	Crop Name	Stored Y=1 No=2	Current Quantity Stored (kg)	Method of Storage	Normal duration of storage	Main purpose	Estimate Storage loss
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
9.2.1	Maize	☐	☐☐☐☐	☐	☐	☐	☐
9.2.2	Paddy	☐	☐☐☐☐	☐	☐	☐	☐
9.2.3	Sorghum/Millet	☐	☐☐☐☐	☐	☐	☐	☐
9.2.4	Beans, peas, etc	☐	☐☐☐☐	☐	☐	☐	☐
9.2.5	Wheat	☐	☐☐☐☐	☐	☐	☐	☐
9.2.6	Coffee	☐	☐☐☐☐	☐	☐	☐	☐
9.2.7	Cashewnut	☐	☐☐☐☐	☐	☐	☐	☐
9.2.8	Tobacco	☐	☐☐☐☐	☐	☐	☐	☐
9.2.9	Cotton	☐	☐☐☐☐	☐	☐	☐	☐
9.2.10	Groundnuts/bambara	☐	☐☐☐☐	☐	☐	☐	☐

Main method of Storage (Col 4)
In locally made traditional structure..1
In Improved locally made structure .2
In modern store ……..3
In Sacks/open drum……..4
In airtight drum ……..5
Unprotected pile ……6
Other ……8

Duration of Storage (Col 5)
Less than 3 months ……1
Between 3 and 6 months ……2
Over 6 months ……3

Main purpose of storage (Col 6)
Food for the household ……1
To sell for higher price ……2
seed for planting……3
Other ……8

Storage loss (Col 67)
Little or no loss ……1
Up to 1/4 loss ……2
Between 1/4and 1/2 loss ..3
Over 1/2 loss ……4

10.0 MARKETING

10.1 Did the household **sell any crops** from the 2002/03 agriculture year? (Yes=1, No=2) ☐

(If the response is 'YES' or 'NO' go to section 10.2)

10.2 For **each of the following crops** what was the main **marketing problem** faced by the household during 02/03

	Crop	Main problem		Crop	Main problem
	(1)	*(2)*		*(1)*	*(2)*
10.2.1	Maize	☐☐	10.2.9	Vegetables	☐☐
10.2.2	Rice	☐☐	10.2.10	Tree Fruits	☐☐
10.2.3	Sorghum/millet	☐☐	10.2.11	Cashewnut	☐☐
10.2.4	Wheat	☐☐	10.2.12	Cotton	☐☐
10.2.5	Beans, peas etc	☐☐	10.2.13	Tobacco	☐☐
10.2.6	Cassava	☐☐	10.2.14	Groundnuts/bamabara	☐☐
10.2.7	Bananas	☐☐	10.2.15	Trees/timber/poles	☐☐
10.2.8	Coffee	☐☐	10.2.16	Fish	☐☐

10.3 From the list of marketing problems below, for all produce rank the five most important problems

		1	2
10.3.1	Biggest problem	☐☐	
10.3.2	2nd problem	☐☐	
10.3.3	3rd problem	☐☐	
10.3.4	4th problem	☐☐	
10.3.5	5th problem	☐☐	

Market problems (Q10.2 & 10.3 (Col 2))
Open market price too low ……01 *Market too far ……05* *Government Regulatory board problems...09*
No transport ……02 *Farmer association problems .....06* *Lack of market Information 10*
Transport cost too high ……03 *Cooperative Problems .....07* *Other (specify) ……98*
No buyer ……04 *Trade Union problems .....08* *Not Applicable 99*

10.4 What was the main **reason for not selling** crops during 2002/03 year …… ☐

Reason for not selling crops (Q10.4)
Price too low ……1 *Farmer association problems ……4* *Government regulatory board problems 7*
Production insufficient to sell……2 *Cooperative Problems.....5* *Other (specify) ……8*
Market too far ……3 *Trade Union problems .....6* *Not Applicable ……9*

Definition and working page for page 8

Question Specific definitions (Section 9.0)
Crop Storage, Section 9

Method of Storage (column 4)

- **Locally made structure:** The structures that have been inherited from their fore fathers

- **Improved locally made structure:** Traditional structures that have been improved using modern technology.

- **Normal duration of storage:** Often there are stored stocks from different seasons and different years. The normal duration refers to the number of months that the most of the crop is stored for.

Marketing problems Q 10.2 and 10.3 col 2:

- **Farmer Association:** A village or community based group of farmers who have formed an organisation to purchase inputs/sell/store their products in order to achieve a better price for their products.

- **Cooperative Union:** Large inter-village /community organisation set up on a district/regional or national basis for providing inputs, marketing and storing farmers products.

- **Government Regulatory board:** Government control body for setting prices and controlling quality of certain agriculture commodities.

Procedures for Questions

Q 9.2 Details of Crop Storage:

1. For the crops listed indicate if the household stored any during 2002/03 in column 2.

2. Check that the crops correspond to the crop lists in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments

3. For the listed crops give details of storage.

Q 10.2 Details on Crop Marketing:

1. For each of the crops listed indicate the main problems in marketing during 2002/03 in column 2.

2. Check if the crops correspond to the crop lists list in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments

Q 10.3 Ranking of market problems:

Rank in order of importance the 5 most important marketing problems from the codes in the Market Problems code box.

Working Area/calculation space

11.0 ON-FARM INVESTMENT

11.1 Does the household practice **irrigation** (Yes=1, No=2) ☐

If the response is 'NO' go to section 11.3

S/N	Source of Irrigation water	Method of obtaining water	Method of applic -ation	Irrigatable area (acres)	Area of irrig ated land this year (acres)
	(1)	(2)	(3)	(4)	(5)
11.1.1	☐	☐	☐	☐☐☐.☐	☐☐☐.☐

Source of irrigation water (Col 1)
River .....1 Borehole 5
Lake .....2 Canal 6
Dam .....3 Tap Water 7
Well 4

Method of obtaining water (Col 2)
Gravity .....1 motor pump 4
Hand bucket .....2 Other 8
Hand pump 3

Method of application (Col 3)
Flood 1
Sprinkler 2
water hose.....3
Bucket/watering can 4

11.2 Does the household have any **erosion control/water harvesting facilities** on their land (Yes=1, No=2) ☐

*If the response is **'NO'** go to section 12.0*

S/N	Type of erosion control/ water harvesting structure	Number of structures	Year of con- struction		Type of erosion control/ water harvesting structure	Number of structures	Year of con- struction
	(1)	(2)	(3)		(1)	(2)	(3)
11.2.1	Terraces	☐☐	☐☐	11.2.5	Tree belts	☐☐	☐☐
11.2.2	Erosion control bunds	☐☐	☐☐	11.2.6	Water harvesting bunds	☐☐	☐☐
11.2.3	Gabions/Sandbags	☐☐	☐☐	11.2.7	Drainage ditches	☐☐	☐☐
11.2.4	Vetiver Grass	☐☐	☐☐	11.2.8	Dam	☐☐	☐☐

12.0 ACCESS TO FARM INPUTS AND IMPLEMENTS

12.1 Give details of **farm inputs** used during the 2002/03 agriculture year

S/N	Input name	Used Yes=1 No=2	Source	Distance to Source	Source of Fin -ance	Reason for not using	Quality of Input	Plan to use next year Yes =1,No=2
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
12.1.1	Chemical Fertiliser	☐	☐☐	☐	☐	☐	☐	☐
12.1.2	Farm Yard Manure	☐	☐☐	☐	☐	☐	☐	☐
12.1.3	Compost	☐	☐☐	☐	☐	☐	☐	☐
12.1.4	Pesticide/fungicide	☐	☐☐	☐	☐	☐	☐	☐
12.1.5	Herbicide	☐	☐☐	☐	☐	☐	☐	☐
12.1.6	Improved Seeds	☐	☐☐	☐	☐	☐	☐	☐
12.1.7	Other ……	☐	☐☐	☐	☐	☐	☐	☐

Source (Col 3)
Cooperative 01
Local farmers group 02
Local market/Trade Store ...03
Secondary Market 04
Development project 05
Crop buyers 06
Large scale farm 07
Locally produced by hh 08
Neighbour 09
Other (specify) 98
Not applicable 99

Distance to source (Col 4)
Less than 1 Km 1
Between 1 and 3km 2
between 3 and 10 km.. ...3
Between 10 and 20 km ...4
20km and above 5
not applicable 9

Source of finance (Col 5)
Sale of farm products .1
Other income generating activities 2
Remittances 3
Bank Loan/Credit.....4
produced on farm 5
Other 8
Not applicable 9

Reason for not using (Col 6)
Not available 1
Price too high 2
No money to buy 3
Too much labour required..4
Do not know how to use.....5
Input is of no use 6
Locally produced by hh 7
Other 8
Not applicable 9

Quality of input (Col 7)
Excellent 1
Good 2
Average 3
Poor 4
Does not work .5
not applicable...9

Definition and working page for page 9

Overview of Investment activities (Section 11.0)

Investment activities:

Investment activities refer to medium to long term farm development structures and projects. This can be Irrigation structures, erosion and water harvesting structures or other permanent or semi-permanent investment made on the land that the household owns.

Question Specific Definitions (Q 11.1)

Source of irrigation Water (Col 1): The main source of water from which water is obtained for irrigation.

Method of obtaining water (Col 2): The mechanism by which the water is extracted from the source,

Application Method (Col 3): How the water is applied on the field.
- Flood - is the application of water down the slope of the land by means of gravity
- Sprinkler - is the application of pressurised water through pipes. The water passes through a device which sprays the water onto the crop from above.

Irrigatable Area (Col 4): The area the irrigation system is designed to cover in acres.

Area of irrigated land this year (Col 5): Area of land under irrigation during the 2002/03 agric year. This is the physical area and NOT the cumulative area of 2 or more croppings.

Q 11.1 Irrigation

1. If the hh practices irrigation give details on the main source, main method of obtaining and applying water.

2. Cross check column 8, Q 7.1.2, 7.2.2 & 7.3.2 to check if irrigation was used on any crops.

Question Specific Definitions (Q 11.3)

Erosion control/water harvesting structure (Col 1)

Terraces: Are structures constructed on the side of a hill to provide a level ground to plant crops. They are often used to trap water for paddy/lowland rice production.

Erosion Control Bunds: These are banks of earth/stones built perpendicular to the slope to slow down water and prevent erosion. They are different to Terraces in that the soil behind the banks are not level.

Gabions: A gabion is a wire mesh box filled with rocks/stones and used to control or prevent gully erosion

Sandbags Used to prevent or control gully erosion

Tree belts/Wind breaks: A band of trees planted perpendicular to the prevailing wind whose main purpose is to slow down wind speed

Water Harvesting bunds: A bank of earth constructed horizontal to the slope of the land to trap water. They are usually banana shaped.

Dam: A bank of earth/material which traps river water to form a catchment of water behind it.

Q 11.3 erosion control/water harvesting

1. Number of structures refers to the number of working/maintained structures and does not include derelict or irreparable structures.

2. Year of construction refers to the year that the structures were first constructed. It is not the year that the structures were last maintained.

Farm Inputs (Q 12.1.1 to 12.1.7)

Farm yard Manure: An organic fertiliser made on farm composed of animal dung.

Compost: An organic fertiliser made on farm from decomposed plant material

Pesticide: Chemical used to either protect the plant from or kill insects, birds, molluscs, mites, etc attacking the plant

Fungicide: is a chemical that s used to protect the plant from or control a fungal disease.

Herbicide: A chemical used to control weeds.

Q 12.0 Farm Inputs

1. Indicate in column 1 whether each of the inputs are used or not.

2. Complete cols 3, 4, 6, and 7 for inputs that are used and place **'9'** in column 5 (for not applicable).

3. Complete cols 5 & 7 for inputs not used.

NOTE: Cross check column 6, 7, 8 & 9 , Q 7.1.2, 7.2.2 & 7.3.2 to check what inputs were used.

12.2 Give details of **farm implements and assets** used and owned by the household during 2002/03 agriculture year

S/N	Equipment/Asset Name	Number Owned	Number rented	Used in 2002/03 Yes 1,No=2	Source of Equip-ment	Source of Fin-ance	Reason for not using	Plan to use next year Yes=1,No=2
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
12.2.1	Hand Hoe							
12.2.2	Hand Powered Sprayer							
12.2.3	Oxen							
12.2.4	Ox Plough							
12.2.5	Ox Seed Planter							
12.2.6	Ox Cart							
12.2.7	Tractor							
12.2.8	Tractor Plough							
12.2.9	Tractor Harrow							
12.2.10	Shellers/threshers							

Source of equipment (Col 5)
Neighbour..... .....1 Development project 5
Cooperative .....2 Government 6
Local farmers association.....3 Large scale farm 7
market/Trade store .....4 Other (specify) 8

Source of finance (Col 6)
Sale of farm products 1
Other income generating activities .2
Remittances 3
Bank Loan 4
Credit 5
Other 8
Not applicable 9

Reason for not using (Col 7)
Not available 1
Price too high 2
No money to buy/rent.....3
Too much labour required....4
Equipment/Asset of no use ...5
Other 8
Not applicable 9

13.0 USE OF CREDIT FOR AGRICULTURE PURPOSES

13.1 During the year 2002/03 did any of the hh members **borrow money** for **agriculture** (Yes = 1, No = 2) ☐
(if the response is 'NO' go to section 13.3)

13.2 Give details of the **credit** obtained during the agricultural year **2002/03**
(if the credit was provided in kind , for example by the provision of inputs, then estimate the value in 13.2.9)

		Source "a"	Source "b"	Source "c"
	use codes to indicate source	☐	☐	☐
	Provided to Male = 1, Female 2	☐	☐	☐
		tick the boxes below to indicate the use of the credit	tick the boxes below to indicate the use of the credit	tick the boxes below to indicate the use of credit
13.2.1	Labour	☐	☐	☐
13.2.2	Seeds	☐	☐	☐
13.2.3	Fertilisers	☐	☐	☐
13.2.4	Agrochemicals	☐	☐	☐
13.2.5	Tools/equipment	☐	☐	☐
13.2.6	Irrigation structures	☐	☐	☐
13.2.7	Livestock	☐	☐	☐
13.2.8	Other …….	☐	☐	☐
13.2.9	**Value of Credit (Tsh.)**	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
13.2.10	**Value of repayment (Tsh.)**	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
13.2.11	**Period of repayment (months)**	☐☐☐	☐☐☐	☐☐☐

Source of credit (Q 13.2-a, b and c)) *Family, friend or relative....1 Commercial Bank.....2 Cooperative .....3 Savings & credit Soc 4*
Trader/trade store .....5 Private individual .....6 Religious Organisation/NGO/Project ...7 Other (Specify).....8

13.3 If the answer to question 13.1 above is 'NO' what is the reason for not using Credit? ☐

Reason for not using credit (Q13.3) *Not needed ...1 Not available ...2 Did not want to go into debt.....3 Interest rate/cost too high.....4*
Did not know how to get credit....5 Difficult bureaucratic procedure ...6 Credit granted too late ...7 Other (specify) ...8 Dont know about credit 9

Definition and working page for page 10

Question Specific Definitions (Q 12.2)

Farm Implements (Col 1):

Hand powered Sprayer: Knapsack or bicycle pump sprayer

Reason for not using (Col 6): Be careful about using "too much labour required" as this code generally refers to hand hoes only. The codes for this should **"NOT"** be read out to the farmer as a prompt.

Note: If remittance is given as the main source of finance check for a response to remittances in **question 2.2.5**

Question Specific Definitions (Q 13.0)

Section 13.0 Credit for Agriculture Purposes

Credit is defined as finance in the form of cash or in-kind contributions (eg direct provision of inputs, machinery, livestock or other material) for the purpose of crop and livestock production whereby the value of the credit must be paid back to the borrower. The value of repayment may either be with interest or interest free.

Credit may be paid back in the form of cash or agriculture produce.

Section 13.0 Credit for Agriculture Purposes

Value of credit: is the amount in cash received from the borrower. If the credit was paid in-kind, estimate the value of this.

Value of repayment: This is the amount to be repaid to the borrower and includes the principal amount (value of credit) plus any interest repayment. If the credit is paid back in agriculture produce, then the cash value of this must be estimated.

Period of repayment: This is the time **in months** the borrower has given for full repayment.

Procedures for questions

Q 12.0 Farm Inputs

1. Indicate in column 2 and 3 whether each of the implements were used or not.

2. Complete cols 4, 5, 6, and 8 for inputs that are used and place **'9'** in column 7 (for not applicable).

3. Complete cols 7 & 8 for inputs not used.

Section 13.2 Source of agriculture credit

If the farmer obtained credit from more than one source then use the columns "a" , "b" and "c" for the different sources of credit. Start with the main source of credit in column "a".

NOTE: Check for use of inputs in column 7, 8 & 9 of questions 7.1.2, 7.2.2 & 7.3.2.

Working Area/calculation space

14.0 TREE FARMING/AGROFORESTRY

14.1 Did your household have any **Planted Trees** on your land during 2002/03 agric year? (Yes =1, No=2) ☐

*If the response is **'NO'** go to section 14.3*

14.2 Give details of the **planted trees** you have **on your land**.

S/N	Tree Code	Number of trees	Where planted	Main Use	Second Use	Number of Plank trees Sold	Number of Pole trees Sold	hh utilised Number of Poles	hh utilised Number of Timber	Total Value (Tsh.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
14.2.1	☐☐	☐☐☐☐	☐	☐	☐	☐☐☐	☐☐☐	☐☐	☐☐	☐☐☐☐☐☐
14.2.2	☐☐	☐☐☐☐	☐	☐	☐	☐☐☐	☐☐☐	☐☐	☐☐	☐☐☐☐☐☐
14.2.3	☐☐	☐☐☐☐	☐	☐	☐	☐☐☐	☐☐☐	☐☐	☐☐	☐☐☐☐☐☐
14.2.4	☐☐	☐☐☐☐	☐	☐	☐	☐☐☐	☐☐☐	☐☐	☐☐	☐☐☐☐☐☐

Where Planted (Col 3)
Mostly on field/plot boundaries.1
Mostly scattered in fields 2
Mostly in plantation/coppice ...3

Use (Col 4 & 5)
Planks/Timber.....1 *Shade 5*
Poles .....2 *Medicinal.....6*
Charcoal .....3 *Other 8*
Fuel wood 4

14.3 Does your village have a **Community tree planting scheme** (Yes=1, No=2) ☐

*If the response is **'NO'** go to section 15.0*

14.4 Household involvement in **community tree planting scheme**

S/N	Distance to community planted forest (Km)	hh Involvement	Main purpose	Main use during 2002/03
	(1)	(2)	(3)	(4)
	☐☐.☐	☐	☐	☐

HH involvement (Col 2)
Only planting 1
Only protection and thinning.....2
Only cutting 3
Most or all activities.....4

Main Purpose (Col 3)
Erosion control.....1 *Environment rehaiblitation ...4*
Production of poles .....2 *Restoration of wildlife 5*
production of firewood..3 *Other (specify) 8*

Main Use during 02/03(Col 4)
Poles .....1 *Not ready to use 5*
Timber logs .....2 *Not allowed to use ...6*
Charcoal ....3 *Other (specify) 8*
Firewood 4

15.0 CROP EXTENSION SERVICES

15.1 Did your household receive **extension advice** for **crop production** during 2002/03 (Yes=1,No=2) ☐

*If the response is **'NO'** go to section 16.0*

S/N	Extension Provider	Source of extension (Y=1,N=2)	If you pay for extension, what is the cost/yr	Contact farmer /group member (Yes=1,No=2)	No. of visits by extension agency per year	No. of message adopted in the last 3 years	Quality of Service
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
15.1.1	Government extension	☐	☐☐☐☐☐	☐	☐☐	☐☐	☐
15.1.2	NGO/development project	☐	☐☐☐☐☐	☐	☐☐	☐☐	☐
15.1.3	Cooperative	☐	☐☐☐☐☐	☐	☐☐	☐☐	☐
15.1.4	Large Scale farmer	☐	☐☐☐☐☐	☐	☐☐	☐☐	☐
15.1.5	Other.....	☐	☐☐☐☐☐	☐	☐☐	☐☐	☐

Quality of service (Col 7)
Very good .....1 good .....2 Average..... ...3 Poor.....4 No Good 5

Definition and working page for page 11

General Definitions for section 14.0

Tree Farming/Agroforestry

This section refers to trees **planted** for wood (firewood, poles, planks, carving, charcoal, medicinal, etc, but **NOT** fruit trees). It does **not** include naturally growing trees on the farm (unless special care has been given to promote their establishment) or trees growing naturally on the communal areas.

Tree farming is the planting of trees on an area of land for which the main purpose is the production and regeneration of trees for wood on that land.

Agroforestry: is the planting of trees on land for the purpose of complementing other farming activities like crop and animal production. For the purpose of this questionnaire Agroforestry trees are trees planted on boundaries and scattered throughout fields. The main productive unit in this case is Crops and Livestock.

Section 14.2 Details of planted trees

1. Enter the tree codes of the main species grown by the hh

2. If no planks or poles are sold enter a "0" in columns 8, & 9.

3. Total value includes both value of hh utilised trees and sold trees.

4. If no trees were utilised by the hh or sold enter "0" in column 10

Question Specific Definitions

Tree farming (Section 14.0)

Pole trees (Col 6): These are young trees which have a maximum diameter of 6 inches at the bottom and are often used for house construction. They are often the thinning harvest after 3 - 5 years.

Plank trees (Col 7): Trees for sawing into timber planks.

Animal shade: Trees grown for the purpose of providing shade to animals.

Community tree planting scheme (Section 14.3)

Community Forest: A forest planted on the communal land which is planted, replanted or spot planted by the members of the village.

Crop Extension Services (Section 15.1)

Contact Farmer: A farmer who is used by the extension agent as a focal point to demonstrate new interventions. The contact farmer then passes on the message to other farmers

Group member: Member of a group under which the contact farmer leads

Adoption: This is the uptake of an intervention for 2 or more years

Section 15.1 Crop Extension Services

1. For each of the extension providers ask if the hh received extension during 2002/2003 agriculture year and indicate in column 2.

2. For each of the providers complete the rest of the columns

Tree Name Guide Col 1

Code	Local Name	Botanical Name	English Name
01		Senna siamea	Cassod tree
02	Msongoma	Gravellia	Silver oak
03	Mbarika	Afzelia quanzensis	Pod mahogony
04	Mkeshia	Acacia spp	Umbrella thorn
05	Msindano	Pinus spp	Pine
06	Mkaratusi	Eucalyptus spp	Red River Gum
07		Cyprus spp	Cyprus tree
08	Mtondoo	Calophylum inophyllum	
09	Mvule	Melicia excelsa	Iroko
10	Mvinji	Casurina equisetfilia	Whistling oak
11	Msaji	Tectona grandis	Teak
12	Mkungu wa kienyeji	Terminalia catapa	Sea almond
13	Mkungu india	Terminilia ivorensis	Black afara
14	Muhumula	Maesopsis berchemoides	
15			

Code	Local Name	Botanical Name	English Name
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

15.2 Crop Extension Messages

S/N	Extension Message	Received Advice Yes=1 No=2	Adopted Yes=1 No=2	Source of Crop Extension
	(1)	(2)	(3)	(4)
15.2.1	Spacing			
15.2.2	Use of agrochemicals			
15.2.3	Erosion control			
15.2.4	Organic fertiliser use			
15.2.5	Inorganic fertiliser use			
15.2.6	Use of improved seed			
15.2.7	Mechanisation/LST			
15.2.8	Irrigation Technology			
15.2.9	Crop Storage			
15.2.10	Vermin control			
15.2.11	Agro-processing			
15.2.12	Agro-forestry			
15.2.13	Bee Keeping			
15.2.14	Fish Farming			
15.2.15	Other			

Source of extension (Col 4)
Government .....1 NGO/Dev project ..2 Cooperative ...3 Large scale farmer .....4 Other (Specify) ...8 Not applicable 9

16.0 LIVELIHOOD CONSTRAINTS

From the list of constraints on the right select:

	the 5 most important problems			the 5 least important problems	
16.1	**Order of most importance**	**Constraint**	16.2	**Order of least importanc**	**Constraint**
	(1)	(2)		(1)	(2)
16.1.1	most important		16.2.1	Least important	
16.1.2	2nd most important		16.2.2	2nd least important	
16.1.3	3rd most important		16.2.3	3rd least important	
16.1.4	4th most important		16.2.4	4th least important	
16.1.5	5th most important		16.2.5	5th least important	

List of constraints

1. Access to Land
2. Ownership of Land
3. Poor farm Inputs
4. Soil Fertility
5. Access to improved seed
6. Irrigation facilities
7. Access to chemical Inputs
8. Cost of Inputs
9. Extension Services
10. Access to forest resources
11. Hunting and Gathering
12. Access to potable water
13. Access to credit
14. Harvesting
15. Threshing
16. Storage
17. Processing
18. Market Information
19. Transport costs
20. Distruction by animals
21. Stealing
22. Pests and Diseases
23. Local government taxation
24. Access to off Farm Income

17.0 ANIMAL CONTRIBUTION TO CROP PRODUCTION

17.1 Did you use Draft animals to cultivate your land during 02/03 (Yes=1, No=2) ☐

(If no, go to question 17.2)

S/N	Type of Draft	Number owned	Number used	Area cultivated (acres)
	(1)	(2)	(3)	(4)
17.1.1	Oxen			.
17.1.2	Bulls			.
17.1.3	Cows			
17.1.4	Donkeys			.

17.2 Did you apply organic fertiliser during 02/03 (Yes=1, No=2) ☐

(If no, go to question 18)

S/N	Type of organ Fertiliser	Area applied (acres)
	(1)	(2)
17.2.1	FYM	.
17.2.2	Compost	.

Definitions and working page for page 12

Question Specific Definitions

Crop Extension Advice (Section 15.2)

Mechanisation/LST: LST means Labour Saving Technology

Section 16.0 Livelihood constraints

16.1 List the five most important problems in order of most importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are a problem. Place a ✓ against the constraints that are a problem.

2. Read the selected constraints and ask the farmer to select 5 which create the largest problems

3. Ask the farmer to list these in order of importance and enter in column 2

16.2 List the five least important problems in order of least importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are **NOT** a problem. Place an ✗ against the constraints that are **NOT** a problem.

2. Read the selected constraints and ask the farmer to select 5 which create the least problems

3. Ask the farmer to list these in order of least importance and enter in column 2

18.0 CATTLE POPULATION, INTAKE AND OFFTAKE

18.1 Did the household own, raise or manage any **CATTLE** during 2002/03 agriculture year? (Yes =1 No =2) ☐

(If **no** go to section 19.0)

18.2 Cattle Population as of 1st October 2003

S/N	Cattle type	Number of Indigenous	Number of Improved: Beef	Number of Improved: Dairy	Total
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
18.2.1	Bulls				
18.2.2	Cows				
18.2.3	Steers				
18.2.4	Heifers				
18.2.5	Male Calves				
18.2.6	Female Calves				
	Grand Total				

18.3 **Cattle Intake** during 2002/2003

S/N	Number Purchased	Number given /obtained	Number Born	Total Intake of Cattle	Average Value per head
	(6)	*(7)*	*(8)*	*(9)*	*(10)*
18.3.1			X X X		
18.3.2			X X X		
18.3.3			X X X		
18.3.4			X X X		
18.3.5					
18.3.6					
		Total Intake			

18.4 **Cattle Offtake** during 2002/2003

S/N	Cattle type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Cattle Offtake	Average value per head
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
18.4.1	Bulls						
18.4.2	Cows						
18.4.3	Steers						
18.4.4	Heifers						
18.4.5	Male Calves						
18.4.6	Female Calves						
					Total Offtake		

18.5 **Cattle diseases**

S/N	Disease/ parasite	Number Infected	Number Treated	No. Rec-overed	Number Died	Last vaccinated	Main Source
	(1)	*(2)*	(3)	*(4)*	*(5)*	*(6)*	*(7)*
18.5.1	Tick Borne diseases						
18.5.2	CBPP						
18.5.3	Trypanosomiasis					X	X
18.5.4	Lumpy Skin Disease						
18.5.5	Helmenthioitis					X	X
18.5.6	FMD						

18.6 **Milk Production**

S/N	Season	Litres of milk/day	No. of cattle milked/day	Value/litre	Sold to	Sold/day (Litres)
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
18.6.1	Wet Season					
18.6.2	Dry Season					

Sold to Q18.6 Col 5)

Neighbour……..1 Largescale farm ..5
Local Market……..2 Trader at Farm ...6
Secondary Market ...3 Did not sell 7
Processing industry .4 Other ……..8

Last Vaccinated (Col 6)

2003 ……1 2000 ……..4
2002 ……...2 before 2000 5
2001 ……...3 Not Vaccinated...6

Main Source of vaccine (Col 7)

Private Vet Clinic ..1 Other ……..…..8
District Vet Clinic ..2 Not applicable ….9
NGO/Project…….3

Definitions and working page for page 13

General definitions for page 13

Cattle Intake during 2002/03: Cattle purchased, given or born which increases the number of cattle in the herd.

Cattle Offtake during 2002/03:
Cattle removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 18.0)

Cattle type (Q 18.2 & 18.4, Col 1)

Bull: Mature **Uncastrated** male cattle used for breeding

Cow: Mature female cattle that has given birth at least once

Steer: Castrated male cattle over 1 year

Heifer: Female cattle of 1 year up to the first calving

Calves: Young cattle under 1 year of age

Average Value per Head (Q 18.3, (Col 7 & 9) & 18.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Cattle vaccination (18.5 col 1)

ECF: East Coast Fever

FMD: Foot and Mouth Disease

CBPP: Contagious Bovine Pleura Pneumonia

Section 18.0 Cattle Population, Intake & Offtake.

NOTE: Section 18.1 is for the current population (as of 1st October 2003);
Section 18.2 and 18.3 is for movement in and out of the herd during the 2002/03 agriculture year.
Section 18.4 is for diseases encountered during the agriculture year.

1. If the household has cows, you would normally expect them to have calves in column 8

2. If calves are reported in column 2, 3, or 4 (18.2.6, 18.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of cattle the importance of this must be reflected in Q 2.2.3

Section 18.5 If cattle are reported to have died in Column 5 then at least that number should be reported in 18.4 col 4

Working area for page 13

19.0 GOAT POPULATION, INTAKE AND OFFTAKE

19.1 Did the household own, raise or manage any **GOATS** during the 2002/03 agriculture year? (Yes =1 No =2) ☐
(If no go to section 20.0)

19.2 Goat Population as of 1st October 2003

S/N	Goat type	Number of Indigenous	Number of Improved for meat	Number of Improved Dairy	Total
	(1)	(2)	(3)	(4)	(5)
19.2.1	Billy Goat				
19.2.2	Castrated Goat				
19.2.3	She Goat				
19.2.4	Male Kid				
19.2.5	She Kid				
	Grand Total				

19.3 **Goat Intake** during 2002/2003

S/N	Number Purchased	Number given /obtained	Number Born	Total Intake of Goats	Average Value per head
	(6)	(7)	(8)	(9)	(10)
19.3.1			X X X		
19.3.2			X X X		
19.3.3			X X X		
19.3.4					
19.3.5					
			Total Intake		

19.4 **Goat Offtake** during 2002/2003

S/N	Goat type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Goat Offtake	Average value per head
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
19.4.1	Male goat						
19.4.2	Castrated Goat						
19.4.3	She Goat						
19.4.4	Male Kid						
19.4.5	She Kid						
	Total Offtake						

19.5 **Goat diseases**

S/N	Disease/ parasite	Number Infected	Number Treated	No. Rec-overed	Number Died	Last vaccinated	Main Source
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
19.5.1	Foot Rot					X	X
19.5.2	CC PP						
19.5.3	Helminthiosis					X	X
19.5.4	Tetanus						
19.5.5	Mange					X	X

19.6 **Milk Production**

S/N	Season	Litres of milk/day	No. of Goats milked/day	Value/litre	Sold to	Sold/day (Litres)
	(1)	(2)	(3)	(4)	(5)	(6)
19.6.1	Wet Season					
19.6.2	Dry Season					

Sold to Q19.6 Col 5)
Neighbour…….....1 Largescale farm ..5
Local Market……....2 Trader at Farm ...6
Secondary Market ...3 Did not sell 7
Processing industry .4 Other ……..…....8

Last Vaccinated (Col 6)
2003 ……1 2000 ……....4
2002 ……....2 before 2000 ……5
2001 ……....3 Not Vaccinated...6

Main Source of vaccine (Col 7)
Private Vet Clinic ..1 Other ……..…..8
District Vet Clinic ..2 Not applicable ….9
NGO/Project…....3

Definitions and working page for page 14

Goat definitions for page 14

Goat Intake during 2002/03: Goat purchased, given or born which increases the number of goats in the herd.

Goat Offtake during 2002/03:
Goat removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 19.0)

Goat type (Q 19.2 & 19.4, Col 1)

Billy Goat (he-goat): Mature **Uncastrated** male goat used for breeding

Castrated goat: Male goat that has been castrated.

She Goat: Mature female goat over 9 months of age

Kid: Young goat under 9 months of age.

Average Value per Head (Q 19.3, (Col 7 & 9) & 19.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Goat vaccination (19.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

LSD: Lumpy Skin Disease

Section 19.0 Goat Population, Intake & Offtake.

NOTE: Section 19.1 is for the current population (as of 1st October 2003);
Section 19.2 and 18.3 is for movement in and out of the herd during the 2002/03 agriculture year.
Section 19.4 is for diseases encountered during the agriculture year.

1. If the household has she goats, you would normally expect them to have kids in column 8

2. If kids are reported in column 2, 3, or 4 (19.2.6, 19.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of goats the importance of this must be reflected in Q 2.2.3

Section 19.5 If goats are reported to have died in Column 5 then at least that number should be reported in 19.4 col 4

Working area for page 14

20.0 SHEEP POPULATION, INTAKE AND OFFTAKE

20.1 Did the household own, raise or manage any **SHEEP** during the 2002/03 agriculture year? (Yes =1 No =2) ☐

(If no go to section 21.0)

20.2 **Sheep Population** as of 1st October 2003

S/N	Sheep type	Number of Indigenous	Number of Improved for Mutton	Number of Improved Dairy	Total
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
20.2.1	Ram			X X X	
20.2.2	Castrated Sheep			X X X	
20.2.3	She Sheep			X X X	
20.2.4	Male lamb			X X X	
20.2.5	She lamb			X X X	
	Grand Total				

20.3 **Sheep Intake** during 2002/2003

S/N	Number Purchased	Number given /obtained	Number Born	Total Intake of Sheep	Average Value per head
	(6)	*(7)*	*(8)*	*(9)*	*(10)*
20.3.1			X X X		
20.3.2			X X X		
20.3.3			X X X		
20.3.4					
20.3.5					

20.4 **Sheep Offtake** during 2002/2003

S/N	Sheep type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Sheep Offtake	Average value per head
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
20.4.1	Ram						
20.4.2	Castrated Sheep						
20.4.3	She Sheep						
20.4.4	Male lamb						
20.4.5	She lamb						
	Total Offtake						

20.5 **Sheep diseases**

S/N	Disease/ parasite	Number Infected	Number Treated	No. Rec-overed	Number Died	Last vaccinated	Main Source
	(1)	*(2)*	(3)	*(4)*	*(5)*	*(6)*	*(7)*
20.5.1	Foot Rot					X	X
20.5.2	CC PP						
20.5.3	Helminthiosis					X	X
20.5.4	Trypanosomiasis						
20.5.5	FMD						

Last Vaccinated (Col 6)

2003 ……1 2000 ……....4
2002 ……....2 before 2000 …...5
2001 ……....3 Not Vaccinated...6

Main Source of vaccine (Col 7)

Private Vet Clinic ..1 Other ……..…..8
District Vet Clinic ..2 Not applicable ….9
NGO/Project…....3

Definitions and working page for page 15

Sheep definitions for page 15

Sheep Intake during 2002/03: Sheep purchased, given or born which increases the number of Sheep in the herd.

Sheep Offtake during 2002/03:
Sheep removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 20.0)

Sheep type (Q 20.2 & 20.4, Col 1)

Ram: Mature **Uncastrated** male goat used for breeding

Castrated sheep: Male sheep that has been castrated.

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Average Value per Head (Q 20.3, (Col 7 & 9) & 20.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Sheep vaccination (20.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

Section 20.0 Sheep Population, Intake & Offtake.

NOTE: Section 20.1 is for the current population (as of 1st October 2003);
Section 20.2 and 20.3 is for movement in and out of the herd during the 2002/03 agriculture year.
Section 20.4 is for diseases encountered during the agriculture year.

1. If the household has ewes, you would normally expect them to have kids in column 8

2. If lambs are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Sheep the importance of this must be reflected in Q 2.2.3

Section 20.5 If Sheep are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 15

21.0 PIG POPULATION AND PRODUCTION

21.1 Did the household own, raise or manage any **PIGS** during the 2002/03 agriculture year (Yes =1 No =2) ☐
(If no go to section 22.0)

21.2 **PIG Population** as of 1 st October 2003

S/N	Pig type	Number
	(1)	*(2)*
21.2.1	Boar	
21.2.2	Castrated male	
21.2.3	Sow/Gilt	
21.2.4	Male piglet	
21.2.5	She piglet	
	Grand Total	

21.3 **Pig increase** during 2002/2003

S/N	Number Purchased	Number given /obtained	Number Born	Total Pig Increase	Average Value per head
	(3)	*(4)*	*(5)*	*(9)*	*(10)*
21.3.1			X X X		
21.3.2			X X X		
21.3.3			X X X		
21.3.4					
21.3.5					

21.4 **Pig decrease** during 2002/2003

S/N	Pig type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Pig Offtake	Average value per head
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
21.4.1	Boar						
21.4.2	Castrated male						
21.4.3	Sow/Gilt						
21.4.4	Male piglet						
21.4.5	She piglet						
	Total Offtake						

21.5 **Pig diseases/pests/conditions**

S/N	Disease/ parasite	Number Infected	Number Treated	No. Rec -overed	Number Died	Last vacci nated	Main Sou -rce
	(1)	*(2)*	(3)	*(4)*	*(5)*	*(6)*	*(7)*
21.5.1	Anthrax						
21.5.2	ASF						
21.5.3	Anemia					X	X
21.5.4	Helmenthiosis					X	X

22.0 LIVESTOCK PEST & PARASITE CONTROL

22.1 Did you **deworm** your animals during 2002/03 (Yes=1, No-2) ☐
(If the response is 'NO' go to section 22.3)

22.2 Which animals did you **deworm**? (Tick appropriate boxes)
Cattle ☐ Goats ☐ Sheep ☐ Pigs ☐

22.3 Do you normally encounter a **tick** problem (Yes=1,No-2) ☐
(If the response is 'NO' go to section 22.5)

22.4 Which methods of tick control did you use ☐
Control method (Q 22.4) *None..1 Spraying ..2 Dipping..3 Smearing ..4 Other.8*

22.5 Do you normally encounter a **tsetse fly** problem (Y=1,N=2) ☐
*(If the response is **'NO'** go to section 23.0)*

22.6 Which methods of control did you use ☐
Control method (Q22.6) *None .1 Spray .2 Dipping .3 Trapping .4 Other .8*

Last Vaccinated (Col 6)
2003 ..1 2000 ……..4
2002 ..2 before 2000 ….5
2001 ..3 Not Vaccinated.6

Main Source (Col 7)
Private Vet Clinic ..1
District Vet Clinic ..2
NGO/Project……..3
Other ……..……8
Not applicable ……9

Definitions and working page for page 16

Pigs definitions for page 16

Pig Intake during 2002/03: Pigs purchased, given or born which increases the number of Pigs in the production unit.

Pig Offtake during 2002/03:
Pigs removed from the production unit, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 21.0)

Pigs type (Q 21.2 & 21.4, Col 1)

Boar: Mature **Uncastrated** male pig used for breeding

Castrated Pig: Male pig that has been castrated.

Sow: Mature female pig that has given birth to at least one litter of pigs.

Gilt: Female pig of 9 months up to the first farrowing.

Piglet: Young pig under 3 months of age.

Average Value per Head (Q 21.3, (Col 7 & 9) & 21.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Pig vaccination (21.5 col 1)

ASF: African Swine Fever

Section 21.0 Pig Population, Intake & Offtake.

NOTE: Section 21.1 is for the current population (as of 1st October 2003);
Section 21.2 and 21.3 is for movement in and out of the herd during the 2002/03 agriculture year.
Section 21.4 is for diseases encountered during the agriculture year.

1. If the household has sows, you would normally expect them to have piglets in column 8

2. If piglets are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Pigs the importance of this must be reflected in Q 2.2.3

Section 20.5 If Pigs are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 16

23.0 **Other Livestock** currently available and details of consumption and sales during the last 12 months

	Animal type	Current Number	Sold during 2002/03		Consumed during 2002/03	
			Number	Average Value/head	Number	Average Value/head
		(1)	(2)	(3)	(4)	(5)
23.1	Indigenous Chicken					
23.2	Layer					
23.3	Broiler					
23.4	Ducks					
23.5	Turkeys					
23.6	Rabbits					
23.7	Donkeys					
23.8	Horses				X X X	X X X X X
23.9	Other ……					

24.0	CHICKEN DISEASES	Number infected	Number Treated	Number Died	Number Recovered
24.1	Newcastle Disease				
24.2	Gumboro				
24.3	Coccidiosis				
24.4	Chorysa				
24.5	Fowl typhoid				

25.0	LIVESTOCK PRODUCTS	Sold during 2002/03		Consumed/utilised during 2002/03	
		Number	Average Value/unit	Number	Average Value/unit
25.1	Eggs		X		
25.2	Hides				
25.3	Skins				

26.0 List in order of importance the **outlets for the sale** of Livestock

S/N	Impo-rtan-ce of outlet	Outlets for Cattle	Out-lets for Goat	Outlets for Sheep	Outl-ets for Pigs	Outlets for Chick-ens
	(1)	(2)	(3)	(4)	(5)	(6)
26.1	1st					
26.2	2nd					
26.3	3rd					
26.4	4th					
26.5	5th					

Outlet code (Col 2, 3, 4 & 5)

Trader at farm……1 *Abattoir/factory……5*
Local Market …… ……2 *Another farmer ……6*
Secondary market/auction……3 *Other (Specify)……8*
Neighbour ……4

Source of structure (Q27.0 - Col 2)

Owns ……1 *NGO ……6*
Cooperative ……2 *Large scale farm ……7*
Local farmers association …… 3 *Other …… ……8*
Gov extension/veterinary ……4 *Not applicable ……9*
Development project …… ……5

27.0 Access to **functional Livestock structures /accessories**

S/N	Type of structure/accessory	Source of Structure	Distance to struct-ure (Km)
	(1)	(2)	(3)
27.1	Cattle Dip		.
27.2	Spray Race		.
27.3	Hand powered sprayer		.
27.4	Cattle crush		.
27.5	Primary Market		.
27.6	Secondary Market		.
27.7	Abattoir		.
27.8	Slaughter Slab		.
27.9	Hide/skin shed		.
27.10	Input supply		.
27.11	Veterinary Clinic		.
27.12	Village holding ground		.
27.13	village watering point/dam		.
27.14	Drencher		.

Definition and working page for page 17

Question Specific Definitions Section 26.0)

Question Specific Definitions Section 27.0)

Access to functional Livestock Structures/accessories (Section 27.0):

NOTE: The structures must be functional. If they are not working/derelict then they should not be included. The distance to the next nearest functional structure should be taken.

Spray Race: A fixed spray structure on an animal race for spraying acaricide

Cattle crush: Corridor structure for restraining cattle.

Abattoir: Large building designed for slaughtering a large amount of animals. It normally has complex structures to assist in the slaughter and storage and a high level of hygiene is maintained.

Slaughter Slab: Concrete slab designed fos slaughtering a small amount of animals

Hides: obtained from Cattle

Skins: Obtained from sheep and goats

Hide/Skin Shed: Shed for curing/tanning animal skins and hides

Village holding Pen: Enclosure for containing large amount of livestock which is owned communally.

Drencher: Device for orally administering medicine to livestock.
If no product was sold in 2002 enter "0" in columns 6, 7& 9.

Procedures for questions

Section 23.0 - Other Livestock:

1. The current number includes both adult and young animals. For example The number of chickens in col 1 would include adults and chicks.

Section 26.0 - Outlets for livestock:

Using the codes enter the outlets for the sale of different livestock in order of importance. If there are, for example, only 2 outlets mark the rest with a "X".

28.0 FISH FARMING

28.1 Was **Fish farming** carried out by this household during 2002/2003? (Yes =1, No=2) ☐ *(If the response is **'NO'** go to section 29.0)*

28.2 Specify details of **fish farming practices**

S/N	Production unit number	Fish farming system	Size of unit/pond (m2)	Source of fingerling	frequency of stocking (No/year)	Number of stocked fish: Tilapia	Number of stocked fish: Carp	Number of stocked fish: Other	Number of fish harvested	weight of fish harvested	weight of fish sold	Mainly sold to
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
28.1.1	1											
28.1.2	2											
28.1.3	3											

Farming System (Col 2)
Natural Pond. ..1 Natural Lake…..3 Other …..8
Dug out pond...2 Water resevoir..4

Source of fingerlings (Col 4)
Own pond ……1 NGO/Project...3 P rivate trader ...5
Government Institution ..2 Neighbour …..4 Other……8

Mainly sold to (Col 12)
Neighbour…….1 Secondary Market.....3 Largescale farm .....5 Did not sell 7
Local Market…….2 Processing industry ….4 Trader at Farm .....6 Other 8

29.0 LIVESTOCK EXTENSION

29.1 Did you receive **livestock extension advice** during 02/03 (Yes=1,No=2) ☐ *(If the response is **'NO'** go to section 30.0)*

S/N	Livestock Extension Message	Received Advice Yes=1,No=2	Adopted Yes=1 No=2	Source of Livestock Extension
	(1)	(2)	(3)	(4)
29.1.1	Feed and Proper feeding			
29.1.2	Housing (Goat, Dairy, Poultry, Pigs)			
29.1.3	Proper Milking			
29.1.4	Milk Hygiene			
29.1.5	Disease control (dipping/spraying)			
29.1.6	Herd/Flock size and selection			
29.1.7	Pasture Establishment			
29.1.8	Group formation and strengthening			
29.1.9	Calf rearing			
29.1.10	Use of improved bulls			
29.1.11	Other livestock extension			

Source of livestock extension (Col 4)
Government .....1 NGO/Dev project ..2 Cooperative …3 Large scale farmer .....4 Other (Specify) 8

29.2 For the following **Livestock Extension Service Providers** give details

S/N	Extension Provider	If you pay for extension, what is the cost/yr	Contact far-mer/group member (Y=1,N=2)	No. of visits by extension agency/year	No. of mess-ages adopted in the last 3 yrs	Quality of Service
	(1)	(2)	(3)	(4)	(5)	(6)
29.2.1	Government					
29.2.2	NGO/dev project					
29.2.3	Cooperative					
29.2.4	Large Scale farmer					
29.2.5	Other……					

Quality of service (Col 6) *Very good ...1 good ….2 Average…3 Poor…4 No Good ...5*

30.0 GOVERNMENT REGULATORY PROBLEMS

31.1 Did you face problems with government regulations during 2002/03 (Y=1, N=2) ☐

(If the response is no go to section 31.0)

List in order of importance

		Problem code
30.1.1	1st	
30.1.2	2nd	
30.1.3	3rd	

Problem code
Land ownership by government 1
Restriction of sale between regions ..2
Import of food items ……3
Other (specify)……..8

Definitions and working page for page 18

General definitions for Section 28.0

Fish farming: Refers to the rearing/production of fish. It is different to fishing in that the fish have to be reared and fed in fish farming. Fishing traps or captures naturally occurring fish in rivers, lakes and the sea and should not be included in this section.

Question Specific Definitions (Section 28.2)

Production unit number (Col 1): A production unit is a pond river/lake which is treated as a separate entity for the production of fish eg it may be by virtue of manageable size, maturity of fish, type of fish etc. Eg a farmer may have 3 fish ponds. (each one is a separate production unit).

Frequency of stocking (Col 5): What is the number of times the farmer puts new fingerlings into the pond each year.

Fingerlings: These are young immature fish used for stocking ponds.

Sold: (Col 10 & 11)

If no fish were sold enter "0" in column 10 and 11)

Livestock Extension Services (Section 29.1)

Adopted (Col 3): This is the uptake of an intervention for 2 or more years

Livestock Extension Service providers (Section 29.2)

Contact Farmer: A farmer who is used by the extension services as a focal point to demonstrate new interventions to. The contact farmer then passes on the message to other farmers

Adopted (Col 5): This is the uptake of an intervention for 2 or more years

Working area for page 18

31.0	LABOUR USE		
31.1	Who is **mainly responsible** for undertaking the following tasks:		
S/N	**Activity**	**Tick if carried out by hh**	**Main responsibility**
	(1)	*(2)*	*(3)*
31.1.1	Land **Clearing**		
31.1.2	Soil **preparation (by hand)**		
31.1.3	Soil **preparation (oxen/trac**		
31.1.4	**Planting**		
31.1.5	**Weeding**		
31.1.6	**Crop Protection**		
31.1.7	**Harvesting**		
31.1.8	Crop **processing**		
31.1.9	Crop **marketing**		
31.1.10	Cattle r**earing/husbandry**		
31.1.11	Cattle **herding**		
31.1.12	Cattle **marketing**		
31.1.13	Goat/sheep **rearing/husband**		
31.1.14	Goat and sheep **herding**		
31.1.15	Goat and sheep **marketing**		
31.1.16	**Milking**		
31.1.17	Pig **rearing/husbandry**		
31.1.18	Poultry **keeping**		
31.1.19	Collecting **Water**		
31.1.20	Collecting **Firewood**		
31.1.21	**Pole** cutting		
31.1.22	**Timber** wood cutting		
31.1.23	**Building/maintaining** house		
31.1.24	Making **Beer**		
31.1.25	**Bee** keeping		
31.1.26	**Fishing**		
31.1.27	**Fish farming**		
31.1.28	**Off-farm income** generation		

Responsibility (Col 3)

HH head alone ….1 Girls ……..…….. …..6
Adult Males ……..2 Boys & Girls ……..…..7
Adult Females…..3 All household members……8
Adults..…… 4 Hired labour ……..9
boys …….. 5

Satisfied with service (Col 4)

Very good ……..1 Average…….3 No good ……5
Good ……..2 Poor ……..4 Not applicable 9

32.0	SUBSISTENCE vs NON-SUBSISTENCE				
32.1	Indicate if any members of the household was involved in the following activities and assess the **percentage used for subsistence/consumption** by the household:				
S/N	Activity	**Tick if hh was involved in activit**	**Estimate % used fo subsistanc**	**Estimate % used for nc subsistence**	**Check Total**
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
32.1.1	**Crop** production				1 0 0
32.1.2	**Livestock** production				1 0 0
32.1.3	**Vegetable** production				1 0 0
32.1.4	Tree cutting for **firewood**				1 0 0
32.1.5	Tree logging for **poles**				1 0 0
32.1.6	Tree logging for **timber**				1 0 0
32.1.7	Tree logging for **charcoal**				1 0 0
32.1.8	**fishing**				1 0 0
32.1.9	**bee** keeping				1 0 0
32.1.10	**employment/off farm**				1 0 0
32.1.11	**employment/off farm**				1 0 0
32.1.12	**Remittances**				1 0 0

33.0	**ACCESS TO INFRASTRUCTURE & OTHER SERVICES**			
S/N	Type of service	**Distance in Km**	S/N	Type of service	**Distance in Km**
	(1)	*(2)*		*(1)*	*(2)*
33.1	**Primary** School	.	32.7	**Feeder** Road	.
33.2	**Secondary** School	.	32.8	**All weather** roa	.
33.3	Health **Clinic**	.	32.9	**Tarmac** road	.
33.4	**Hospital**	.	32.10	**Primary** market	.
33.5	**District** Capital	.	32.11	**Secondary** mark	.
33.6	**Regional** Capital	.	32.12	**Tertiary** market	.

S/N	Type of service	**Distance in Km**	**No of visits/year**	**Satisfied with service**
	(1)	*(2)*	*(3)*	*(4)*
33.13	**Vet** Clinic	.		
33.14	**Extension** Centre	.		
33.15	**Research** Station	.		
33.16	**Plant protection** Lab	.		
33.17	**Land registration** offic	.		
33.18	**Livestock Dev** Centre	.		

Definition and working page for page 19

Question specific definitions (Section 31.1)

Activity (Col 1):

Land Clearing: Refers to removing trees/bush/grass prior to ploughing

Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc).

Cattle Rearing: Tending to cattle at home, eg assisting with births, castration,etc. Different livestock keeping activity to herding.

Cattle Herding: Moving livestock from place to place for grazing and water. If herding is carried out the respondent must also give a response to rearing/husbandry

Question Specific Definitions (Section 32.0.0)

Activity (Col 1):

Subsistence: For the family's survival, rather than for the generation of cash. This includes feeding the hh, provision of water and fuel for cooking. The source of these products are usually from the land resources available to the family. Remember that not all cash earnings are for non subsistence purposes/activities as cash can be used to purchase subsistence items eg food.

Non -subsistence: Cash used for items and activities which are not crucial for the survival of the family. This includes modern medication, non working clothes, refined beer, school fees, etc.

Procedures for (Section 31.1)

Section 31.1 ((Labour use)

1. For each listed activity in column 1, place a tick in column 2 if any member of the household was involved in that activity during the 2002/03 agriculture year.

2. After completing column 2 return to the first activity in row 27.1.1 and complete column 3.

3. Make sure you stress MAINLY responsible.

NOTE: If an activity has been mentioned previously in the questionnaire eg that the hh keeps chickens, make sure a response is obtained in the appropriate place ie poultry keeping.

If off-farm income generation is mentioned, check for responses to off farm income in other parts of the questionnaire

Section 32.0 - Subsistence vs Non-subsistence

1. For each listed activity in column 1, place a tick in column 2 if any member of the household was involved in that activity during the 2002/03 agriculture year.

2. After completing column 2 return to the first activity in row 32.1.1 and complete column 3 & 4. For each activity make an assessment of the percentage used for subsistence survival and the percent converted to cash for non subsistence goods and items.

3. Make sure you stress MAINLY responsible.

NOTE: Cross check the responses with previous sections in the questionnaire. eg if a response is given to remittances check for an entry in question 2.2.5

34.0 HOUSEHOLD FACILITIES

34.1 House Construction

For the **main dwelling**, what are the **main building materials used** in the construction of the following

34.1.1: Roof ☐ 34.1.2 Number of rooms ☐☐

Roof Material
Iron Sheets.....1
Tiles 2
Concrete 3
Asbestos 4
Grass/leaves.....5
Grass & mud.....6
Other (Specify) 8

34.2 Household **assets**

Does your household **own** the following?

	Asset	Y=1 N=2
34.2.1	Radio/cassette, music system)	☐
34.2.2	Telephone (landline)	☐
34.2.3	Telephone (mobile)	☐
34.2.4	Iron	☐
34.2.5	Wheelbarrow	☐
34.2.6	Bicycle	☐
34.2.7	Vehicle	☐
34.2.8	Television	☐

34.3 **Energy use** by the Household

Energy use and access by the household

Main Source of energy for

34.3.1 Lighting ☐☐ **34.3.2** Cooking ☐☐

Lighting energy
Mains electricity.....01
Solar 02
Gas (biogas) 03
Hurricane Lamp 04
Pressure Lamp 05
Wick Lamp 06
Candles 07
Firewood 08
Other (specify) 98

Cooking energy
Mains electricity.....01
Solar 02
Gas (hh biogas) 03
Bottled gas 04
Paraffin/kerocine.....05
Charcoal.....06
Firewood 07
Crop Residues 08
Livestock dung 09
Other (specify) 98

34.4 Access to **drinking water**

	Season	Main sou -rce of drinking water	Distance to source (in km)	Time to and from source (Hour : minute)
	(1)	*(2)*	*(3)*	*(4)*
34.4.1	Wet Season	☐☐	☐☐.☐	☐☐:☐☐
34.4.2	Dry Season	☐☐	☐☐.☐	☐☐:☐☐

Main Source of drinking water
Piped water 01
Protected well 02
Protected/covered spring ... .03
Unprotected Well 04
Unprotected spring 05
Surface water (lake/dam/river/stream)06
Covered rainwater catchment ...07
Uncovered rainwater catchment 08
Water Vendor 09
Tanker truck 10
Bottled water 11
Other (Specify) 98

34.5 Access to **toilet facilities**

34.5.1 What **type of toilet** does your hh use ☐

Type of toilet
No toilet/bush.....1
Flush toilet 2
Pit latrine - traditional ..3
Improved pit latrine - hh owned.....4
Other type (specify) 5

34.6 **Food consumption** patterns

34.6.1	**Number of meals** the hh normally has per day	☐
34.6.2	**Number of days** hh consumed **meat** last w	☐
34.6.3	How often did the hh have **problems in satisfying the food needs** of the hh last year?	☐

Problems satisfying hh food needs (row 34.6.3)
Never 1
Seldom 2
Sometimes 3
Often 4
Always 5

34.7 Source of Household **income**

34.7.1 What is the households **main source of cash income**? ☐☐

Source of Income codes
Sale of food crops 01
Sale of Livestock.....02
Sale of livestock products ...03
Sale of cash crops.....04
Sale of forest products 05
Business income.....06
Wages or salaries in cash 07
Other casual cash earnings ..08
Cash remittances 09
Fishing 10
Other 98
Not applicable 99

Definition and working page for page 20

Household facilities (Section 34):

Number of rooms used for sleeping in the household (Q 34.1)

Include sitting room, dining room, kitchen, etc if used for sleeping. It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building/house that is not divided into rooms is considered to have one room.

Household assets (Q 34.2): these assets must be functioning. Do not include if broken.

Access to drinking water (Q 34.4): If there is more than one source, use the one, which the hh uses most frequently.

Main source of hh cash income:

Activity that provides the hh with the most cash during 2002/03 agriculture year.

Average/maximum yields

Use this table to compare the yields calculated in sections 7.1, 7.2, and 7.3. They are STRICTLY to be used as guidelines only and the sole purpose is to assist in getting the correct area and harvest for each crop

	Crop Name	kg/ha		kg/acre	
		Average	Max	Average	Max
11	Maize	1200	6250	486	2530
12	Paddy	700	4000	283	1619
13	Sorghum	750	3500	304	1417
14	Bulrush Millet	350	3000	142	1215
15	Finger Millet	300	2500	121	1012
16	Wheat	1200	4500	486	1822
17	Barley	1400	2300	567	931
21	Cassava	3000	7000	1215	2834
22	Sweet Potato	600	8000	243	3239
23	Irish potatoes	750	8500	304	3441
24	Yams	4000	10000	1619	4049
25	Cocoyams	2500	5000	1012	2024
26	Onions			0	0
27	Ginger			0	0
31	Beans	400	1300	162	526
32	Cowpeas	300	1750	121	709
33	Green gram			0	0
34	Pigeon pea	600	2000	243	810
35	Chick peas	500	1500	202	607
36	Bambara nut	600	4000	243	1619
41	Sunflower	600	1700	243	688
42	Simsim	300	1000	121	405
43	Groundnut	600	4000	243	1619
47	Soyabeans	1300	2500	526	1012
48	Caster seed	300	750	121	304
75	Pineapple	25000	60000	10121	24291
50	Cotton	300	1500	121	607
51	Tobacco	500	2000	202	810
53	Pyrethrum			0	0
62	Jute	800	3500	324	1417
44	Palm Oil	1200	5000	486	2024
45	Coconut	2000	8000	810	3239
46	Cashewnut	9	60/tree	4	24

	Crop Name	kg/ha		kg/acre	
		Average	Max	Average	Max
86	Cabbage			0	0
87	Tomatoes			0	0
88	Spinach			0	0
89	Carrot			0	0
90	Chillies			0	0
91	Amaranths			0	0
92	Pumpkins			0	0
93	Cucumber			0	0
94	Egg Plant			0	0
95	Water Mellon			0	0
96	Cauliflower			0	0
52	Sisal	800	25000	324	10121
54	Coffee	500	100	202	40
55	Tea	2500	10000	1012	4049
56	Cacao	200	1000	81	405
57	Rubber	400	1400	162	567
58	Wattle			0	0
59	Kapok			0	0
60	Sugar Cane	60000	150000	24291	60729
61	Cardamom			0	0
71	Banana	10000	50000	4049	20243
72	Avocado			0	0
73	Mangoes	10000	25000	4049	10121
74	Papaw	50000	70000	20243	28340
76	Orange	20000	40000	8097	16194
77	Grape fruit	30000	50000	12146	20243
78	Grapes	5000	30000	2024	12146
79	Mandarin/tange	20000	40000	8097	16194
80	Guava	7000	35000	2834	14170
81	Plums			0	0
82	Apples			0	0
83	Pears			0	0
84	Pitches			0	0

Back Page Reference material

This page contains reference information that may be required to complete some of the questions in the questionnaire.

Weights and measures

1 hectare	= 10,000 sq metres	(100 x 100 metres)
1 kilometre	= 1000 metres	
1 acre	= 4840 square yards	(110 x 44 yards)

Conversions

1 hectare	= 2.47 acres
1 mile	= 1.61 Kilometres

Kg equivalents

The following standards may be used as a guide to obtain kg if the reported unit is different. Only use these conversions if the respondent is unable to provide weights in kgs.

	Crop	Number of Kgs			
		Standard		Non-standard	
	Name	Bag	Tin	Name	kgs
11	Maize	100	18	Rumbesi	140
12	Paddy	75	15		
13	Sorghum	100	18		
14	Bulrush Millet	100	18		
15	Finger Millet	120	20		
16	Wheat	75	15		
17	Barley	75	15		
21	Cassava	60	12		
22	Sweet Potatoe	80	16		
23	Irish potatoes	80	16		
24	Yams	80	16		
25	Cocoyams	80	16		
26	Onions	80	16		
27	Ginger	75	15		
31	Beans	100	20		
32	Cowpeas	100	20		
33	Green ram	100	20		
34	Pigeon pea	100	20		
35	Chick peas	100	20		
36	Bambara nut	100	20		
41	Sunflower	60	12		
42	Simsim	100	20		
43	Groundnut	50	10		
47	Soyabeans	100	20		
48	Caster seed	100	20		
75	Pineapple	90	18		
50	Cotton	50	10		
51	Tobacco	70	14		
53	Pyrethrum	60	12		
62	Jute	50	10		
44	Palm Oil	100			
45	Coconut	75			
46	Cashewnut	80			

	Crop	Number of Kgs			
		Standard		Non-standard	
	Name	Bag	Tin	Name	kgs
86	Cabbage	50			
87	Tomatoes	90			
88	Spinach	45			
89	Carrot	110			
90	Chillies	85			
91	Amaranths	50			
92	Pumpkins	60			
93	Cucumber	80			
94	Egg Plant	70			
95	Water Mellon	80			
96	Cauliflower	50			
52	Sisal	130			
54	Coffee	55			
55	Tea	60			
56	Cacao	60			
57	Rubber				
58	Wattle	90			
59	Kapok				
60	Sugar Cane	120			
61	Cardamom	100			
71	Banana	120			
72	Avocado	140			
73	Mangoes	130			
74	Papaw	100			
76	Orange	130			
77	Grape fruit	120			
78	Grapes	80			
79	Mandarin/tange	110			
80	Guava	110			
81	Plums	110			
82	Apples	110			
83	Pears	110			
84	Pitches	110			

For official use only:

If a question has a query, an indication will be made by the supervisor/data entry controller on the front page of the questionnaire. This space is to note what and where the problem is, the action required to be taken and the responsible person to take follow up action.

Nature of the problem:

_____

_____

_____

Action Required: National supervisor action ☐ Field supervisor action ☐

Overall Status: Does not affect overall integrity of the questionnaire. ☐ Discard and resample ☐

More data is required before it can be used ☐ Discard as missing data ☐