United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE
2002/2003

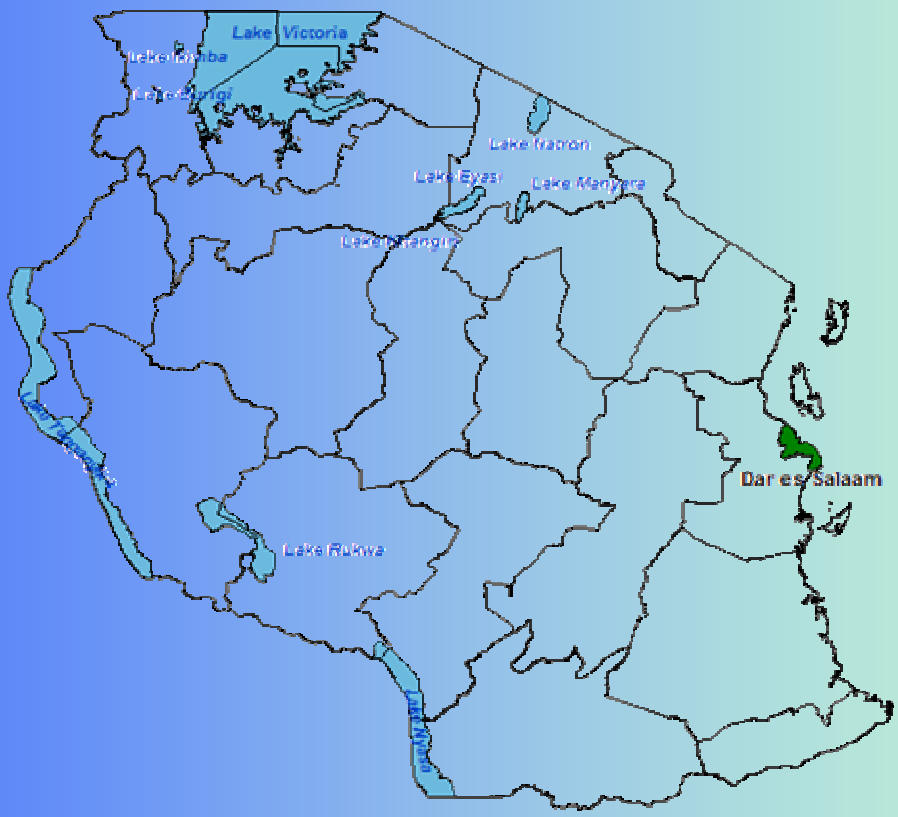
Volume Vg: REGIONAL REPORT: DAR ES SALAAM REGION

Cattle Rearing

Fish Harvesting

Eggs Production

Maize Planting



Paddy Growing

Hand Cultivation

Indigenous Chicken

Irrigation Pratice

Orange Marketing

Cassava Planting

Goat 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

United Republic of Tanzania

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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,
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	*Scotts 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's 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 Dar es Salaam 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 th e 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.

Albina A.Chuwa
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 Dar es Salaam region who were selected using statistical sampling techniques. The results 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 Dar es Salaam 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 Dar es Salaam region were 20,394 out of which 15,844 (77.7%) were involved in growing crops only, 1130 (5.5%) rearing livestock only, 0 (0%) were pastoralist, and 3420 (16.8%) were involved in crop production as well as livestock keeping. In summary, Dar es Salaam region had 19264 households involved in crop production and 4550 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, permanent crop farming, tree/forest resources, livestock keeping/herding, remittances and fishing/hunting.

The region has a literacy rate of 76 percent. The highest literacy rate is in Kinondoni district (79%) followed by Temeke district (76%) and Ilala district (75%). The literacy rate for the heads of households in the region was 78 percent.

The number of heads of agricultural households with formal education in Dar es Salaam region was 14970 (73%), those without formal education were 4907 (24%) and those with only adult education were 517 (3%). The majority of heads of agricultural households (58%) had primary level education whereas only 15 percent had post primary education.

In Dar es Salaam region 8903 household members (44%) were involved in one off-farm income generating activity, 5977 (29%) involved in two off-farm income generating activities and 3197 (16%) involved in more than two off-farm income generating activities.

ii) Crop Production

- **Land Area**

The total area of land available to smallholders was 36,551 ha. The regional average land area utilised for crop production per crop growing household was only 0.4 ha. This figure is below the national average of 2.0 hectares.

- **Planted Area**

The area planted with annual crops and vegetables was 21121 hectares out of which 3507 hectares (16.6%) were planted during short rainy season and 17614 hectares (83.4%) during long rainy season.

An estimated area of 9143 ha (43.3% of the total planted area with annual and vegetable crops) was with roots and tubers, followed by 7736 ha (36.6%) of cereals, 2171 hectares (10.3%) of pulses, 1919 ha (9.1%) of fruit and vegetables, 152 ha (0.7%) of oil seeds. There were no annual cash crops in the region.

- **Maize**

Maize is the second most important cereal and third most important annual crop grown in Dar es Salaam region and it had a planted area 172 times greater than beans, which ranked 20th planted area. The area planted with maize constitutes 17.2 percent of the total area planted with annual crops. Other crops in order of their importance (based on area planted) are cassava, paddy, maize, cowpeas, sweet potatoes, tomatoes, water melon, okra, cucumber, groundnuts and amaranths.

The total production of maize in 2002/03 was 959 tonnes. The average area planted with maize per household ranged from 0.29 hectares in Ilala district to 0.43 hectares in Kinondoni district. Kinondoni district had the largest planted area of maize 2,328 ha) followed by Ilala (1,055 ha) and Temeke (252 ha).

- **Paddy**

Paddy is the dominant cereal crop and second most important annual crop in the region in terms of planted area. The number of households that grew paddy in Dar es Salaam region during the long rainy season was 7705. This represented 58 percent of the total crop growing households in Dar es Salaam Region in the long rainy season.

- **Cassava**

The area planted with cassava was larger than any other root and tuber crop or any annual crop in Dar es Salaam in terms of planted area (37.2% of the total area planted with annual crops and vegetables) and it accounted for 86 percent of the area planted with roots and tubers.

- **Fruit and Vegetables**

The total production of fruit and vegetables was 5555 tonnes. The most cultivated fruit and vegetable crop was the tomato. The production for this crop was 2725 tonnes, which amounts to 49 percent of the total fruit and vegetable production, followed by water melon 1309 tonnes (24%) and okra 635 tonnes (11%). The production of the other fruit and vegetable crops was relatively small.

- **Permanent Crops**

The area of smallholders planted area with permanent crops was 18875 hectares which is 13 percent of the area planted with annual crops in the region. The most important permanent crop is coconuts which accounts for 33.3 percent of the total area planted with permanent crops followed by cashew nuts (27.8%), mangoes (16.3%) and oranges (10.7%).

- **Improved Seeds**

The planted area using improved seeds was 7674 ha which represents 36.3 percent of the total planted area with the annual crops and vegetables. The percentage use of improved seed in the short rainy season was 11 percent which is slightly higher than the corresponding percentage use for the long rainy season (25.3%).

- **Use of Fertilizers**

Most annual crop growing households do not use any fertiliser. The planted area without fertiliser for annual crops was 14814 hectares representing 70 percent of the total planted area with annual crops. Of the planted area with fertiliser application, farm yard manure was applied to 3840 ha which represented 18 percent of the total planted area (61% of the area planted with fertiliser application). This was followed by compost (1373 ha, 7%). Inorganic fertilizers were used on a very small area and represented only 22 percent of the area planted with fertilizers.

- **Irrigation**

In Dar es Salaam region, the area of annual crops and vegetables under irrigation was 8618 ha representing 41 percent of the total area planted. The area under irrigation during the short rainy season was 372 ha accounting for 4.3 percent of the total area under irrigation. However, the percentage of the planted area under irrigation during the long rainy season was 27 percent compared with 48 percent in the short rainy season.

- **Crop Storage**

There were 14465 crop growing households (28% of the total crop growing households) that reported storing various agricultural products in the region.

The most important stored crop was paddy with 4937 households storing 997 tonnes as of 1st January 2004. This was followed by maize (3,750 households, 374t), beans and other pulses (4,834 households, 107t) and cashew nuts (886 households, 14t). Other crops were stored in very small amounts

- **Crop Marketing**

The number of households that reported selling crop was 13976 which represents 69 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Temeke (88%) followed by Ilala (60%), and Kinondoni (57%).

- **Agricultural Credit**

In Dar es Salaam region, few agricultural households (106, 0.5%) accessed credit, out of which 49 (46%) were male-headed households and 57 (54%) were female headed households. In Ilala district only female headed households got credit for agriculture purposes, whereas in Temeke district only male households accessed credit. In Kinondoni district both male and female headed households accessed credit.

- **Crop Extension Services**

The number of agricultural households that received crop extension was 13,122 (64% of total crop growing households in the region). Some districts have more access to extension services than others. Ilala district had a relatively high proportion of households that received crop extension messages (71%), followed by Temeke (70%), and Kinondoni (14%).

- **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 1155. This number represents 16 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 Kinondoni District (11%) followed by Ilala (4%) and Temeke (2%).

iii) Livestock and Poultry Production

- **Cattle**

The total number of cattle in the region was 13,195. Cattle rearing is the second dominant livestock type in the region followed by pigs and sheep. Goats were dominant. The region had 0.08 percent of the total cattle population on the Tanzanian Mainland. The number of indigenous cattle was 4660 head (35.3% of the total number of cattle in the region), 8233 (62.4%) were dairy breeds and only 302 (2.3%) were beef breeds.

- **Goats**

The number of goat-rearing-households in the region was 1,840 (9% of all agricultural households) with a total of 22,292 goats giving an average of 12 head of goats per goat-rearing-households.

- **Sheep**

The number of sheep-rearing households was 284 (1% of all agricultural households) with a total of 1,290 sheep giving an average of 4 heads of sheep per sheep-rearing household.

- **Pigs**

The number of pig-rearing households in the region was 703 (3.4% of the total agricultural households) rearing about 12,993 pigs. This gives an average of 18 pigs per pig-rearing household.

- **Chicken**

The number of households keeping chicken was 1,1424, raising 525,052 chicken. This gives an average of 46 chicken per chicken-rearing household. In terms of total number of chicken in the country Dar es Salaam ranked 21st of the 21 Mainland regions.

- **Use of Draft Power**

The region has 157 oxen and they were only found in one district, Temeke. Dar es Salaam region has 0.007 percent of the total 2,233,927 head of oxen found on the Mainland and were used to cultivate 289 hectares of land.

- **Fish Farming**

The number of households involved in fish farming was 22 (0.1 percent of the total agricultural households in the region). Temeke was the only district with 22 agricultural households involved in fish farming (0.1%). Fish farming was not practiced in Kinondoni and Ilala districts.

iv) Poverty Indicators

- **Availability of Toilets**

It was estimated that 83.6 percent of all rural agricultural households used the traditional pit latrines, 4.2 percent used improved pit latrine and 9.5 percent had flush toilets. The remaining 0.1 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 (44% of households) followed by bicycle (22%), iron (16%), wheelbarrow (5%), mobile phone (5%), television/video (4%), vehicle (3%) and landline phone (1%).

- **Source of Lighting Energy**

Wick lamp is the most common source of lighting energy in the region. About 51.9 percent of the total rural households used this source of energy followed by hurricane lamp (36.5%), pressure lamp (5.8%), mains electricity (5.4%), solar (0.2%), candle (0.2%), firewood (0%), and gas or biogas (0%).

- **Energy for Cooking**

The most prevalent source of energy for cooking was firewood, which was used by 82.1 percent of all rural agricultural households. The second most common source of energy for cooking was charcoal (15.2%) and parrafin/kerosene (1.3%). The rest of energy sources accounted for 0.9 percent. These were mains electricity (0.3%), crop residues (0.2%), gas/biogas (0.2%), solar (0.2%), bottled gas (0.1%), and none for livestock dung.

- **Roofing Materials**

The most used roofing material (for the main dwelling) was iron sheets and it was used by 61 percent of the rural agricultural households however, this was closely followed by grass and/or leaves (32.6%). Other roofing materials are grass/mud (3.1%), tiles (2.2%), asbestos (0.6%), concrete (0.4%) and other (0.1%).

- **Number of Meals per Day**

About 62.9 percent of the holders in the region took three meals per day, 31.9 percent took two meals, 4.7 percent took one meal and 0.5 percent took four meals.

- **Food Security**

Households which seldom had problems in satisfying their food needs represent 35 percent of the total number of agriculture households in the region. Households with recurring food shortage problems represent 13 percent whereas those with little problems represent 7 percent. About 6 percent of agriculture households always faced food shortages whilst 39 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 21.3 percent of all rural agricultural households. The second main cash income earning activity was selling of cash crops (20.2%), income from businesses (17.5%), casual labour (13.8%), wages and salaries (11.2%) and sale of livestock products (4.7%). Other income earning activities were cash remittances (4.5%), fishing (3%), income from other unspecified source (2.7%), sale of livestock (0.7%) and sale of forest products (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 a general understanding of the region and its resources.

1.2 Geographical Location and Boundaries

Dar es Salaam region is located at latitude 645 East. The region shares all its borders with Coast region except the Indian Ocean to the East. It occupies the area of 1,393 square kilometers or 0.2% of the whole Tanzania area where 448 sq. km. is occupied by the city of Dar es Salaam while 945 sq. km. is occupied by rural.

The region comprises three districts namely Kinondoni which occupies 247 sq. km., Ilala district 122 sq. km. and Temeke district 305 sq.km. The region headquarters is located in Ilala District.

1.3 Land Area

The region has an area of 1,800 square kilometers (incuding 8 small islands and its surrounding water area), of which 1,393 square kilometers are arable land.

1.4 Climate

1.4.1 Temperature

The dominant climate is warm and wet along the coast and inland of the Dar es Salaam region. In most cases, there is no big variation of temperature at the coast due to the influence of the Indian Ocean. The temperatures are high and humid. The coolest month is June with a minimum temperature of 20^0C. The hottest month is December with a maximum temperature of 32^0C.

1.4.2 Rainfall

The region has two rainy seasons, the short and the long rainy seasons. The short rainy season (Vuli) is from November to January, and the Long rainy season (Masika) from March to May.

In Dar es Salaam region, most areas get rainfall. The amount of rainfall is about 1,100 to 1,400mm along the coast, decreasing inland depending upon the slope position and height. The average rainfall is below 1,200 mm.

1.5 Population

According to the 2002 Population and Housing Census, there were 2,487,288 inhabitants in Dar es Salaam region. Kinondoni district 1083913 people, Ilala district 634924 and Temeke district 768451 people. The population of Dar es Salaam region ranked 3rd 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 1,589,543 million. The region held 1st position among regions on GDP and contributed about 16.2 percent to the national GDP[1]. Being also a city, Dar es Salaam is the highest industrially developed region. Most of the people are employed in the industrial sector. It is linked to the outside regions and the world by the port and the international airport (DIA). Railways and roads connect this region to other regions and to the neighbouring countries like Kenya and Zambia. There is a very good communications network connecting the region with other regions and the outside world.

The coastal area has many natural tourist attractions and has first class hotels with conference facilities.

The region is famous for producing both food and to a lesser extent, annual cash crops. The main food crops produced in Dar es Salaam region include: Cassava, Maize, Paddy, Sorghum and Sweet potatoes. The main permanent crops include coconuts, cashew nuts, mangoes, oranges and bananas. Livestock keeping is a moderate economic activity in the region.

[1] Hali ya Uchumi wa Taifa Katika Mwaka 2003

2. 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.

2.1 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).

2.2 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.

2.3 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 Dar es Salaam 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.

2.4 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.

2.5 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.

2.6 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.

2.6.1 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.

2.6.2 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.

2.6.3 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 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.

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

2.6.4 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.

2.6.5 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.

2.6.6 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.

2.6.7 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.

2.6.8 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.

2.6.9 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.

2.6.10 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.

2.6.11 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

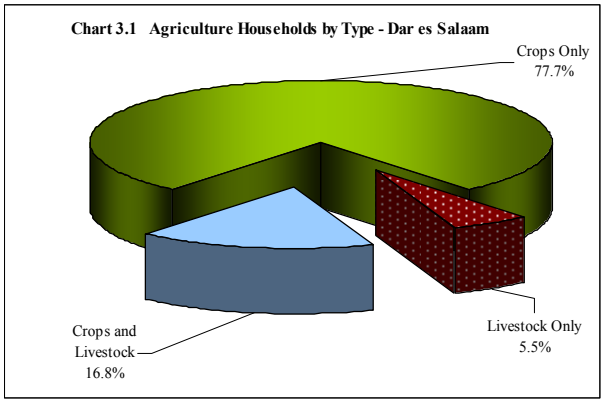
This part of the report presents the results of the census data for Dar es Salaam region which are based on the statistical tables presented in Appendix A2. The results are presented in different forms including brief summaries, charts, condensed tables, graphs and maps in order to make it easy for the 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 was 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 Households

The number of agricultural households in Dar es Salaam region was 20,394 out of which 15,844 (77.7%) were involved in growing crops only, 1,130 (5.5%) were rearing livestock only and 3,420 (16.8%) 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 - Dar es Salaam



3.1.2 Livelihood Activities/Source of Income

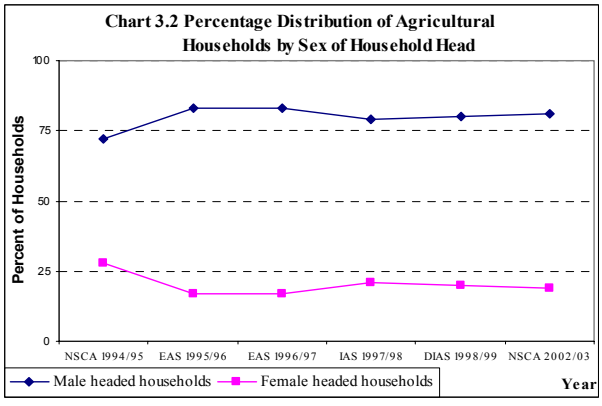
The census results for Dar es Salaam region indicate that most of the agricultural households ranked annual crop farming as an activity that provides most of their cash income followed by off farm income, permanent crop farming, tree/forest resources, livestock keeping/herding, remittances and fishing/hunting. (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	Remitt -ances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	2	3	5	1	6	7	4
Ilala	2	1	5	3	6	7	4
Temeke	1	2	5	3	7	6	4
Total	1	3	5	2	6	7	4

Kinondoni and Ilala were the only districts for which annual crop farming was not the most important source of livelihood, being replaced by off-farm income and permanent crop farming, respectively.

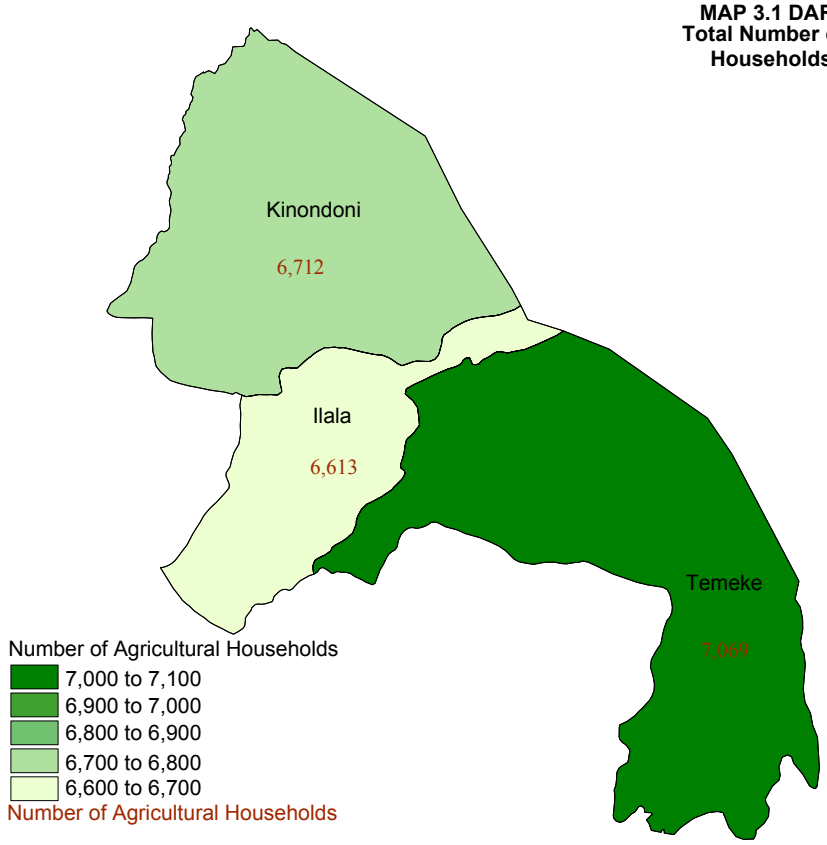
Chart 3.2 Percentage Distribution of Agricultural Households by Sex of Household Head



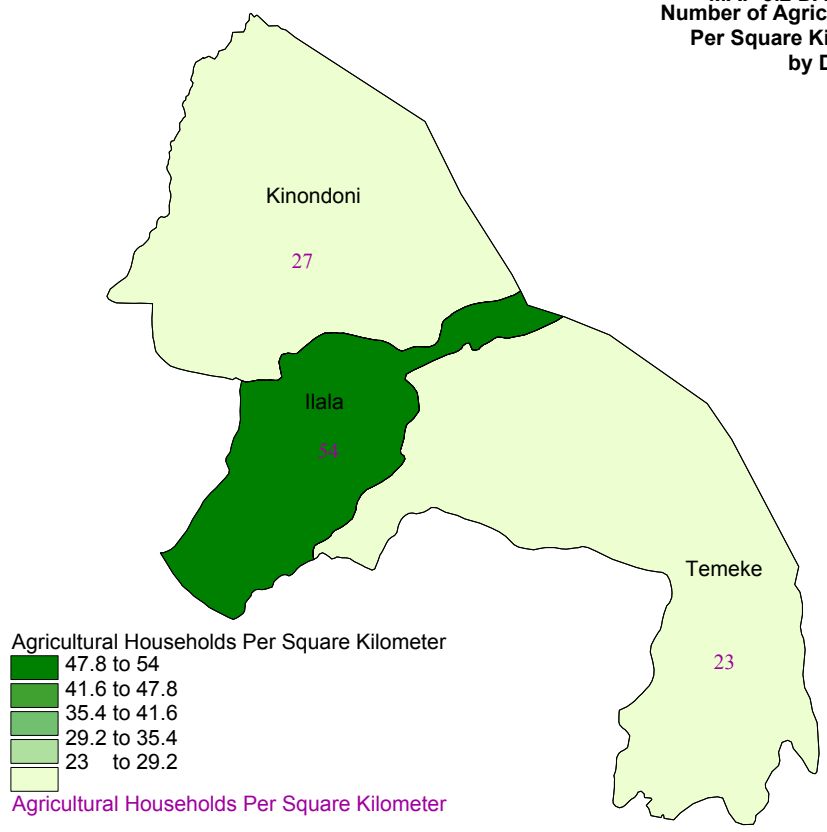
3.1.3 Sex and Age of Heads of Households

The number of male-headed agricultural households in Dar es Salaam region was 16,611, 81% of the total regional agricultural households) whilst the female-headed households it was 3,783 (19%). (Chart 3.2).

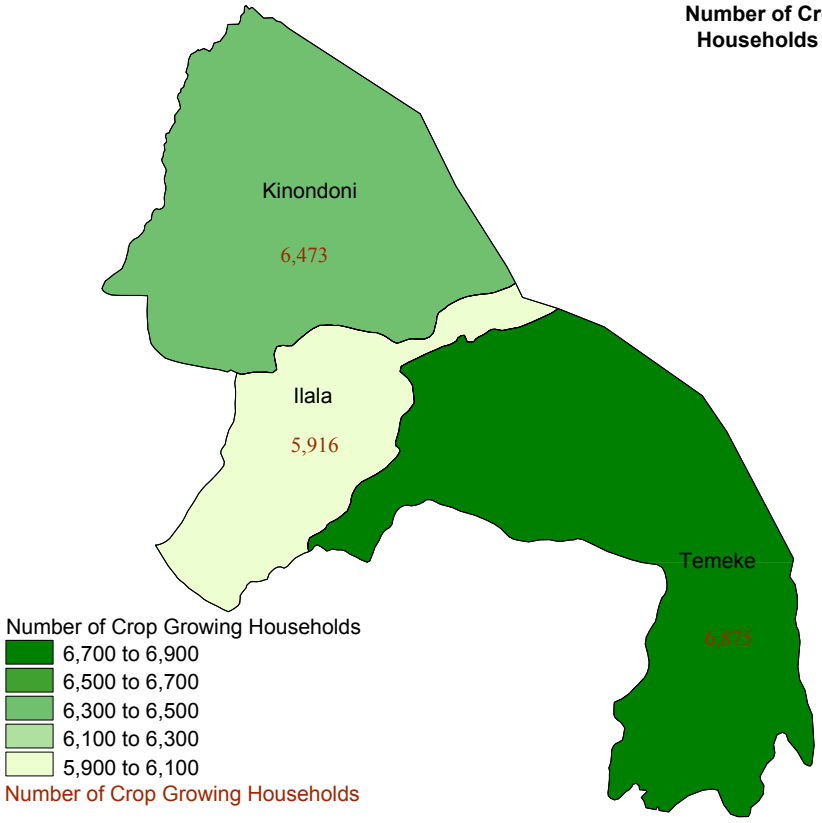
MAP 3.1 DAR ES SALAAM
Total Number of Agricultural Households by District



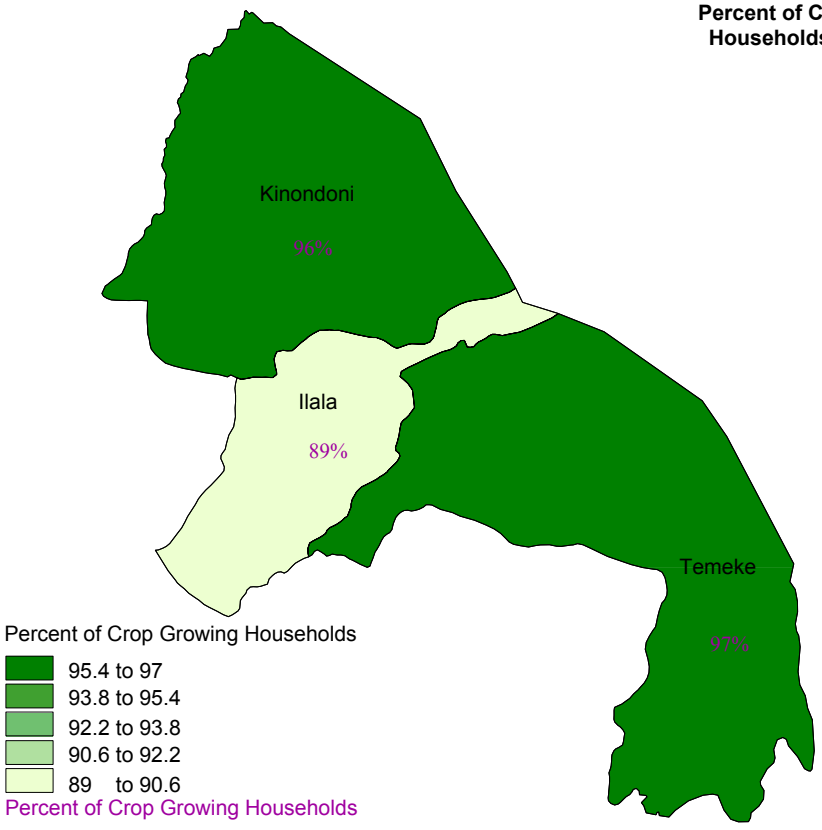
MAP 3.2 DAR ES SALAAM
Number of Agricultural Households Per Square Kilometer of Land by District



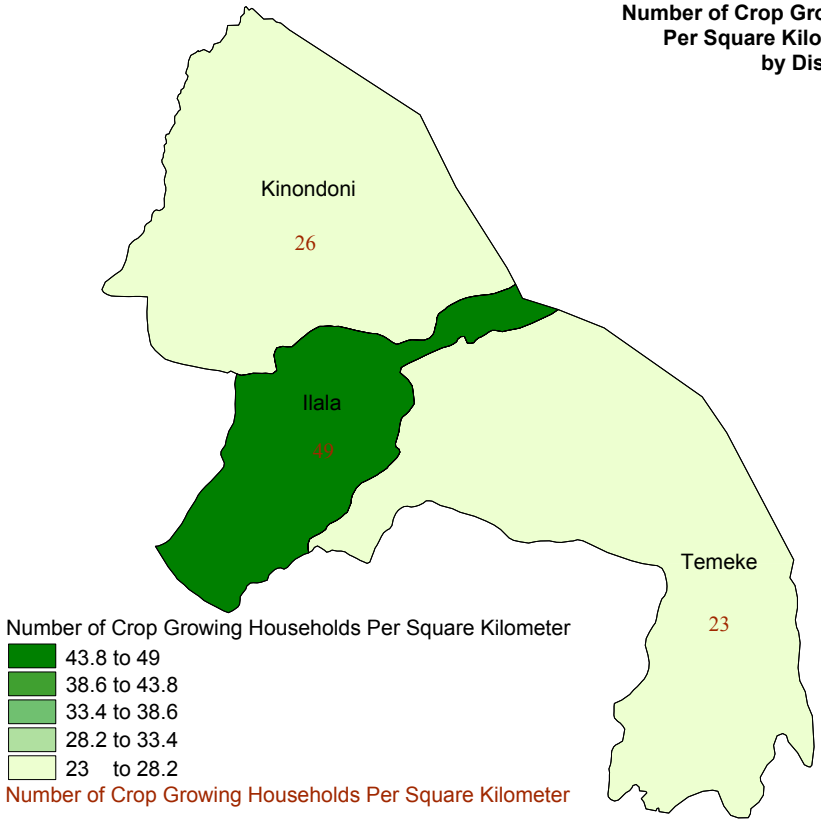
MAP 3.3 DAR ES SALAAM
Number of Crop Growing Households by District



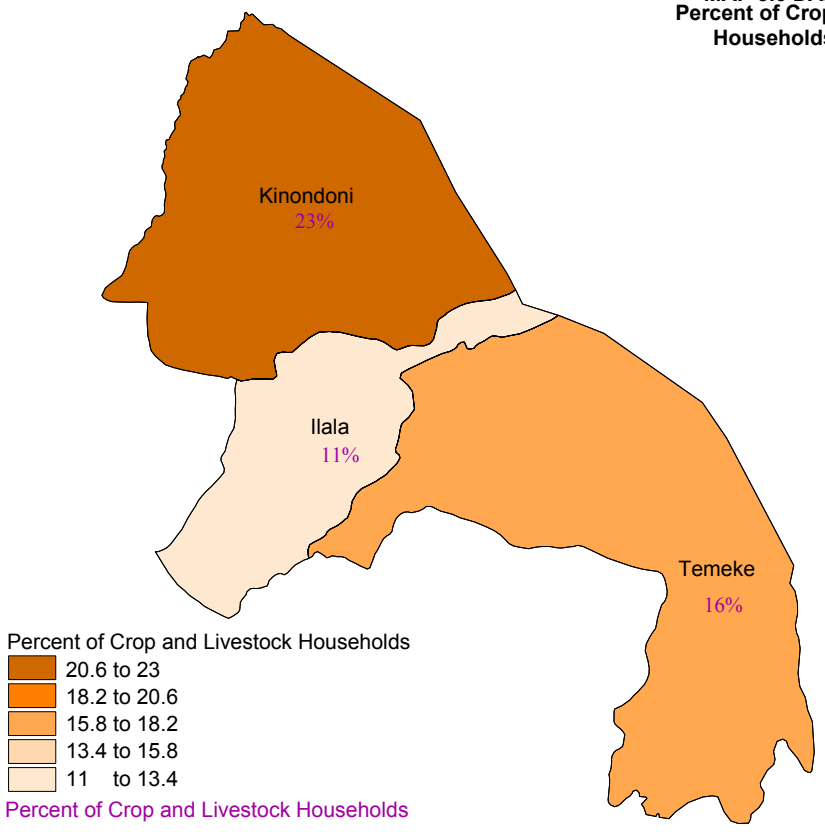
MAP 3.4 DAR ES SALAAM
Percent of Crop Growing Households by District



MAP 3.5 DAR ES SALAAM
Number of Crop Growing Households Per Square Kilometer of Land by District

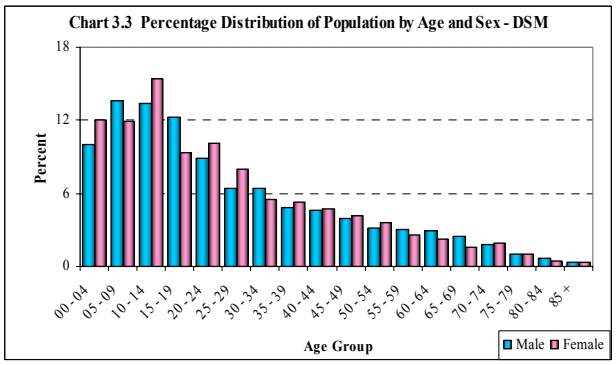


MAP 3.6 DAR ES SALAAM
Percent of Crop and Livestock Households by District



3.1.4 Number and Age of Household Members

Dar es Salaam region had a total rural agricultural population of 99,030 of which 50,030 (51%) were males and 49,000 (49%) were females. Whereas age group 0-14 constituted 38 percent of the total rural agricultural population, age group 15–64 (active population) constituted 56 percent of the total population. Dar es Salaam region had an average household size of 5 with Kinondoni district having the lowest household size of 4. The mean age of household heads is 48 years (47 years for male heads and 54 years for female heads) (Chart 3.3).

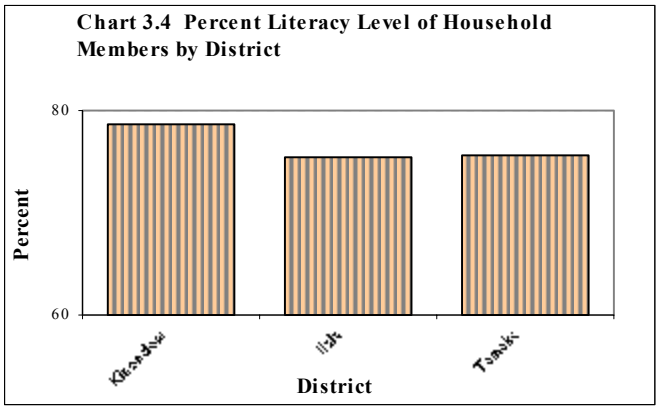


3.1.5 Level of Education

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.

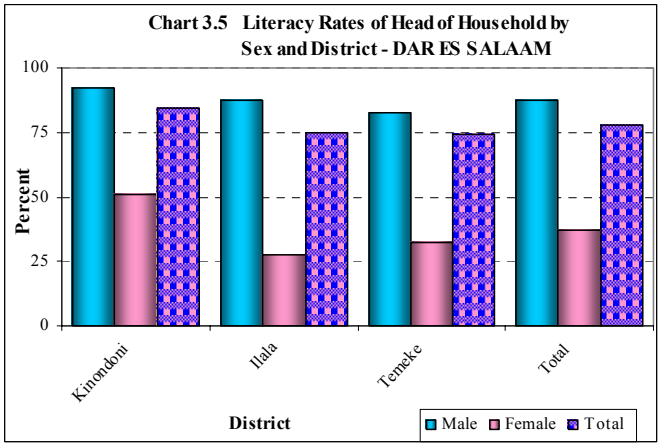
Literacy

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

Dar es Salaam region had a total literacy rate of 76 percent. The highest literacy rate was found in Kinondoni district (79%) followed by Temeke district (76%). Ilala district had the lowest literacy rate of 75 percent. (Chart 3.4).



Literacy Rates for Heads of Households

The literacy rate for the heads of households in the region was 78 percent. The literacy rates for male and female heads of households were 87 and 37 percent respectively. Male heads' literacy rate was higher than that of female heads in all districts. The district with the highest literacy rate amongst heads of households was Kinondoni (84%), followed by Ilala (75%) and Temeke (74%). (Chart 3.5).

Educational Status

Information on educational status was collected from individual agricultural households. The results show that in agricultural households in the region 47 percent of the population aged 5 years and above had completed different levels of education and 30 percent was still attending school. Those who had never attended school were 23 percent (Chart 3.6).

Chart 3.6 Percentage of Population Aged 5 Years and Above by Education Status

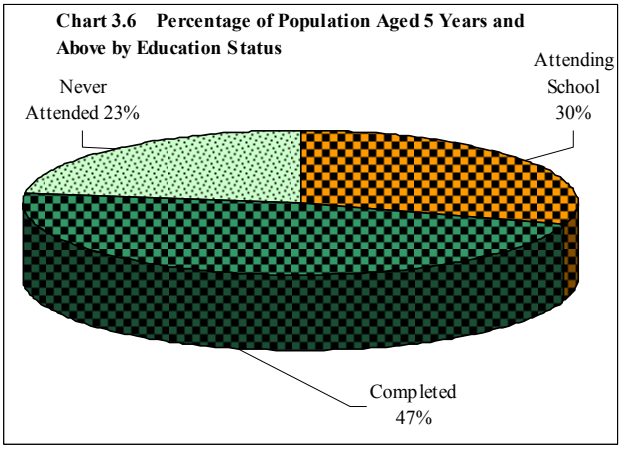
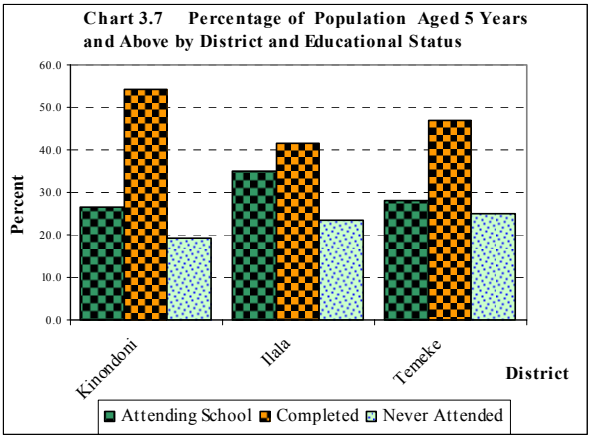


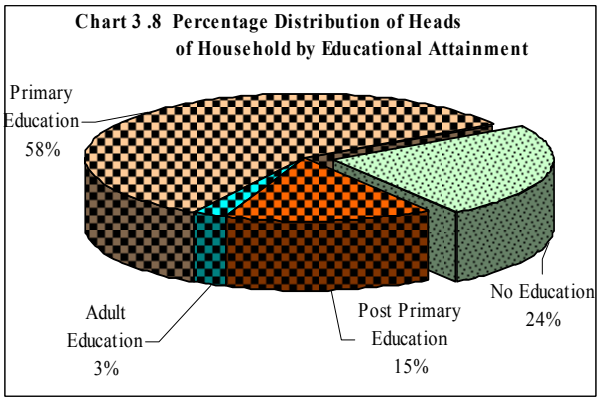
Chart 3.7 Percentage of Population Aged 5 Years and Above by District and Educational Status



Agricultural households in Kinondoni district had the highest percentage (54%) of population aged 5 years and above who had completed different levels of education. This was followed by Temeke district with 47 percent. Ilala district had the lowest percentage of 42. (Chart 3.7)

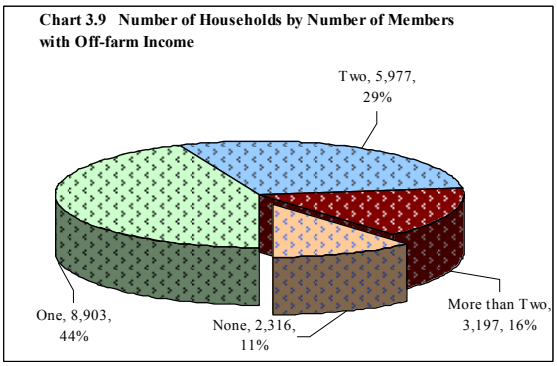
The number of heads of agricultural households with formal education in Dar es Salaam region was 14,970 (73%), those without any education were 4,907 (24%) and those with only adult education were 517 (3%). The majority of heads of agricultural households (58%) had primary level education whereas only 15 percent had post primary education. (Chart 3.8).

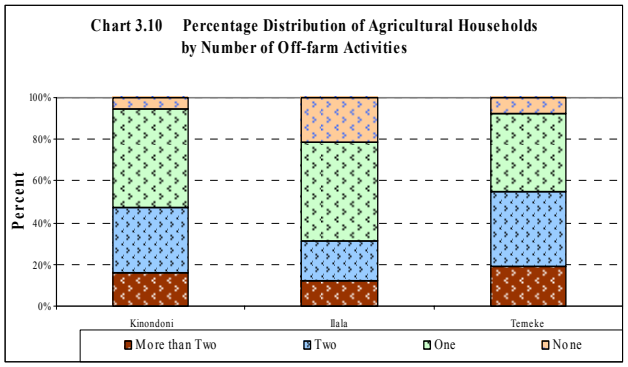
Chart 3 .8 Percentage Distribution of Heads of Household by Educational Attainment



With regard to the heads of agricultural households with primary or secondary education in Dar es Salaam region, Kinondoni district had the highest percentages (28% for primary and 6% for secondary). This was followed by Ilala disrict (29% primary and 5% secondary). Temeke district had the lowest percentages for heads of agricultural households with both primary education (28%) and secondary education (5%).

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 Dar es Salaam with 89 percent of households having at least one member with off-farm income. In Dar es Salaam region 8,903 households (44%) had only one member aged 5 and above involved in only one off-farm income generating activity, 5,977 households (29%) had two members involved in off-farm income generating activities and 3,197 households (16%) had more than two members involved in off-farm income generating activities. (Chart 3.9)

Kinondoni and Temeke districts had high percentages of agriculture households with off-farm income (over 90% of total agriculture households in the district). Ilala district had 79 percent of agriculture households with off-farm income. (Chart 3.10)

3.2 Land Use

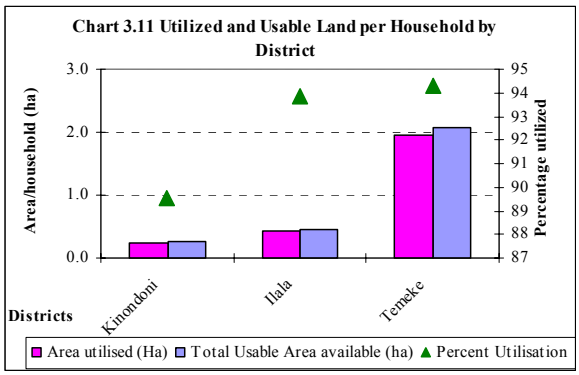
Land area and planted area are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on the land in one year. Planted area is the total area of crops planted in a year and this area is summed if there were more than one crop on the same land in a 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, instead, 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 Area of Land Utilised

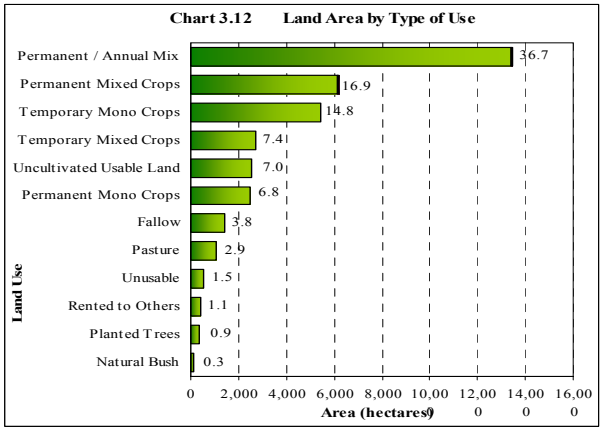
The total area of land available to smallholders was 36,551 ha. The Regional average land area utilised for agriculture per household was only 0.4 ha. This figure is below the national average which is estimated at 2.0 hectares. Ninety three percent of the total land available to smallholders was utilised. Only 0.5 percent of usable land available to smallholders was not used (Chart 3.11).



Large differences in land area utilised per household exist between districts with Temeke and Ilala utilizing between 2.0 and 0.4 ha respectively per household. The smallest land area utilised per household is found in Kinondoni (0.2 ha). The percentage utilized of the usable land per household is same for Temeke and Ilala districts (94%) and lowest in Kinondoni (90%). Only 7 percent of usable land available to smallholders was not used. (Chart 3.11).

3.2.2 Types of Land Use

The area of land under permanent/annual mix was 13,408 hectares (36.7% of the total land available to smallholders in Dar es Salaam), followed by permanent mixed crop (6,160 ha, 16.9%), temporary monocrop (5,417 ha, 14.8%) temporary mixed crops (2,716 ha, 7.4%), uncultivatable usable land (2,550 ha, 7.0%), permanent monocrop (2,474 ha, 6.8%), area under pasture (1,059 ha, 2.9%) unusable area (533 ha, 1.5%) area rented to others (392 ha, 1.1%) area planted with trees (330 ha, 0.9%) and area under natural bush (123 ha, 0.3%). (Chart 3.12)

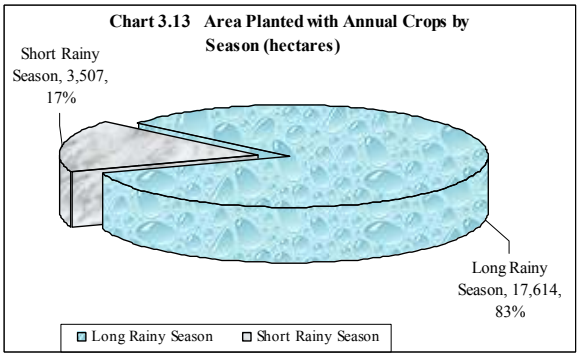


3.3 Annual Crops and Vegetable Production

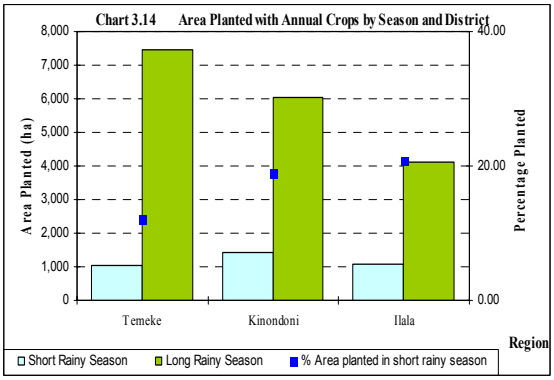
Dar es Salaam region has two rainy seasons, namely the short rainy season (November to January) and the long rainy season (March to May). The quantity of crops produced in both seasons will be used as a base for comparison with the past surveys and censuses.

3.3.1 Area Planted

The area planted with annual crops and vegetables was 21,121 hectares out of which 3,507 hectares (16.6%) were planted during short rainy season and 17,614 hectares (83.4%) during long rainy season. The average areas planted per household during the short and long rainy seasons was 0.3 and 0.4 ha respectively (Chart 3.13). The districts with the largest area planted per household (the average of the two seasons) were Temeke (0.5 ha) followed by Kinondoni (0.4 ha).

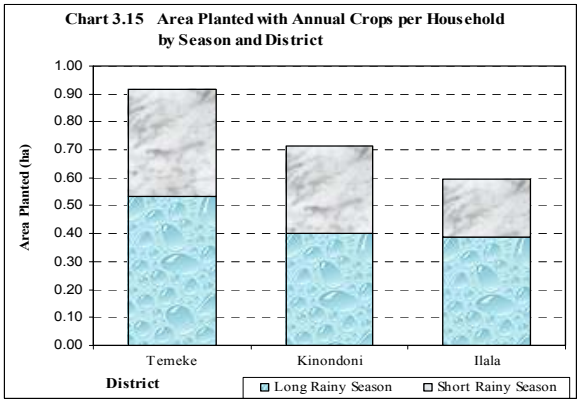


The district with the smallest average area planted was Ilala (0.3ha). While in Kinondoni and Ilala districts the average area planted during the short rainy season is higher than that of the long rainy season the reverse is true in the remaining district (Chart 3.14 and Map 3.8).



The planted area occupied by roots and tubers was 9,143 hectares (43.3% of the total area planted with annuals). This was followed by cereals 7,737 ha, 36.6%) pulses (2,171 hectares, 10.3%), fruits and vegetables (1,918 hectares, 9.1%), oil seeds (152 hectares, 0.7%). There were no annual cash crops in all the districts.

The average area planted per household during the long rainy season in Dar es Salaam region was 0.44 hectares, however, there were fairly small district differences. Temeke had the largest planted area per household (0.53 ha) followed by Kinondoni (0.4 ha). The smallest planted area per household is in Ilala (0.39 ha). In Kinondoni the area planted per household in the short rainy season represents 40.2 percent of the region's planted area per household, whereas in Temeke the corresponding figure is 29 percent (Chart 3.15). and Map 3.9).

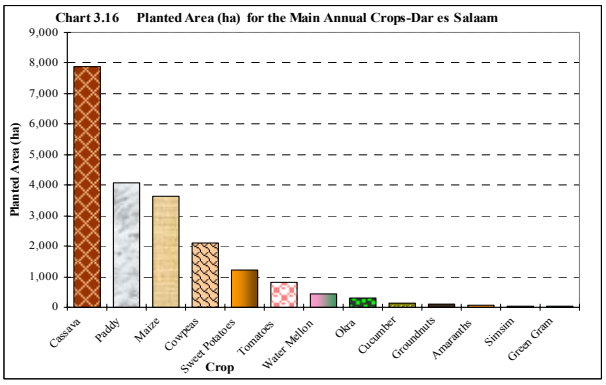


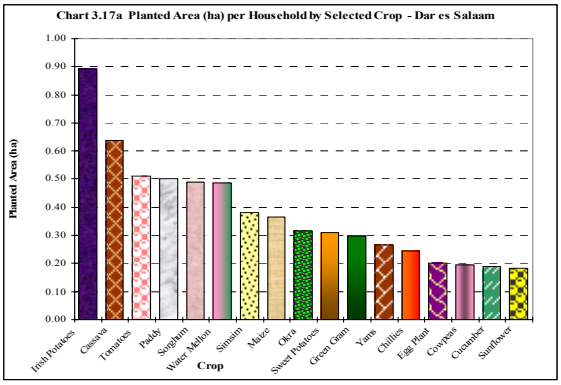
Analysis of the Most Important Crops

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

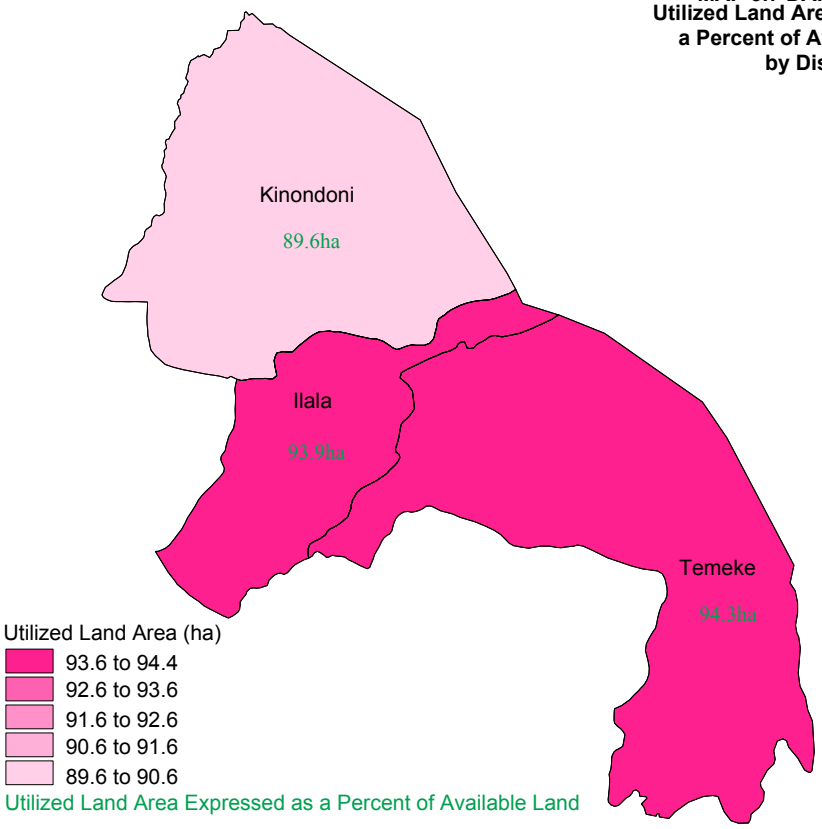
3.3.2 Crop Importance

Cassava is the dominant annual crop grown in Dar es Salaam region and it had a planted area 1.9 times greater than paddy which had the second largest planted area. The area planted with cassava constitutes 37 percent of the total area planted with annual crops in the region. Other crops in order of their importance (based on area planted) are maize, cowpeas, sweet potatoes, tomatoes and water melon (Chart 3.16).

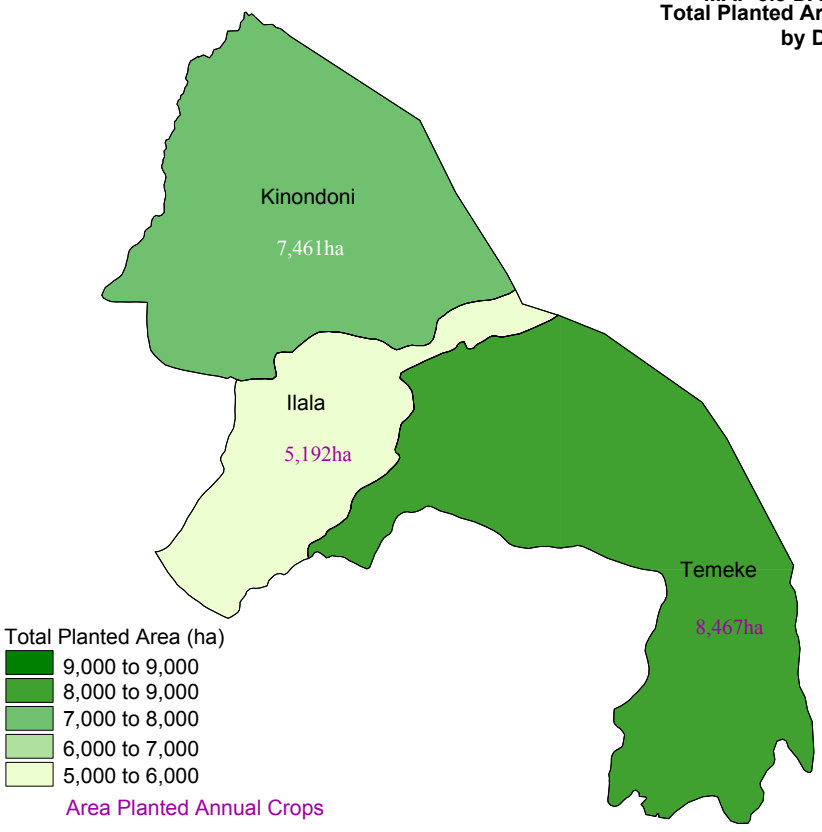




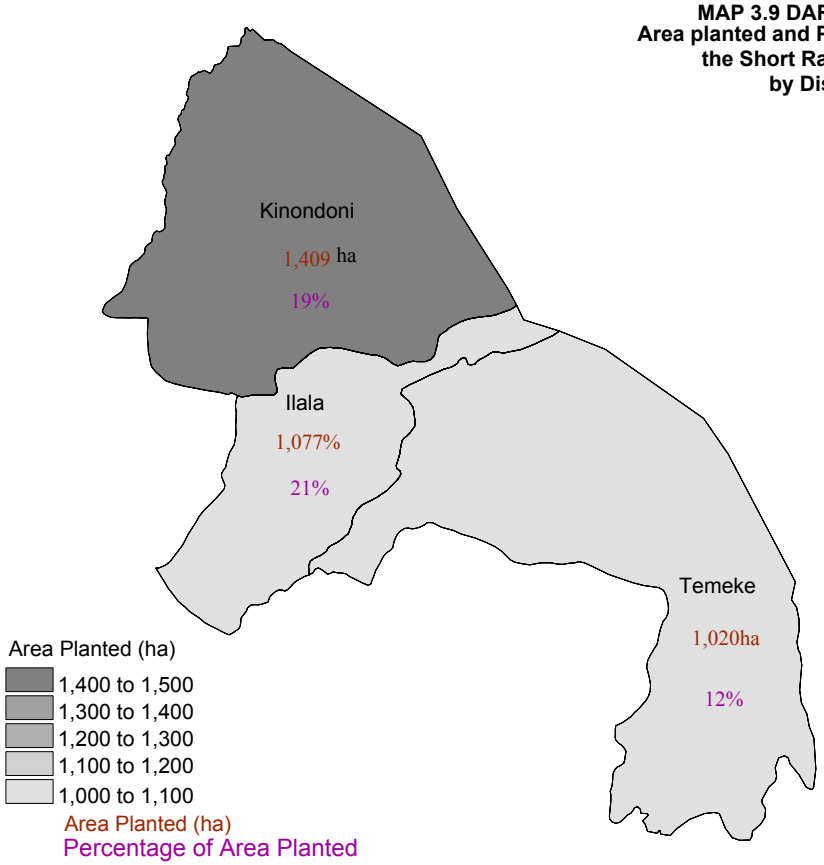
MAP 3.7 DAR ES SALAAM
Utilized Land Area Expressed as a Percent of Available Land by District



MAP 3.8 DAR ES SALAAM
Total Planted Area (Annual Crops) by District



MAP 3.9 DAR ES SALAAM
Area planted and Percentage During the Short Rainy Season by District



MAP 3.10 DAR ES SALAAM
Area Planted With Cereals and Percent of Total Land Planted With Cereals by District

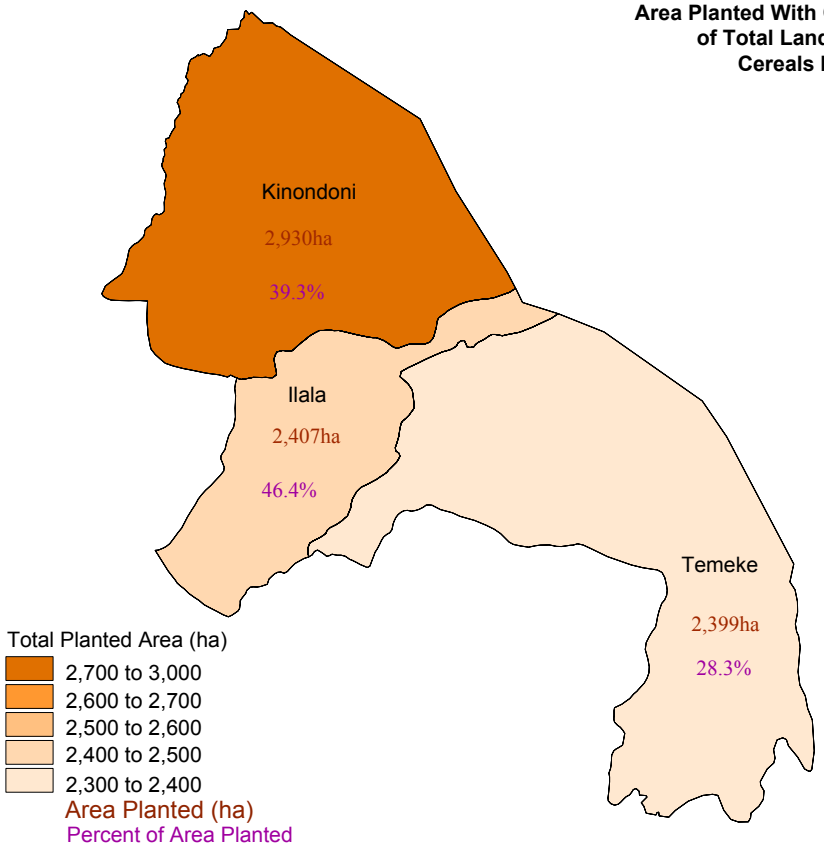
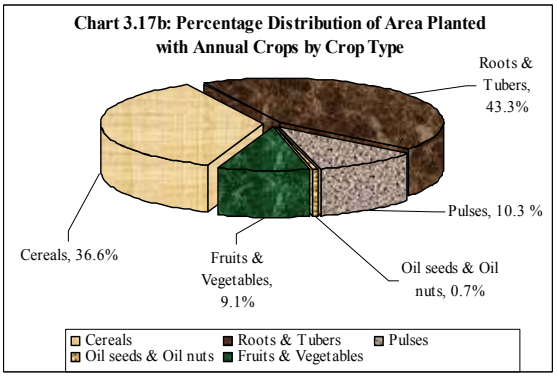
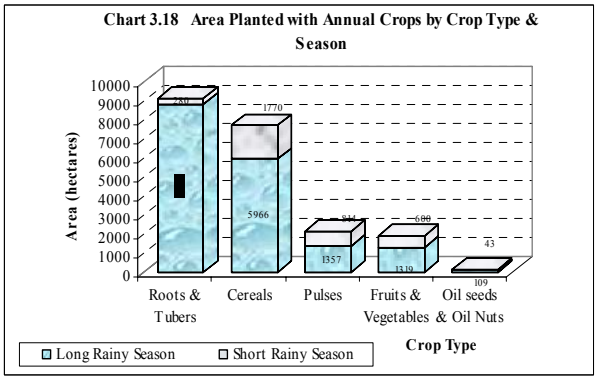


Chart 3.17a shows the area planted per household growing the selected crops. Households that grow Irish potatoes, cassava and tomatoes have larger planted areas per household.

3.3.3 Crop Types

Roots and Tubers are the main crops grown in Dar es Salaam region. The area planted with roots and tubers was 9143 ha





(43.3% of the total planted area), followed by cereals with 7,736 ha (36.6.0%), pulses 2,171 ha (10.3%), fruits and vegetables 1,919 ha (9.1%) and oil seeds 152 ha (0.7%). No cash crops were reported. (Chart 3.17b).

Roots and tubers and cereals, are the dominant crops in both seasons 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).

3.3.4 Cereal Crop Production

The total production of cereals was 2,869 tonnes. Paddy was the dominant cereal crop at 1,900 tonnes accounting for 66 percent of total cereal crops produced, followed by maize (33.4%) and lastly, sorghum (0.4%).

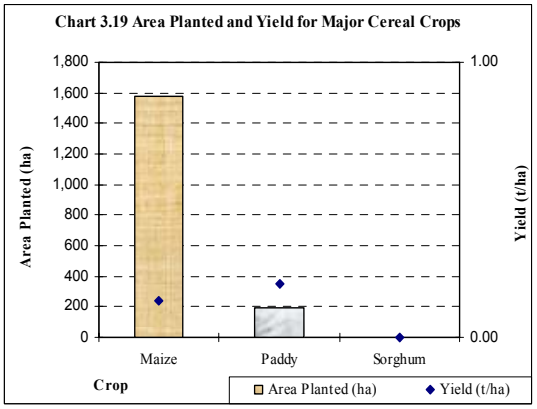
Table 3.2: Area, Production and Yield of Cereal Crops by Season

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Maize	1,576	213	135	2,060	746	362	3,635	959	264
Paddy	195	38	197	3,872	1,861	481	4,067	1,900	467
Sorghum	0	0	0	34	11	320	34	11	320
Total	**1,770**	**251**		**5,966**	**2,618**		**7,736**	**2,869**	

The total area planted with cereals during the short and long rainy seasons was 7,736 ha out of which 1,770 ha (23.0%) were planted in short rainy season and 5,966 ha (77%) were planted during the long rainy season. The long rainy season accounts for 91 percent of the total cereals produced in both seasons. The area planted with maize during the short rainy season was 89 percent of the total area planted with cereals in that season followed by Paddy (11%) and none for sorghum. (Table 3.2).

Paddy had the largest planted area accounting for 53 percent of the total area planted with cereal crops. It was followed by maize (47%), and then sorghum (0.4%).

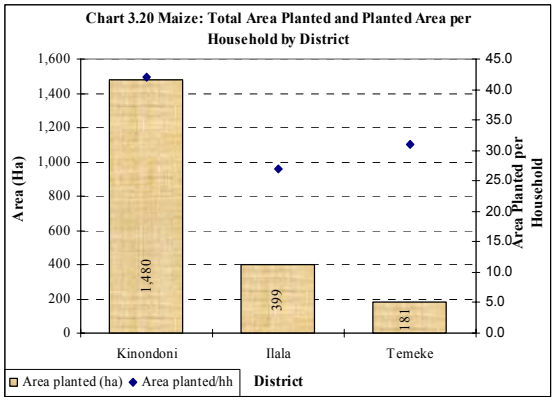
The yield of paddy was 467 kg/ha, followed by maize (264 kg/ha) and sorghum (320 kg/ha). Bulrush millet, finger millet, wheat, and barley were not grown in the region (Chart 3.19).



3.3.4.1 Maize

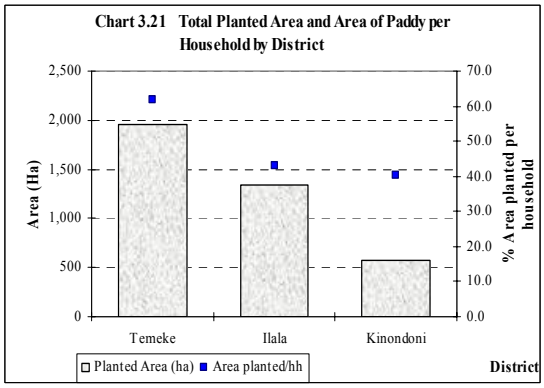
Maize was the second most important cereal crop in the region in terms of planted area. The number of households growing maize in Dar es Salaam region during the long rainy season was 5,577, (42% of the total crop growing households in the region during the long rainy season). The total production of maize was 959 tonnes from a planted area of 3,635 hectares resulting in a yield of 0.26 t/ha.

The average area planted with maize per household was 0.36 hectares, however it ranged from 0.29 hectares in Ilala district to 0.43 hectares in Kinondoni district. Kinondoni district had the largest area of maize (2,328 ha) followed by Ilala (1,055 ha), and Temeke (252 ha). (Chart 3.20 and Map 3.11).



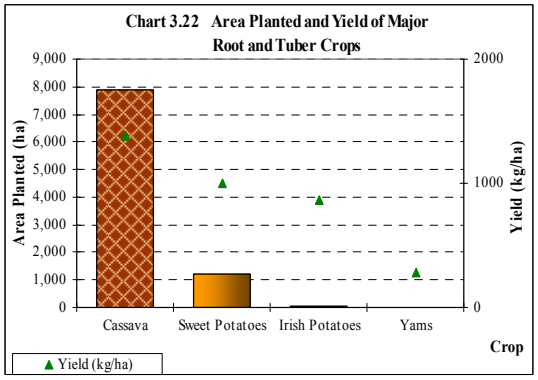
3.3.4.2 Paddy

Paddy dominates the production of cereal crops in the region. The number of households that grew paddy in Dar es Salaam region during the long rainy season was 7,705. This represents 58 percent of the total crop growing households in Dar es Salaam region in the long rainy season. The total production of paddy was 1,900 tonnes from a planted area of 4,067 hectares resulting in a yield of 0.5 t/ha. The district with the largest area planted with Paddy was Temeke (2,130 ha) followed by Ilala (1,352 ha), and lastly, Kinondoni (586 ha) Map 3.13. There are small insignificant variations in the average area planted per crop growing household among the districts ranging from 0.33 ha in Ilala to 0.5 ha in Temeke (Chart 3.21 and Map 3.14).



3.3.4.3 Other Cereals

Fingermillet and wheat were not produced by the agricultural households in all three districts. A small quantity of Sorghum is produced in Temeke (17 ha). Although Kinondoni district planted 11 hectares with sorghum, no single ton was harvested. Sorghum was not recorded in Ilala district.



3.3.5 Roots and Tuber Crops Production

The total production of roots and tubers was 12,162 tonnes. Cassava production was higher than any other root and tuber

crop in the region with a total production of 10,901 tonnes representing 89.6 percent of the total root and tuber crops production. This was followed by sweet potatoes with 1,231 tonnes (10.1%), Irish potatoes (27t, 0.2%), and yams (4t, 0.03%) (Table 3.3). The area planted with cassava was larger than any other root and tuber crops and it was the most important crop in Dar es Salaam region in terms of planted area (37.2% of the total area planted with annual crops and vegetables) and it accounted for 86 percent of the area planted with roots and tubers, followed by sweet potatoes (13.5%), Irish potatoes (0.34%), and yams (0.2%). (Chart 3.22).

Table 3.3: Area, Production and Yield of Root and Tuber Crops by Season

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)
Cassava	29	5	163	7,834	10,896	1391	7,863	10,901	1386
Sweet Potatoes	245	195	796	989	1,036	1047	1,235	1,231	997
Irish Potatoes	0	0	0	31	27	865	31	27	865
Yams	6	3	567	8	1	79	14	4	276
TOTAL	**280**	**203**		**8,863**	**11,959**		**9,143**	**12,162**	

Note: Cassava is produced in both the long and short rainy season. However, it was not possible to separate cassava production in the different growing seasons as the growth period spans both seasons and even over a year in certain varieties. Because of this, cassava has been combined and is reported in the long rainy season only.

The total production of cassava was reported under both rainy seasons. Excluding cassava, 14 percent of the area planted with roots and tubers was during the long rainy season with Irish potatoes having 100 percent of its production in the long rainy season. The percentage of yams produced during the short rainy season was estimated at 75 percent of total yams production in the region.

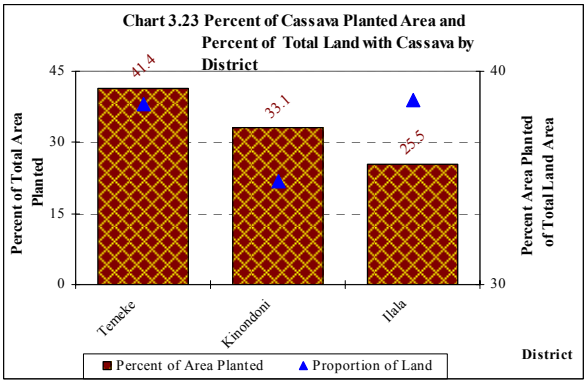
The total production of roots and tubers was estimated at 12,162 tonnes. Cassava with an estimate of 10,901 tonnes was the most important root and tuber crop. It accounted for 89.6 percent of the total roots and tubers production, followed by sweet potatoes with 1,231 tonnes (10.1%), Irish potatoes with 27 tonnes (0.2%), and yams with 4 tonnes (0.03%).

The estimated yield was high for cassava (1.4 t/ha), followed by sweet potatoes (1.0 t/ha), Irish potatoes (0.9 t/ha) and yams (0.3 t/ha).

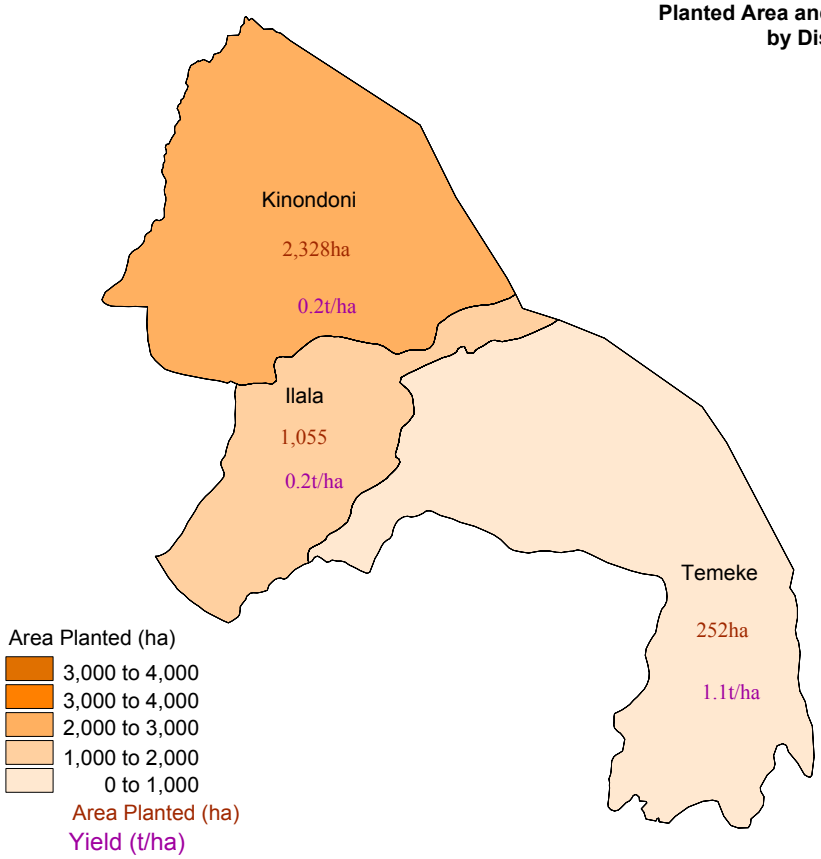
3.3.5.1 Cassava

The number of households growing cassava in the region was 12,318. This represents 24 percent of the total crop growing households in the region. The total production of cassava during the census year was 10,901 tonnes from a planted area of 7,863 hectares resulting in a yield of 1.4t/ha.

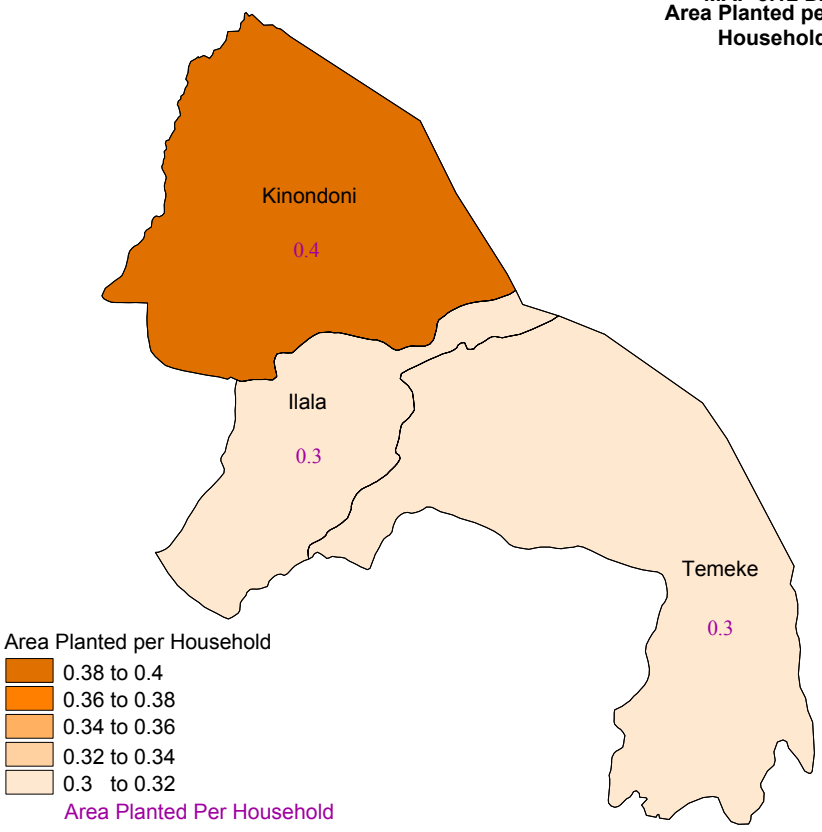
The area planted with cassava accounted for 37 percent of the total area planted with annual crops and vegetables in the census year. Temeke district had the largest planted area of cassava (3,256 ha, 41% of the cassava planted area in the region), followed by Kinondoni (2,601 ha, 33%), and Ilala (2,006 ha, 26%). However, the highest proportion of land planted with cassava, expressed as a percent of the total land area (21,121 ha) was in Temeke district (15%). This was followed by Kinondoni (12%) and Ilala (9%) (Chart 3.23).



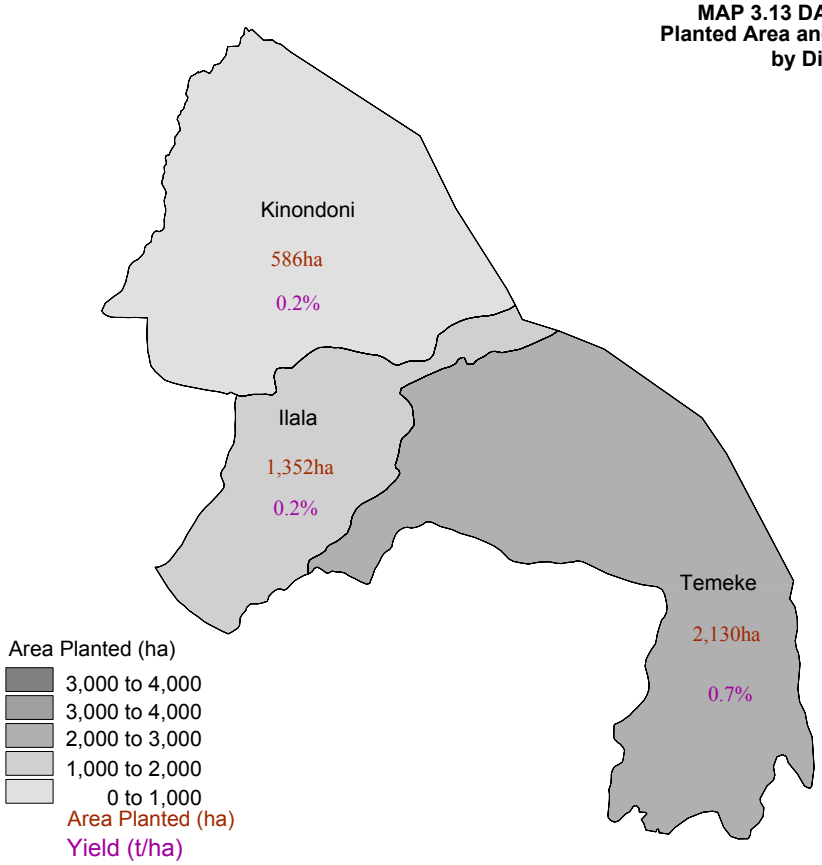
MAP 3.11 DAR ES SALAAM
Planted Area and Yield of Maize by District



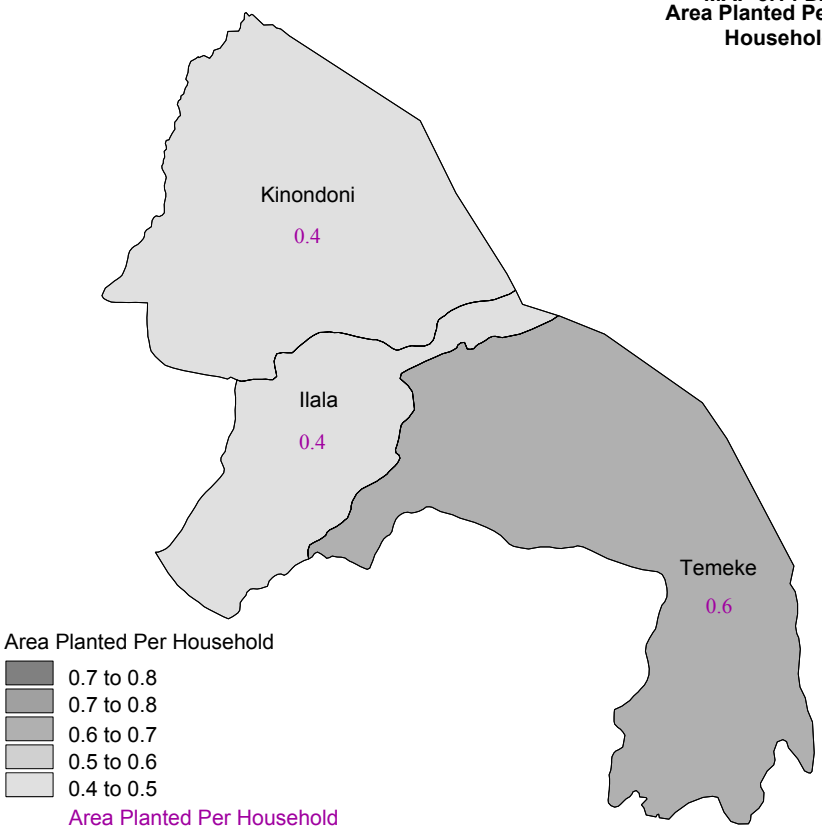
MAP 3.12 DAR ES SALAAM
Area Planted per Maize Growing Household by District



MAP 3.13 DAR ES SALAAM
Planted Area and Yield of Paddy by District



MAP 3.14 DAR ES SALAAM
Area Planted Per Paddy Growing Household by District



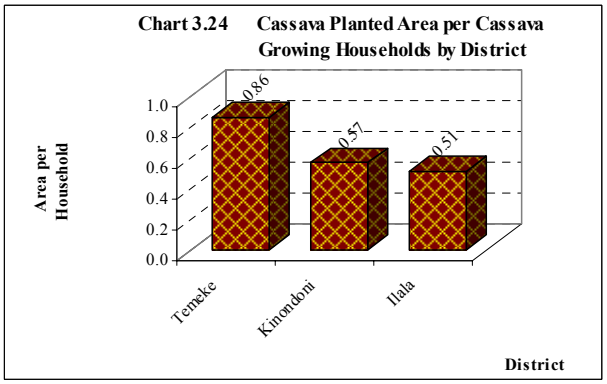
The average cassava planted area per cassava growing household was 0.6 hectares. However, there were small district variations. The area planted per cassava growing household was greatest in Temeke (0.9 ha). This was followed by Kinondoni (0.6 ha) and Ilala (0.5 ha) (Chart 3.24).and Map 3.16).

3.3.5.2 Irish Potatoes

The number of households growing Irish potatoes in Dar es Salaam region was 35. This was 0.4 percent of the total root and tuber crop growing households during the long rainy season. The total production of Irish potatoes during the census year was 27 tonnes from a planted area of 31 hectares resulting in a yield of 0.9t/ha. Temeke was the only district growing Irish potatoes in the region. Other root and tuber crops were more important in terms of area planted compared to yams and Irish potatoes.

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

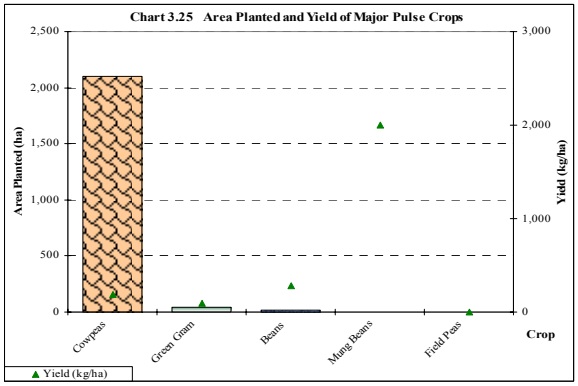
Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Mung Beans	2	5	2500	1	1	1000	3	6	2000
Beans	1	1	1000	20	5	250	21	6	286
Cowpeas	799	76	95	1302	328	252	2101	404	192
Green Gram	12	2	167	30	3	100	43	4	93
Field Peas	0	0	0	3	0	0	3	0	0
TOTAL	**814**	**84**		**1356**	**337**		**2171**	**420**	



3.3.6 Pulse Crops Production

The total area planted with pulses was 2,170 hectares out of which 2,101 ha were planted with cowpeas (97 percent of the total area planted with pulses), followed by green grams (43 ha, 2%), beans (21 ha, 1%), mung beans (3 ha, 0.1%) and field peas (3 ha, 0.1%). Pigeon peas, bambara nuts, and chick peas were not cultivated in the region.

The area planted with pulses in the short rainy season was 814 ha which represented 37.5 percent of total area planted with pulses during the year. Cow peas was the most dominant crop during long rainy season with a planted area of 1,302 ha (96% of the total area planted with pulses in that particular season), followed by green grams (30 ha, 2.2%), beans (20 ha, 1.5%) and field peas 3 ha (0.2%) and mung beans 1 ha, (0.1%).

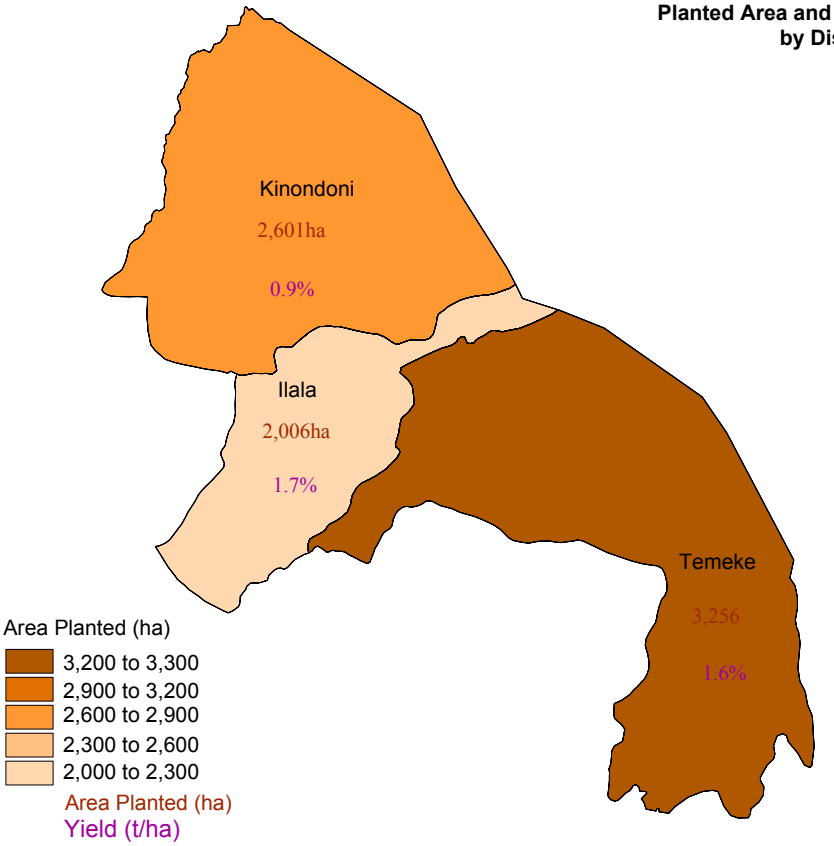


The total production of pulses was 420 tonnes. Cow peas were the most cultivated crop producing 404 tonnes which accounted for 96 percent of the total pulse production. This was followed by beans (6t, 1.4%), mung beans (6t, 1.4%), green grams (4t, 1.0%). Mung beans and beans had relatively higher yields of 2,000 and 286 kgs/ha respectively. The yields of the rest of the pulses in kilograms per hectare were cow peas 192 kgs/ha and green gram 93 kgs/ha. (Chart 3.25).

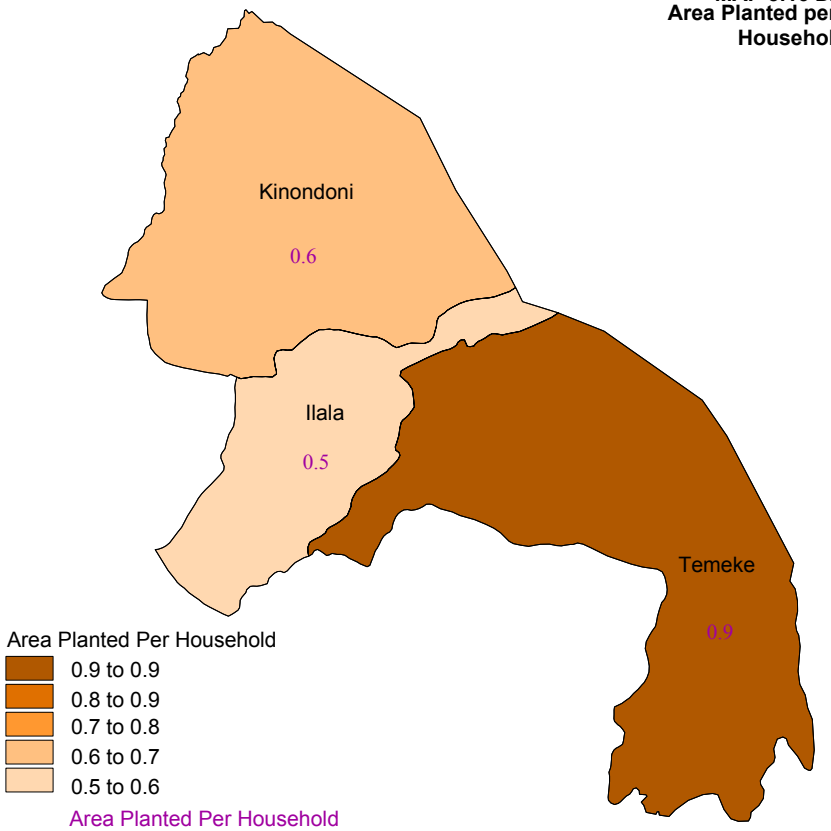
3.3.6.1 Beans

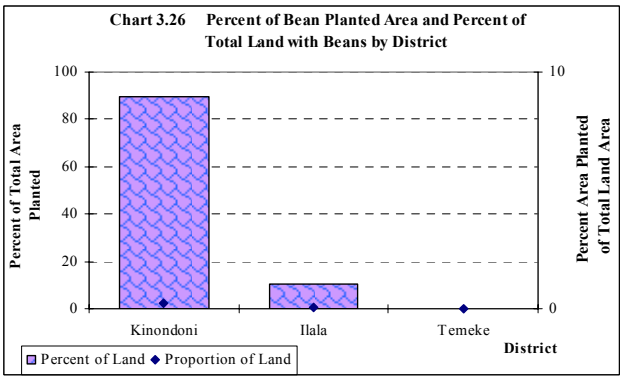
Beans was the second crop in the production of pulse crops in the region. The number of households growing in Dar es Salaam region was 168. The total production of beans in the region was 6 tonnes from a planted area of 21 hectares Resulting in a yield of 0.3 t/ha.

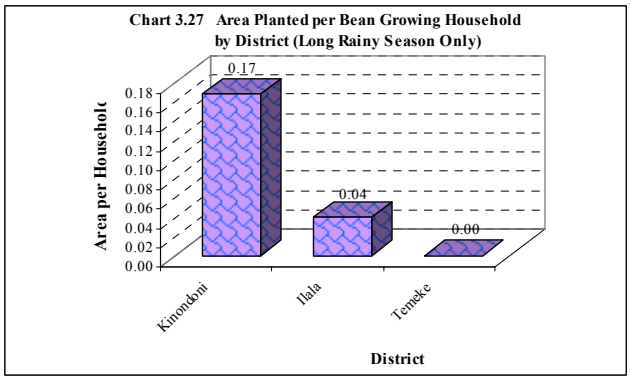
MAP 3.15 DAR ES SALAAM
Planted Area and Yield of Cassava by District



MAP 3.16 DAR ES SALAAM
Area Planted per Cassava Growing Household by District







The largest area planted with beans in the region (19 ha, 90.5%) was in Kinondoni district (Chart 3.26), however, the largest area planted with beans per household was in –Kinondoni district (0.17 ha) (Chart 3.27). The average area planted per household in the region during the long rainy season was 0.1 ha. The only other district with beans production was Ilala, 0.04 ha.

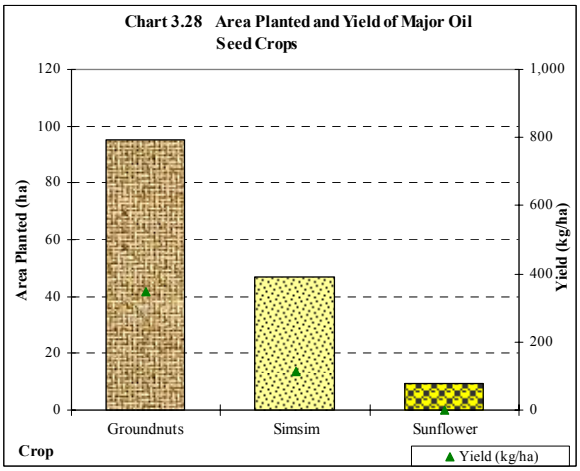
3.3.7 Oil Seed Production

The total production of oilseed crops was 38 tonnes planted on an area of 152 hectares.. The total planted area of oilseeds in the long rainy season was 109 ha representing 72 percent of the total area planted with oil seeds.

Table 3.5: Area, Quantity Harvested and Yield of Oil Seed Crops by Season

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)
Sunflower	10	0	0	0	0	0	10	0	0
Simsim	0	0	0	47	5	114	47	5	114
Groundnuts	33	12	366	62	21	336	95	33	346
Total	**43**	**12**		**109**	**26**		**152**	**38**	

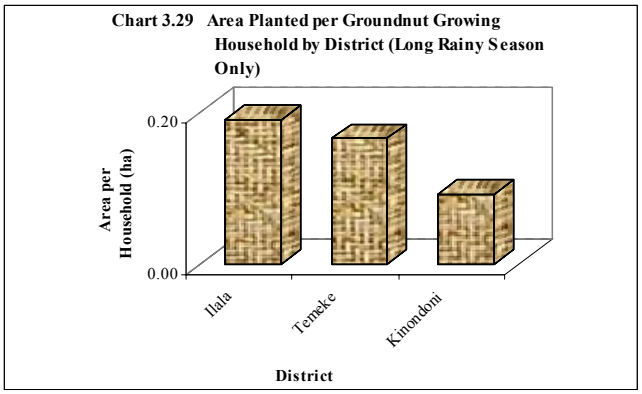
Groundnuts were the most important oilseed crop with 95 ha (63% of the total area planted with oil seeds), followed by simsim (31%), and sunflower (7%), (Chart 3.28). The yield of groundnuts was fairly significant (0.3 t/ha). simsim had a yield of 0.1 t/ha. Although there were efforts by 52 households in Ilala district to cultivate sunflower on a planted area of 10 ha, the yield was 0, nothing was harvested.

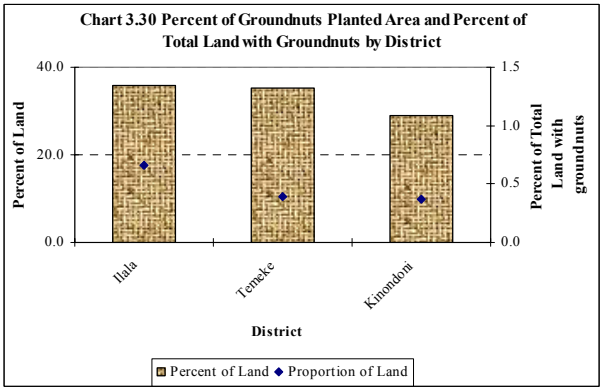


In terms of production, groundnuts was 33 tonnes and accounted for 87 percent of the total production of oil seeds, followed by simsim (13%). None for sunflower as indicated.

3.3.7.1 Groundnuts

The number of households growing groundnuts in Dar es Salaam region was only 727. The total production of groundnuts in the region was 33 tonnes from a planted area of 95 hectares resulting in a yield of 0.3 t/ha.

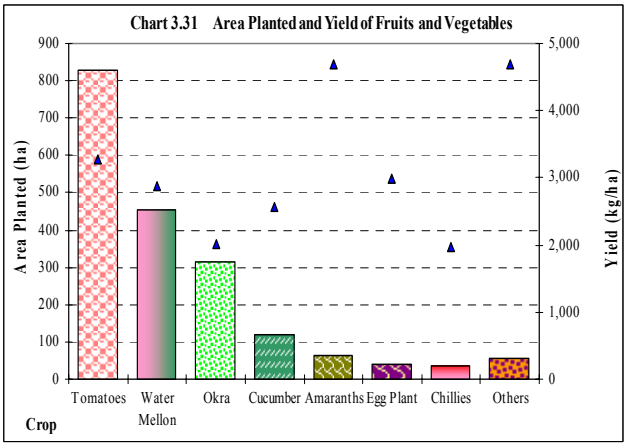




Thirty-six percent of the area planted with groundnuts was located in Ilala district (34 ha) followed by Temeke (34 ha, 36%), Kinondoni (28 ha, 29%. (Chart 3.29).

The largest area planted per groundnut growing household was found in Temeke district (0.22 ha) and the lowest was in Kinondoni (0.09). The range between the district with the highest and the lowest area planted per household depicts small variations in area planted among the districts (Chart 3.30).

3.3.8 Fruits and Vegetables



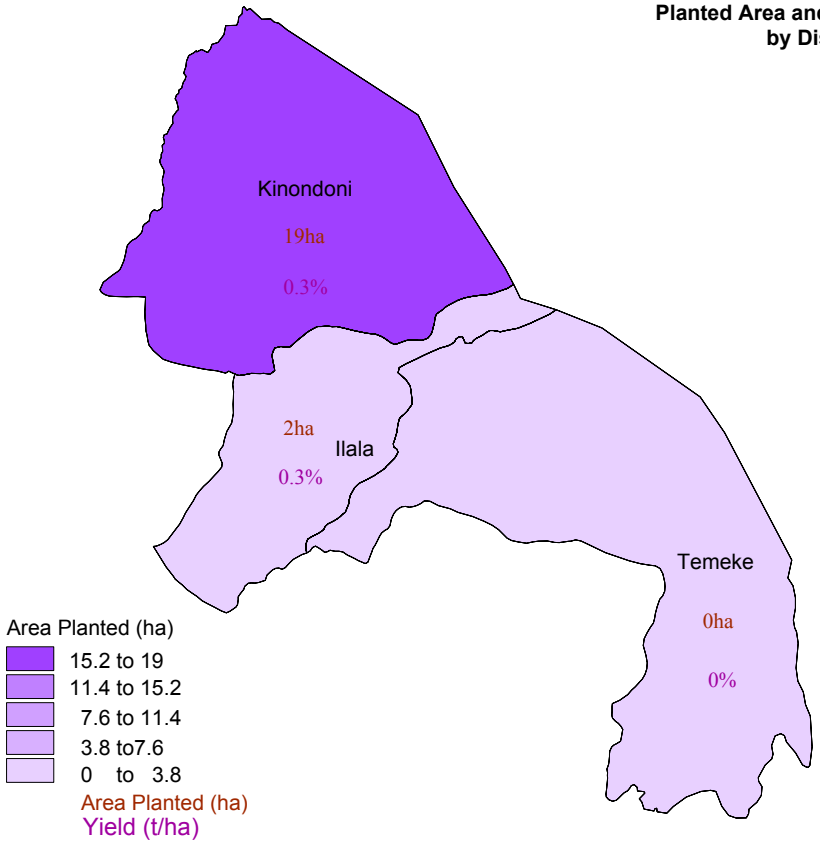
The collection of fruits and vegetables production data was difficult due to the small quantities produced per household. Most of the data presented here gives the production of smallholders who grew these crops as cash crops and not merely for household consumption. Most fruit production was from permanent 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 69 percent of the total area planted with fruits and vegetables was during the long rainy season. For tomatoes, water mellon, okra, cucumber, amaranths, over 70 percent of the planted area was during the long rainy season. The planted area for tomatoes in the long rainy season was abnormally large. Reliable historical data for time series analysis of fruits and vegetables are not available.

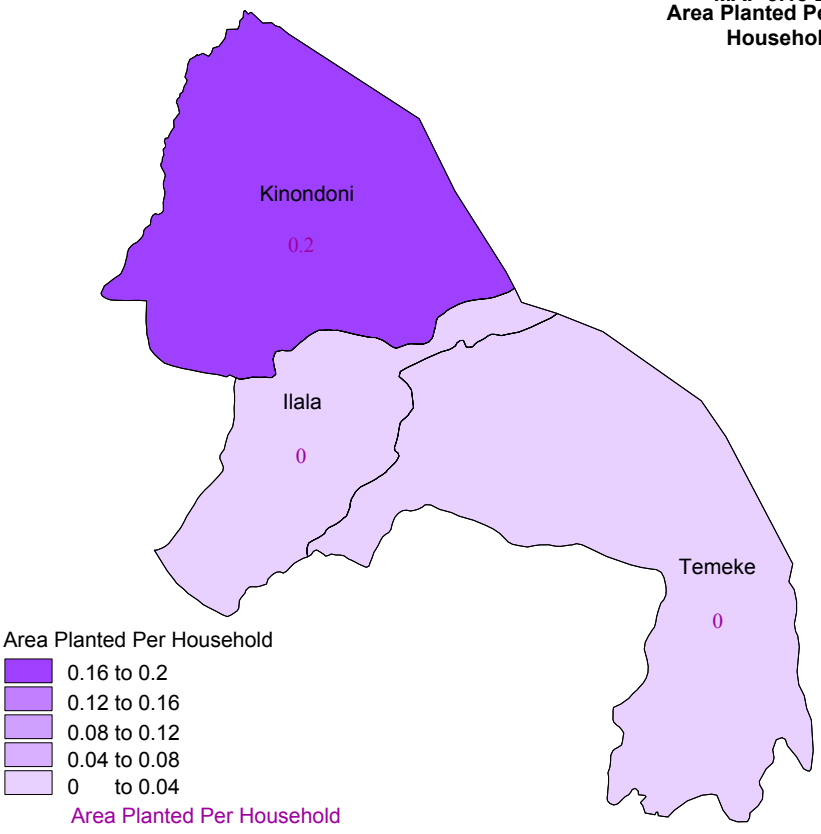
The total production of fruits and vegetables was 5,555 tonnes. The most cultivated fruit and vegetable crop was the tomato with a production of 2,725 tonnes (49% of the total fruits and vegetables produced) followed by water melon (1309t, 24%), okra (635t, 11%), and cucumber (307t, 5%). The production of the other fruits and vegetables crops was relatively small (Table 3.6).

The yield of amaranthus was 4,695 kg/ha, tomatoes (3,283 kg/ha), egg plant (2,987 kg/ha), watermelon (2,872 kg/ha), cucumber (2,561 kg/ha.) and okra (2,010 kg/ha.). Spinach and bitter aubergine had the lowest yields of 843 and 499 kg/ha respectively (Chart 3.31).

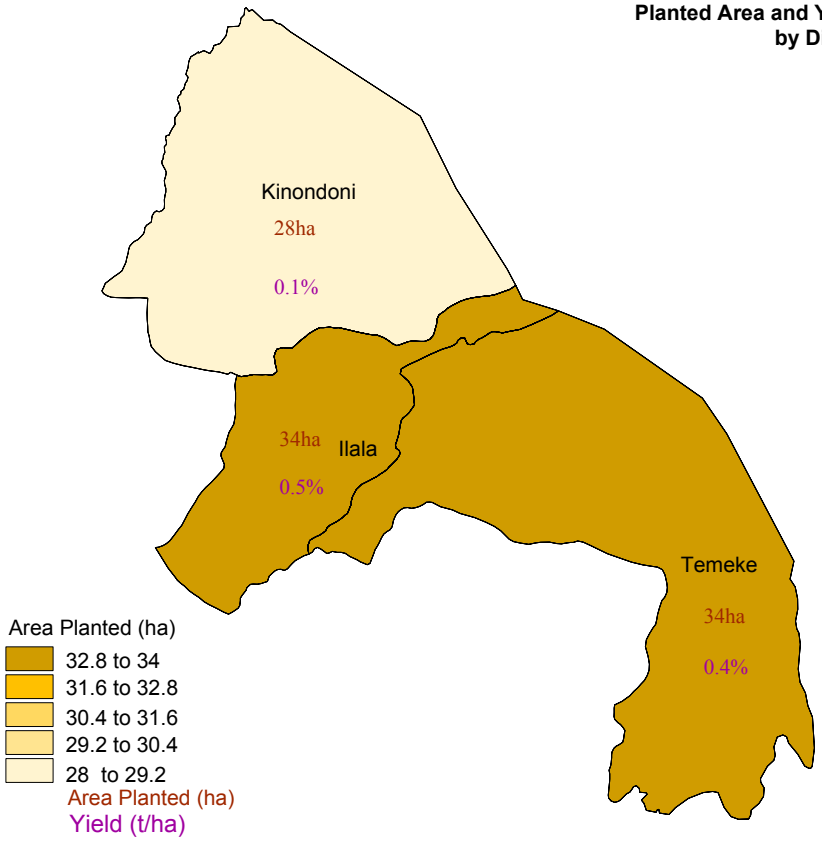
MAP 3.17 DAR ES SALAAM
Planted Area and Yield of Beans by District



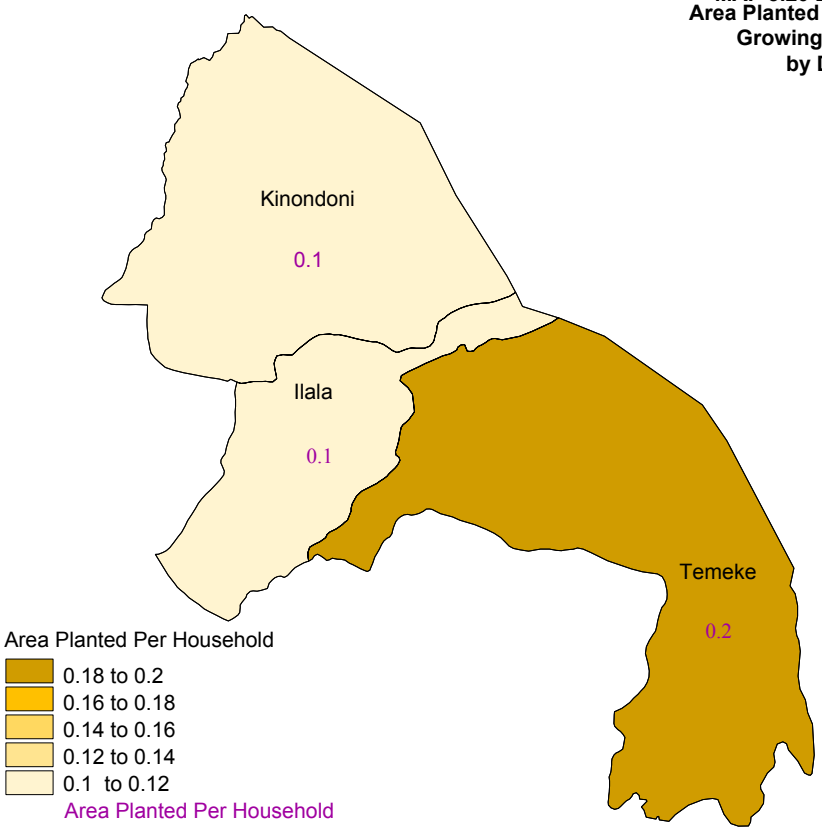
MAP 3.18 DAR ES SALAAM
Area Planted Per Beans Growing Household by District



MAP 3.19 DAR ES SALAAM
Planted Area and Yield of Groundnuts
by District



MAP 3.20 DAR ES SALAAM
Area Planted Per Groundnuts
Growing Household
by District

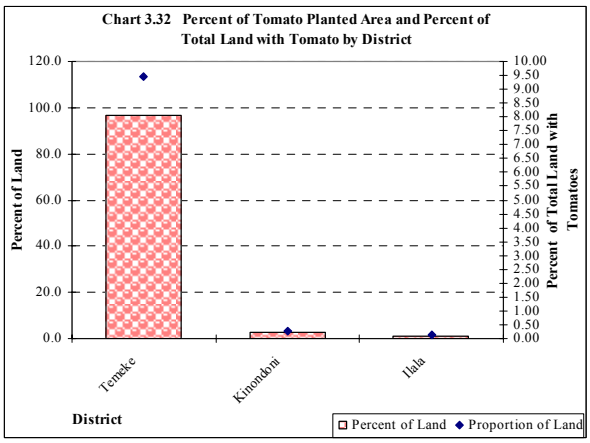


3.3.8.1 Tomatoes

The number of households growing tomatoes in the region during the long rainy season was 1,435 and 187 households in the short rainy season. This represented 37 percent of the total crop growing households in the region during the long rainy season and 12 percent during the short rainy season.

Temeke district had the largest planted area of tomatoes (96% of the total area planted with tomatoes in the region), followed by Kinondoni (2.6%) and Ilala (1.0%).

The highest percentage of land with tomatoes was found in Temeke, followed by Kinondoni district. Ilala district had a relatively small percentage of land used for tomato production (Chart 3.32).



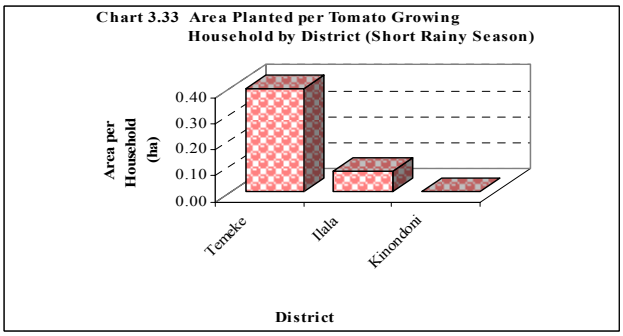
The largest area planted per tomato growing household was found in Temeke district (0.56 ha) followed by Kinondoni (0.23 ha), and Ilala (0.08 ha). (Chart 3.33). The total area planted with tomatoes accounted for 0.04 percent of the total area planted with annual crops and vegetables during the short and long rainy seasons.

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 (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Okra	78	68	870	238	568	2,381	316	635	2,010
Bitter Aubergine	6	2	370	1	1	1,170	7	3	499
Onions	0	0	0	25	47	1,849	25	47	1,849
Tomatoes	70	200	2,837	760	2,526	3,325	830	2,725	3,283
Spinnach	0	0	0	2	2	843	2	2	843
Chillies	11	1	64	24	69	2,818	35	69	1,959
Amaranths	28	259	9,264	36	41	1,142	64	300	4,695
Pumpkins	8	3	351	13	29	2,211	22	32	1,492
Cucumber	70	130	1,846	50	177	3,577	120	307	2,561
Egg Plant	13	3	216	28	121	4,318	41	124	2,987
Water Mellon	315	933	0	141	376	2,669	456	1,309	2,872
Total	**600**	**1598**		**1319**	**3957**		**1919**	**5555**	

3.3.8.2 Cabbage

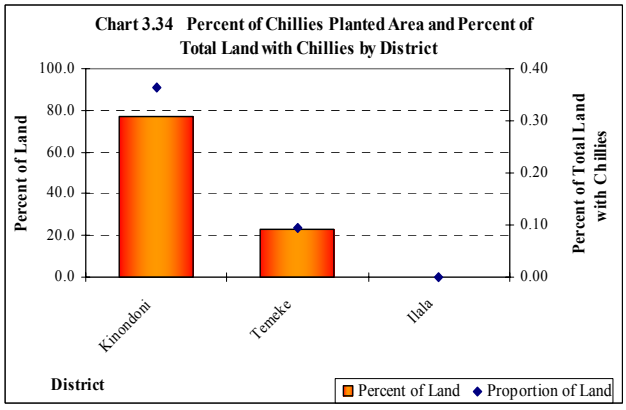
There were no agricultural households growing cabbages in the region during the census period.



3.3.8.3 Chillies

The number of households growing chillies in the region during the long rainy season was 108 households and 37 in the short rainy season. This represented 0.3 percent of the total crop growing households in the region in the long rainy season and 0.27 percent in the short rainy season. Kinondoni district had the largest planted area of chillies (27 ha, 77.1% of the total area planted with chillies in the region), followed by Temeke (8 ha, 22.8%). Ilala district reported no chillies production.

The largest proportion of the area planted with chillies was found in Kinondoni district (0.36%), followed by Temeke (0.09%), and none for Ilala district. (Chart 3.34).



The total area planted with chillies accounted for 0.16 percent of the total area planted with annual crops and vegetables during the short and long rainy seasons.

3.3.9 Other Annual Crop Production

There were no agricultural households growing annual cash crops in the region during the census period.

3.3.9.1 Cotton

There were no agricultural households growing cotton in the region during the census period.

3.3.9.2 Tobacco

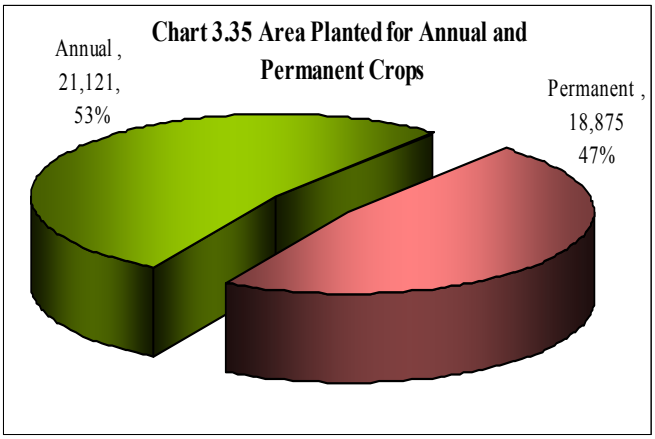
There were no agricultural households growing cotton in the region during the census period.

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

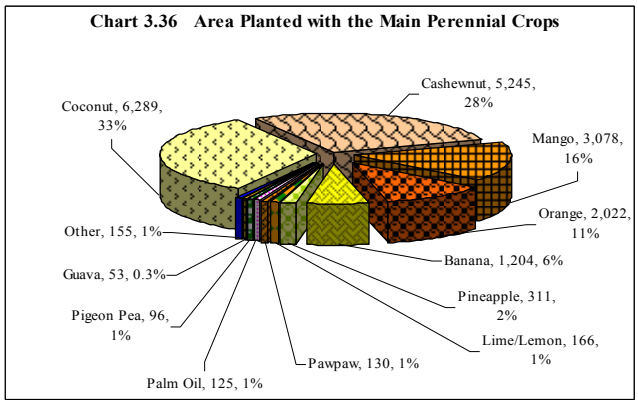
Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Seaweed	0	0	0	0	0	0	0	0	0
Cotton	0	0	0	0	0	0	0	0	0
Tobacco	0	0	0	0	0	0	0	0	0
Jute	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**		**0**	**0**		**0**	**0**	

3.4 Permanent Crops

Permanent crops (sometimes referred as perennial) are crops that normally take over a year to mature and once mature can be harvested for a number of years. For most crops, it is easy to determine if they are annual or permanent. However, for crops like cassava and bananas the distinction is not so clear. Cassava has varieties that mature within a year and produce only one harvest, whilst other varieties survive for more than one year and produce several harvests. In this census, cassava was treated as an annual crop. Conversely, bananas normally take less than a year to mature, survive for more than one year and are thus treated as a permanent crop. In this report the agriculture census results are presented for the most important permanent crops in terms of production, yield and area planted. Previous censuses and surveys did not measure these variables for permanent crops, therefore no time series analysis is made in this section.

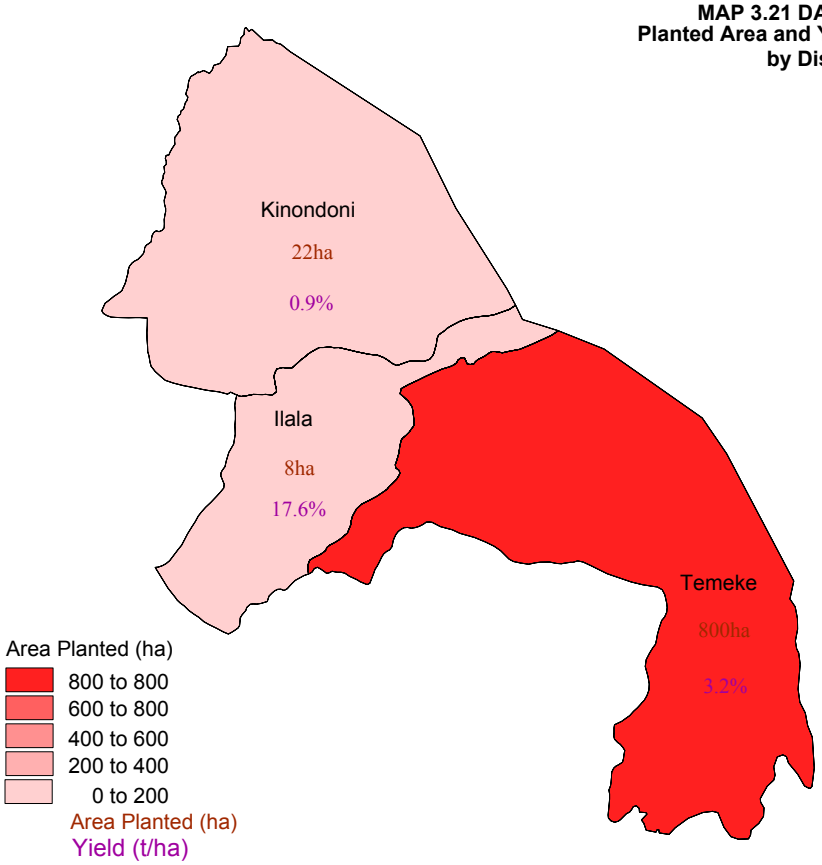


The area of smallholders planted with permanent crops was 18,875 hectares (47% of the area planted with crops in the region). However, the area planted with annual crops is not the actual physical land area as it includes all the areas of crops planted more than once on the same land, whilst the planted area for permanent crops is the same as physical planted land area. So the percentage physical area planted with permanent crops would be higher than indicated in Chart 3.35.

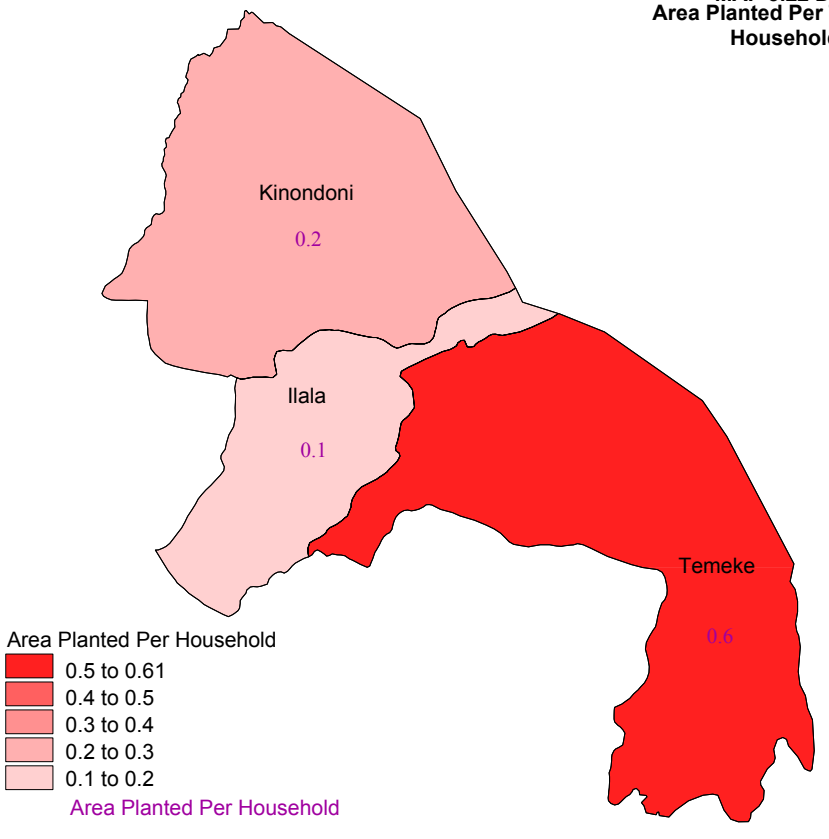


The most important permanent crop in Dar es Salaam region was coconuts with a planted area of 6,289 ha, (33.3% of the planted area of all permanent crops) followed by cashew nuts (5,245 ha, 27.8%), mango (3,078 ha, 16.3%) orange (2,022 ha, 10.7%), and banana (1,204 ha, 6.4%). Each of the remaining permanent crops had an area of less than 5 percent of the total area planted with permanent crops (Chart 3.36).

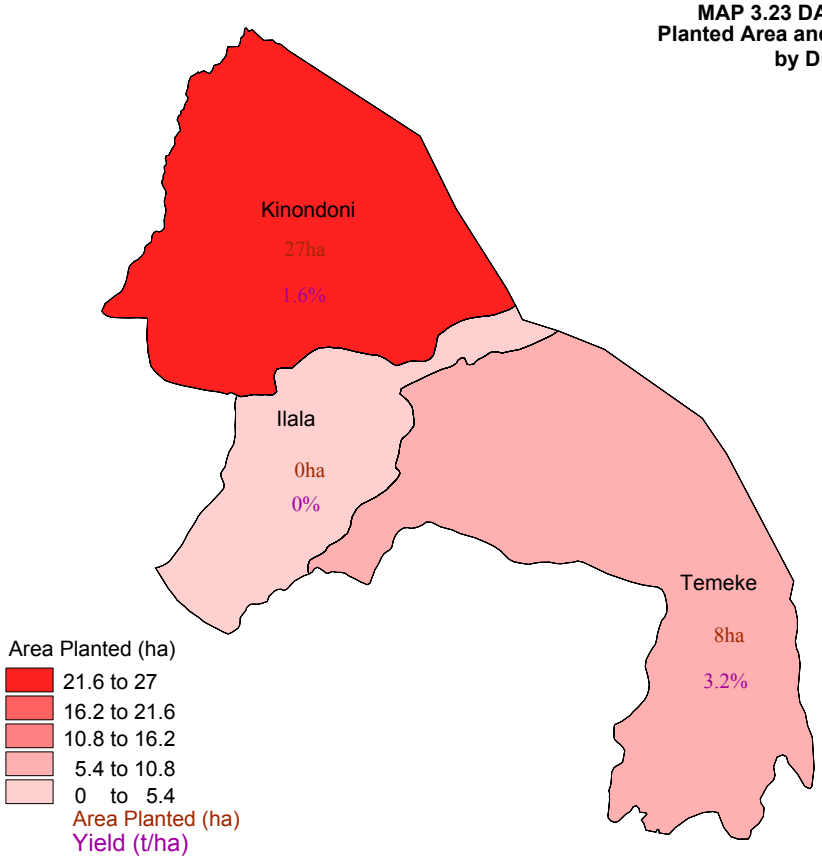
MAP 3.21 DAR ES SALAAM
Planted Area and Yield of Tomatoes by District



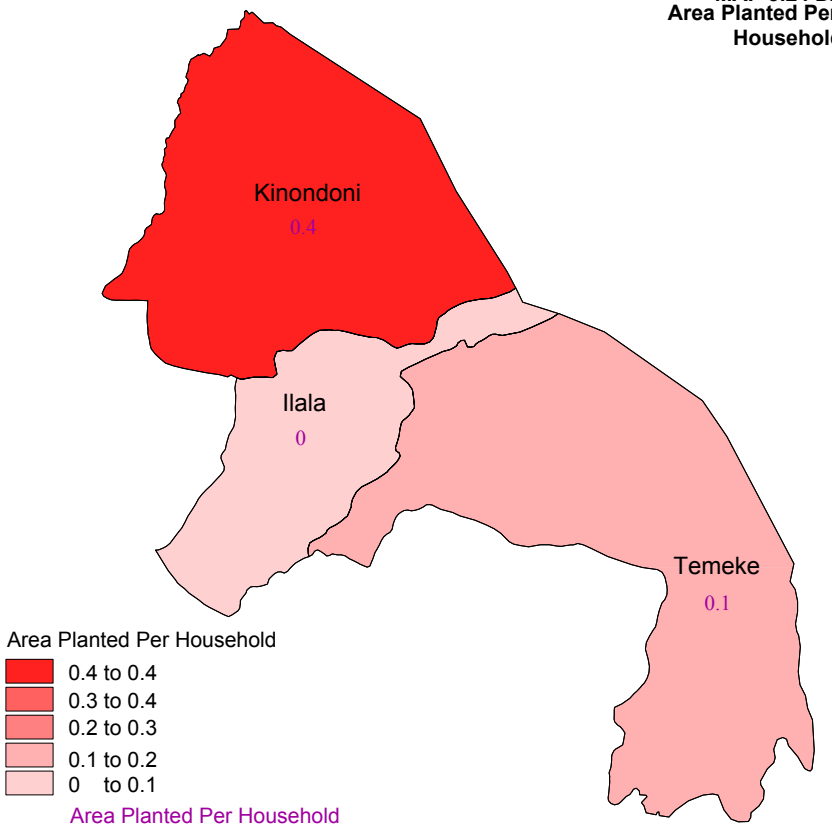
MAP 3.22 DAR ES SALAAM
Area Planted Per Tomatoes Growing Household by District



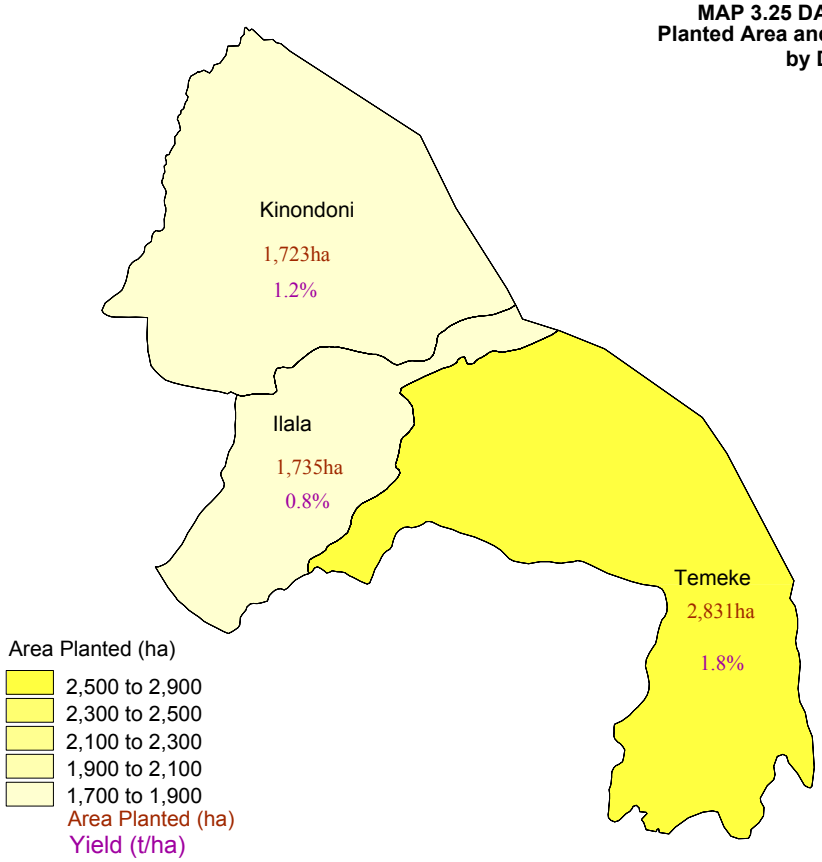
MAP 3.23 DAR ES SALAAM
Planted Area and Yield of Chillies by District



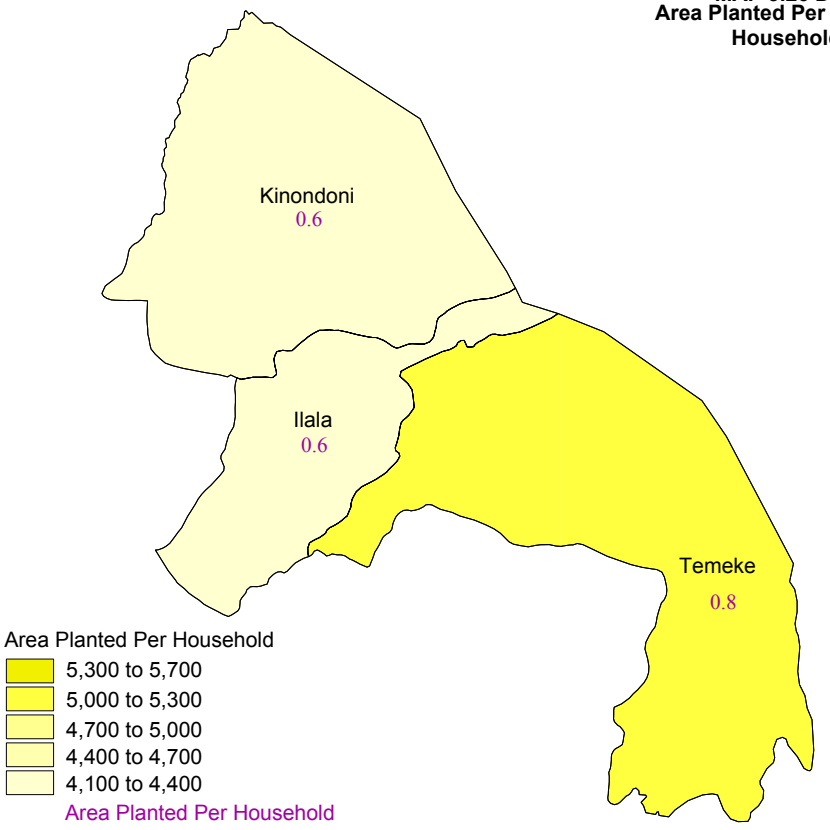
MAP 3.24 DAR ES SALAAM
Area Planted Per Chillies Growing Household by District



MAP 3.25 DAR ES SALAAM
Planted Area and Yield of Coconuts by District

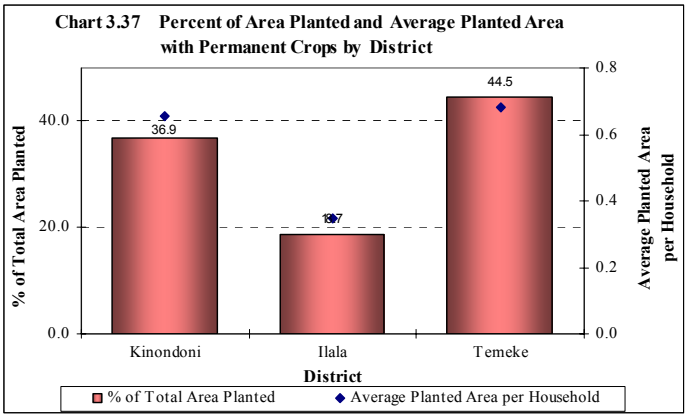


MAP 3.26 DAR ES SALAAM
Area Planted Per Coconuts Growing Household by District



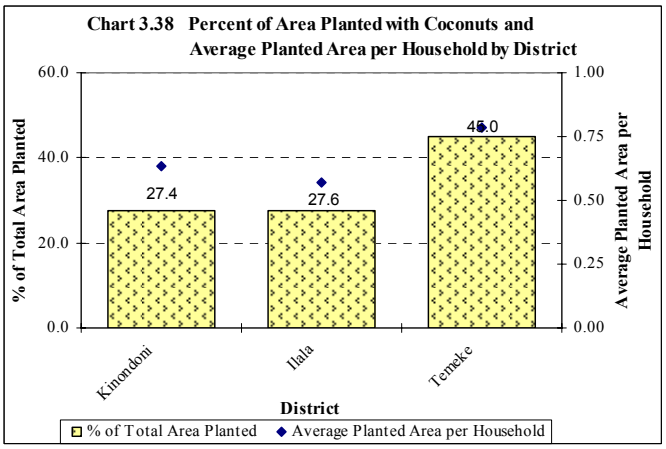
Temeke district had the largest area under smallholder permanent crops (8392 ha, 44.5%). This is followed by Kinondoni (6956 ha, 36.9%), and Ilala (3527 ha, 18.7%). However, Temeke had the largest area per permanent crop growing household (0.68 ha) followed by Kinondoni (0.66 ha), and Ilala (0.35 ha) (Chart 3.37).

In terms of area of permanent crops planted expressed as a percentage of the total area planted with crops per district, Temeke had the highest (50%) followed by Kinondoni (48%), and Ilala (40%).



3.4.1 Coconuts

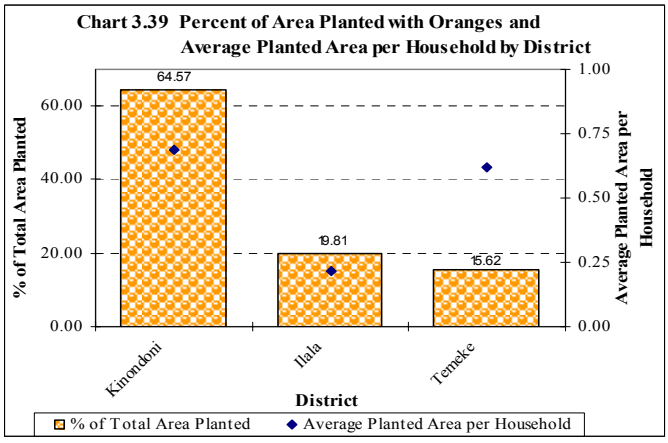
The total production of coconuts by smallholders was 4,667 tonnes. In terms of area planted, coconut was the most important permanent crop grown by smallholders in the region. They were grown by 9,366 households (28.3% of the total crop growing households). The average area planted with coconuts per household was relatively small at around 0.7 ha per coconuts growing household and the average yield obtained by smallholders was 1,511.3 kg/ha from a harvest area of 3088 hectares.



Temeke had the largest area of coconuts in the region (2,831 ha, 45.0%) followed by Ilala (1,735 ha, 27.6%), and Kinondoni (1,723 ha, 27.4%). (Map 3.31). The average area planted with coconuts per coconut growing household was highest in Temeke (0.78 ha) followed by Kinondoni (0.64 ha), then Ilala (0.57 ha) (Chart 3.38 and Map 3.32).

3.4.2 Oranges

The total production of orange by smallholders was 8,290 tonnes. In terms of area planted, orange was the fourth most important permanent crop grown by smallholders in the region. It was grown by 4,283 households (13.0% of the total crop growing households). The average area planted with orange per household was relatively small at around 0.5 ha per orange growing household and the average yield obtained by smallholders was 9,711 kg /ha from a harvest area of 854 hectares. (Chart 3.39).



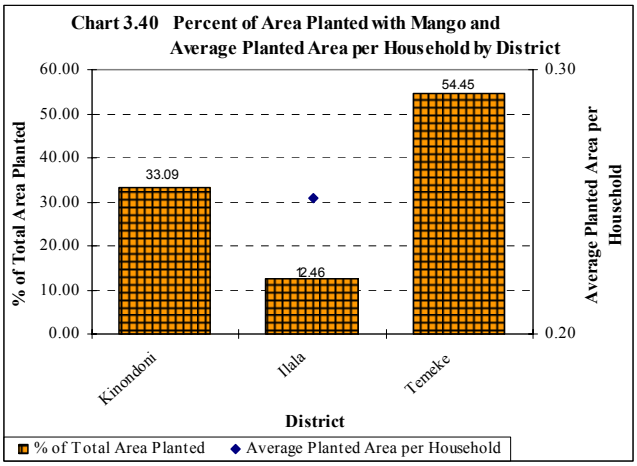
Kinondoni has the largest area of orange trees in the region (1306 ha, 64.6%) followed by Ilala (401 ha, 19.8%), then Temeke (316 ha, 15.6%) (Map 3.37). However, the average area planted per orange growing household was highest in Kinondoni (0.7 ha), followed by Temeke (0.6 ha), and Ilala (0.2 ha) (Map 3.38).

3.4.3 Mangoes

The total production of mango by smallholders was 7,203 tonnes. In terms of area planted, mango was the third most important permanent crop grown by smallholders in the region. It was grown by 5,771 households (17.5% of the total crop growing households). The average area planted with mango per household was relatively small at around 0.5 ha per mango growing household and the average yield obtained by smallholders was 3,772.1 kg/ha from a harvested area of 1,909 hectares.

Temeke had the largest planted area of mango in the region (1,676 ha, 54.5%) followed by Kinondoni (1,019 ha, 33.1%), then Ilala (383 ha, 12.5%) (Map 3.35). However, the area planted with mango per mango growing household was highest in Temeke (0.6 ha), followed by Kinondoni (0.6 ha), and Ilala (0.3 ha) (Chart 3.40 and Map 3.36).

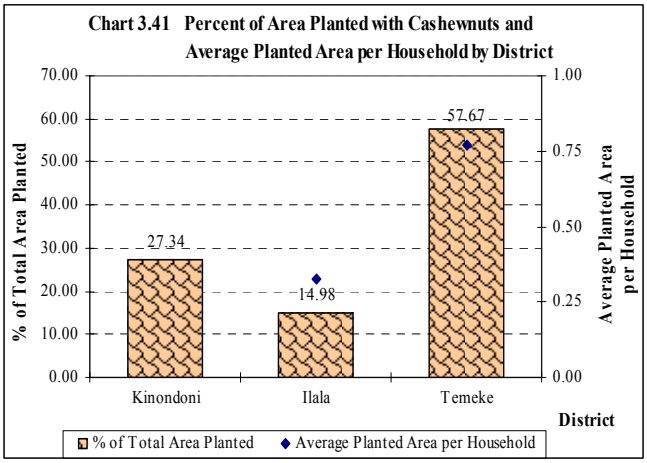
Chart 3.40 Percent of Area Planted with Mango and Average Planted Area per Household by District



3.4.4 Cashew Nuts

The total production of cashew nuts by smallholders was 2,526 tonnes. In terms of area planted, cashew nuts was the second most important permanent crop grown by smallholders in the region. It was grown by 6,901 households (20.9% of the total crop growing households). The average area planted with cashew nuts per household was relatively small at around 0.8 ha per cashew nut growing household and the average yield obtained by smallholders was 705.3 kg/ha from a harvest area of 3582 hectares.

Chart 3.41 Percent of Area Planted with Cashewnuts and Average Planted Area per Household by District

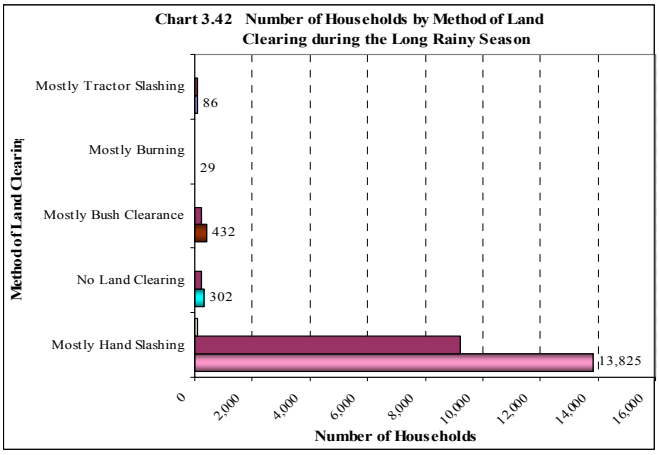


Temeke had the largest area of cashew nuts in the region (3,025 ha, 57.7%) followed by Kinondoni (1,434 ha, 27.3%), and Ilala (786 ha, 15%) (Map 3.33). However, the average area planted with cashew nuts per cashew nut planting household was highest in Kinondoni (2.6 ha) followed by Temeke (0.8 ha), and Ilala (0.3 ha) (Chart 3.41 and Map 3.34).

3.5 Input/Implement Use

3.5.1 Methods of Land Clearing

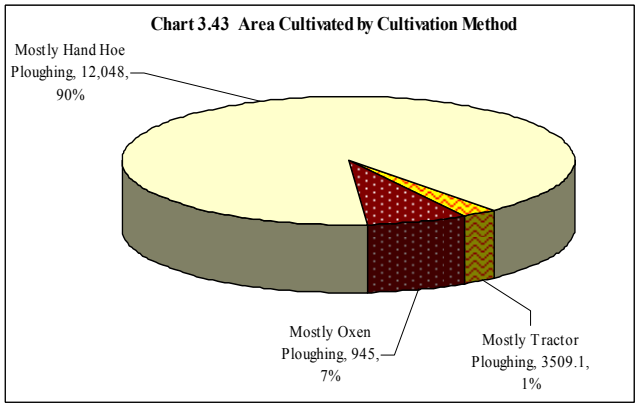
Land clearing is a common pre-tillage operation practiced by most farmers in the region. Land clearing is divided into two categories: bush clearing, which by definition implies either expansion into virgin areas or into areas which have been left fallow for a long period. The other category, which includes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



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 9,209 ha which represented 93.9 percent of the total planted area. Bush clearance, burning and tractor slashing are less important methods for land clearing and they represent 2.6, 0.2 and 0.9 percent respectively (Chart 3.43 and Table 3.8).

Table 3.8: Land Clearing Methods

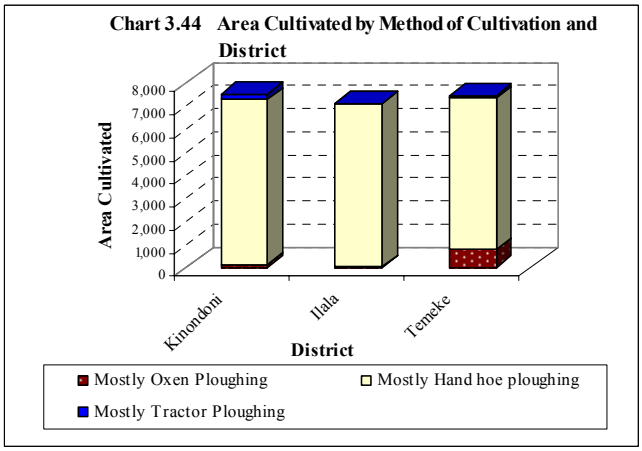
Method of Land Clearing	Long Rainy Season			Short Rainy Season			Total		
	Number of Households	Area Planted	%	Number of Households	Area Planted	%	Number of Households	Area Planted	%
Mostly Hand Slashing	13,825	9,209	93.9	7,072	3,247	92.7	20,897	12,456	93.6
No Land Clearing	302	240	2.4	184	116	3.3	486	356	2.7
Mostly Bush Clearance	432	253	2.6	150	129	3.7	583	383	2.9
Mostly Burning	29	23	0.2	0	0	0.0	29	23	0.2
Mostly Tractor Slashing	86	87	0.9	40	10	0.3	126	96	0.7
Total	**14,673**	**9,813**	**100.0**	**7,446**	**3,501**	**100.0**	**22,120**	**13,314**	**100.0**



3.5.2 Methods of Soil Preparation

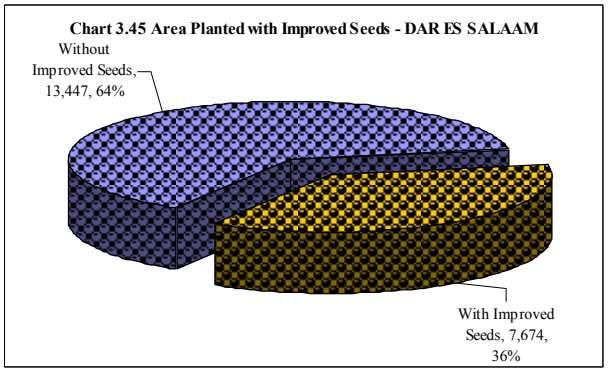
Hand cultivation is mostly used for soil preparation as it has been used in an area of 12,048 ha which represented 90.4 percent of the total planted area, followed by ox-ploughing (945 ha, 7.1%) and tractor ploughing (336 ha, 2.5%).

Slightly more hand cultivation was used during short rainy season at 91 percent against 90 percent for the long rainy season, whereas, oxen and tractor ploughing in both seasons was of no significant difference. For the long rainy season it was 7.1 percent and 2.5 percent respectively. For the short rainy season the corresponding percentages are 6.9 and 2.6 respectively.



In Dar es Salaam region, Temeke district has the largest planted area cultivated with oxen (790 hectares, 83.7%) followed by Kinondoni (124 ha, 13.1%), and Ilala (30 ha, 3.2%).

During the long rainy season, 74.3 percent of the total area cultivated by using oxen was planted with fruit and vegetables (58%), followed by cereals, (29.5%), pulses (6.8%), roots and tubers (5.6%), oil seeds (0.1%). No cash crops ware recorded in the region.



3.5.3 Improved Seed Use

The planted area using improved seeds was estimated at 7,674 ha which represents 36.3 percent of the total planted with the annual crops and vegetables area. The percentage use of improved seed in the short rainy season was 11 percent, slightly higher than the corresponding percentage use for the long rainy season (25.3%).

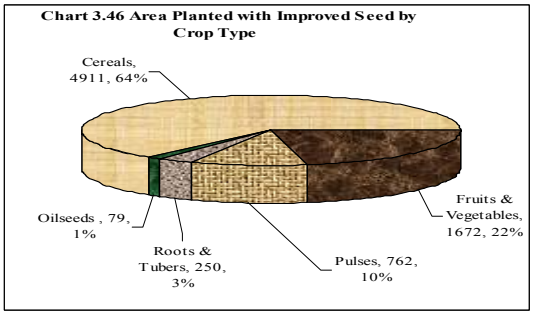
Cereals had the largest planted area with improved seeds (4911 ha, 64% of the planted area with improved seeds) followed by fruit and vegetables (1672 ha, 21.8%), pulses (762 ha, 9.9%), roots and tubers (250 ha, 3.3%), and Oil seed (79 ha, 1%) (Chart 3.46). However, the use of improved seed in cereals and 'fruit and vegetables' is much greater than in other crop types (64% and 22% respectively), only 1 percent of the planted area for oil seed crops used improved seed (Chart 3.47).

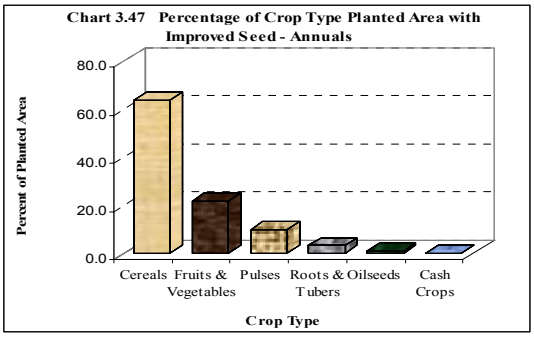
3.5.4 Fertilizer Use

The use of fertilisers on annual crops is very small with a planted area of only 5,665 ha (26.8% of the total planted area in the region). The planted area without fertiliser for annual crops was 15,456 hectares representing 73.2 percent of the total planted area with annual crops. Of the planted area with fertiliser application, farm yard manure was applied to 2,814 ha which represents 13.3 percent of the total planted area (49.7% of the area planted with fertiliser application in the region). This was followed by Inorganic fertilizers (1,496 7.1%). Compost were used on a small area (1,355 ha) and represented only 24 percent of the area planted with fertilizers.

Table 3.9 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	
Kinondoni	1,127	395	262	1,784	5,677
Ilala	351	609	123	1,082	4,110
Temeke	1,337	350	1,111	2,798	5,669
Total	2,814	1,355	1,496	5,665	15,456





The highest percentage of the area planted with fertilizer (all types) was in Temeke district (49%) followed by Kinondoni (31%), and lastly, Ilala (19%) (Table 3.9 and Charts 3.62 and 3.63).

Most annual crop growing households do not use any fertiliser (approximately 15,456 households, 73.2%) (Map 3.39).

Table 3.10: Number of Crop Growing Households and Planted Area by Type of Fertiliser Use and District – Long Rainy Season

District	Fertiliser Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertiliser		No Fertiliser 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
Kinondoni	2,551	821	1,050	314	691	219	10,875	4,698	15,167	6,052
Ilala	965	232	1,063	525	226	95	8,405	3,262	10,659	4,115
Temeke	2,145	991	551	208	1,428	937	9,839	5,312	13,963	7,447
Total	5,661	2,044	2,664	1,047	2,345	1,251	29,119	13,271	39,789	17,614

The percentage of the planted area with applied fertiliser was highest for cereals (46%) followed by fruit and vegetables (24.7%), roots and tubers (20.6%), pulses (7.9%), and lastly, oil seeds (0.8%). Fertiliser application in cash crops was not applicable. (Table 3.10).

Chart 3.48 Area of Fertiliser Application by Type of Fertiliser

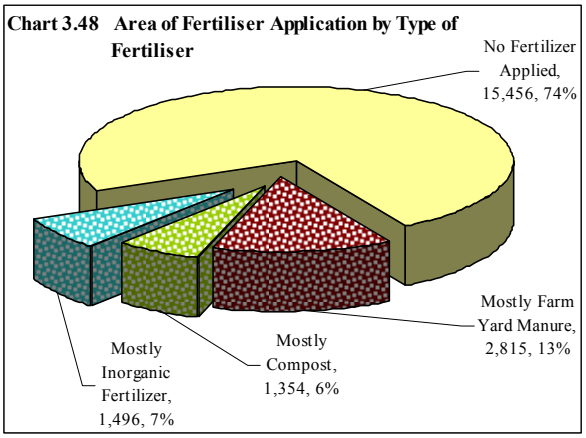
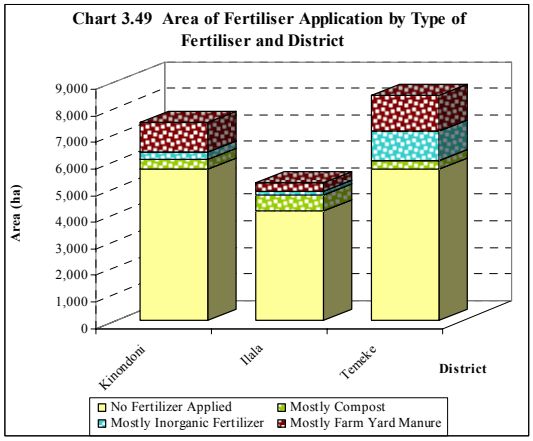


Chart 3.49 Area of Fertiliser Application by Type of Fertiliser and District



3.5.4.1 Farm Yard Manure Use

The total planted area applied with farm yard manure in Dar es Salaam region was 2,814 ha. The number of households that applied farm yard manure in their annual crops during the long rainy season was 5,661 and it was applied to 2,044 ha representing 11.6 percent of the total area planted during that season (Table 3.10). Cereals had the highest percent of the total area planted and applied with farm yard manure (5.4%), followed by fruit and vegetables (4.4%), roots and tubers (1.9%), pulses (1.4%) and oilseeds (0.2%). (Chart 3.50).

Chart 3.50 Planted Area with Farm Yard Manure by Crop Type - DAR ES SALAAM

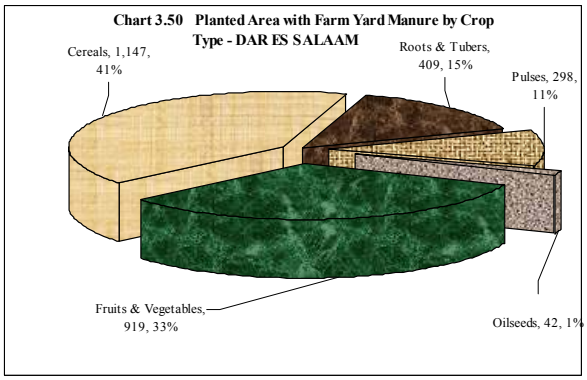
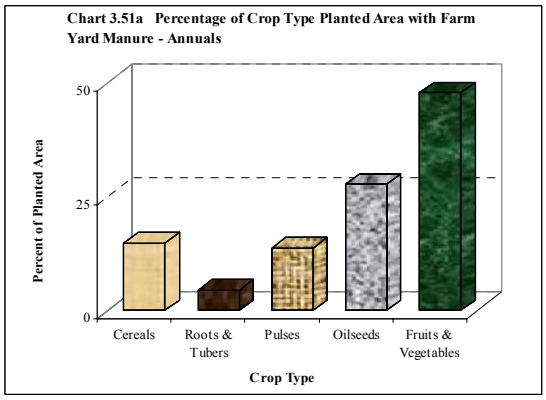
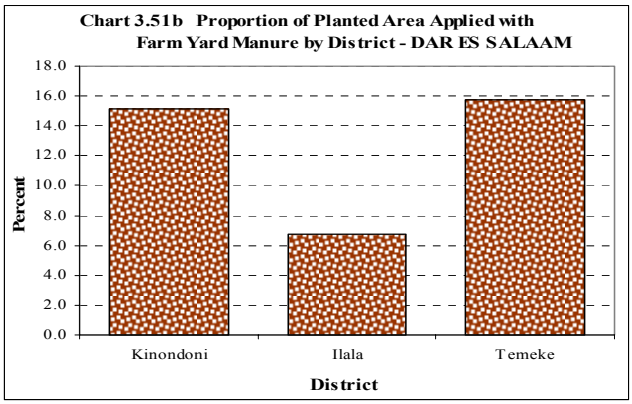


Chart 3.51a Percentage of Crop Type Planted Area with Farm Yard Manure - Annuals



However, fruit and vegetables had the highest percent of the planted area with farm yard manure (48% of the total area of fruit and vegetables in Dar es Salaam). This was followed by oil seeds (28%), cereals (15%), pulses (14%) roots and tubers (4%). (Chart 3.51a).

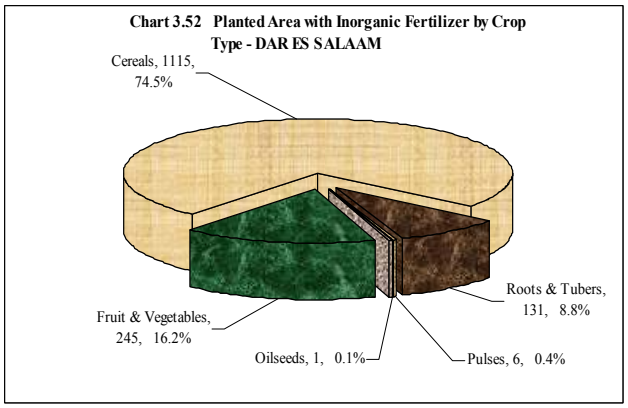
Farm yard manure is mostly used in Temeke (15.8% of the total planted area in the district), followed by Kinondoni (15.1%), and Ilala (6.3%). (Chart 3.51b).

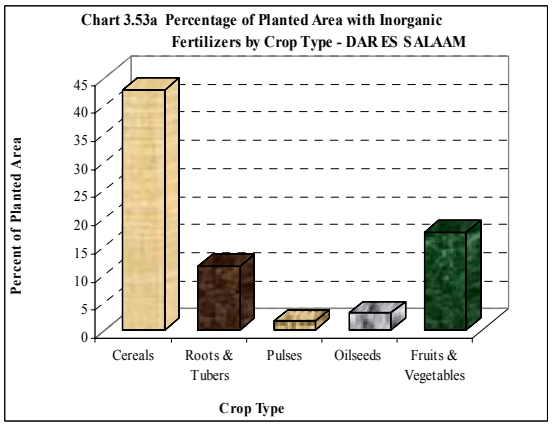


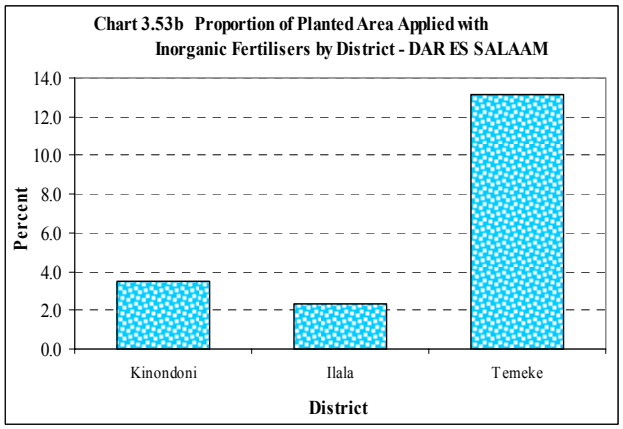
For permanent crops, most farm yard manure is used for the production of oranges (35%), followed by coconuts (25.7%) and mangoes (12.6%).

3.5.4.2 Inorganic Fertiliser Use

The total planted area applied with inorganic fertilisers in Dar es Salaam region was 1,496 ha which represents 7 percent of the total planted area with annuals in the region and 17.3 percent of the total planted area with fertiliser. The number of households that applied inorganic fertilizer on their annual crops during the long rainy season was 2,345 and it was applied to 1,251 ha representing 7 percent of the total area planted during that season (Table 3.10). The largest area applied with inorganic fertilizers was on cereals (74.5% of the total area applied with inorganic fertilizers), followed by fruit and vegetables (16.2%) roots (8.8%), pulses (0.4%). (Chart 3.52). However, the proportion of planted area with inorganic fertilizers was 12.7 percent higher than other crop types, followed by roots and tubers (1.1%), Pulses (0.8%) and cereals (0.3%) (Chart 3.53a).



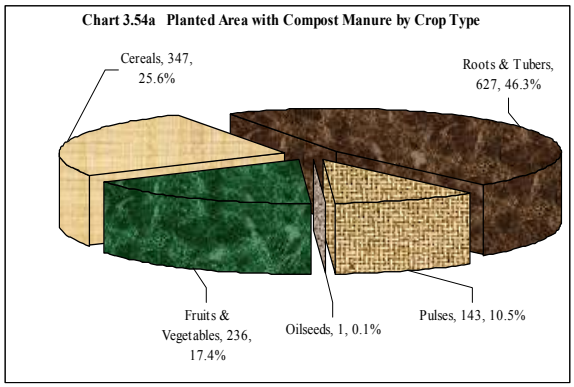




Inorganic fertiliser is mostly used in Temeke (13.1% of the total planted area in the district), followed by Kinondoni (3.5%) and Ilala (2.4%) (Chart 3.53b).

In permanent crops inorganic fertiliser were used on cashew nut (54.3%), followed by coconut (36%), mangoes (4.7%) and bananas (3%).

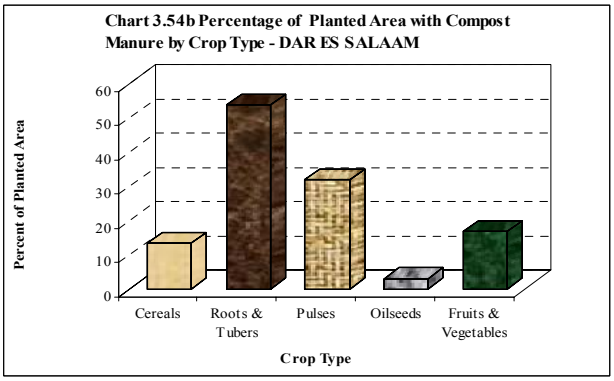
3.5.4.3 Compost Use

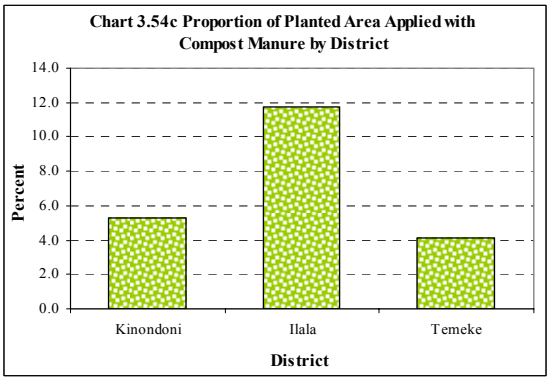


The total planted area applied with compost was 1,355 ha which represents only 6.4 percent of the total planted area with annual crops in the region and 24 percent of the total planted area with fertiliser in the region. The number of households that applied compost manure on their annual crops during the long rainy season was 2,664 and it was applied to 1,047 ha representing 6 percent of the total area planted (Table 3.10). The proportion of area applied with compost was very low for each type of crop (0 to 3.0%); however the distribution of the total area using compost manure shows that 54 percent of this area was cultivated with roots & tubers, followed by pulses (32%), fruit and vegetables (17%) cereals (13%) and oilseeds (3%). (Chart 3.54b).

Compost is mostly used in Ilala (11.7% of the total planted area in the district), and this is closely followed by Kinondoni (5.3%). Temeke district used the least compost (4.1%) (Chart 3.54c).

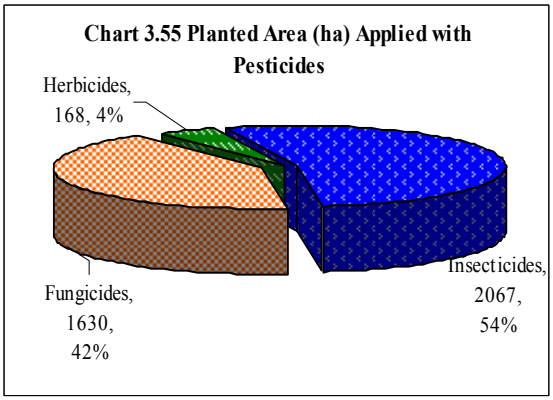
In permanent crops, compost was mostly used to durian (10.0%) followed by cloves (8.6%), pears (7.8%), avocado (5.3%) cinnamon (4.7%) and mangoes (4.0%).





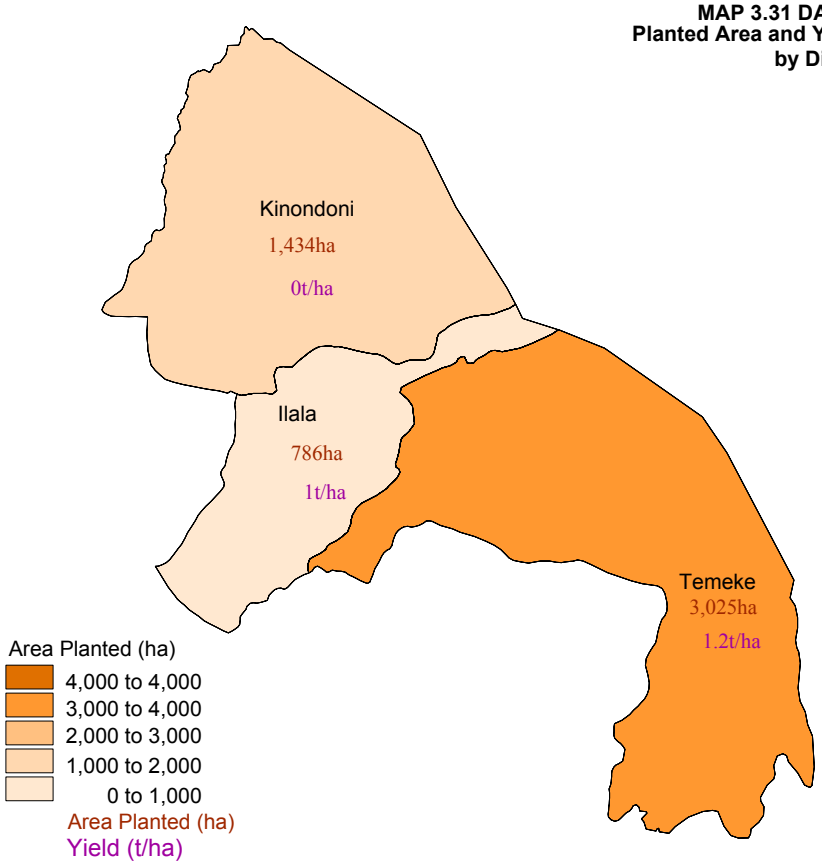
3.5.5 Pesticides Use

Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders on both annual and permanent crops in the region. Pesticides were applied to a planted area of 3865 ha of annual crops and vegetables.

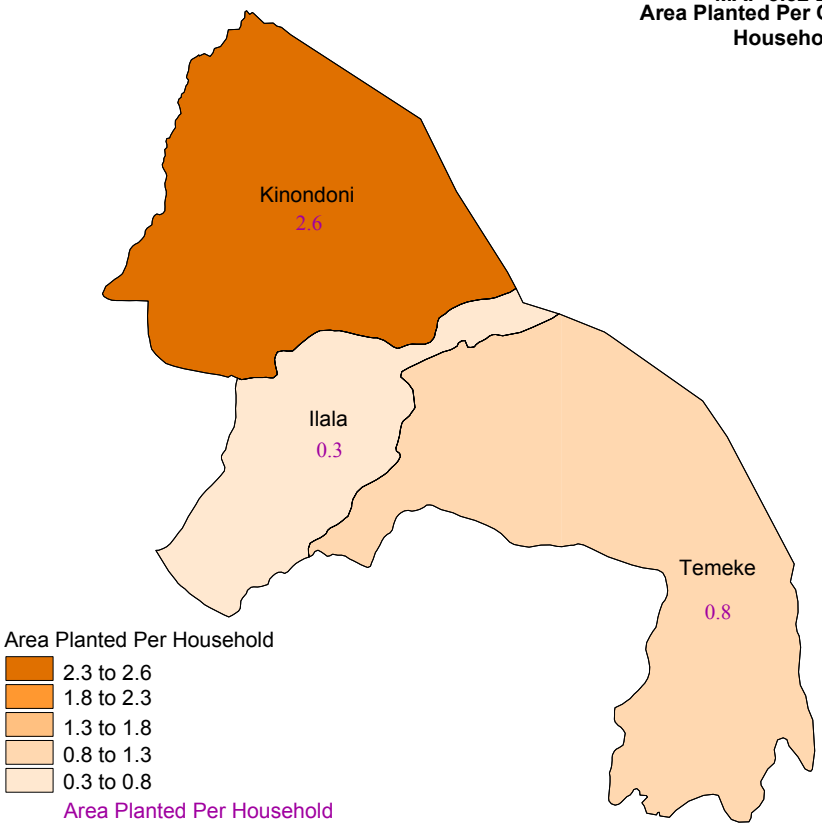


Insecticides are the most common pesticides used in the region (54% of the total area applied with pesticides). This was followed by fungicides (42%) and herbicides (4%) (Chart 3.55).

MAP 3.31 DAR ES SALAAM
Planted Area and Yield of Cashewnuts by District



MAP 3.32 DAR ES SALAAM
Area Planted Per Cashewnuts Growing Household by District

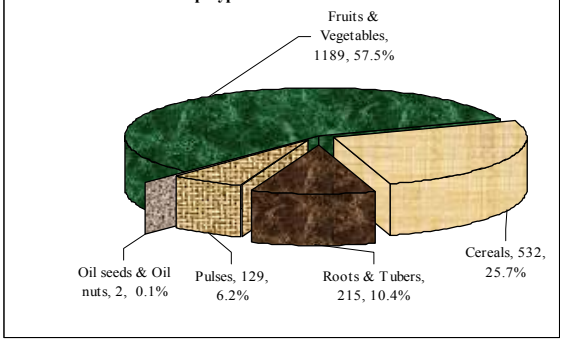


3.5.5.1 Insecticides Use

The planted area applied with insecticides was estimated at 2067 ha which represented 9.8 percent of the total planted area for annual crops and vegetables.

Fruits and vegetables had the largest planted area applied with insecticides (1189 ha, 58% of the total planted area with insecticides) followed by cereals (532 ha, 26%), roots and tubers (215 ha, 10%), pulses (129 ha, 6%), oil seed (2 ha, 0.1%) and none for cash crops. (Chart 3.56).

Chart 3.56 Planted Area Applied with Insecticides by Crop Type

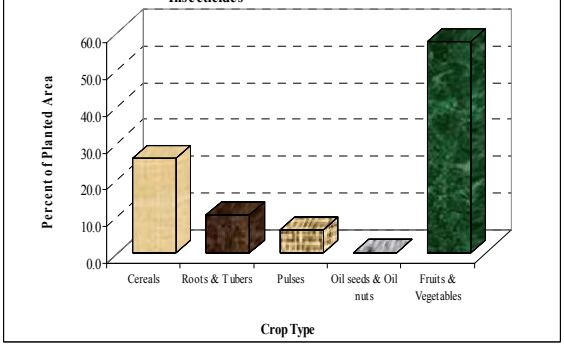


However, the percent of insecticides used in fruits and vegetables and cereals is much greater than in other crop types (58% and 26% respectively), while only 0.1 percent of oil seed crops were applied with insecticides (Chart 3.57).

There were no individual annual crops with more than 50 percent insecticide use. The highest was for tomatoes (21%) followed by water melon (20.1%), and maize (11%).

Temeke had the highest percent of planted area with insecticides (15.4% of the total planted area with annual crops in the district). This was followed by Ilala (7.1%). The smallest percentage use was recorded in Kinondoni district (5.3%) (Chart 3.58).

Chart 3.57 Percentage of Crop Type Planted Area Applied with Insecticides



3.5.5.2 Herbicides Use

The planted area applied with herbicides was 168 ha which represented 0.8 percent of the total planted area annual crops and vegetables. Cereals had the largest planted area applied with herbicides (82ha, 49%) followed by fruits and vegetables (42 ha, 25%), roots and tuber (37 ha, 22%), pulses (7 ha, 4%), and none for oil seeds. (Chart 3.59).

Chart 3.58 Percent of Planted Area Applied with Insecticides by District - DAR ES SALAAM

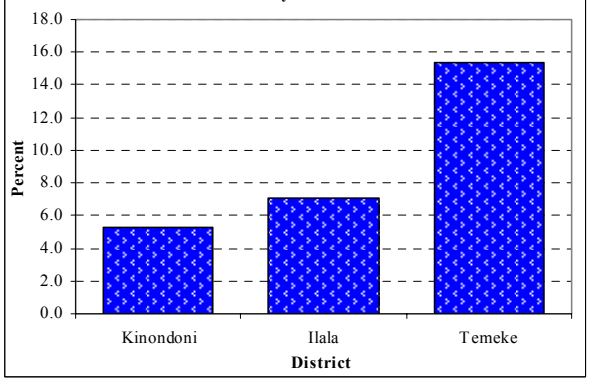
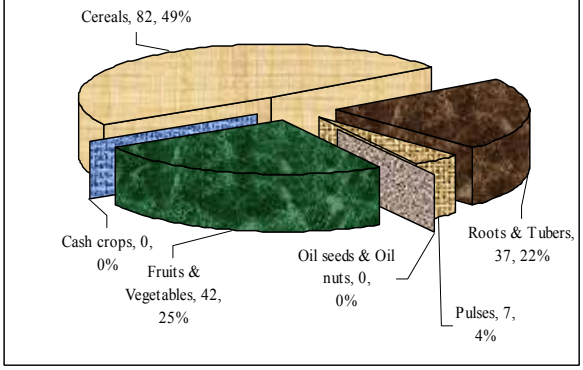
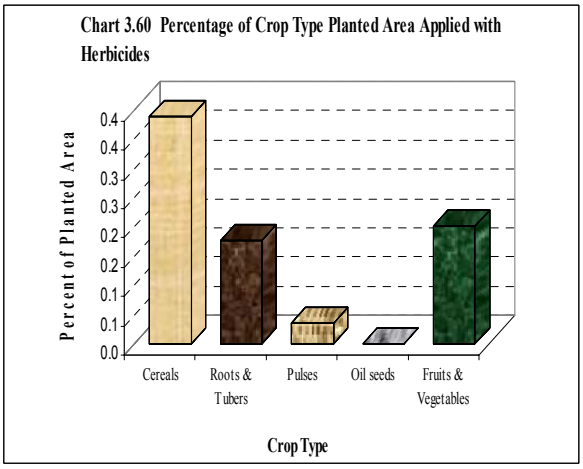


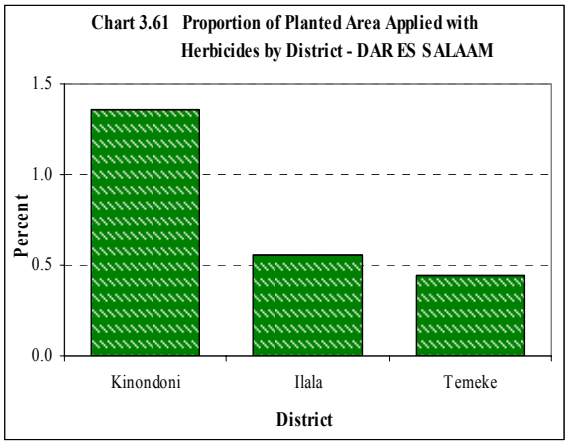
Chart 3.59 Planted Area Applied with Herbicides by Crop Type



However, the percent of herbicide use on Cereals and Fruit and vegetables was much greater than in other crop types (0.4% and 0.2% respectively) while only 0.18 percent of oil seeds was applied with herbicides (Chart 3.60). The top six annual crops with highest percentage use of herbicides in terms of planted area were sorghum (48.2%), cucumber (12%), water melon (5.7%), amaranths (2.9%), maize (0.9%) and paddy (0.8%).

Kinondoni had the highest percent of planted area with herbicides (1.4% of the total planted area with annual crops in the district). This was followed by Ilala (0.6%). The smallest percentage use was recorded in Temeke district (0.4%) (Chart 3.61).



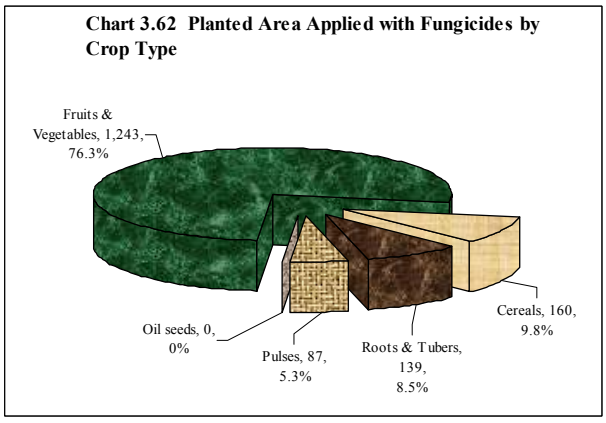


3.5.5.3 Fungicides Use

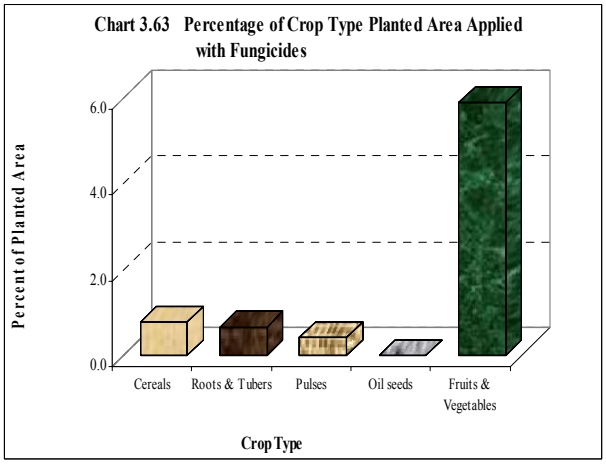
The planted area applied with fungicides was 1630 ha which represented 7.7 percent of the total planted area for annual crops and vegetables. The percentage use of fungicides in the short rainy season at (13%) was higher than the corresponding percentage for the long rainy season (6.7%). Fruits and vegetables had the largest planted area applied with fungicides (1243 ha, 5.9%) followed by cereals (160 ha, 0.8%), roots and tubers (139 ha, 0.7%), pulses (87 ha, 0.4%) and none for cash crops and oil seeds. (Chart 3.62).

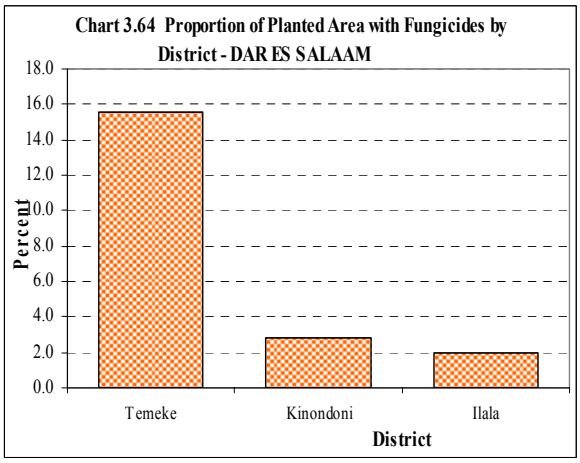
However, the percentage use of fungicides in fruits and vegetables and pulses was much greater than in other crop types (65% and 4% respectively), while only 1.5 percent of roots and tubers was applied with fungicides. (Chart 3.63).

Annual crops with more than 40 percent fungicides use were water melon (81%), tomatoes (79%), mung beans (62%), bitter aubergine (58%), egg plants (46%), cucumber (46%) and chillies (45%).



Temeke had the highest percent of planted area with fungicides (15.6% of the total planted area with annual crops in the district). This was followed by Kinondoni (2.8%). The smallest percentage use was recorded in Ilala district (1.9%) (Chart 3.64).





3.5.6 Harvesting Methods

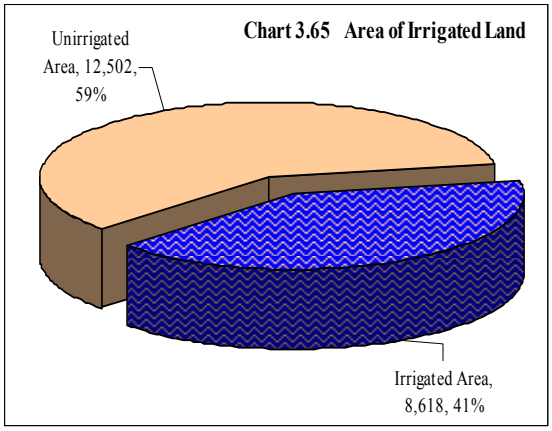
The main harvesting method for cereals was reported to be by hand. Very small amounts of maize were harvested by machine (0.5%) All other cereals and annual crops were harvested by hand.

3.5.7 Threshing Methods

Hand threshing was the most common method used, with 81 percent of the total area planted with cereals during the long rainy season was threshed by hand. Draft animals, human powered tools and engine driven machines were only used on crops harvested from 0.2%, 0.4 percent and 0.5 percent of the total planted area respectively.

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 by different crops and the means by which water was extracted from the source and applied to the field.



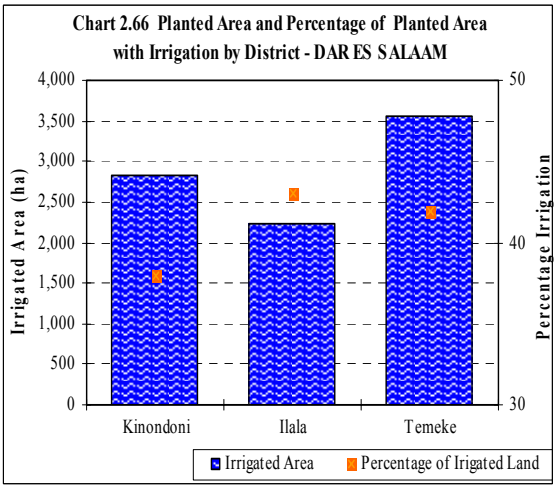
3.6.1 Area Planted with Annual Crops and Under Irrigation

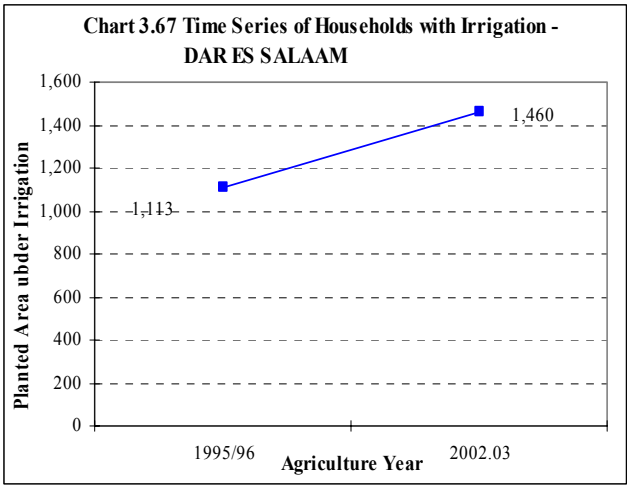
In Dar es Salaam region, the area of annual crops under irrigation was 8,618 ha representing 41 percent of the total area planted (Chart 3.65). The area under irrigation during the short rainy season was 372 ha accounting for 4.3 percent of the total area under irrigation. Some crops, especially vegetables, were predominantly grown during the short rainy season with irrigation. In the short rainy season, 48 percent of the area planted with vegetables was irrigated, whilst 27 percent of the vegetables were irrigated in the long rainy season.

The district with the largest planted area under irrigation with annual crops was Temeke (3,549 ha, 41% of the total irrigated planted area with annual crops in the region). This is closely followed by Kinondoni with (2,835 ha, 33%) and then Ilala (2,234 ha, 26%). When expressed as a percentage of the total area planted in each district, Ilala had the highest

with 43 percent of the planted area in the district under irrigation. This is followed by Temeke (42%), and Kinondoni (38%) (Chart 3.66 and Map 3.40).

Of all the different crops and in terms of proportion of the irrigated planted area, spinnach, bitter aubergine and egg plant were the most irrigated crops with 100 percent irrigation followed by amaranths (97%), cassava (97%), chillies (80%) and pumpkins (78%).





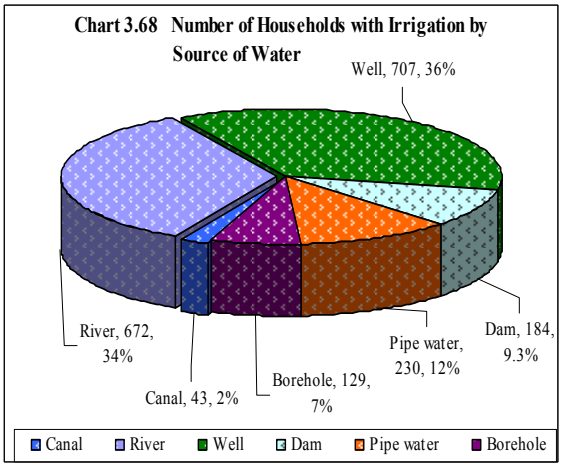
In terms of crop type, the area under irrigation with roots and tubers was 7,666 ha (89% of the total area under irrigation), followed by fruit and vegetables (649 ha, 8%) cereals with 230 ha (3%), and pulses (71 ha, 1%). All of the irrigation on cereals was applied to maize and paddy.

The area of fruit and vegetables under irrigation was 649 ha which represents 34 percent of the total planted area with fruit and vegetables. spinnach, bitter aubergines and egg plants were the most irrigated crops. Irrigation was not used on annual cash crops.

The Planted area with irrigation in Dar es Salaam region appears to have increased over the 10 year intercensal period from 1,113 to 1,460 hectares. This may not be statistically significant due to the small number of households sampled with irrigation. (Chart 3.67).

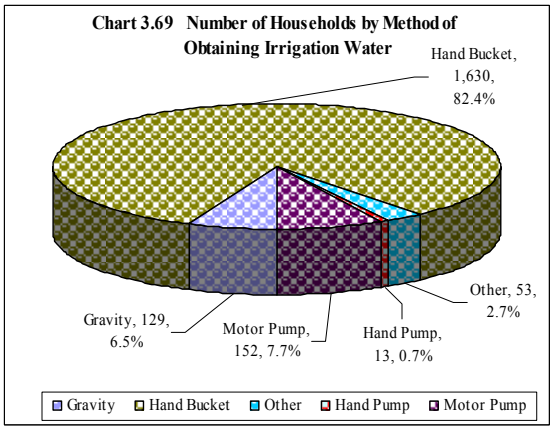
3.6.2 Sources of Water Used for Irrigation

The main source of water used for irrigation was from wells (36% of households with irrigation). This was followed by river (34%) and pipe water (12%). Only 6.5 percent of the households used water from boreholes and the proportion of households that used dams, canal and lakes, as a source of water for irrigation were very few (9%, 2% and 1% respectively). Most households using irrigation in Temeke get their irrigation water from rivers (48%). (Chart 3.68).



3.6.3 Methods of Obtaining Water for Irrigation

Hand bucket was the most common means of getting water for irrigation with 82.4 percent of households using this method. This was followed by motor pump with 7.7 percent of households. The remaining methods (gravity, hand pump and others) were of minor importance (Chart 3.69).

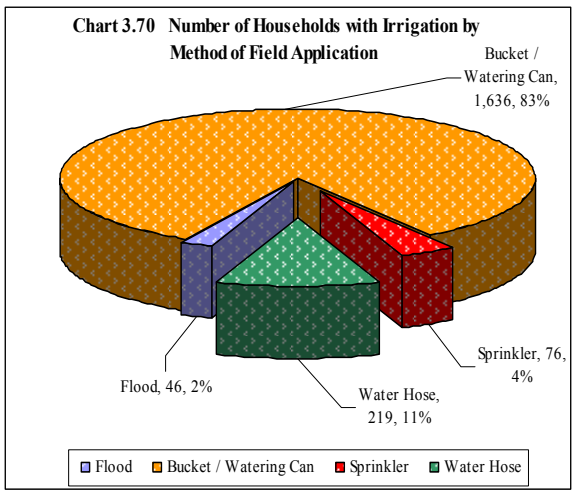


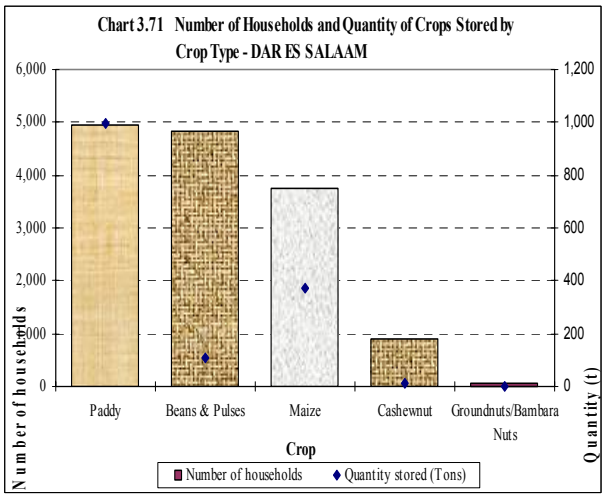
Hand bucket was used by most households with irrigation in Ilala (87.6%), followed by Temeke (85%), and Kinondoni (75.3%). Motor pump was more common in Ilala with 12.4 percent of households using the method to get water for irrigation, followed by Temeke (8.0), and Kinondoni (4.5%).

Although the method of obtaining irrigation water by hand bucket was the most common method in all three districts, Kinondoni and Temeke districts used some gravity for obtaining water.

3.6.4 Methods of Water Application

Most households used hand bucket/watering can irrigation (83% of households using irrigation) as a method of field application. This was followed by water hose (11%). Sprinklers and flood were not widely used (4% and 2% respectively). (Chart 3.70).





3.7 Crop Storage, Processing and Marketing

3.7.1 Crop Storage

Crop storage means keeping a crop for a certain period of time as food for the household, in order to sell at higher prices or as seed for planting in the following season.

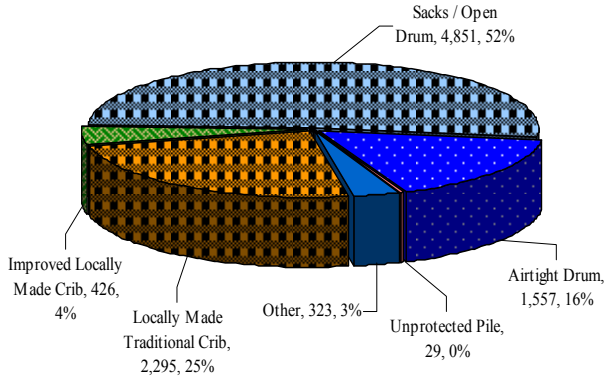
The results for Dar es Salaam region show that there were 14,465 crop growing households (28% of the total crop growing households) that stored various agricultural products in the region.

The most important stored crop was paddy with 4,937 households storing 997 tonnes as of 1st January 2004. This was followed by maize (3,750 households, 374t), beans and other pulses (4,834 households, 107t) and cashew nuts (886 households, 14t). Other crops were stored in very small amounts. (Chart 3.71).

3.7.1.1 Methods of Storage

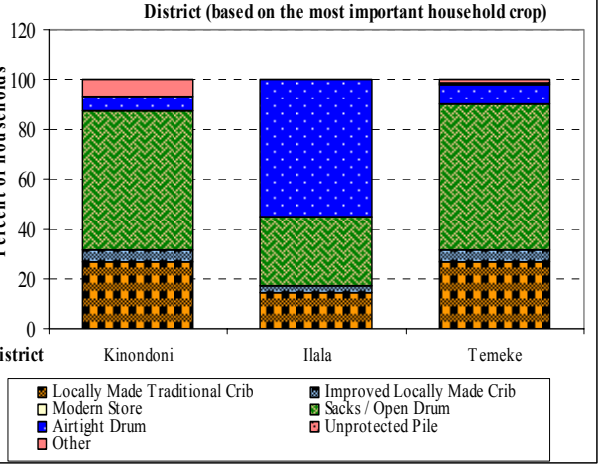
The region had 4,851 crop growing households storing their produce in sacks and/or open drums (52% of households that stored crops in the region). The number of households that stored their produce in locally made traditional structures was 2,295 (25%). This was followed by : air tight drums (1,557 households, 16%), improved locally made structures (426 households, 4%), other methods (323 households, 3%) and unprotected piles (29 households, 0.3%). (Chart 3.72).

Chart 3.72 Number of households by Storage Method - DAR ES SALAAM



Sacks and open drum were the dominant storage method in all districts, with Temeke having the highest percentage of households using this method (59% of the total number of households storing crop products). This is followed by Kinondoni (56%), and Ilala (28%) (Chart 3.73).

Chart 3.73 Number of Households by Method of Storage and District (based on the most important household crop)

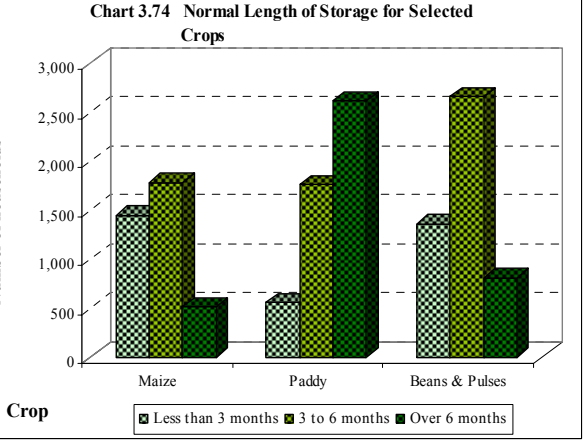


The highest percentage of households using locally made traditional structures was in Temeke and Kinondoni districts each with 27% of the total households using this method, followed by Ilala (15%).

3.7.1.2 Duration of Storage

Most households (44% of the households storing crops) stored their produce for a period of 3 to 6 months followed by those that stored crops for a period of over 6 months. The minority of households stored their crops for a period of less than 3 months (25%).

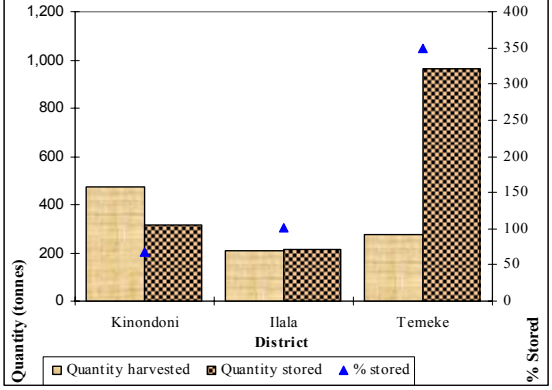
Chart 3.74 Normal Length of Storage for Selected Crops



Most households that stored pulses, stored them for a period of 3 to 6 months followed by less than 3 months. A small number of households stored pulses for the period of over 6 months (Chart 3.74). The proportion of households that stored their produce for the duration of 3 to 6 months was highest in Kinondoni district (52%) followed by Temeke (43%), and Ilala (27%) (Map 3.41).

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 (Chart 3.75). However, households in Temeke district stored relatively more maize in comparison to the quantity produced indicating that the quantity stored was not determined by the food and seed requirement of the household.

Chart 3.75 Quantity of Maize Produced (tonnes), Stored and Percent Stored by District



3.7.1.3 Purposes of Storage

Subsistence food crops (maize, paddy, sorghum and millet, beans and pulses) are mainly stored for household consumption. The percent of households that stored maize for household consumption as the main purpose of storage was 79.2 percent followed by seed for planting. A high percent of the stored permanent crops was for selling at a higher price as was the case of cashew nuts (73.1%). This was followed by household consumption (23.2%). (Chart 3.76).

3.7.1.4 The Magnitude of Storage Loss

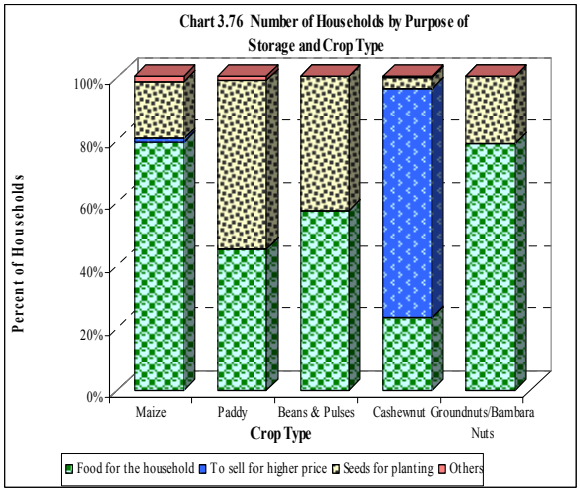
About 69 percent of households that stored crops had little or no loss, however the proportion of households that experienced a loss of more than a quarter was higher for food crops than crops that are produced for sale such as coffee, tobacco, cashew nut, groundnut and bambara nuts.

Table 3.11: 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
Kinondoni	3,431	278	40	0	3,750
Ilala	1,821	165	0	0	1,986
Temeke	2,813	889	42	0	3,745
Total	8,066	1,333	82	0	9,481

The proportion of households that reported a loss of more than a quarter was greatest for paddy (55% of the total number of households that stored crops). This was followed by beans and pulses (42.7%), then groundnuts and bambaranut (21.5%). Households that stored cashew nut had storage loss (3.7%). Most households storing other crops in the region had little or no storage loss (85.1%).

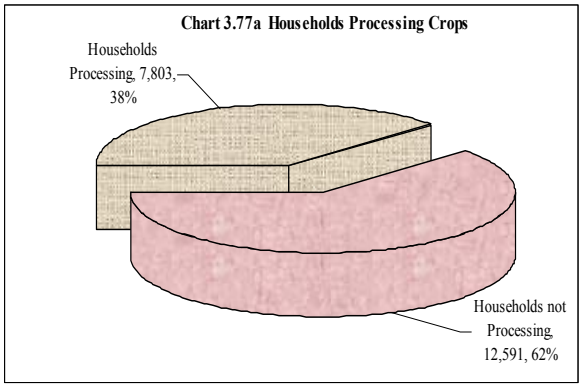
Chart 3.76 Number of Households by Purpose of Storage and Crop Type

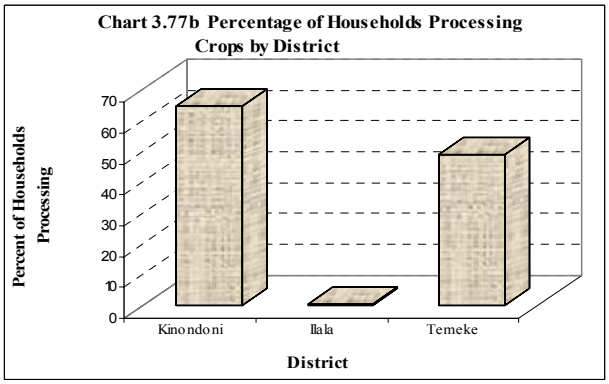


3.7.2 Agro processing and By-products

Agro processing refers to a process that converts a crop product from one form to another form in order to add value or increase the palatability of the product. Agro-processing was practiced in some crop growing households in Dar es Salaam region (7,803 households, 38% of the total crop growing households) (Chart 3.77a).

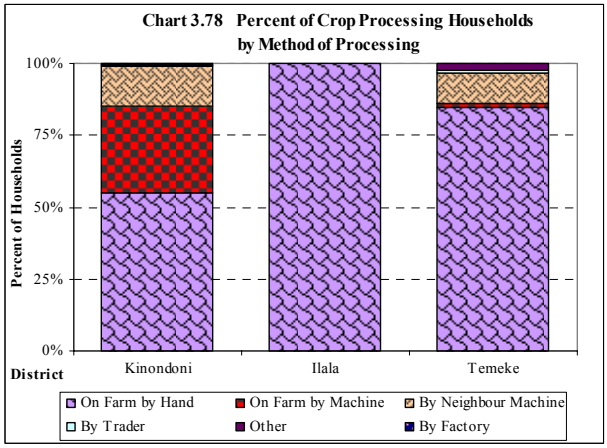
The percent of households processing crops was highest in Kinondoni district (64%) followed by Temeke (49%). Ilala had no households processing crops. (Chart 3.77b).



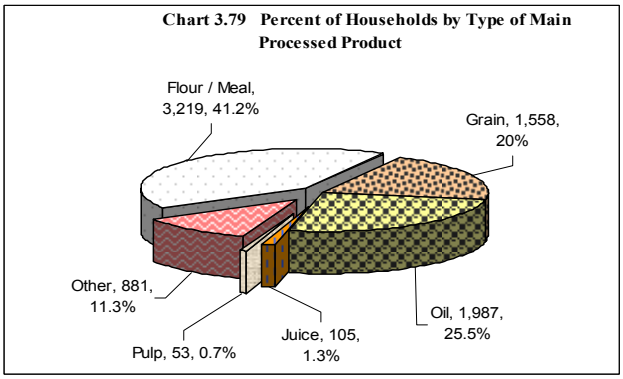


3.7.2.1 Processing Methods

Most crop processing households processed their crops using on-farm by hand representing 68 percent (5,337 households). This was followed by those processing on-farm by machine (1,329 households, 17%), neighbour's machines (990 households, 12.7%) and other methods (95 households, 1.2%). The remaining methods of processing were used by very few households (less than 1%).



Although processing on-farm by hand was the most common processing method in all districts in Dar es Salaam region, district differences existed. Ilala had a 100 percent of hand processing, followed by Temeke (85%) and Kinondoni (55%). Processing on-farm by machine was more common in Kinondoni and Temeke (30% and 1% respectively), also processing on farm by neighbour's machine was more prevalent in these two districts. (Chart 3.78).

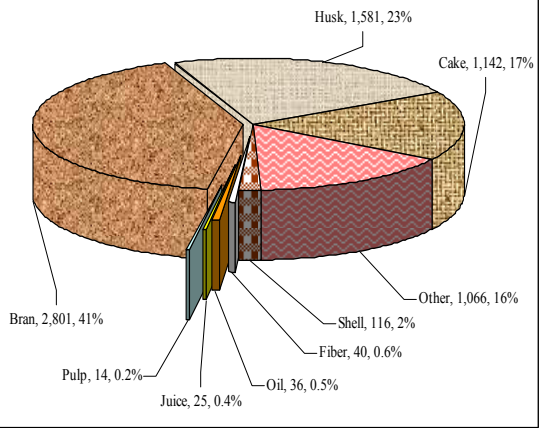


3.7.2.2 Main Agro-processing Products

Two types of products can be produced from agro-processing namely, main product and by-product. The main product is the major product after processing and the by-product is 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 was flour/meal with 3,219 households processing crops into flour (41.2%) followed by oil with 1,987 households (25.5%). The remaining products were produced by a small number of households (Chart 3.79).

Chart 3.80 Number of Households by Type of By-product

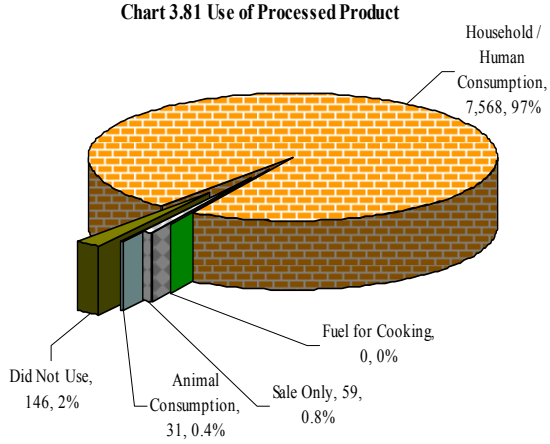


The number of households producing by-products accounted for 87.4 percent of the households processing crops. The most common by-product produced by crop processing households was bran with 2,801 households (41%) followed by Husks (1,581 households, 23%), cake (1,142 households, 16%) and other (1,066 households, 15.6%). The remaining by-products were produced by a small number of households (Chart 3.80).

3.7.2.3 Main Use of Primary Processed Products

Primary processed products were used for households or human consumption, fuel for cooking, for selling and for animal consumption. The most important use was for household/human consumption which represented 98.8 percent of the total households that used primary processed product (Chart 3.81). No district used primary products as fuel for cooking.

Chart 3.81 Use of Processed Product



Out of 59 households that sold processed products, 44 were from Kinondoni (76% of the total number of households selling processed products in the region), followed by Temeke with 14 households (24%) and none for Ilala. (Chart 3.82). Compared to other districts in Dar es Salaam region, Kinondoni had the highest percentage of households

Chart 3.82 Percentage of Households Selling Processed Crops by District

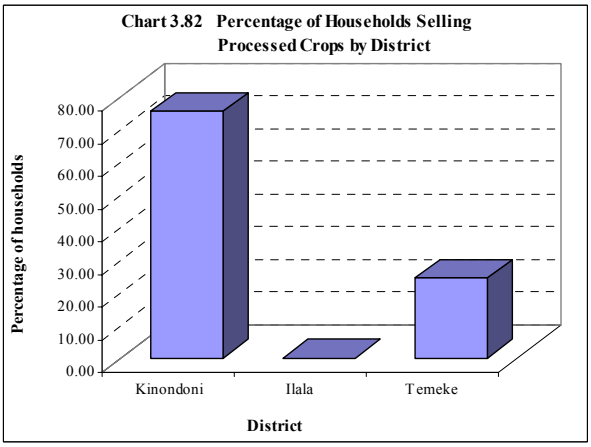
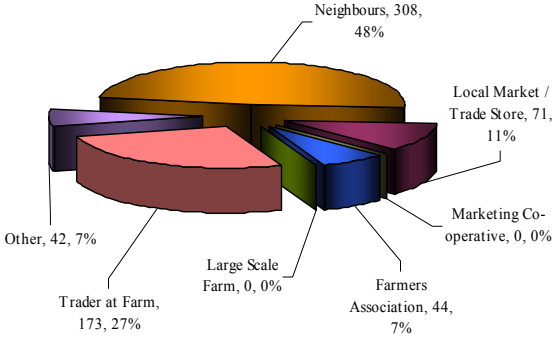


Chart 3.83 Location of Sale of Processed Products

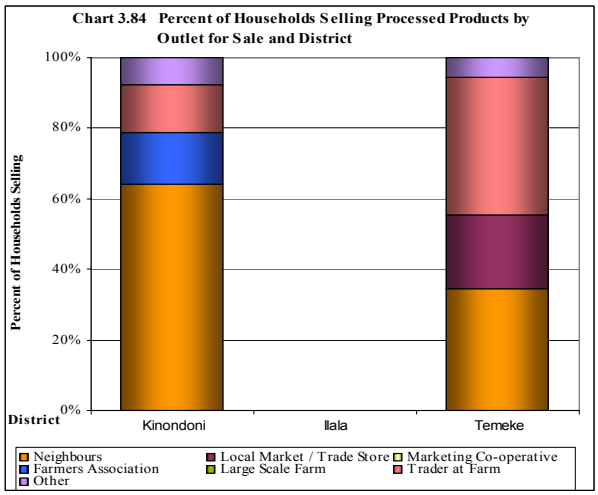


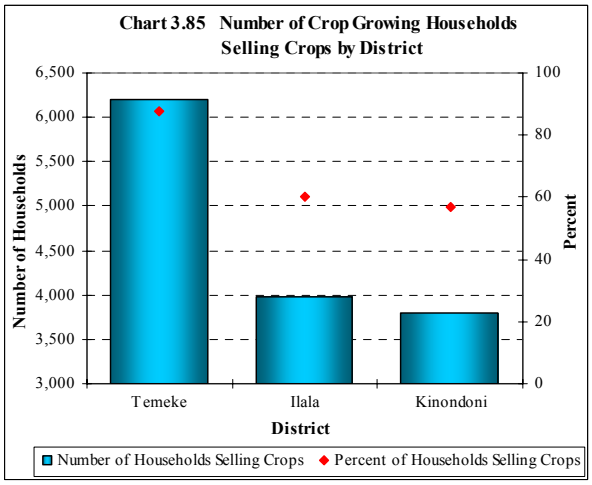
that sold processed products. This is followed by Temeke (0.41%).

3.7.2.4 Outlets for Sale of Processed Products

Most households that sold processed products sold to neighbours (308 households, 48% of households that sold crops). This was followed by selling to trader at farm (173 households, 27%), local market and trade stores (71 households, 11%), Farmers Associations (44 households, 7%), and other outlets (42 households, 6.6%) (Chart 3.83).

There are large differences between districts in the proportion of households selling processed products to neighbours with Kinondoni district having the largest percent of households in the district selling to neighbours (64%), whereas Temeke had only 34 percent. Temeke had a higher percent of households relying on trader at farm than other outlets.
In Kinondoni the sale of processed produce to farmer associations was most prominent compared to other districts. No district was selling processed products to marketing cooperatives in the region.



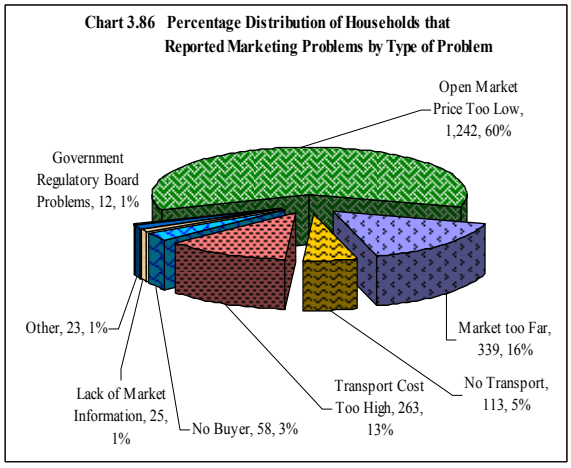


3.7.3 Crop Marketing

The number of households that reported selling crops was 13,976 which represent 69 percent of the total number of crop growing households. The percentage of crop growing households selling crops was highest in Temeke (88%) followed by Ilala (60%), then Kinondoni (57%) (Chart 3.85 and Map 3.42).

3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main marketing problem reported by households (60% of crop growing households). Apart from low market prices, other problems were longer distances to the markets (16.4%), high transport costs (12.7%), lack of transport (5.4%), lack of buyers (2.8%) and lack of market information (1.2%). Other marketing problems are minor and represented less than 2 percent of the total reported problems. (Chart 3.86).



3.7.3.2 Reasons for Not Selling Crops

The main reason for not selling crops was reported as "Open Market Price Too Low", representing 59.8 percent of the smallholders, followed by "Market too Far" (16.4%). The remaining reasons for not selling are in such low numbers that it is not appropriate to rank their importance (Table 3.12). This general trend applies to all districts except for Ilala where the main reason for not marketing their agricultural products is lack of transport (2.1%).

Table 3.12 Reasons for Not Selling Crop Produce

Main Reason	Household Number	%
Price Too Low	1,242	59.8
Market Too Far	339	16.4
Transport Cost Too High	263	12.7
No Transport	113	5.4
No Buyer	58	2.8
Lack of Market Information	25	1.2
Other	23	1.1
Government Regulatory Board Problems	12	0.6
Total	**2,075**	**100.0**

3.8 Access to Crop Production Services

3.8.1 Access to Agricultural Credits

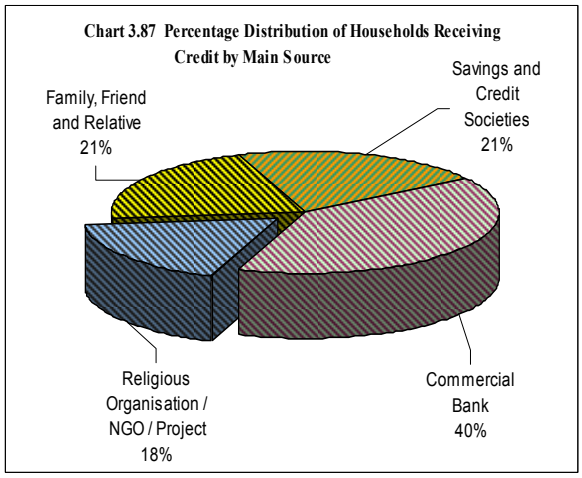
The census result shows that in Dar es Salaam region very few agricultural households (106, 0.5%) accessed credit out of which 49 (46%) were male-headed households and 57 (54%) were female headed households. In Ilala district only female headed households got agricultural credit whereas in Temeke districts only male households accessed credit. In Kinondoni district both male and female headed households accessed agricultural credit (Table 3.12).

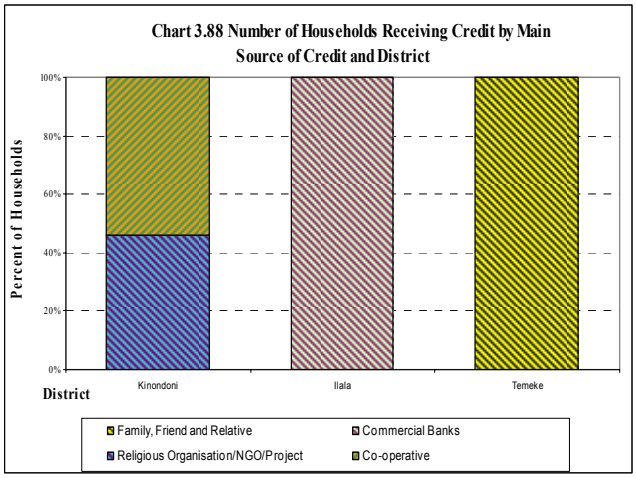
Table 3.13 Number of Agricultural Households that Received Credit by Sex of Household Head and District

District	Male		Female		Total
	Number	%	Number	%	
Kinondoni	4	23	15	77	19
Ilala	0	0	42	100	42
Temeke	44	100	0	0	44
Total	49	46	57	54	106

3.8.1.1 Source of Agricultural Credits

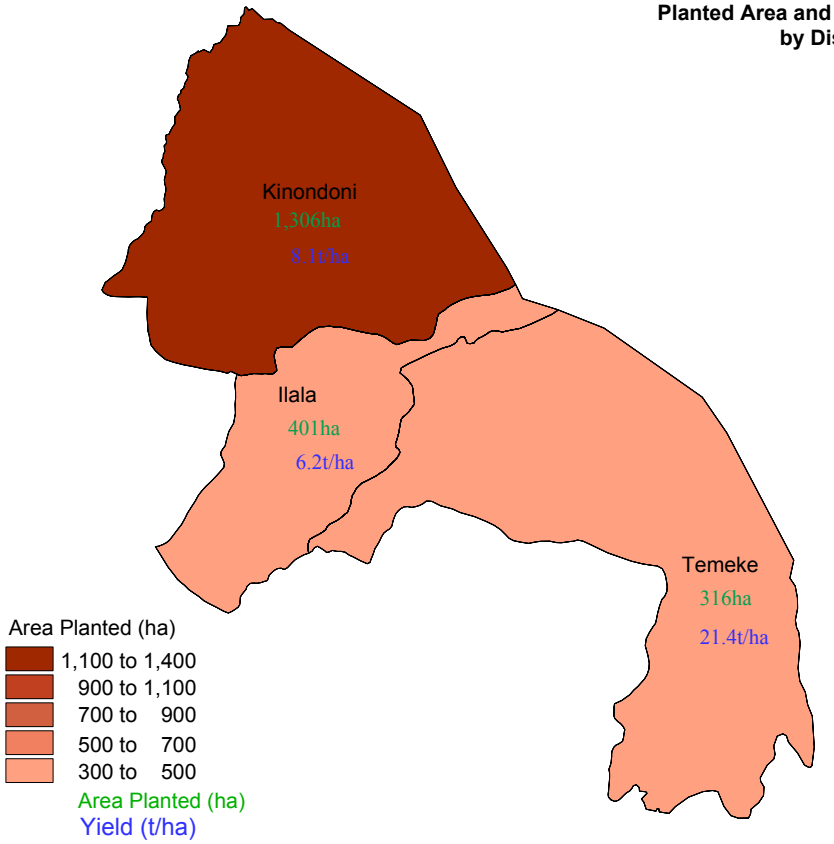
The major agricultural credit provider in Da r es Salaam region were Commercial banks which collectively provided credit to 42 agricultural households (40.1% of the total number of households that accessed credit), followed by family, friends



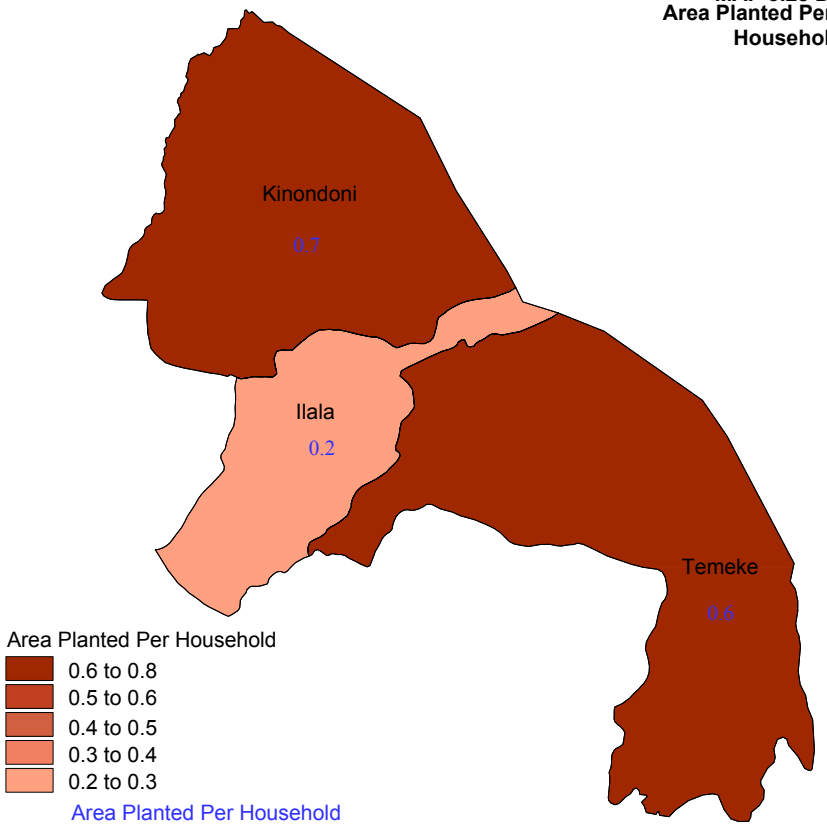


and relatives (21.2%), saving and credit society (21%), and religious organizations/non governmental organizations/ projects sources (17.8%) (Chart 3.87). Commercial banks were the sole source of credit in Ilala district and savings and credit societies were found in Temeke district only. Also Family/Friends/Relatives was a credit provider in Temeke district. Religious organization, NGO and projects were more involved in funding households in Kinondoni district (Chart 3.88).

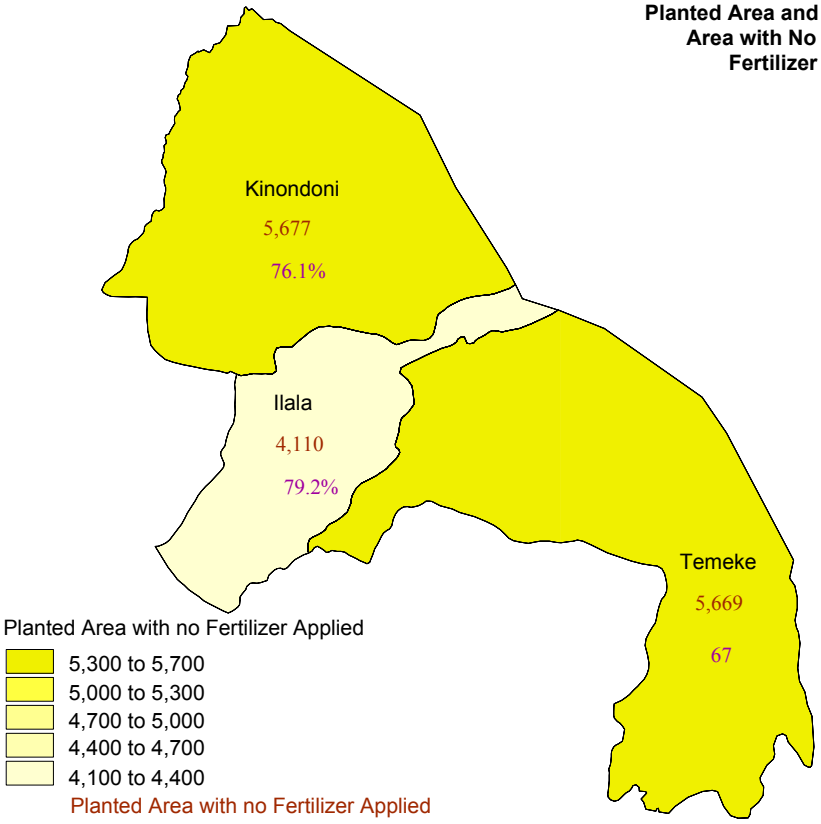
MAP 3.27 DAR ES SALAAM
Planted Area and Yield of Oranges by District



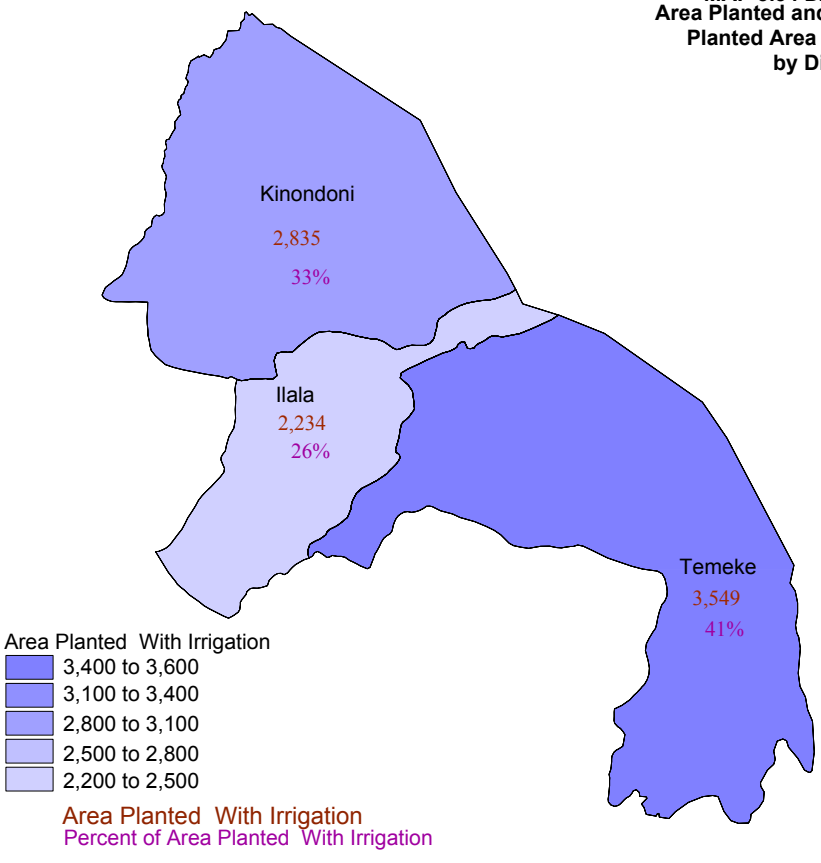
MAP 3.28 DAR ES SALAAM
Area Planted Per Oranges Growing Household by District



MAP 3.33 DAR ES SALAAM
Planted Area and Percent of Planted Area with No Application of Fertilizer by District

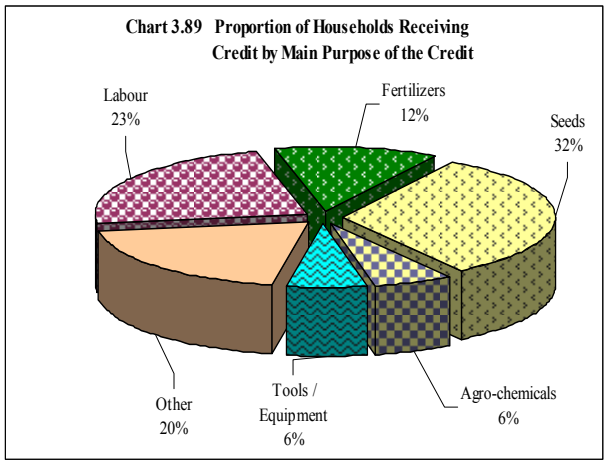


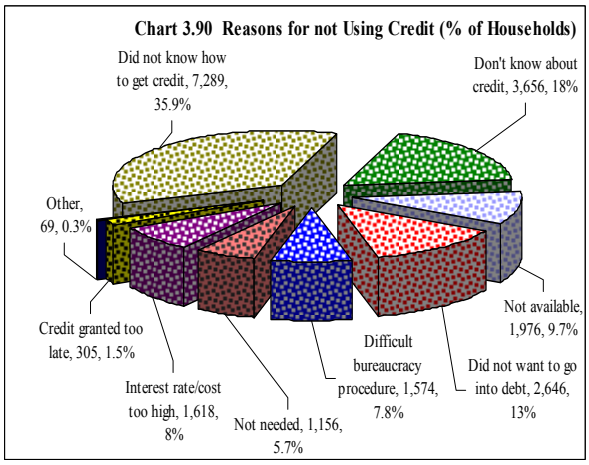
MAP 3.34 DAR ES SALAAM
Area Planted and Percent of Total Planted Area with Irrigation by District



3.8.1.2 Use of Agricultural Credits

A large proportion of the agricultural credits provided to agricultural households in the region were used to purchase seeds (32%), followed by hiring labour (23%), unspecified activities (20%) and fertilizers (12%). The proportion of credits used for tools, equipment and agro-chemicals was very low (Chart 3.89).



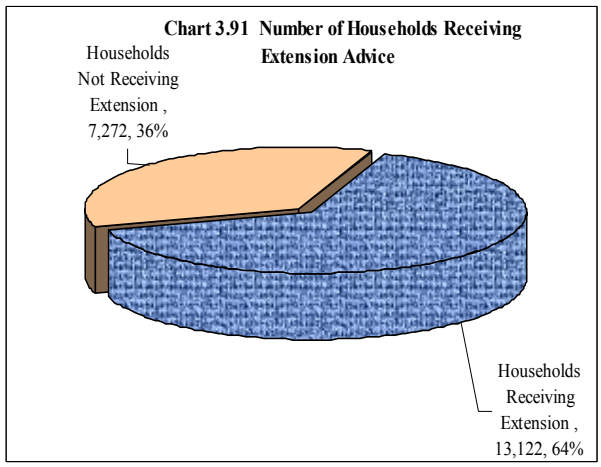


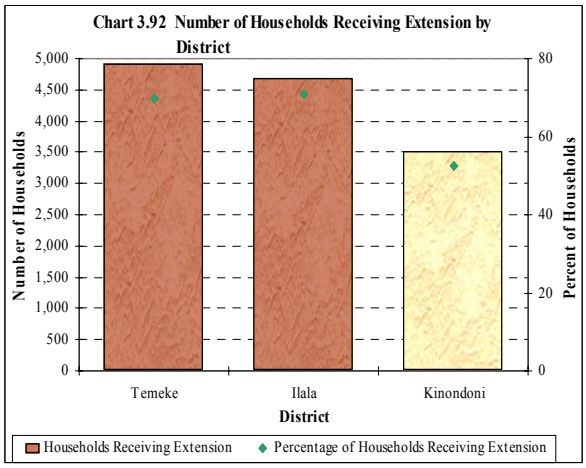
3.8.1.3 Reasons for Not Using Agricultural Credits

The main reason for not using agricultural credit as a source of finance was little credit awareness accounting to 54 percent of the agricultural households ("did not know how to get credit" and "don't know about credit"). This was followed by households reporting "not wanting to go into debt" (13.0%) the un-availability of credit (9.7%), followed by "interest rate/cost too high" (8%). The rest of the reasons applied to 15.3 percent of the households.

3.8.2 Crop Extension

The number of Agricultural households that received crop extension was 13,122 (68% of total crop growing households in the region) (Chart 3.91). Some districts have more access to extension services than others, with Ilala having a relatively high proportion of households (71%) that received crop extension messages in the district followed by Temeke (70%), and Kinondoni (52%) (Chart 3.92 and Map 4.43).





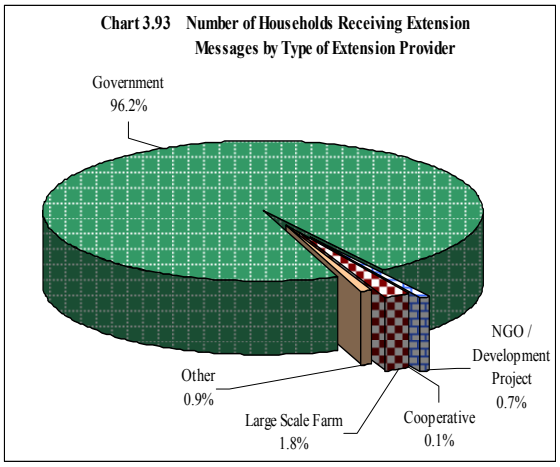


Chart 3.93 Number of Households Receiving Extension Messages by Type of Extension Provider

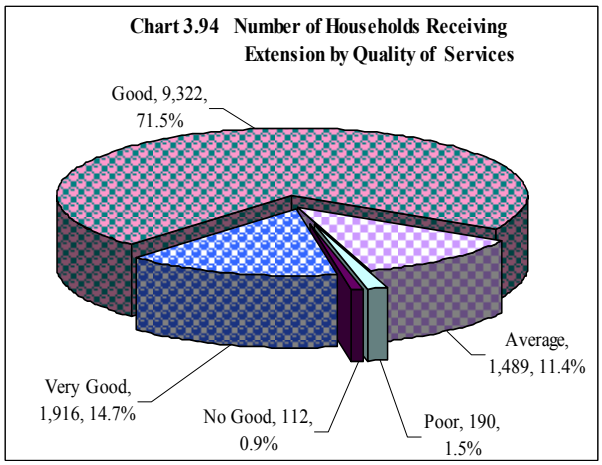


Chart 3.94 Number of Households Receiving Extension by Quality of Services

3.8.2. 1 Sources of Crop Extension Messages

Of the households receiving extension advice the Government provided the greatest proportion (96.2%, 12,178 households). large scale farms provided 1.8 percent, other providers 0.9 percent, and the remaining less than 0.9 percent (Chart 3.93), however district differences exist with the proportion of the households receiving advice from government services ranging from between 95 percent and 97 percent in Temeke and Kinondoni respectively.

3.8.2.2 Quality of Extension

An assessment of the quality of extension indicates that 71.5 percent of the households receiving extension ranked the service as being good followed by very good (14.7 %), average (11.4%), poor (1.5%) and no good (0.9%) (Chart 3.94). 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, some of the figures presented in this section may be slightly different from the previous section on inputs use (Section 3.5). Data on source of inputs is only found in this section and it applies to both annual and permanent crops.

Table 3.14 Access to Inputs

Type of Input	Households With Access to Input		Households Without Access to Inputs	
	Number	%	Number	%
Farm Yard Manure	5,958	2.3	14,498	5.5
Improved Seeds	10,915	4.1	9,466	3.6
Pestcides/Fungicides	3,304	1.3	17,090	6.5
Inorganic Fertiliser	2,480	0.9	17,865	6.8
Compost	3,393	1.3	17,001	6.5
Herbicide	156	0.1	20,238	7.7

A small number of households use inputs and this is particularly true of inputs that are not produced on farm i.e., improved seeds, fungicides, inorganic fertiliser and herbicides. In Dar es Salaam region improved seeds are used by 10,915 households which represent 4.1 percent of the total number of crop growing households. This is followed by households using farm yard manure (2.3%), compost (1.3%), fungicides (1.3%), inorganic fertiliser (0.9%), and herbicide (0.1%) (Table 3.14).

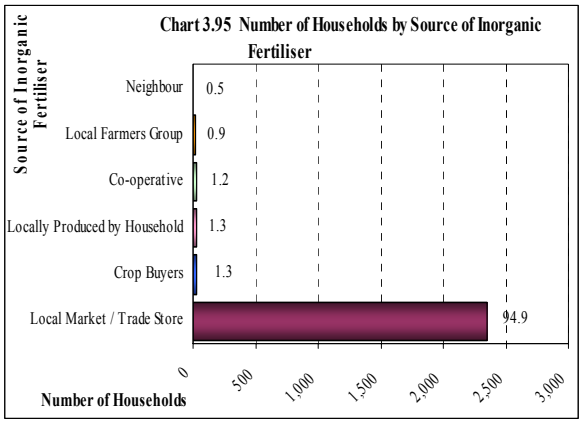


Chart 3.95 Number of Households by Source of Inorganic Fertiliser

3.9.2 Inorganic Fertilisers

Smallholders that use inorganic fertiliser in Dar es Salaam mostly purchase from the local market/trade store (95% of the total number of i norganic fertiliser users). The remaining sources of inorganic fertilisers are minor (Chart 3.95).

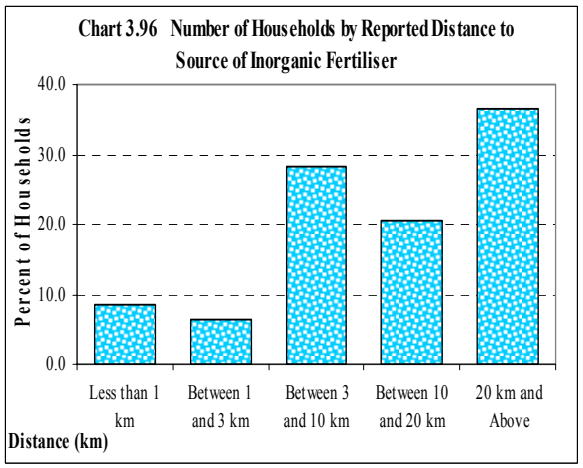
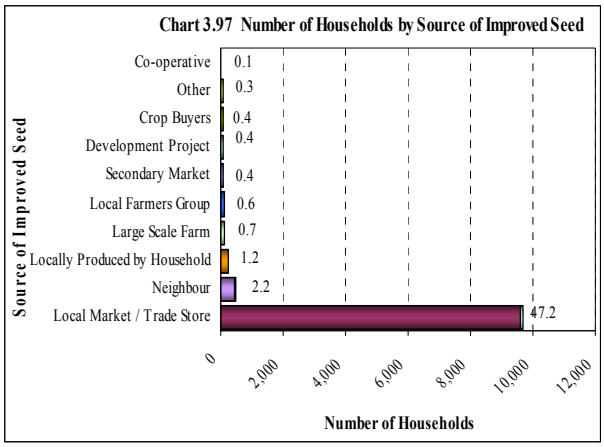
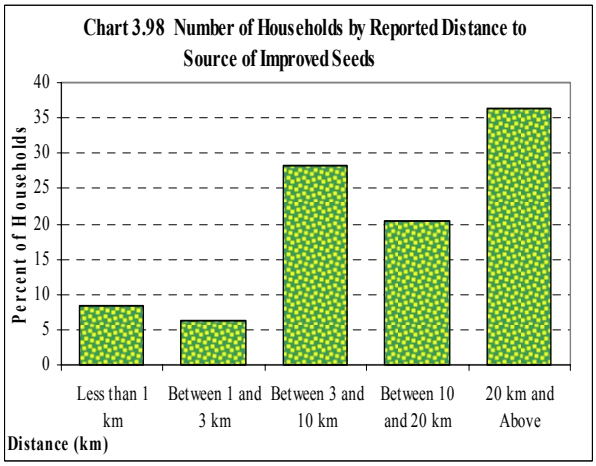


Chart 3.96 Number of Households by Reported Distance to Source of Inorganic Fertiliser

The distance to the source of inorganic fertilisers was on the average between 10 and 20 km from the household, with most households residing 20 km and above from the source (36.5%), followed by between 3 and 10 km (28.3%), between 10 and 20 km (20.4%) (Chart 3.96). Due to the very small number of households using inorganic fertilisers coupled with the small number of households responding to "not available" (5%) as the reason for not using them, it may be assumed that access to inorganic fertilisers was not the main reason for not using them. Other reasons such as cost were more important with 75 percent of households responding to cost factors as the main reasons for not using them. In other words, it may be assumed that if the cost was affordable the demand would be higher and access to inorganic fertilisers would be made more available.

More smallholders used inorganic fertilisers in Temeke than in other districts in Dar es Salaam region (59.3% of households using inorganic fertilisers), followed by Kinondoni (24.6%) and Ilala (16.0).





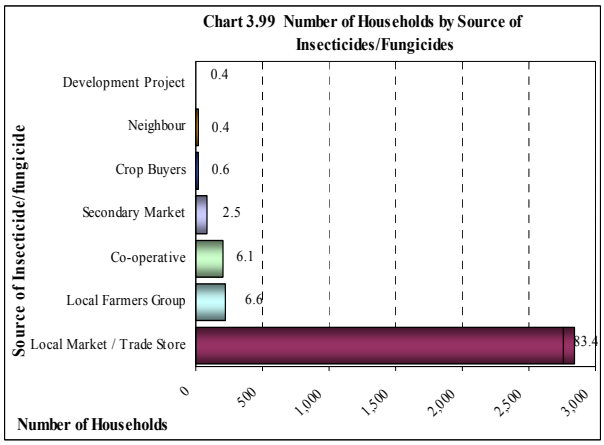
3.9.3 Improved Seeds

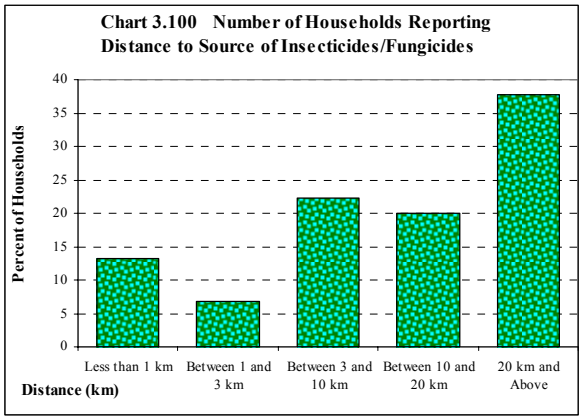
The percent of households that use improved seeds was 53.6 percent of the total number of crop growing households. Most of the improved seeds are from the local market/trade store (47.2%). Other less important sources of improved seed are from neighbours (2.2%) and locally produced by h ousehold (1.2%). Only 0.7 percent of households using improved seed obtain them from large scale farms (Chart 3.97).

Chart 3.100 shows that there is no distinct pattern for the number of households with varying distances from the source of insecticides/fungicides. The small number of households using insecticides/fungicides coupled with the 2 percent of households responding to "not available" as the reason for not using it may be assumed that access was not the main reason for not using them. Other reasons such as cost were more important with 71 percent of households responding to cost factors as the main reason for not using. In other words, it may be assumed that if the cost was affordable, the demand would be higher and access to insecticides/fungicides would be made more available. Fungicides were used more in Temeke district (57 percent of the total number of households that used fungicides in the region), followed by Kinondoni (22%) and Ilala (21%). (Map 3.44).

3.9.4 Insecticides and Fungicides

Most smallholder households using insecticides and fungicides mainly purchase them from local markets/trade stores (83.4% of the total number of fungicides users). Other sources of insecticides/ fungicides are of minor importance (Chart 3.99).





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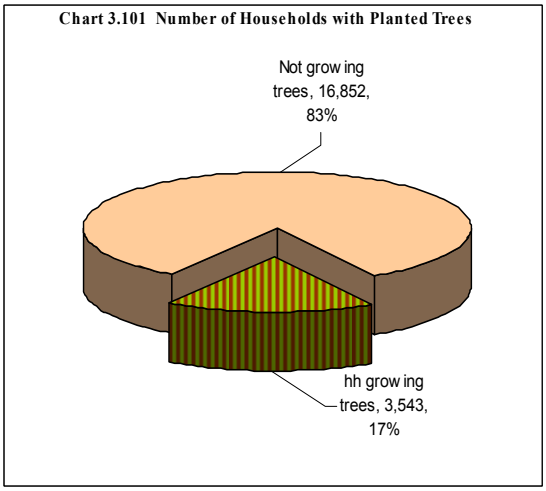
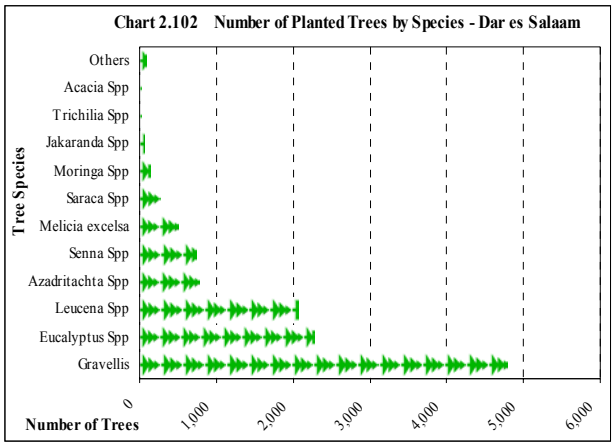
3.10 Tree Planting

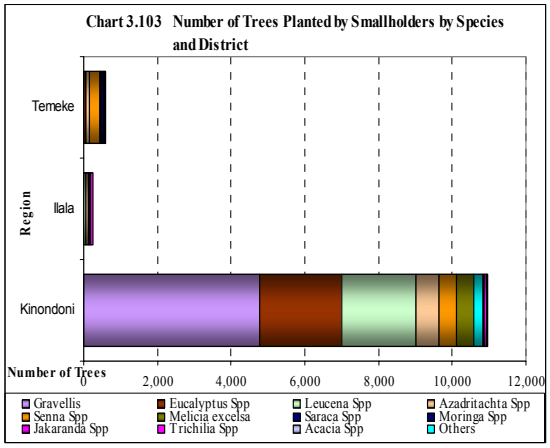
The number of households involved in tree farming was 3,543 representing 17 percent of the total number of agriculture households (Chart 3.101).



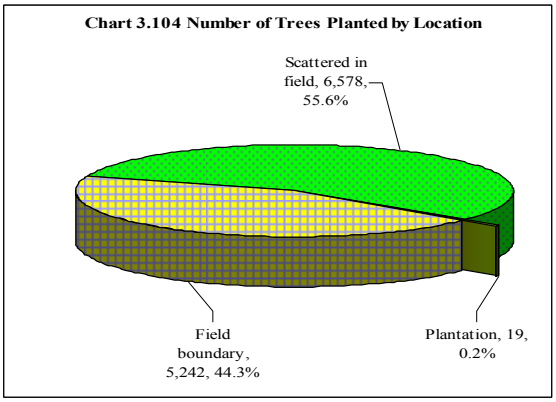
The number of trees planted by smallholders on their allotted land is 11,839 trees. The average number of trees planted per household planting trees was 3.3 trees.

The main species planted by smallholders is Gravellia spp (4,789 trees, 40.5%), followed by Eucalyptus (2,283, 19.3%) and Leucena spp (2,080, 17.6%), then Azadritachta spp (782 trees, 6.6%). The remaining trees species are planted in comparatively small numbers (Chart 3.102). Kinondoni has the largest number of smallholders with planted trees than any other district (92.6%) and is dominated by Gravellia species. This is followed by Temeke (5.2%) which is dominated by Senna spp and to a lesser extent Azadritachta spp then Ilala (2.2%) which is mainly planted with Azadritachta spp and to a lesser extent, Leucena spp. (Chart 3.103 and Map 3.45.).





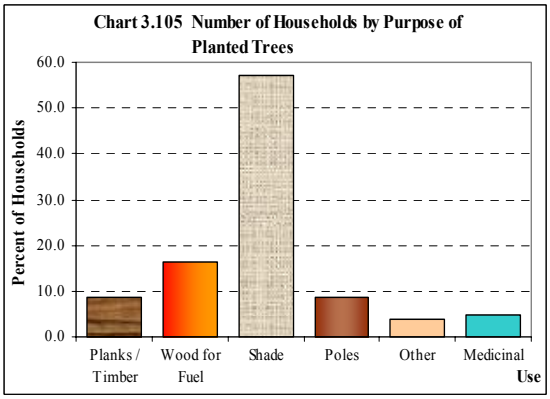
Most smallholders planted trees on the boundaries of their fields. The proportion of households that plant on field boundaries is 44.3 percent, followed by scattered around fields (55.6%) and then trees planted in a plantation or coppice (0.2%) (Chart 3.104).



The main purpose of planting trees is for shade (57%). This is followed by wood for fuel (16.5%), to obtain planks/timber (8.7%) and poles (8.7%) (Chart 3.105).

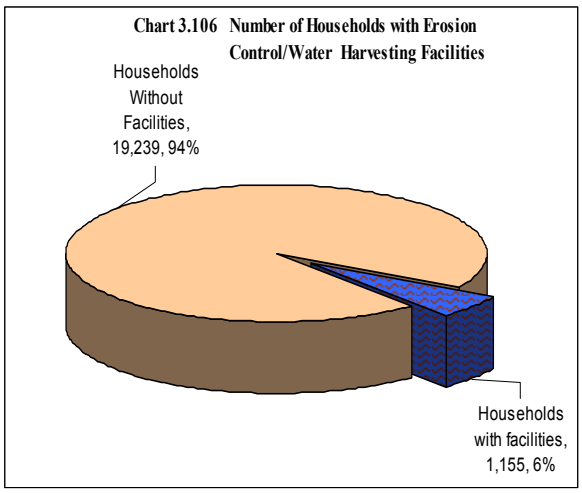
3.11 Irrigation and Erosion Control Facilities

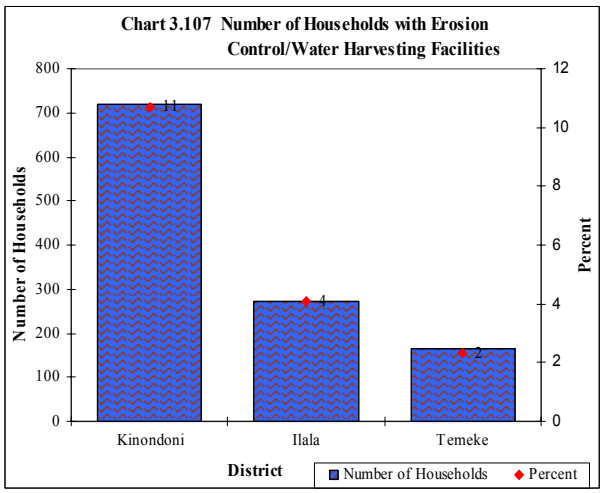
Erosion control and water harvesting facilities are grouped together as they normally have dual purposes of reducing erosion and increasing the amount of water available for crop production.



The number of agricultural households that had soil erosion and water harvesting facilities on their farms was 1,155 which represented 6 percent of the total number of agricultural households in the region (Chart 3.106).

The proportion of households with soil erosion control and water harvesting facilities was highest in Kinondoni district (11%) followed by Ilala (4%), then Temeke (2%) (Chart 3.107).

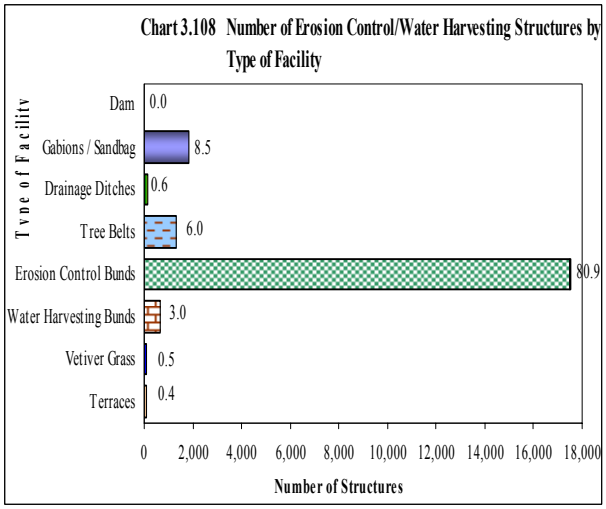




Erosion control bunds accounted for 81 percent of the total number of structures, followed by gabions/sandbags (8.5%), tree belts (6.0%), water harvesting bunds (3.0%), drainage ditches (0.6%), vetiver grass (0.5%), terraces (0.4%) and dams (0%) (Chart 3.108 and Map 3.46).

Erosion control by water harvesting bunds, gabions/sandbags and tree belts together had 20,613 structures. This represented 95 percent of the total structures in the region. The remaining 5 percentages were shared among the rest of the erosion control methods mentioned above.

Kinondoni and Temeke districts had 20,264 erosion control structures (94 percent of the total erosion structures in the region).

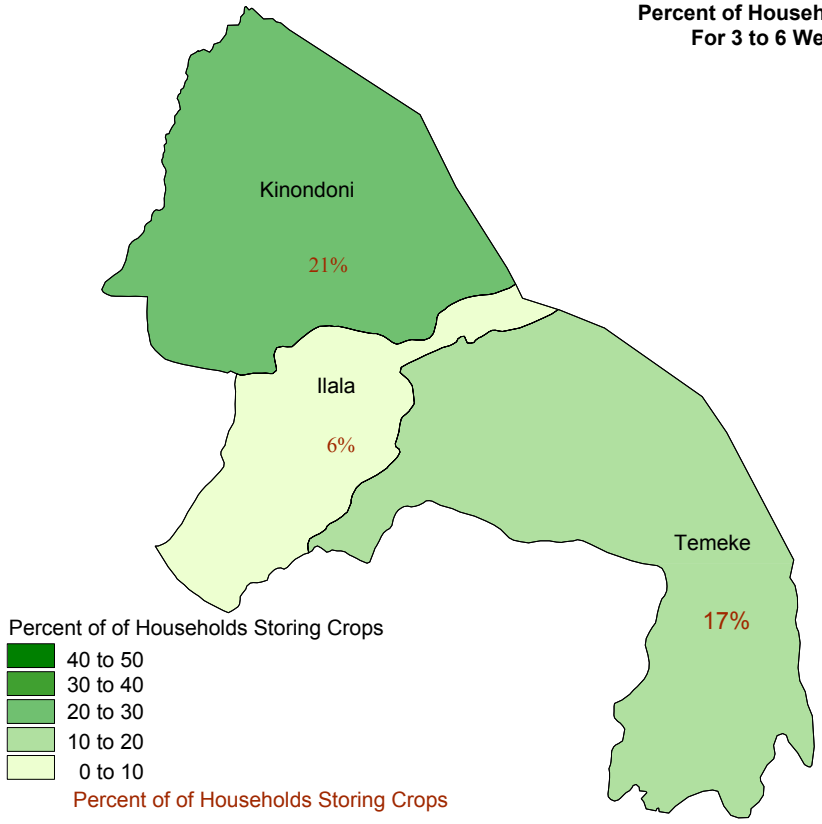


3.12 LIVESTOCK RESULTS

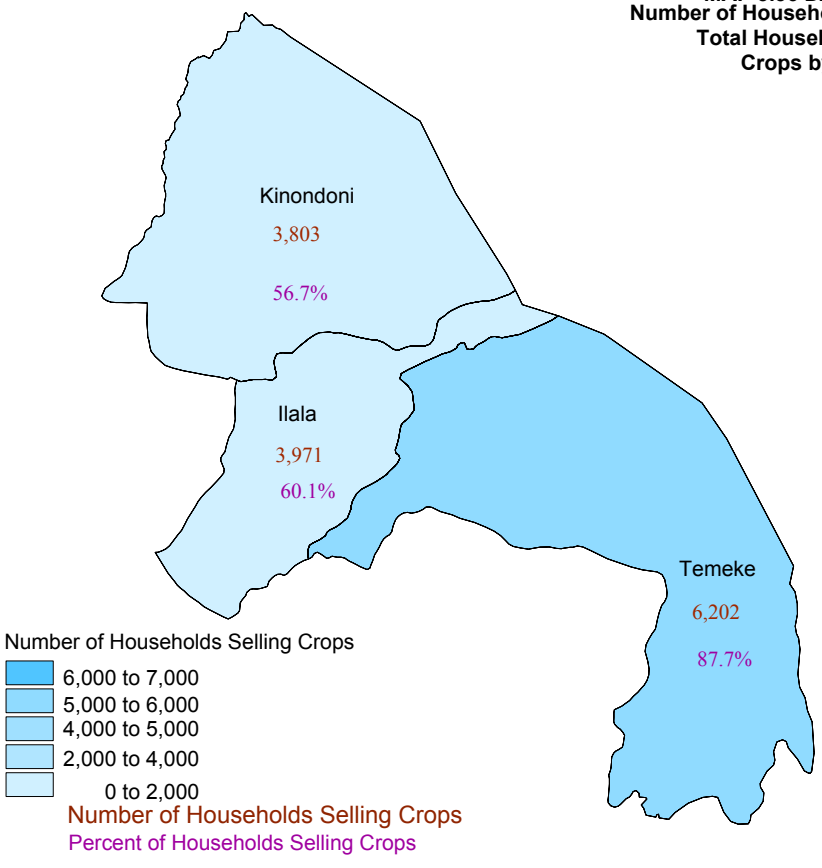
3.12.1 Cattle Production

The total number of cattle in the region was 13,195. Cattle was the second dominant livestock type in the region followed by pigs, and sheep. Goats were the most dominant. The region had 0.08 percent of the total cattle population on Tanzania Mainland.

MAP 3.35 DAR ES SALAAM
Percent of Households Storing Crops
For 3 to 6 Weeks by District

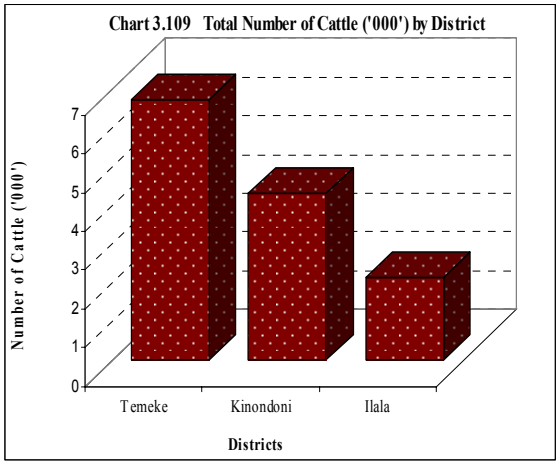


MAP 3.36 DAR ES SALAAM
Number of Households and Percent of Total Households Selling Crops by District



3.12.1.1 Cattle Population

The number of indigenous cattle in Dar es Salaam region was 4,660 (35.3 % of the total number of cattle in the region), 8,233 cattle (62.4%) were dairy breeds and 302 cattle (2.3%) were beef breeds.

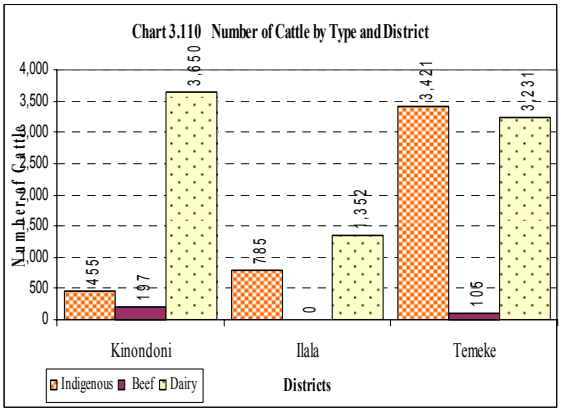


The census results show that 2,072 agricultural households in the region (10.2% of total agricultural households) kept 13,195 cattle. This was equivalent to an average of 6.4 heads of cattle per cattle-keeping-household. The district with the largest number of cattle was Temeke which had about 6,756 cattle (51.2% of the total cattle in the region). This was followed by Kinondoni (4,302 cattle, 32.61%), and Ilala (2,137 cattle, 16.2%). (Chart 3.109 and Map 3.47). However Temeke district had the highest density (22 head per km^2) (Map 3.48).

Although Temeke district had the largest number of cattle in the region, most of them were indigenous, closely followed by dairy. The number of beef cattle was insignificant. Kinondoni district had the largest number of diary cattle in the region. In general, the number of beef cattle in the region was insignificant (Chart 3.110).

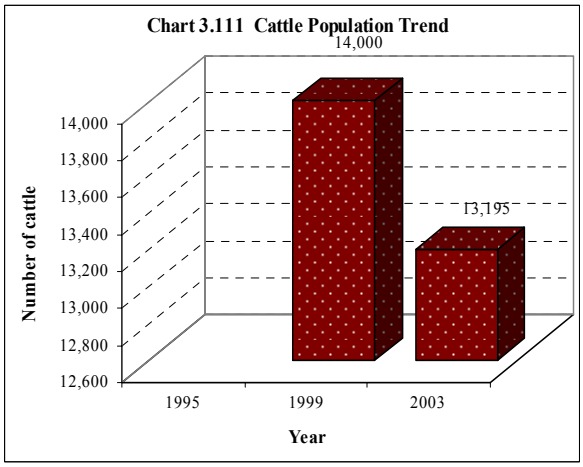
3.12.1.2 Herd Size

Sixty-six percent of the cattle-rearing households had herds of size 1-5 cattle with an average of two cattle per household. Herd sizes of 6-30 accounted for about 54 percent of all cattle in the region. Only 4 percent of the cattle rearing households had herd sizes of 31- 100 cattle or more. About 96 percent of total cattle rearing households had herds of size 1-30 cattle and owns 80 percent of total cattle in the region, resulting in an average of 5 cattle per cattle rearing household. There were about 20 households with a herd size of more than 40 cattle each (991 cattle in total) resulting in an average of 49 cattle per household.



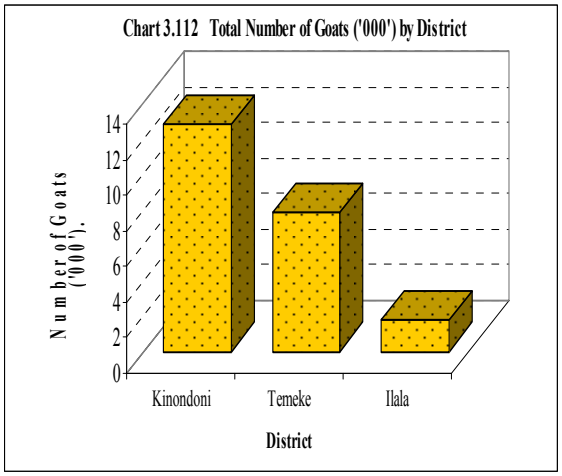
3.12.1.3 Cattle Population Trend

Cattle population in Dar es Salaam decreased by -1.47 percent during the period of four years from 14,000 in 1999 to 13,195 cattle in 2003. (Chart 3.111).



3.12.1.4 Improved Cattle Breeds

The total number of improved cattle in Dar es Salaam region was 8,535 (8,233 dairy and 302 improved beef). The dairy cattle constituted 62.4 percent of the total cattle and 96 percent of improved cattle in the region. The number of beef cattle in the region was insignificant constituting only 4 percent of the total number of the improved cattle and 2.3 percent of the total cattle in the region.



3.12.2. Goat Production

Goat rearing was the most important livestock keeping activity in the region followed by cattle, pig and sheep rearing. In terms of total number of goats on the Mainland, Dar es Salaam region ranked 21 out of the 21 regions with 0.2 percent of the total goats on the Mainland.

3.12.2.1 Goat Population

The number of goat-rearing-households in Dar es Salaam region was 1,840 (9% of all agricultural households in the region) with a total of 22,292 goats giving an average of 12 head of goats per goat-rearing-household. Kinondoni had the largest number of goats (12,743 goats, 52.4% of all goats in the region), followed by Temeke (7,812 goats, 35%). Ilala district had the least number of goats (1,737 goats, 7.8%) (Chart 3.112 and Map 3.49). However Kinondoni district had the highest density (52 head per km^2) (Map 3.50).

3.12.2.2 Goat Herd Size

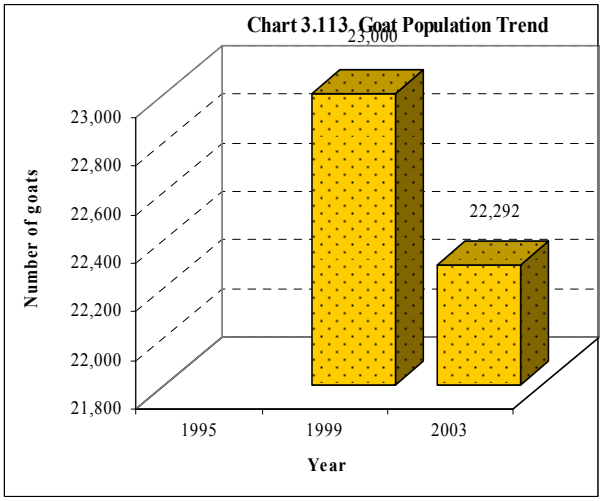
Thirty-three percent of the goat-rearing households had herd size of 1-4 goats with an average of 3 goats per goat rearing household. Seventy six percent of total goat-rearing households had herd size of 1-14 goats and owned 40 percent of the total goats in the region resulting in an average of 6 goats per goat-rearing households. The region had 106 households (6%) with herd sizes of 40 or more goats each (5,953 goats in total), resulting in an average of 56 goats per household.

3.12.2.3 Goat Breeds

Goat husbandry in the region was dominated by the indigenous breeds that constituted 92 percent of the total goats in Dar es Salaam region. Dairy goats and improved goats for meat constituted 4.4 and 3 percent of total goats respectively.

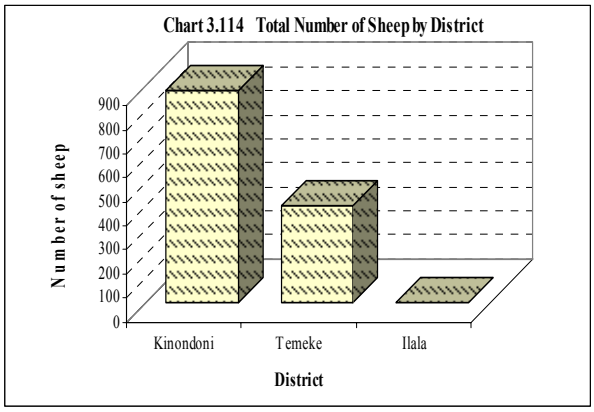
3.12.2.4 Goat Population Trend

The number of goats decreased from 23,000 in 1999 at an estimated annual rate of -0.78 percent to 22,292 in 2003. (Chart 3.113).



3.12.3. Sheep Production

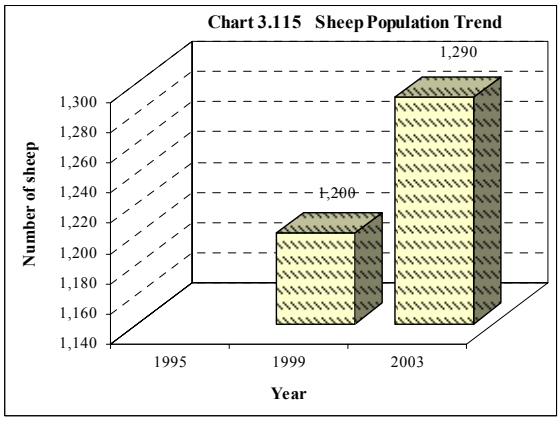
Sheep rearing was the fourth important livestock keeping activity in Dar es Sa;aam region after goats, cattle and pigs. The region ranked 21 out of 21 Mainland regions and had 0.03 percent of all sheep on Tanzania Mainland.



3.12.3.1 Sheep Population

The number of sheep-rearing households was 284 (1% of all agricultural households in Dar es Salaam region) rearing 1,290 sheep, giving an average of 4 heads of sheep per sheep-rearing household. The district with the largest number of sheep was Kinondoni with 886 sheep (68.7%of total sheep in Dar es Salaam region) followed by Temeke (404 sheep, 31.3%). Ilala District had no sheep recorded . (Chart 3.114 and Map 3.51). Kinondoni district also had the highest density (3.6 head per km^2) (Map 3.52).

Sheep rearing was dominated by indigenous breeds that constituted 100 percent of all sheep kept in the region. No improved breeds were recorded.

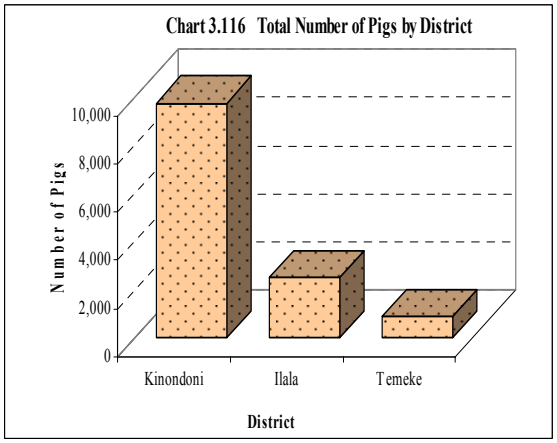


3.12.3.2 Sheep Population Trend

The annual growth rate of the sheep population for the four year period of 1999 to 2003 is estimated at 1.82 percent. The population increased from 1,200 in 1,999 to 1290 in 2003 (Chart 3.115).

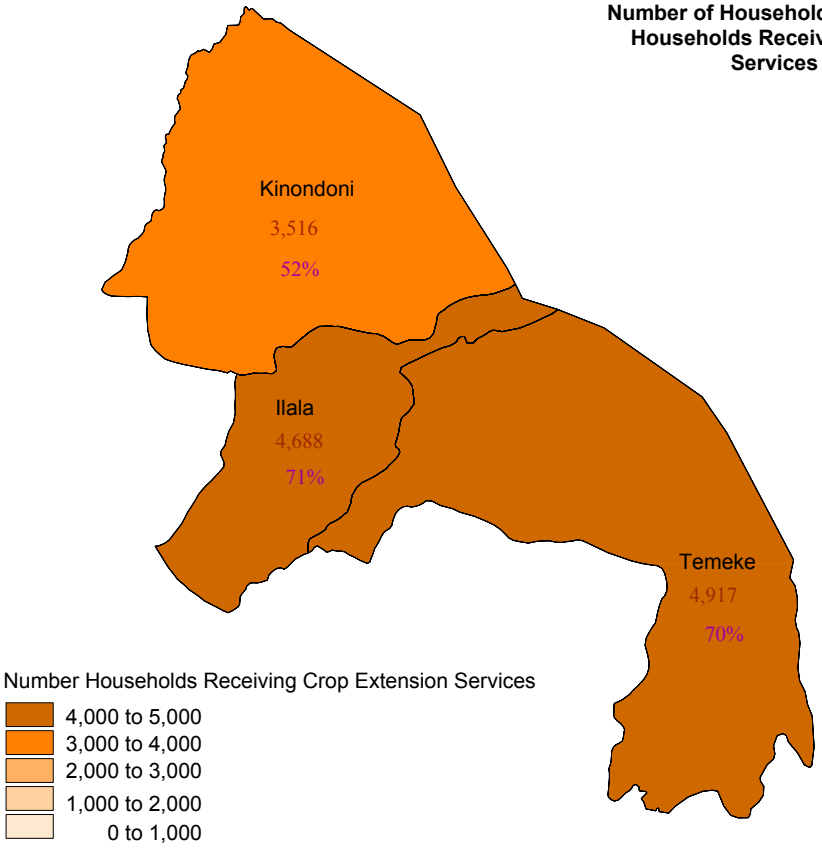
3.12.4. Pig Production

Piggery was the third important livestock keeping activity in the region after goats and cattle. The region ranked 11th out of 21 Mainland regions and had 1.2 percent of the Mainland total pigs.

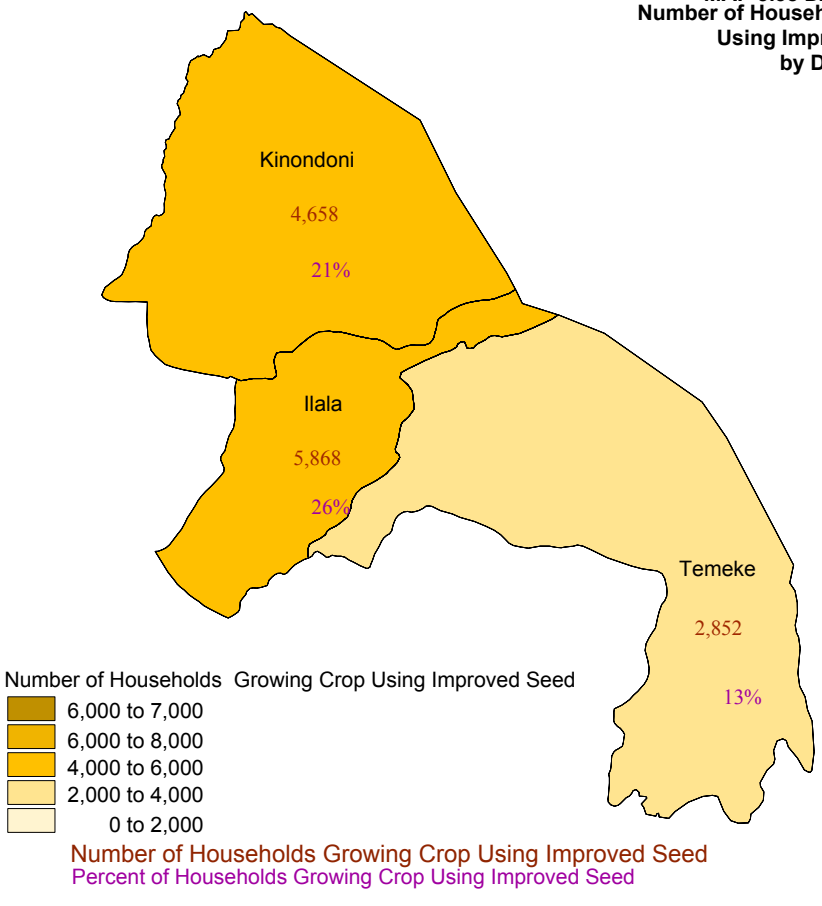


The number of pig-rearing agricultural households in Dar es Salaam region was 703 (3.4% of the total agricultural households in the region) rearing 12,993 pigs. This gave an average of 18 pigs per pig-rearing household. The district with the largest number of pigs was Kinondoni with 9,690 pigs (74.6% of the total pig population in the region) followed by Ilala (2,464 pigs, 19%), and Temeke (839 pigs, 6.5%) (Chart 3.116 and Map 3.53). However, Kinondoni district had the highest density (39.2 heads per km^2) (Map 3.54).

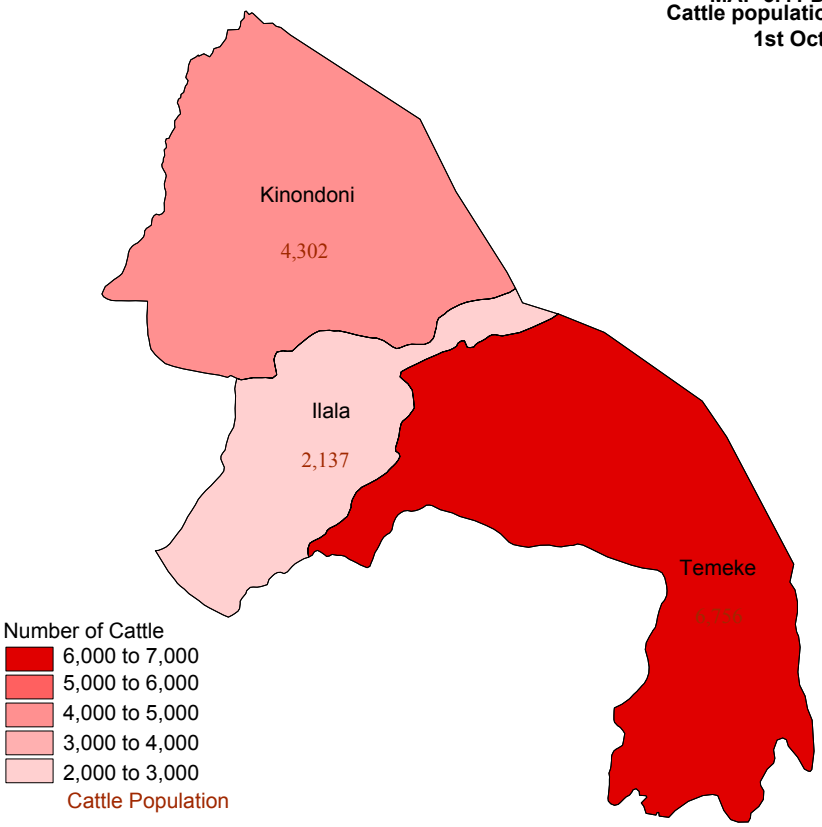
MAP 3.37 DAR ES SALAAM
Number of Households and Percent of Total Households Receiving Crop Extension Services by District



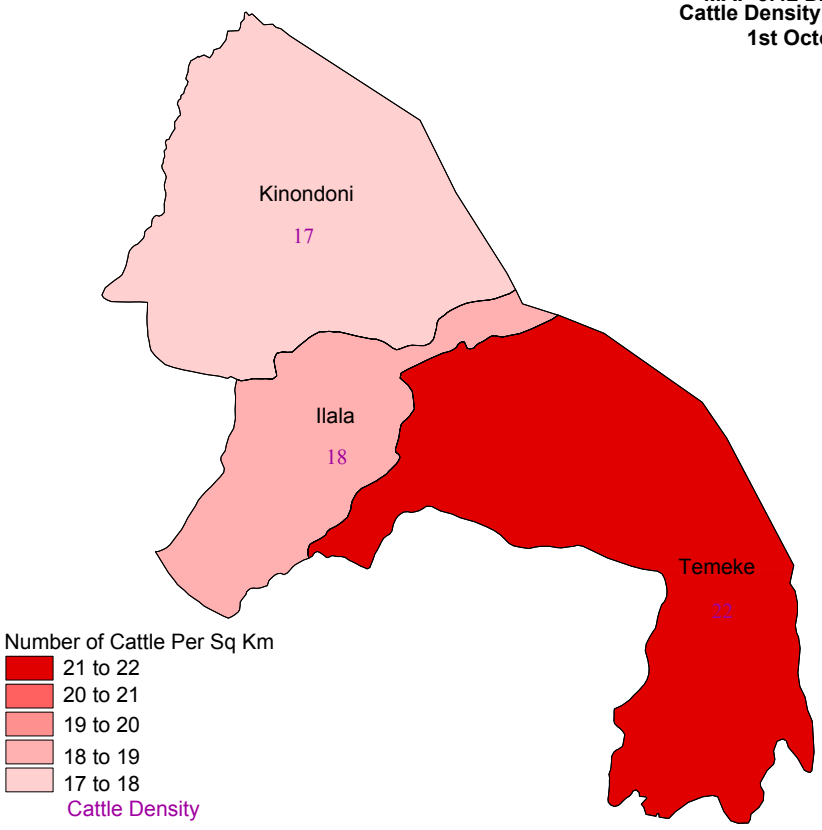
MAP 3.38 DAR ES SALAAM
Number of Households Crop Growing Using Improved Seeed by District



MAP 3.41 DAR ES SALAAM
Cattle population by District as of 1st October 2003

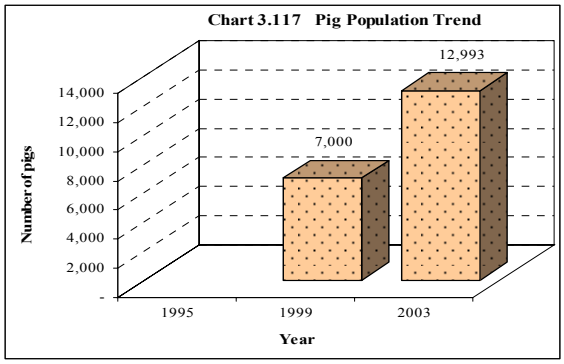


MAP 3.42 DAR ES SALAAM
Cattle Density by District as of 1st October 2003



3.12.4.1 Pig Population Trend

The annual growth rate of the pig population for the four years period from 1999 to 2003 was 16.72 percent. During this period the population grew from 7,000 to 12,993. (Chart 3.117).



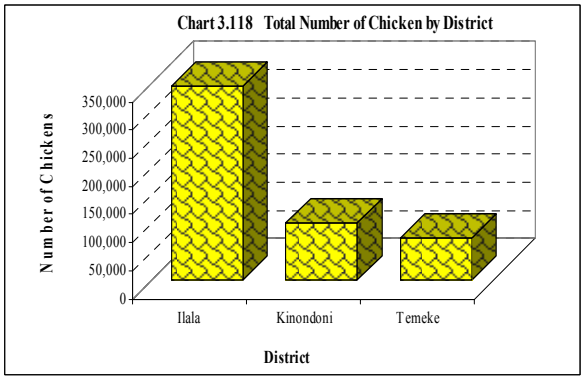
3.12.5 Chicken Production

The poultry sector in Dar es Salaam region was dominated by chicken production. The region contributed 1.6 percent to the total chicken population on Tanzania Mainland.

3.12.5.1 Chicken Population

The number of households keeping chicken was 11,424 raising about 525,052 chicken. This gives an average of 46 chicken per chicken-rearing household. In terms of total number of chicken in the country, Dar es Salaam region was ranked last, out of the 21 Mainland regions.

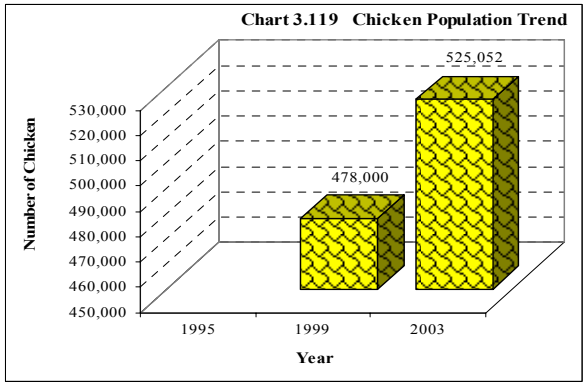
The District with largest number of chicken was Ilala (344,886 chicken, 65.7% of the total number of chicken in the region) followed by Kinondoni (104,069; 19.8%). Temeke district had the smallest number of chicken (76,097; 14.5%) (Chart 3.118 and Map 3.55). However Ilala district had the highest density (2836 head per km^2) (Map 3.56).



3.12.5.2 Chicken Population Trend

The annual chicken population growth rate during the four year period from 1999 to 2003 was 2.37 percent. The population increased from 478,000 to 525,052. (Chart 3.119).

Dar es Salaam region has the lowest percent of broilers (6%). Almost 59 percent of all chicken in Dar es Salaam region were of layers breed. The dominance of layers breed makes the population trend for the layers chicken more-or-less the same as that of the total chicken in the region.



3.12.5.3 Chicken Flock Size

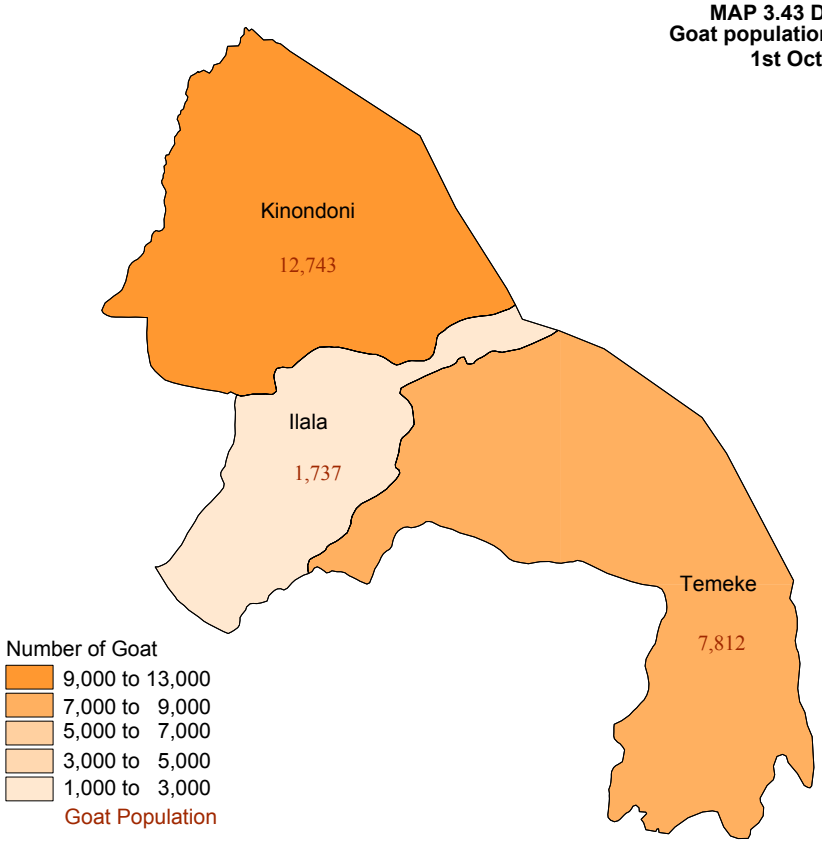
The results indicate that about 58 percent of all chicken-rearing households were keeping 1-19 chicken with an average of 9 chicken per holder. About 33 percent of holders were reported to be keeping the flock size of 20 to 99 chicken with an average of 33 chicken per holder.

Table 3.15 Number of Households and Chicken Raised by Flock Size

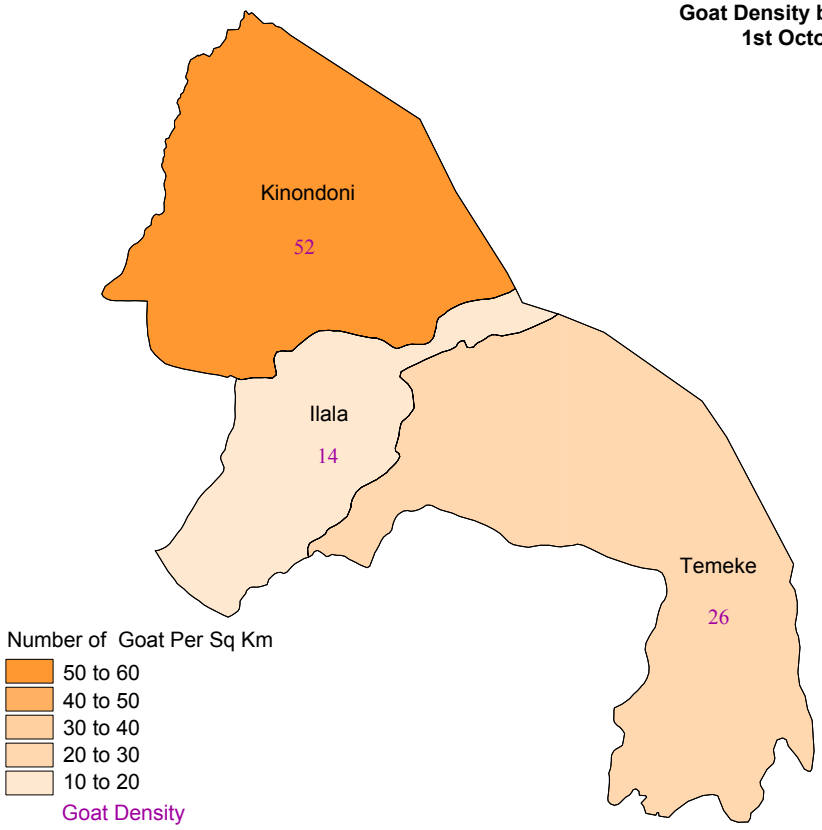
Flock Size	Number of Households	%	Number of Chicken	Average Chicken by Households
1-4	1,324	11.6	3,953	3.0
5-9	2,203	19.3	14,951	6.8
10-19	3,072	26.9	40,467	13.2
20-29	2,111	18.5	48,016	22.7
30-39	591	5.2	19,053	32.3
40-49	504	4.4	21,109	41.9
50-99	562	4.9	35,523	63.3
100+	1,058	9.3	341,981	323.1
Total	**11,424**	**100**	**525,052**	**46.0**

Only 9.3 percent of holders kept the flock sizes of more than 100 chicken at an average of 323 chicken per holder (Table 3.15).

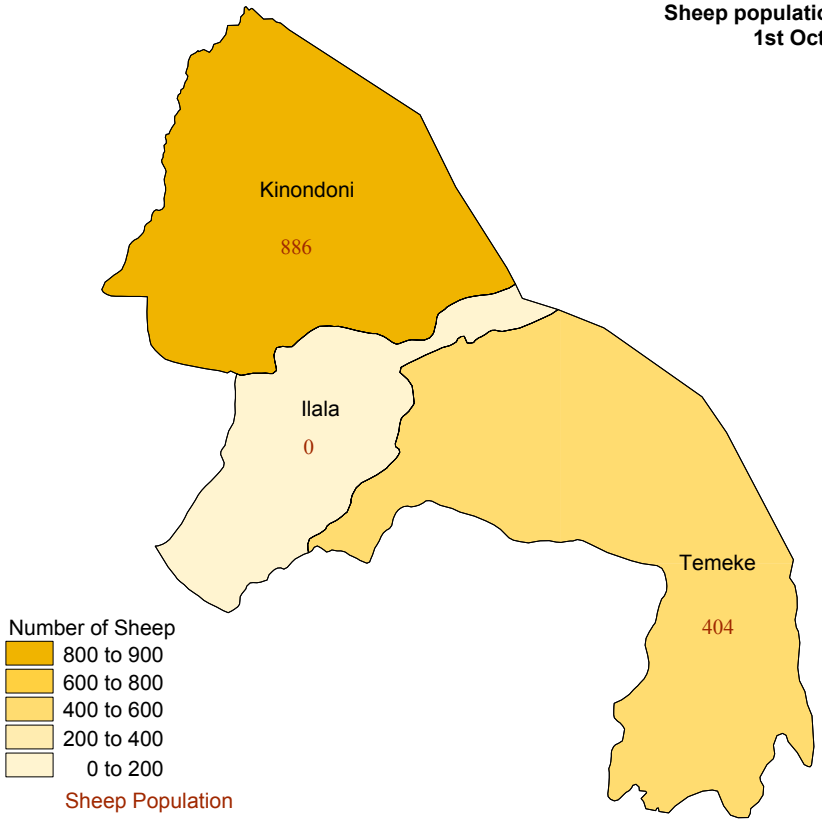
MAP 3.43 DAR ES SALAAM
Goat population by District as of 1st October 2003



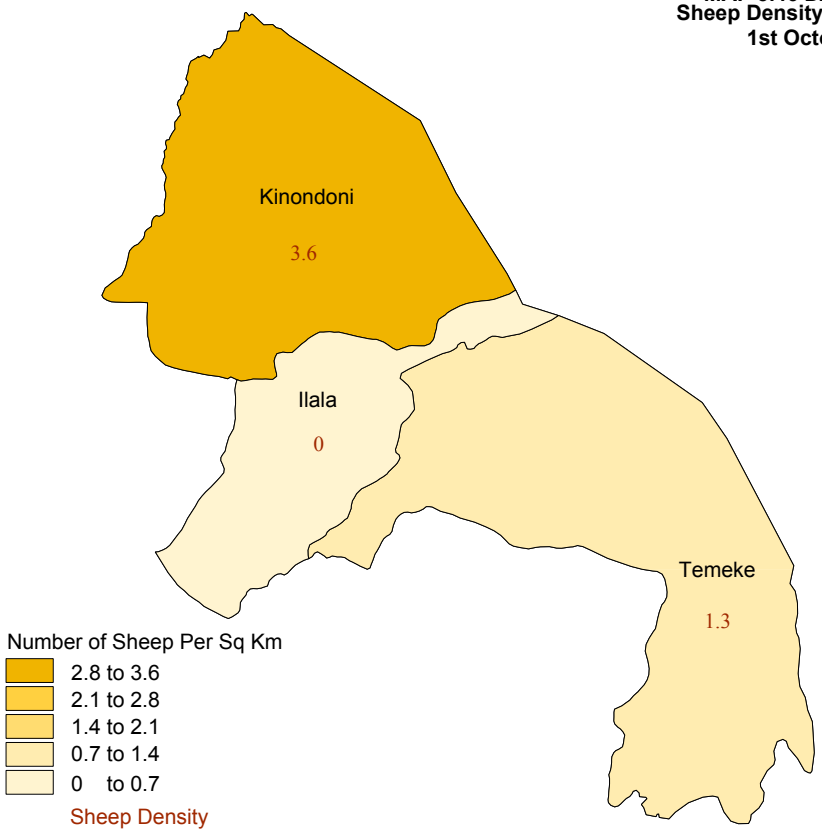
MAP 3.44 DAR ES SALAAM
Goat Density by District as of 1st October 2003



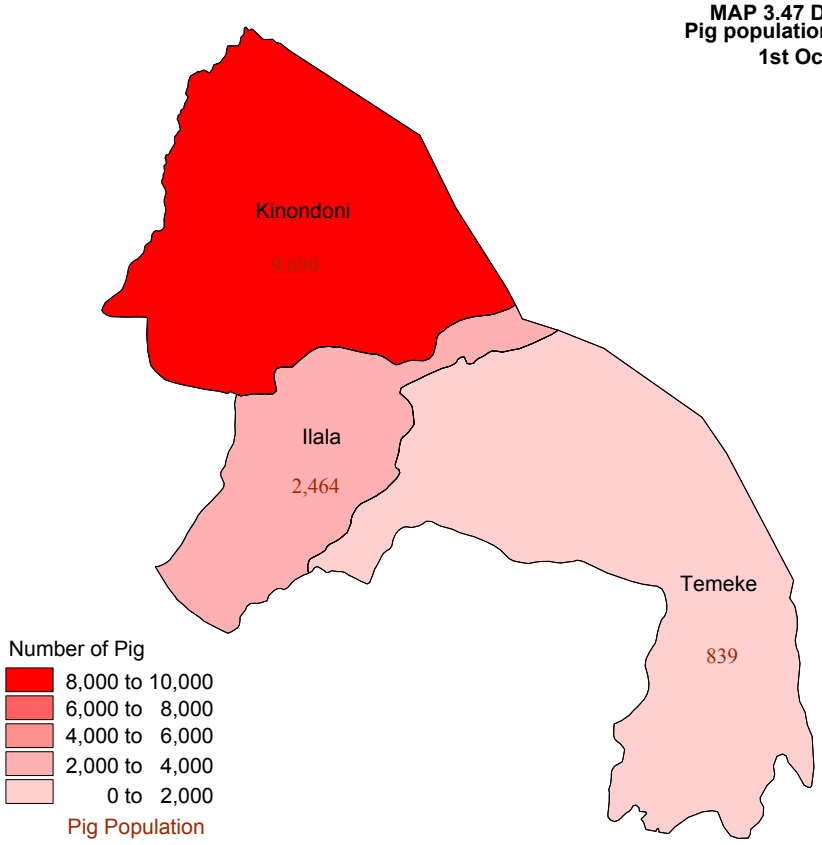
MAP 3.45 DAR ES SALAAM
Sheep population by District as of 1st October 2003



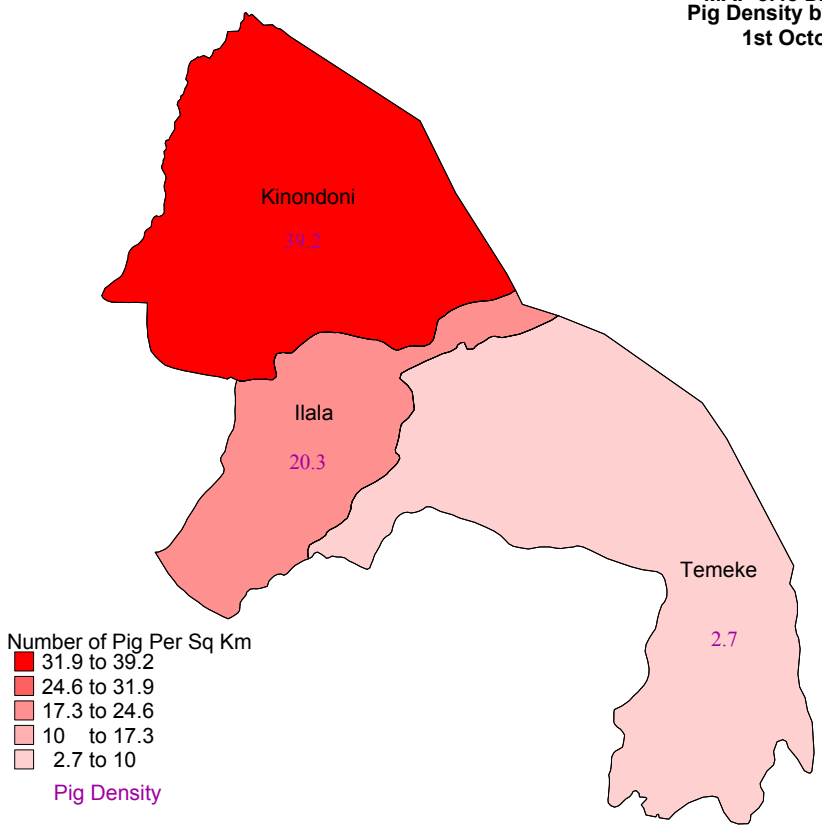
MAP 3.46 DAR ES SALAAM
Sheep Density by District as of 1st October 2003



MAP 3.47 DAR ES SALAAM
Pig population by District as of
1st October 2003



MAP 3.48 DAR ES SALAAM
Pig Density by District as of
1st October 2003



3.12.5.4 Improved Chicken Breeds (Layers and Broilers)

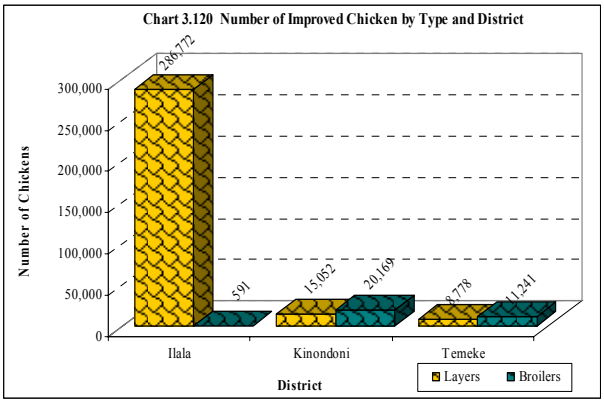
Dar es Salaam had a total of 342,603 improved chicken (layers and broilers). The biggest number was found in Ilala district (287,363; 84%), followed by Kinondoni (35,221; 10%) and the least in Temeke (20.019; 6%). (Chart 3.120).

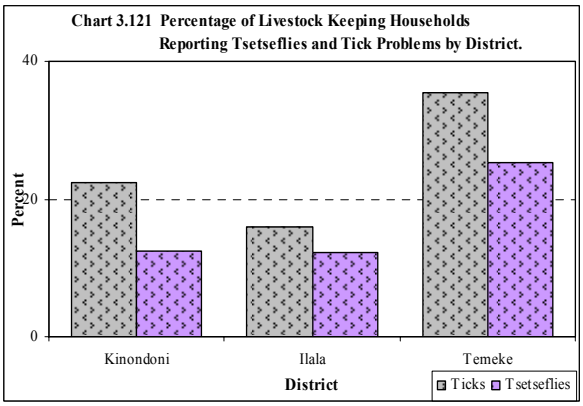
3.12.6. Other Livestock

There were 13,462 ducks, 983 turkeys, 70 rabbits and 465 donkeys raised by rural agricultural households in Dar es Salaam region. Table 3.16 indicates the number of livestock kept in each district. The biggest number of ducks in the region was found in Temeke District (47% of all ducks in the region), followed by Ilala (27%). Kinondoni district had the least number of ducks estimated at 25 percent of total ducks in the region. Most turkeys were reported in Kinondoni district. (Table 3.16).

Table 3.16 Number of Other Livestock byType of Livestock and District

District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Kinondoni	3,425	913	70	394	0
Ilala	3,698	28	0	0	0
Temeke	6,340	42	0	71	242
Total	**13,462**	**983**	**70**	**465**	**242**





3.12.7 Pest and Parasite Incidences and Control

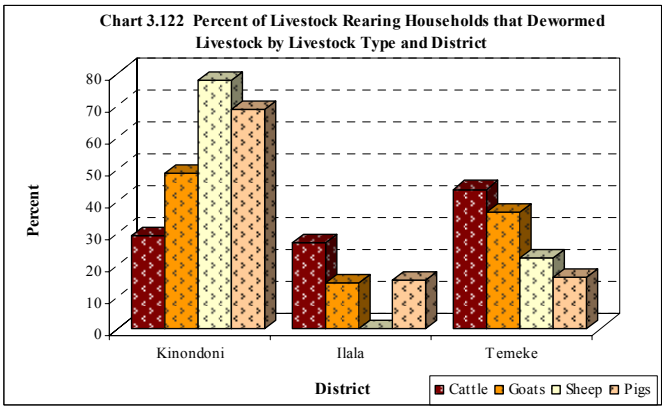
The results indicate that 24 percent and 16 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. Chart 3.121 show that there is a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Temeke district but lowest in Ilala district (Map 3.57).

The most practiced method of tick control was spraying with 80.1 percent of all reporting the problem in the region using the method followed by smearing (9.6%). However, 10.3 percent of livestock-keeping households reporting the tick problem did not use any method.

The most common method used to control tsetse flies was spraying which was practiced by 89 percent of the households reporting the tsetse fly problem. However, the remaining 11 percent of the households did not use any method.

3.12.7.1 Deworming

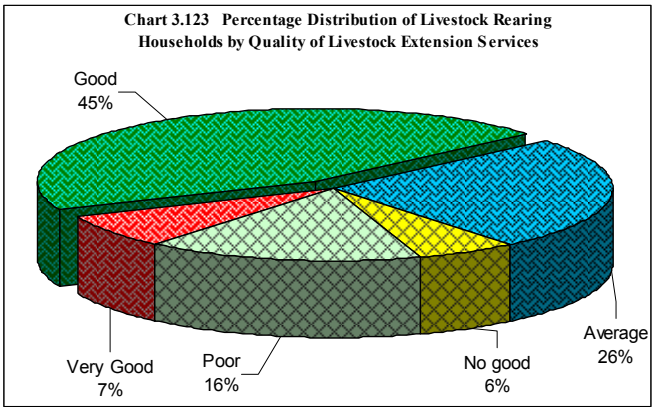
Livestock rearing households that dewormed their animals were 2,281 (54% of the total livestock rearing households in the region). The percentage of the households that dewormed cattle was 43 percent, goats (21%), pigs (13%) and sheep (2%) (Chart 3.122).



3.12.8. Access to Livestock Services

3.12.8.1 Access to Livestock Extension Services

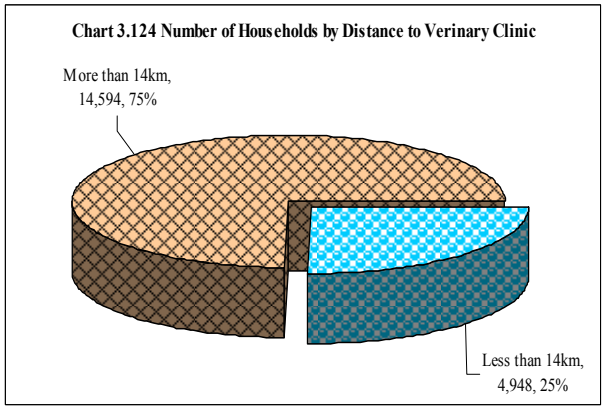
The total number of households that received livestock advice was 3,994, representing 88 percent of the total livestock-rearing households and 20 percent of the agricultural households in the region. The main livestock extension agent was the government which provided service to about 88.2 percent of all households receiving livestock extension services. The rest of the households got services from other sources (8.5%), NGOs/development projects (1.7%) and large-scale farmers (1.6%).

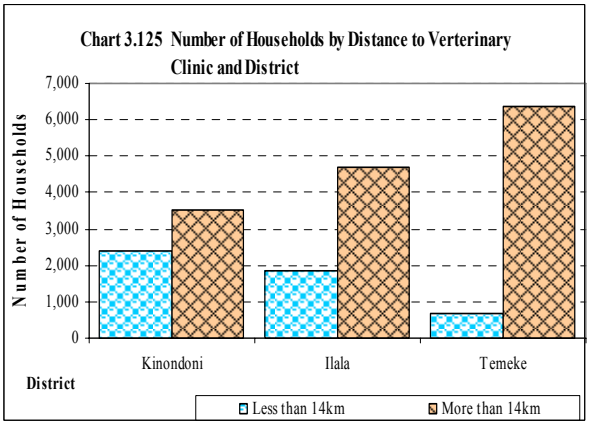


About 45 percent of livestock rearing households described the general quality of livestock extension services as being good, 26 percent said they were average and 16 percent described them as poor, 7 percent said they were very good. However, 6 percent of the livestock rearing households said the quality was not good. (Chart 3.123).

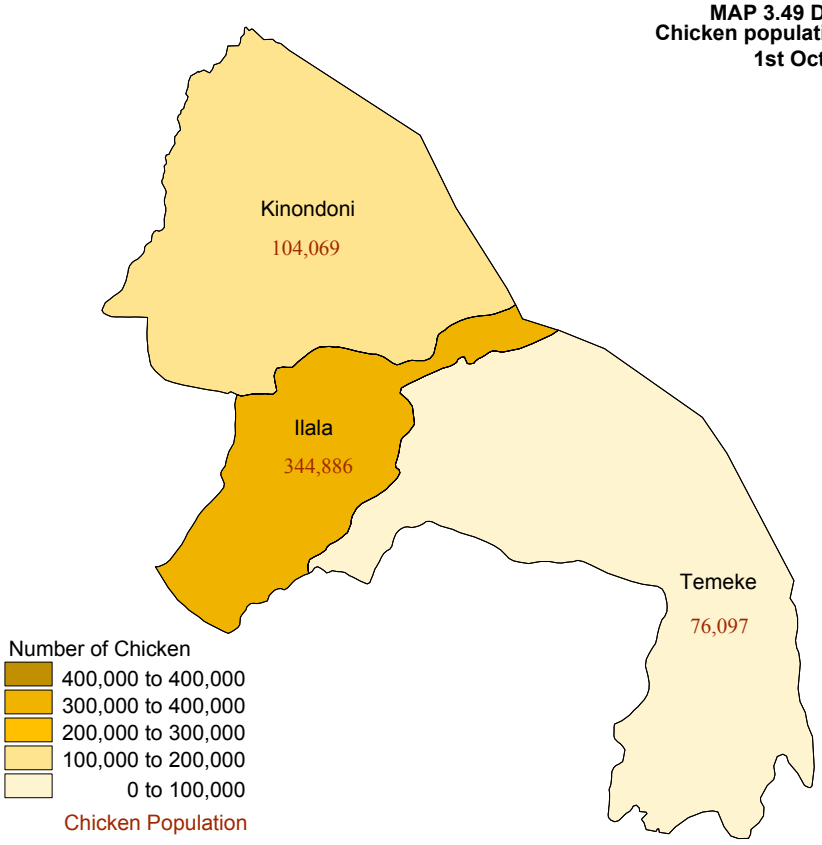
3.12.8.2 Access to Veterinary Clinic

Many veterinary clinics were located very far from livestock rearing households. About 75 percent of the livestock rearing households accessed the services, at a distance of more than 14 kms. About 25 percent of them accessed the services within 14 kms from their dwellings (Chart 3.124). The most affected district was Temeke district with 90 percent of livestock rearing households accessing the services at a distance of more than 14 kms., followed by Ilala district (72%). Relatively, Kinondoni was the least affected because about 40 percent of the households could access the service within a distance of 14 kilometres. (Chart 3.125).

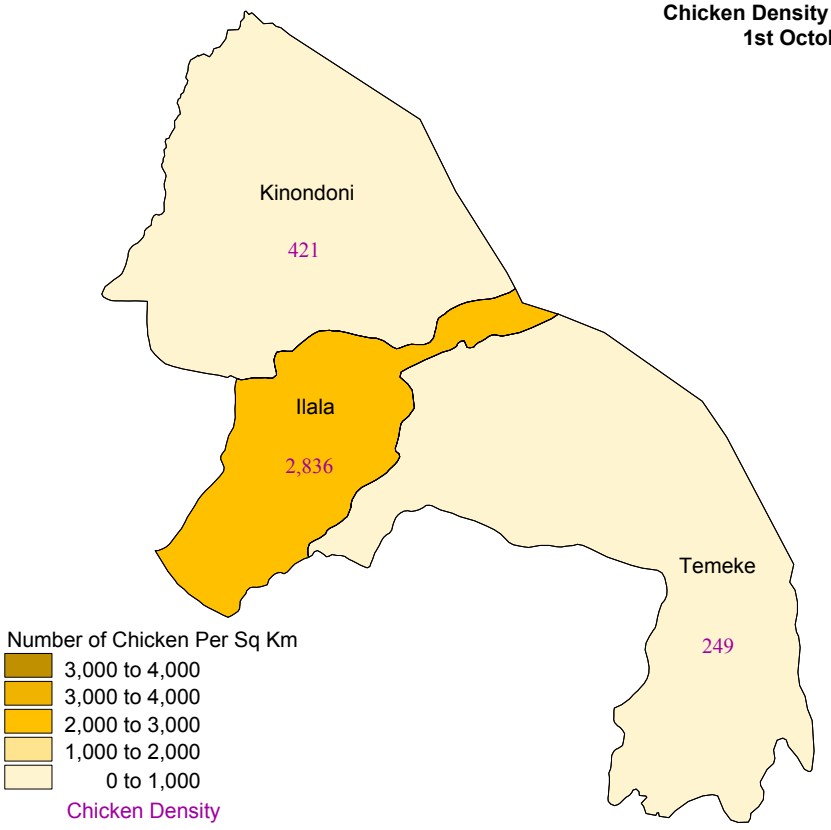




MAP 3.49 DAR ES SALAAM
Chicken population by District as of 1st October 2003

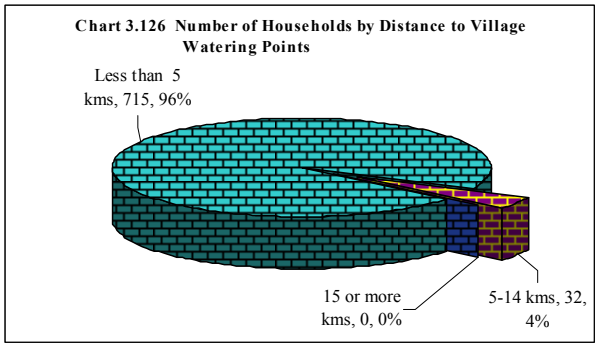


MAP 3.50 DAR ES SALAAM
Chicken Density by District as of 1st October 2003

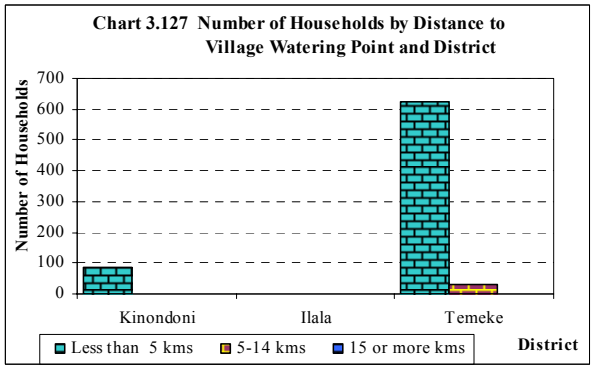


3.12.8.3 Access to Village Watering Points/dam

The number of livestock rearing households residing less than 5 kms from the nearest watering point was 715 (96% of livestock rearing households using/ accessing the village watering point in Dar es Salaam region) whilst 32 households (4%) resided between 5 and 14 kms. No district had to travel a distance of 15 or more kms to the nearest village watering point (Chart 3.126).



Temeke district had the best livestock water supply with the majority of livestock rearing households using the village watering point residing within 5 kms from the nearest watering point. This was followed by Kinondoni district. (Chart 3.127).

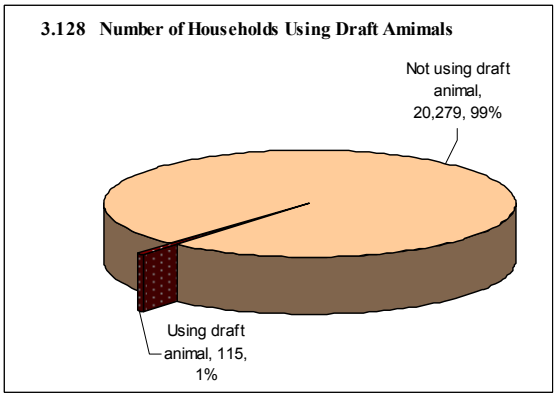


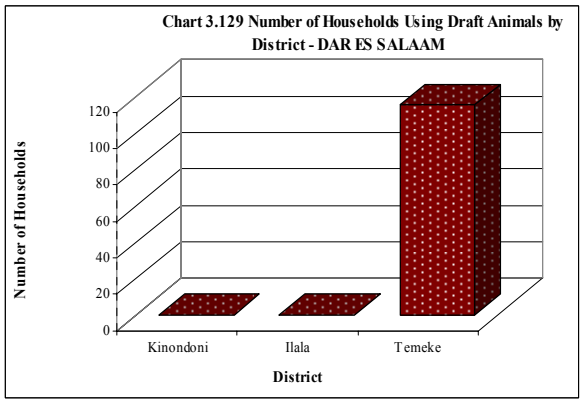
3.12.9. Animal Contribution to Crop Production

3.12.9.1 Use of Draft Power

Use of draft animals to cultivate land in Dar es Salaam region was very limited with only 115 households (1% of the total households in the region) using them (Chart 3.128).

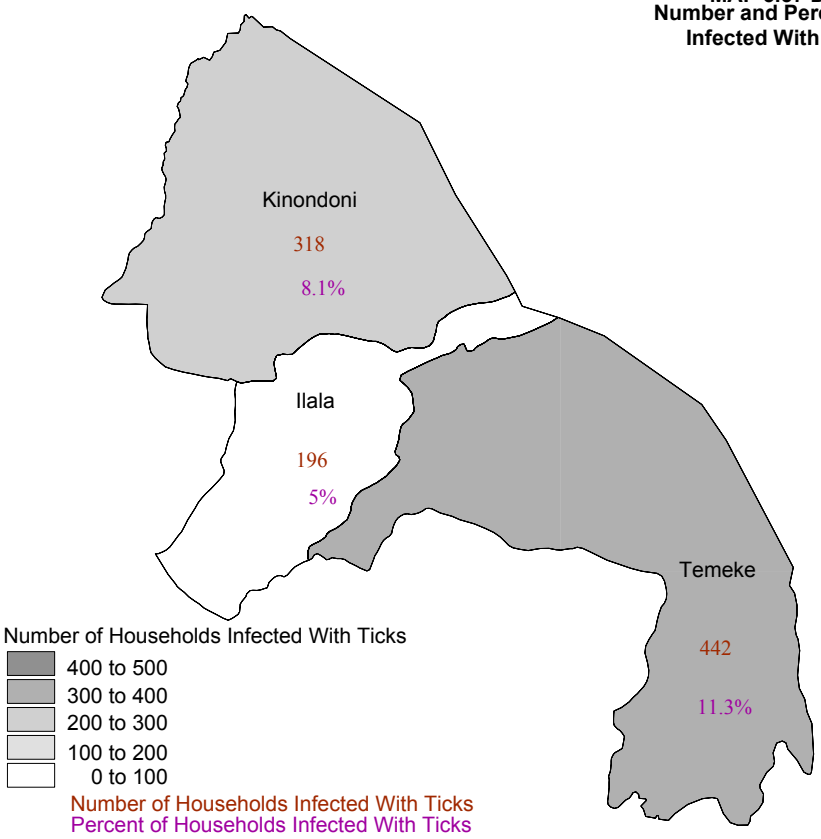
All the households that used draft animals were in Temeke, Use of draft animals was not reported in the other districts (Chart 3.129 and Map 3.58).



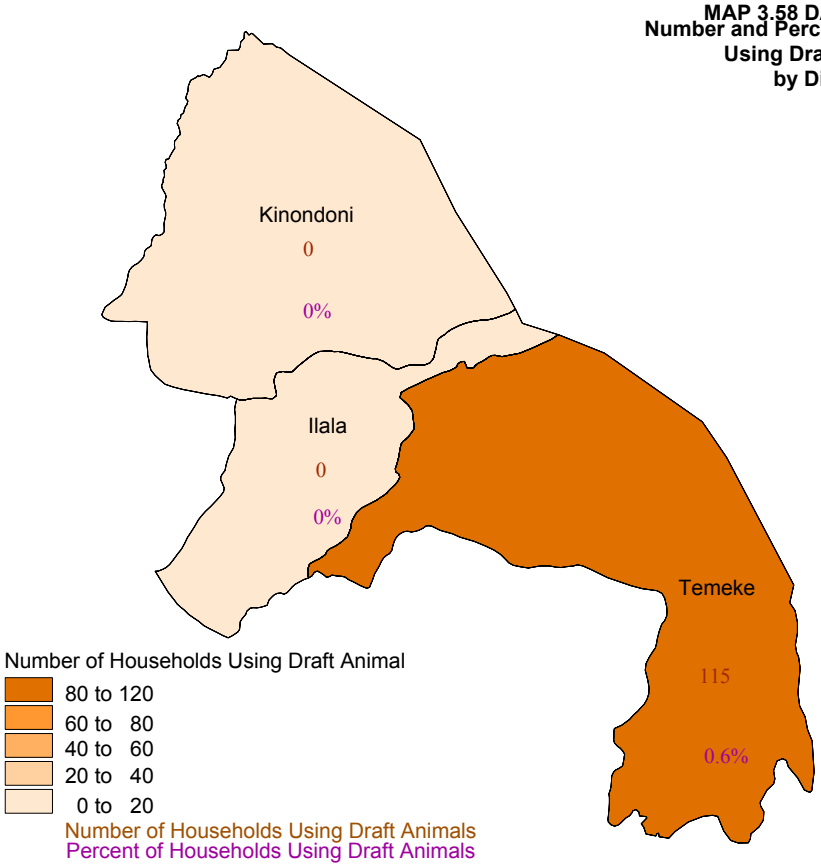


The region had 157 oxen (all in Temeke district) that were used to cultivate 289 hectares of land. This represented only 0.007 percent of the total oxen found on the Mainland. The area cultivated using oxen was therefore found in Temeke district only.

MAP 3.57 DAR ES SALAAM
Number and Percent of Households Infected With Ticks by District



MAP 3.58 DAR ES SALAAM
Number and Percent of Households Using Draft Animals by District



3.12.9.2 Use of Farm Yard Manure

The number of Households using organic fertilizer in Dar es Salaam region was 6,706 (33% of total crop growing households in the region) (Chart 3.130). The total area applied with organic fertiliser was 6,273 ha of which 4,498 hectares (72% of the total area applied with organic fertiliser or 35.6% of the area planted with annual crops and vegetables in Dar es Salaam region during the long rainy season) was applied with farm yard manure (Map 3.59).

Chart 3.130 Number of Households Using Organic Fertiliser

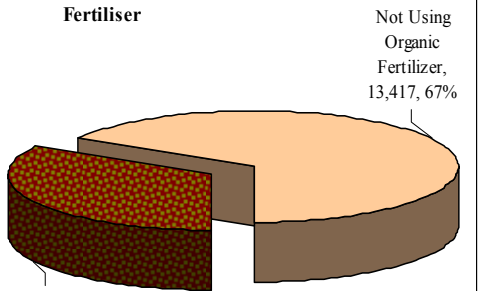
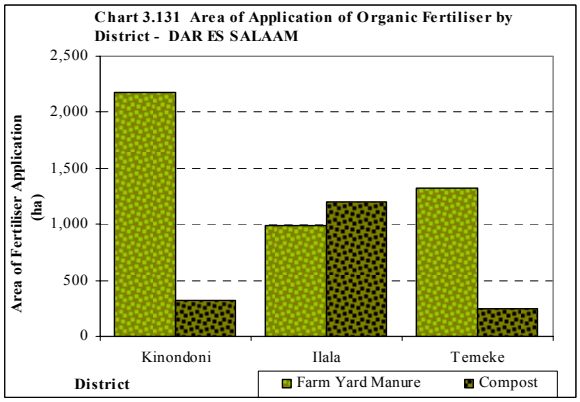


Chart 3.131 Area of Application of Organic Fertiliser by District - DAR ES SALAAM



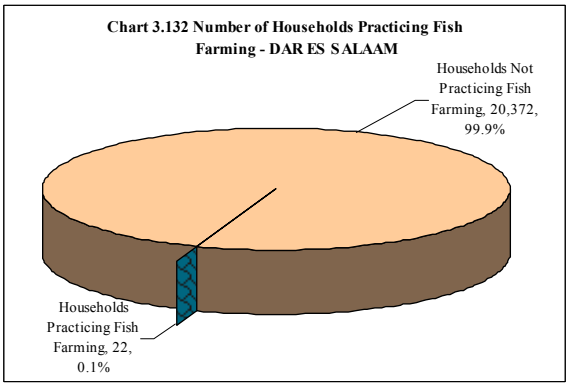
3.12.9.3 Use of Compost

Only 1,774 ha (28% of the area of organic fertilizer application) were applied with compost. The largest area applied with farm yard manure was found in Kinondoni district with 2,178 hectares (48.4% of the total area applied with farm yard manure) followed by Temeke (1,330 ha, 29.6%), and Ilala (990 ha, 22%) (Chart 3.131 and Map 3.60).

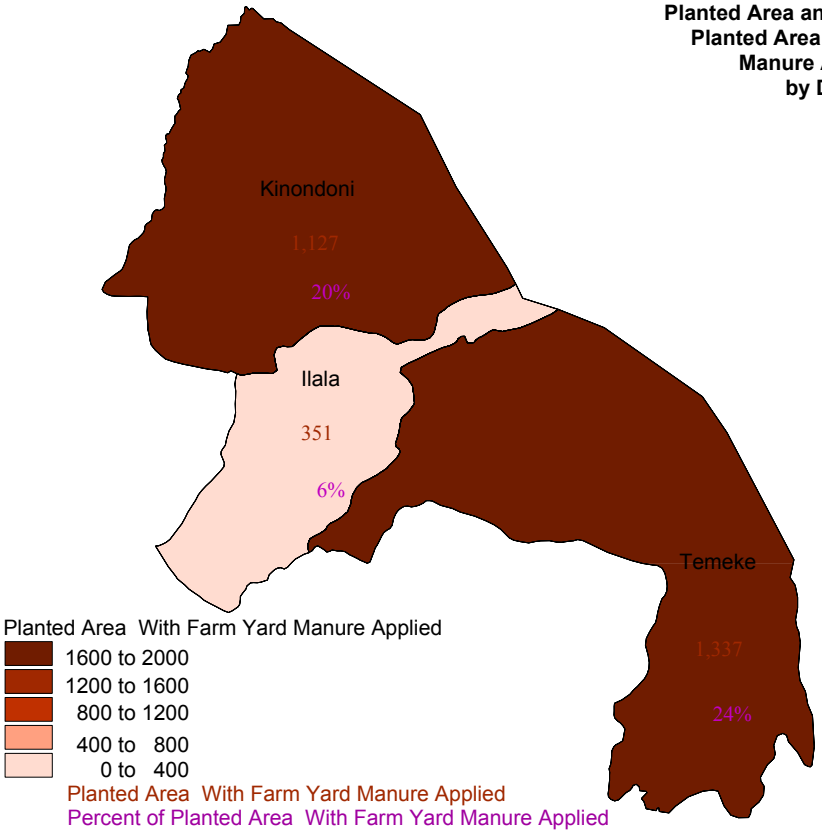
3.12.10 Fish Farming

The number of households involved in fish farming in Dar es Salaam region was 22, representing 0.1 percent of the total agricultural households in the region (Chart 3.132 and Map 3.61).

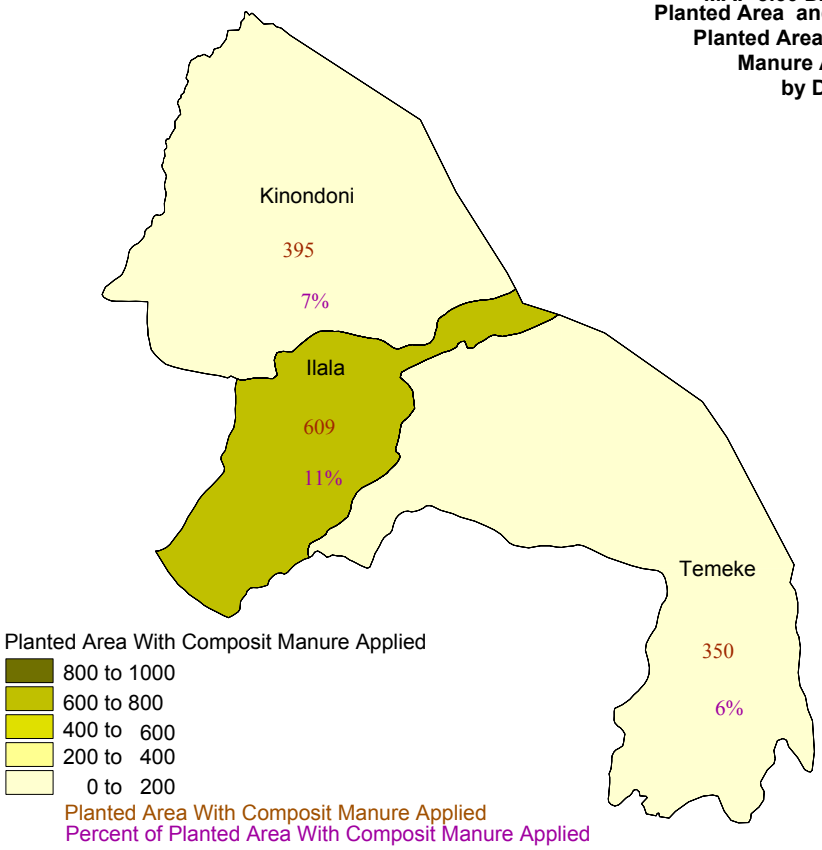
Chart 3.132 Number of Households Practicing Fish Farming - DAR ES SALAAM



MAP 3.59 DAR ES SALAAM
Planted Area and Percent of Total Planted Area With Farm Yard Manure Application by District



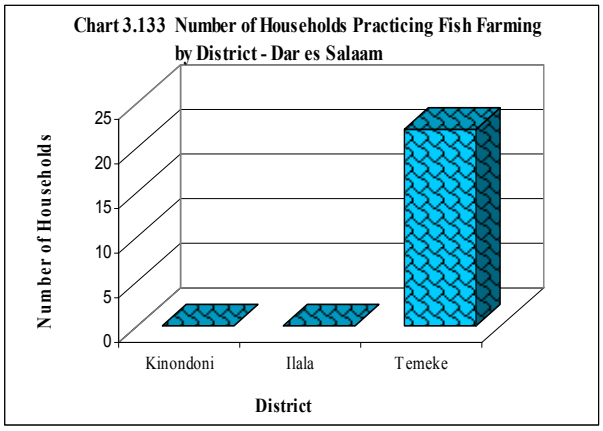
MAP 3.60 DAR ES SALAAM
Planted Area and Percent of Toatal Planted Area With Composit Manure Application by District



Temeke was the only district with the 22 households involved in fish farming. Fish farming was not practiced in Kinondoni and Ilala districts (Chart 3.133).

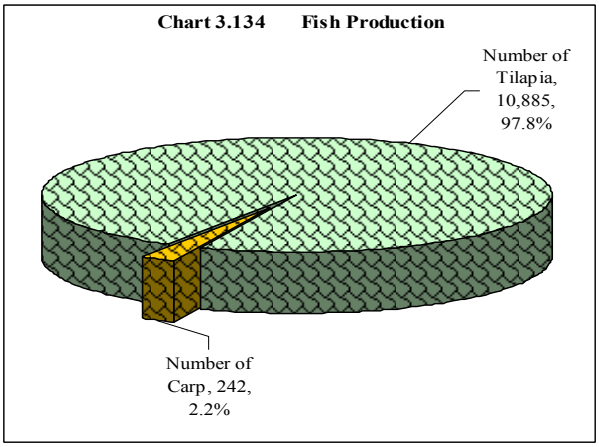
The main source of fingerings was "other" which provided fingering to 100 percent of the fish farming households.

All fish farming households in the region used the dug-out-pond system and the main fish specie planted was Tilapia. The number of fish harvested in Dar es Salaam region was 11,127, of which 10,885 fish (97.8%) were tilapia and 242 (2.2%) were carp (Chart 3.134). None of the fish farming households sold their fish.



3.13. POVERTY INDICATORS

The agricultural census collected data on poverty for the purpose of providing a base for tracking progress in poverty reduction strategies undertaken by the government.



3.13.1 Access to Infrastructure and Other Services

The results indicate that among the evaluated services, regional capital was a service located the furthest from most of the household's dwellings. It was located at an average distance of 32 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were tertiary market (28), hospital (28), secondary school (15), secondary market (11), tarmac road (10), primary market (8), health clinic (5), primary school (3)), all weather road (2), and feeder road (1) (Table 3.17).

Table 3.17: Mean Distances from Household Dwellings to Infrastructures and Services by District

District	Mean Distance to										
	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	Regional Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmac Roads
Kinondoni	10.1	2.5	2.2	0.7	26.1	4.4	33.3	8.3	9.3	30.0	7.2
Ilala	9.1	2.4	1.3	0.6	25.2	4.1	29.1	2.4	4.3	25.4	6.3
Temeke	24.5	3.1	2.5	1.0	31.4	7.3	34.1	11.9	19.2	27.9	15.9
Total	14.8	2.7	2.0	0.8	27.6	5.3	32.2	7.6	11.1	27.8	9.9

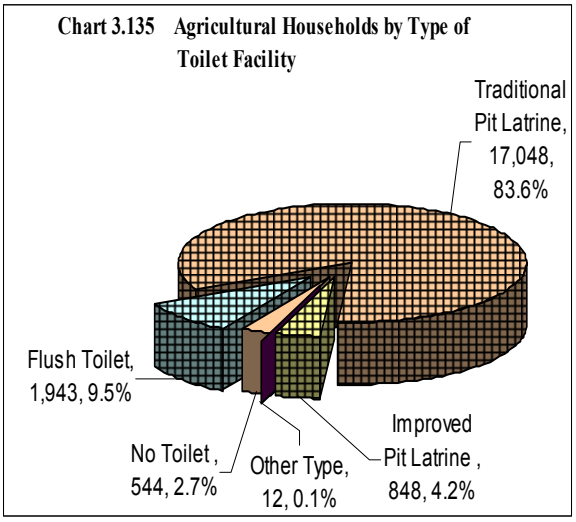
Only 3 percent of the agricultural households reported the available infrastructures and services as 'very good' whereas 32 percent reported them to be average. 42 percent of the agricultural households said the infrastructure and services were poor, and 7 percent said they were 'no good'.

3.13.2 Type of Toilets

A large number of rural agricultural households used traditional pit latrines (17,048 households, 83.6% of all rural agricultural households) 848 households (4.2%) used improved pit latrine and 1,943 households (9.5%) used flush toilets. The remaining 12 household (0.1%) used other toilets facilities. However, 544 households (2.7%) in the region had no toilet facilities (Chart 3.135).

The distribution of the households without toilets within the region indicates that 53 percent of them were in Temeke district and 38 percent were from Kinondoni. The percentage of households without toilets in Ilala district was (10%) Map 3.62).

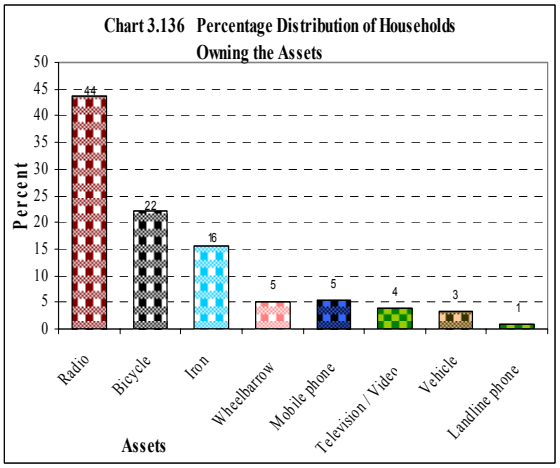
Chart 3.135 Agricultural Households by Type of Toilet Facility



3.13.3 Household's Assets

Radios were owned by most rural agricultural households in Dar es Salaam region with 17,683 households 44% of the agriculture households in the region) owning the asset. followed by bicycle (8,930 households, 22%), iron (6,275 households, 16%), wheelbarrow (2,088 households, 5%), mobile phone (2,219 households, 5%), television/video (1,612 households, 4%), vehicle (1,337 households, 3%) and landline phone (314 households, 1%) (Chart 3.136).

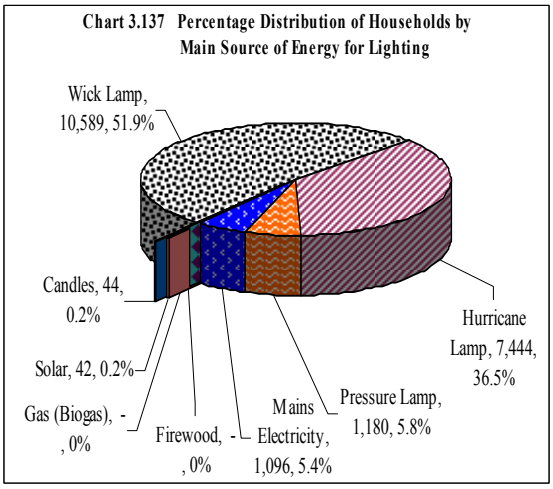
Chart 3.136 Percentage Distribution of Households Owning the Assets



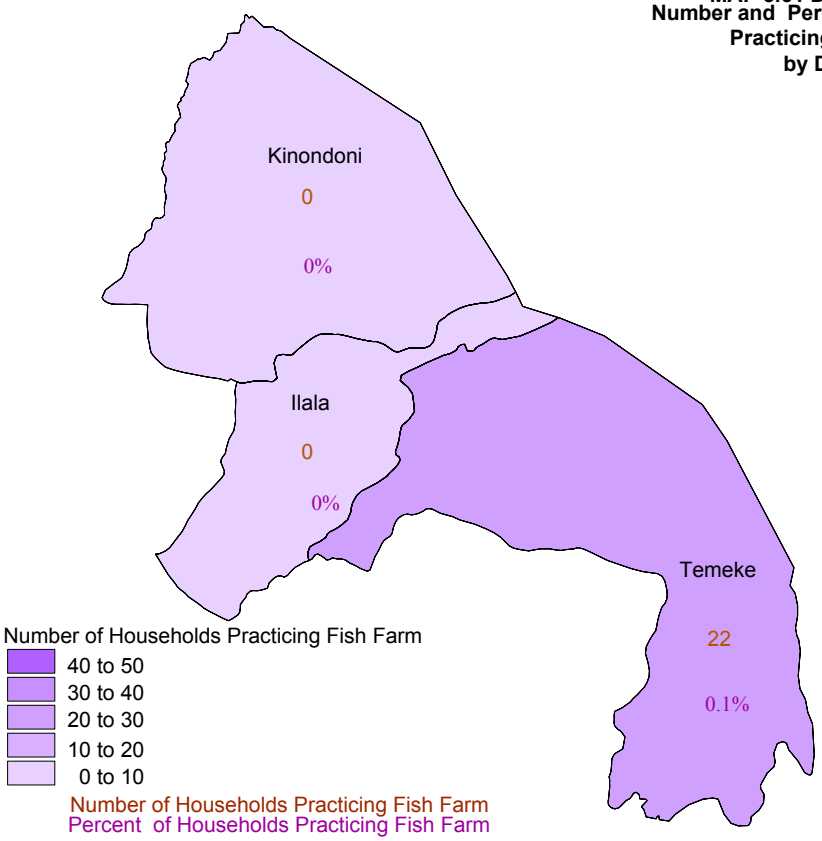
3.13.4 Sources of Lighting Energy

Wick lamp is the most common source of lighting energy in the region. with 51.9 percent of the total rural households using this source of energy followed by hurricane lamp (36.5%), pressure lamp (5.8%), mains electricity (5.4%), firewood (0%), solar (0.2%), candle (0.2%) and gas or biogas (0%) (Chart 3.137).

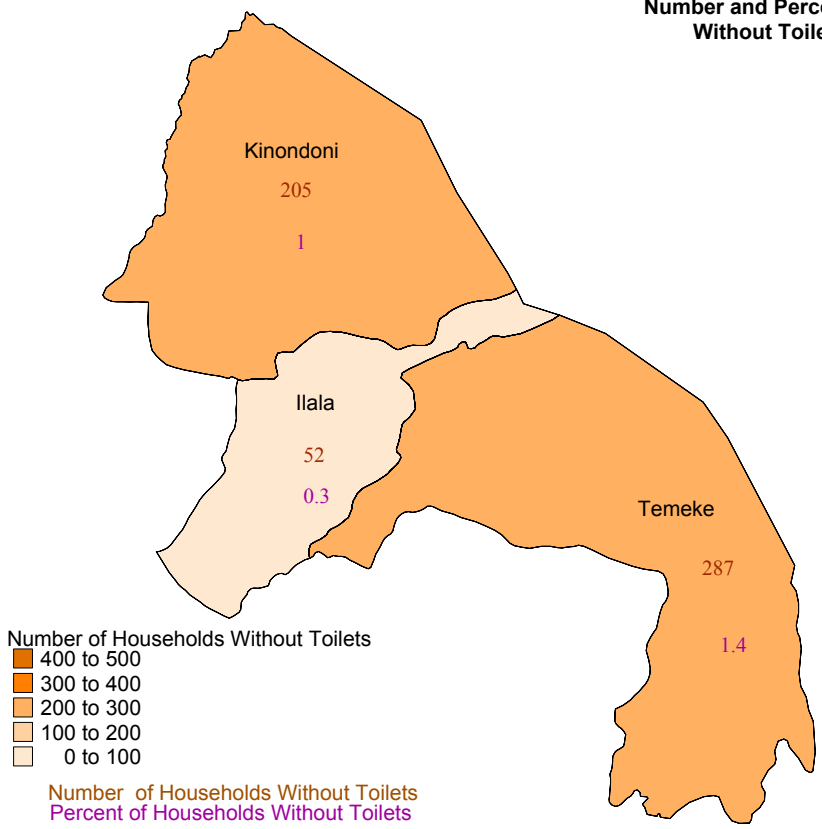
Chart 3.137 Percentage Distribution of Households by Main Source of Energy for Lighting



MAP 3.61 DAR ES SALAAM
Number and Percent of Households Practicing Fish Farm by District

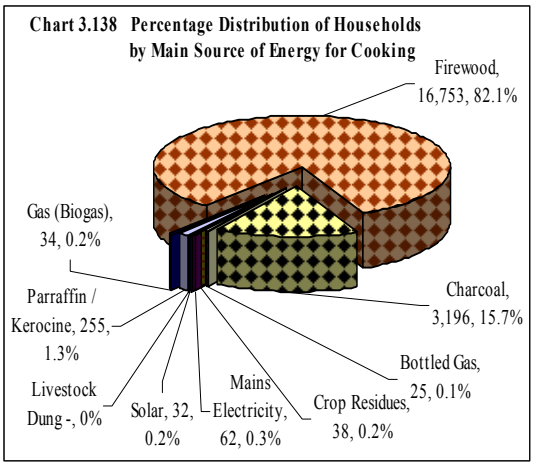


MAP 3.62 DAR ES SALAAM
Number and Percent of Households Without Toilets by District



3.13.5 Sources of Energy for Cooking

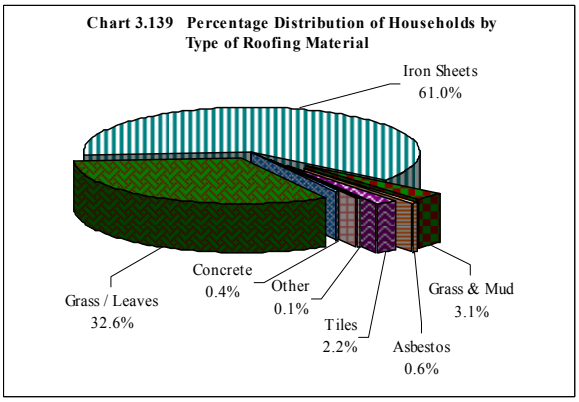
The most prevalent source of energy for cooking was firewood, which was used by 82.1 percent of all rural agricultural households in Dar es Salaam region. This was followed by charcoal (15.2%) and parrafin/kerosene (1.3%). The rest of energy sources accounted for 0.9 percent. These were mains electricity (0.3%), crop residues (0.2%), gas/biogas (0.2%), solar (0.2%), bottled gas (0.1%), and livestock dung (0.0%). (Chart 3.138).

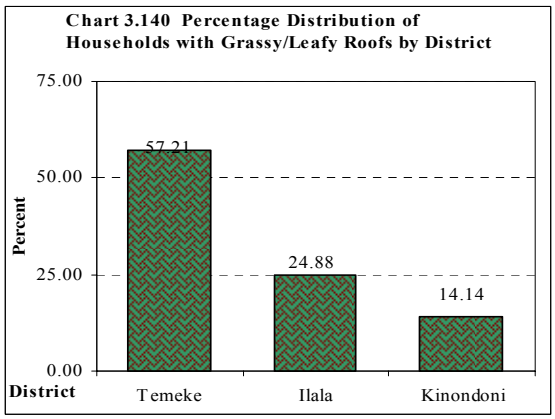


3.13.6 Roofing Materials

The most used roofing material (for the main dwelling) was iron sheets and it was used by 61 percent of the rural agricultural households this was closely followed by grass and/or leaves (32.6%). Other roofing materials were grass/mud (3.1%), tiles (2.2%), asbestos (0.6%), concrete (0.4%) and other (0.1%). (Chart 3.139).

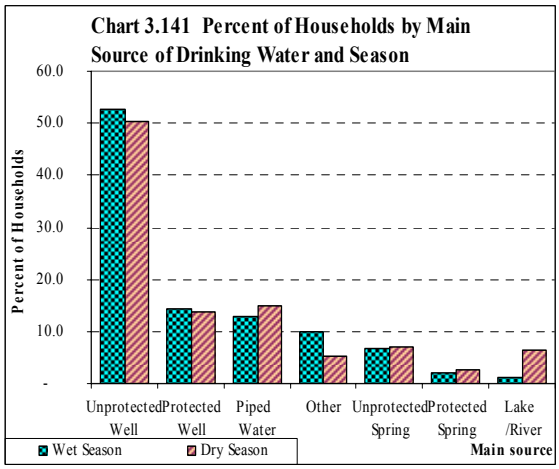
Temeke district had the highest percentage of households with grass/leaves roofing (57%) followed by Ilala (25%) and Kinondoni (14%) (Chart 3.140 and Map 3.63).





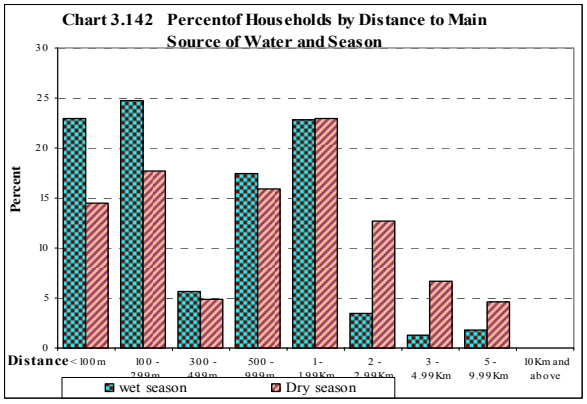
3.13.7 Access to Drinking Water

The main source of drinking water for rural agricultural households in Dar es Salaam region was unprotected wells (52.8 percent of households use unprotected wells during the wet season and 50.2 percent of the households during the dry seasons. This is followed by protected wells (14% of households for each season), piped water (13% of households during the wet season and 14.8% in the dry season), other sources (10% of households during the wet season and 5% in the dry season), unprotected spring (7% of households for each season), protected spring (2% of households during the wet season and 2.5% in the dry season). Surface water was used as a main



source by 1.1 percent of the households in the wet season and by 6.4 percent in the dry season Chart 3.141)

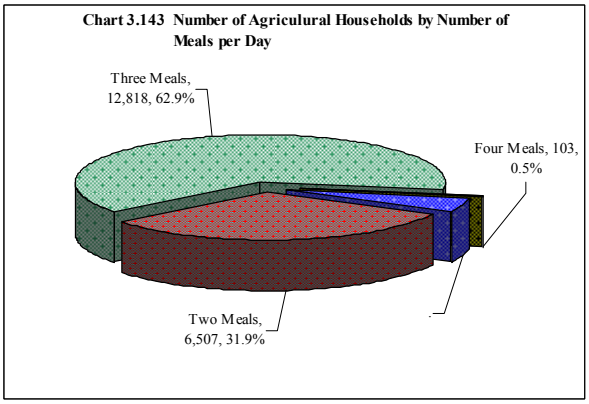
About 71 percent of the rural agricultural households in Dar es Salaam region obtained drinking water within a distance of less than one kilometer during wet season compared to 53 percent of the households during the dry season. However, 29 percent of the agricultural households obtained drinking water from a distance of one or more kilometers during wet compared to 47 percent of households in the dry season. The most common distance from the source of drinking water was between 1 and 2 km (Chart 3.142).



3.13.8 Food Consumption Pattern

3.13.8.1 Number of Meals per Day

The majority of households in Dar es Salaam region normally had 3 meals per day (62.9 percent of the households in the region). This was followed by 2 meals per day (31.9 percent) and 1 meal per day (4.7 percent). Only 0.5 percent of the households had 4 meals per day (Chart 3.143).



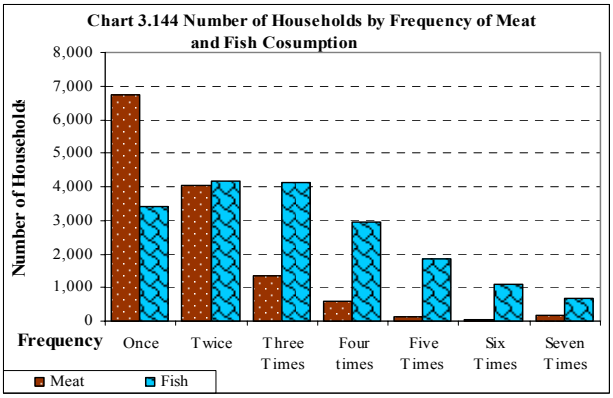
Ilala district had the largest percentage of households eating one meal per day also had the highest percentage of households eating 3 meals per day. (Table 3.18 and Map 3.64).

Table 3.18: Number of Households by Number of Meals the Household Normally Takes per Day and District

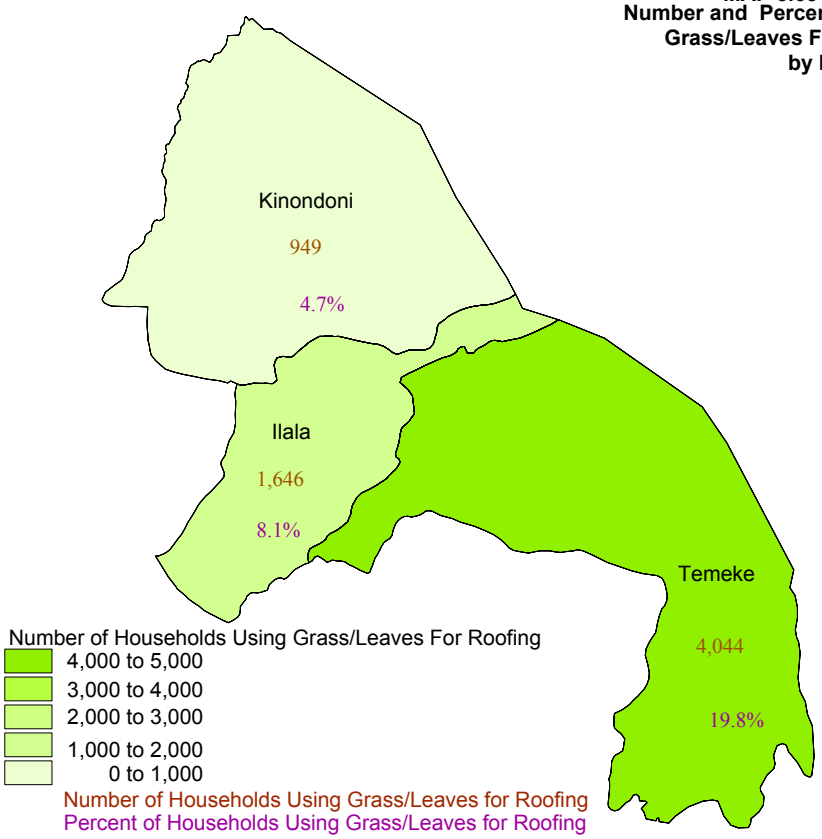
District	Number of meals per day								
	One	%	Two	%	Three	%	Four	%	Total
Kinondoni	348	5.2	2,224	33.1	4,140	61.7	0	0.0	6,712
Ilala	550	8.3	1,806	27.3	4,257	64.4	0	0.0	6,613
Temeke	69	1.0	2,477	35.0	4,420	62.5	103	1.5	7,069
Total	**966**	**4.7**	**6,507**	**31.9**	**12,818**	**62.9**	**103**	**0.5**	**20,394**

3.13.8.2 Meat Consumption Frequencies

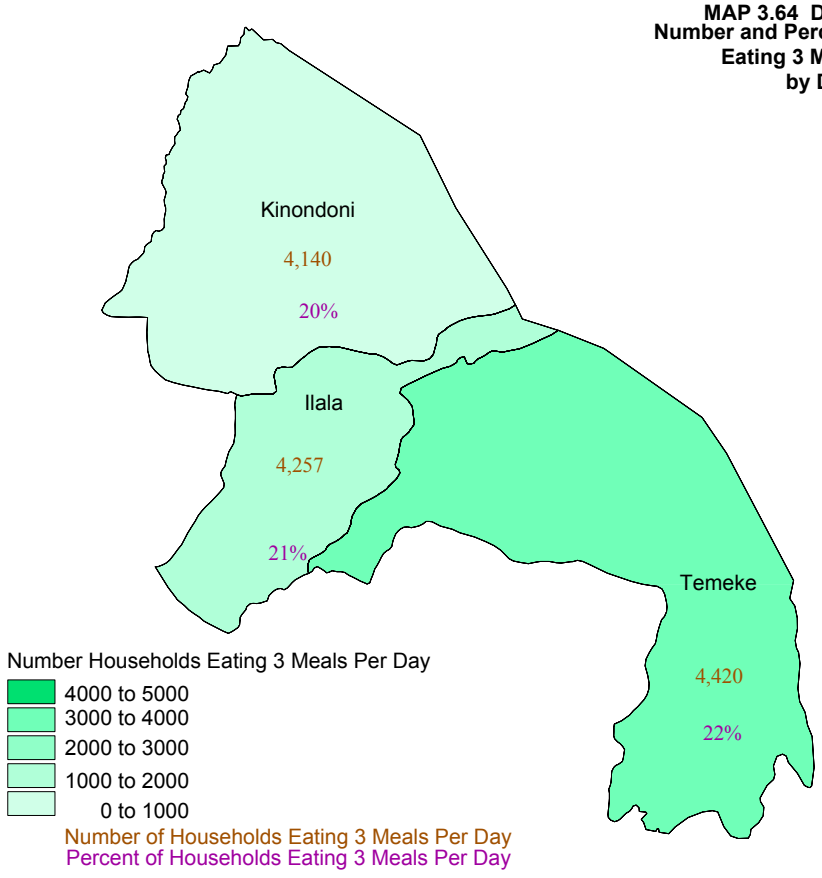
The number of agricultural households that consumed meat during the week preceding the census was 13,011 (63.3% of the agricultural households in Dar es Salaam region) with 6,731 households (51.7 % of those who consumed meat) consuming meat only once during the respective week. This was followed by those who had meat twice during the week (31%). Very few households had meat three or more times during the respective week. About 36.2 percent of the agricultural households in Dar es Salaam region did not eat meat during the week preceding the census (Chart 3.144 and Map 3.65).



MAP 3.63 DAR ES SALAAM
Number and Percent of Households Using Grass/Leaves For Roofing Material by District



MAP 3.64 DAR ES SALAAM
Number and Percent of Households Eating 3 Meals Per Day by District



3.13.8.3 Fish Consumption Frequencies

The number of agricultural households that consumed fish during the week preceding the census was 18,326 (90% of the total agricultural households in Dar es Salaam region) with 4,172 households (22.8% of those who consumed fish) consuming fish twice during the respective week. This was followed by those who had fish three times (22.6%). In general, the percentage of households that consumed fish twice or more during the week in Dar es Salaam region was 14,921 (81.4% of the agricultural households that ate fish in the region during the respective period). About 10.1 percent of the agricultural households in Dar es Salaam region did not eat fish during the week preceding the census (Chart 3.144 and Map 3.66).

3.13.9 Food Security

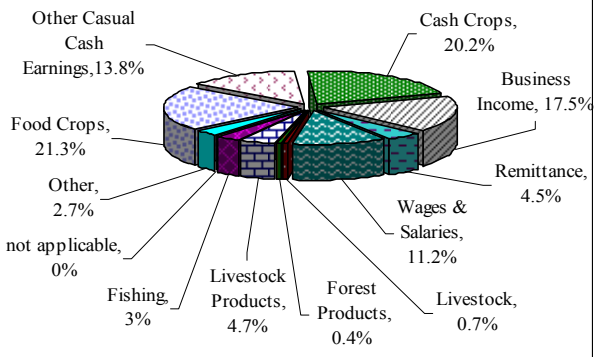
In Dar es Salaam region, 7,215 households (35% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirement. However 1,372 (7%) said they sometimes experience problems, 13% often experienced problems and 6 percent always had problems in satisfying the household food requirement. About 39 percent of the agricultural households said they did not experience any food sufficiency problems (Map 3.67).

3.13.10 Main Sources of Cash Income

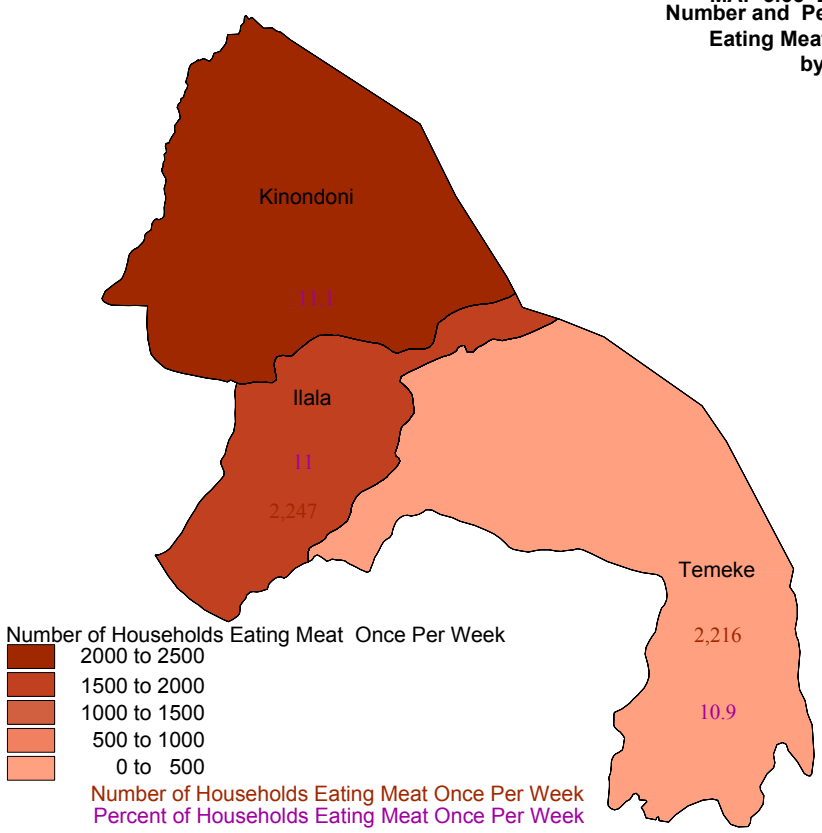
The main cash income of the households in Dar es Salaam region was from selling food crops (21.3 percent of smallholder households), followed by selling of cash crops (20.2%), income from businesses (17.5%), casual labour (13.8%), wages and salaries (11.2%), sale of livestock products (4.7%) and cash remittances (4.5%).

Only 3% of smallholder households reported fishing as their main source of income, followed by income from other source (2.7%), the sale of livestock (0.7%), and forest products (0.4%) (Chart 3.145).

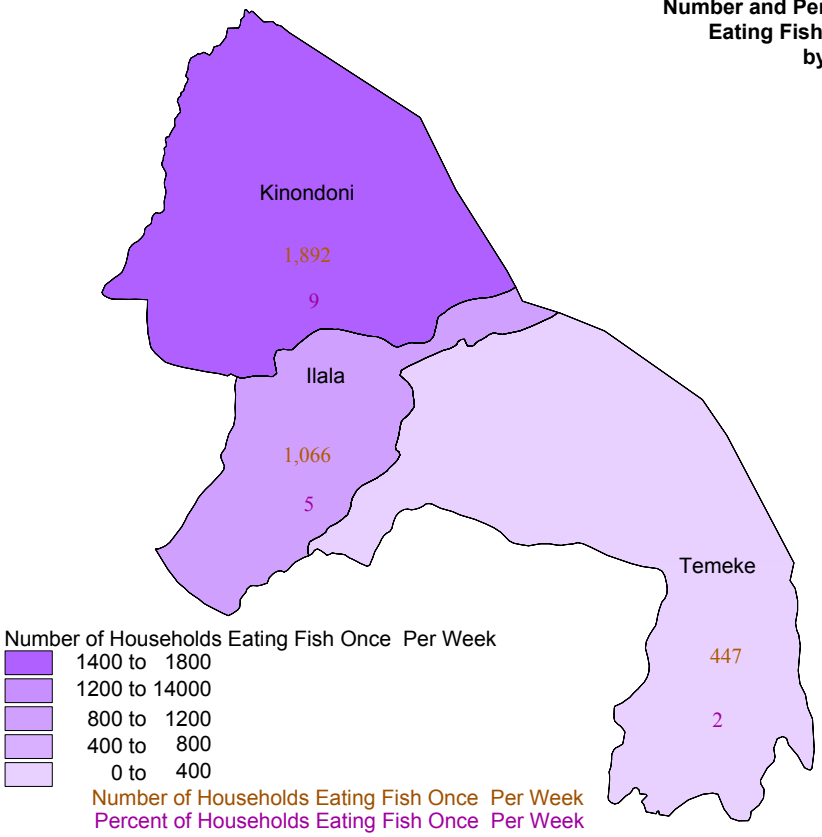
Chart 3.145: Percentage Distribution of the Number of Households by Main Source of Income



MAP 3.65 DAR ES SALAAM
Number and Percent of Households Eating Meat Once Per Week by District



MAP 3.66 DAR ES SALAAM
Number and Percent of Households Eating Fish Once Per Week by District



4 DAR ES SALAAM 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 Dar es Salaam Region Profile

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

Dar es Salaam region has a land area of around 32,000 hectares under crop production and it has the smallest number of crop growing households compared to other regions. It has the 3rd largest number of crop growing households per square kilometer. The available land area per household is (1.5 ha/household) and almost all the available land to smallholders is utilized. Whilst most of the region is under annual crop production, it has significant areas of permanent crops mainly planted as a mixture with annual crops. It has the smallest (21st) planted area of both cereals and of maize in the country. The region also ranks 21st in planted area of beans. Vegetable production in the region is not so important with the exception of tomatoes and water melons. Cassava, paddy and sorghum production are low but millet, wheat, barley production is almost absent in the region.

With the exception of coconuts, cashew nuts, mangoes, oranges and bananas, permanent crops are not important in Dar es Salaam although it ranks 15th in percent of area planted with permanent crops. Coconut production ranks first in the region in terms of size of planted area but fifth in the country.

Compared to other regions, Dar es Salaam comes last, having the smallest planted area with irrigation in the country and the number of households practicing irrigation has remained more or less unchanged over the period of 10 years prior to the census. The source of irrigation water is equally split between wells and rivers followed by pipe water. Use of buckets/watering cans is the most common method of obtaining irrigation water closely followed by motor pumps. Irrigation application is mostly by buckets/watering cans and to a lesser extent, water hose.

The method of cultivation in Dar es Salaam is almost entirely by hand. A very small quantity of fertilizer is used and is mostly farm yard manure and compost to a lesser extent. Virtually no pesticides are used. Compared to other regions, smallholder households in Dar es Salaam store insignificant quantities of maize. Most of the storage is mostly in sacks or open drums, with small amounts stored in locally made structures.

The region has the smallest number of households selling crops compared to other regions. The large majority of households process their crops on farm by hand and very few households sell their processed produce.

Compared to other regions, the number of smallholders in Dar es Salaam receiving extension services is very small but the percentage of households receiving extension services by region is one of the highest.

Dar es Salaam has a small number of planted trees by smallholders and the species is mainly gravellis followed by eucalyptus. Compared to other regions, the percent of households with erosion control/water harvesting facilities is insignificant to low, with erosion control bunds being one of the most prominent.

Dar es Salaam has the lowest livestock population compared to the rest of the regions other than Lindi region. It has a similar number of cattle as Mtwara; however it has a very low cattle density and ranks 14th in the country. Most of the cattle kept are dairy breeds and cattle rearing comes second to goats. Milk production is very low (ranking 19th in the country) and since the demand is very high, the farm gate price of milk is correspondingly high. Goat numbers as well as sheep and pigs are low, considering that the region is among the last ranked regions rearing livestock.

Dar es Salaam has the lowest population of chicken compered to other regions, almost entirely made up of layer breed but is the leading region in layer population in the country. Egg production is high to moderate compared to other regions (ranks 6th). The use of organic fertilizer is very low (ranks 19th) but percentage of area being applied per livestock rearing household is among the highest. Very few draft animals are used for cultivation in the region.

The disease infection rate is moderate to high for most diseases. The region had the highest rate of helminthiosis infection compared to regions other than Kilimanjaro, Tanga and Arusha. Access to livestock infrastructure and services is between average and poor. In relation to livestock population Dar es Salaam receives disproportionately more extension advice compared to other regions with much higher livestock populations. It ranks 7th in the percentage of households receiving extension advice but comes last in number of livestock kept. Dar es Salaam has very low number of fish farmers.

4.2 District Profiles

The following district profiles highlights 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 Kinondoni

Kinondoni district has the second largest number of households in the region and it has one third of households involved in smallholder agriculture in the region. Most smallholders are involved in crop and livestock production followed by livestock rearing only. It has a very small number of crops only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Kinondoni district is Off farm Income, followed by Annual Crop Farming and Permanent crop farming. However, the district has the smallest percent of households with no off-farm activities and one third of its total households with more than one member with off-farm income. Compared to other districts in the region, Kinondoni has a second highest percent of female headed households (19%) and also second in average age of the household head (48 years). With an average household size of 4.3 members per household it is the lowest for the region. Kinondoni has a comparatively high literacy rate among smallholder households and this is reflected by the concomitant relatively high level of school attendance in the region.. The literacy rate for the heads of household is also slightly higher than most of districts in the region.

It has the smallest utilized land area per household (0.2ha) indicating that the allocated area is not fully utilized. The total planted area is the second largest in the region due to the presence of good wet and dry seasons, however it has the highest planted area per household (0.5ha) and has highest number of smallholders in the district.

The district ranks first in planted area for maize production in the region with a planted area of 2,328 ha, and the planted area per household is the highest in the region. Paddy production is not important with a planted area of only 586 hectares

and the production of sorghum is insignificant. Cassava production is moderate accounting for one third (33.1 percent) of the quantity harvested in the region. The district has the second largest planted area of cassava, a crop which ranks first in the region in area planted with annual crops (2,601 ha). The production of beans in Kinondoni is much higher than in Ilala district in the region with a planted area of 19ha but the crop ranks 20th in annuals in the region. Oilseed crops are of importance in Kinondoni and accounts for half of all oilseed crops planted area in the region. However it ranks last in grondnuts which is the region's 10th crop in terms of planted area. Sunflower is not grown in Kinondoni district. Vegetable production is of moderate importance in the district. It has the small planted area with tomatoes and water melon (22 ha and 63 ha respectively). However, it has the largest planted area for chillies than other districts and accounts for 78 percent of the chillies production in the region. Traditional cash crops (e.g. tobacco and cotton) are not grown in Kinondoni district.

Compared to other districts in the region, Kinondoni has a moderate planted area with permanent crops (37%) which is dominated by coconuts (1,723 ha), cashew nuts (1,434 ha), mangoes (1,019 ha), oranges (1,306 ha), and bananas (813 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 and preparation is done by hand slashing, however the next option is leaving the land without clearing followed by bush clearance option, compared to the two other districts.
The use of inputs in the region is very small, however district differences exist. Kinondoni has the largest planted area with improved seeds in Dar es Salaam region and this is due to the moderate planted area of vegetables and moderate number of households using improved seeds.
The district has the second largest planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), however most of this is farm yard manure. Compared to other districts in the region, Kinondoni district ranka second in the level of insecticides use. The use of fungicides, although small, was twice as much as used by Ilala. Virtually more than half of herbicides in the region was used in Kinondoni district. It has the second largest area with irrigation compared to other districts with 387 ha of irrigated land. The most common source of water for irrigation is pipe water and wells. Bucket/watering cans and water hose 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 sacks/open drums, however the proportion of households storing crops in the district is highest, with moderate quantity in tons of stored crops than other districts in the region. The district has the second largest number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. The highest percent of households processing crops in Dar es Salaam region is found in Kinondoni district and is almost all done on farm by hand. The district also has a higher percent of households selling processed crops to neighbours than other districts and no sales are to traders on farm. Although very small, access to credit in the district is mostly to women with a small proportion (23%) going to males and the main sources are religious organisations.

The largest number of households receive extension services in Kinondoni and most of this is from the government (97%). The quality of extension services was rated between good and average by the majority of the households.

Tree farming is important in Kinondoni (with 10,968 or 92.6% planted trees) and is mostly Gravellis with some eucalyptus and leucena spp. The highest proportion of households with erosion control and water harvesting structures is found in

Kinondoni district and is mostly erosion control bunds. It has the highest number of gabions/sand bags, unlike other districts which has none.

The district has the second largest number of cattle in the region and they are almost all indigenous followed by dairy. Goat and also sheep and pigs production rank first compared to other districts in the region. It has a moderate number of chicken. Although small, the district has the second highest number of layers in the region. Small numbers of ducks, turkeys and donkeys are also found in the district. The second largest number of households reporting Tsetse and tick problems was in Kinondoni district and it had the largest number of households de-worming livestock. The use of draft animals in the district is absent and so is fish farming.

It has a better access to secondary schools, primary schools, health clinics and primary and secondary markets compared to other districts. I also has a better access to all weather roads and regional capital.

Kinondoni district has the second highest percent of households with no toilet facilities (38%) and it has the highest percent of households owning radio, vehicles, tv/video and mobile phones but lowest in bicycles. It has the 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 the smallest percent of households with grass roofs with 41.3 percent of households having iron sheets. The most common source of drinking water is from unprotected springs. It has the second highest percent of households having two or one meal per day compared to other districts and one third of its households have 3 meals per day. The district had the second highest percent of households that did not eat meat and highest percent (50%) who did not eat fish during the week prior to enumeration. However most households never had problems with food satisfaction.

4.2.2 Ilala

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

The most important livelihood activity for smallholder households in Ilala district is Permanent crop farming, followed by Annual Crop Farming. The district has the highest percent of households with no off-farm activities and has the smallest percent of households with more than one member with off-farm income. Compared to other districts in the region, Ilala has the highest percent of female headed households (20%) and it has one of the highest average age of the household head in the region (49 years). With a household size of 5.2 members per household it is highest for the region. Ilala has a moderately high literacy rate among smallholder households and this is reflected by the district having the second highest level of school attendance in the region.

It has the second largest utilized land area per household (0.4ha) and 74 percent of the allocated area is currently being utilised. The district has the lowest planted area in the region, and the lowest also in planted area per household either season (0.4ha in the long rainy season and 0.2ha in the short rainy season).

The district is second in importance for maize production in the region with a planted area of over 1,055ha, and the planted area per maize growing household is also moderate for the region. The district has the second largest planted area of paddy in the region with 1,352 hectares. Sorghum, bulrush millet, finger millet, wheat and barley are not grown in the district. Cassava production is moderate, accounting for 32.2 percent of the quantity harvested in the region. The production of beans in Ilala district is very low with a planted area of 2ha. Ilala district has the second largest oilseeds crops planted area in Dar es Salaam region with a planted area of 44ha. The district comes second in groundnut crop planted area with a planted area per groundnut growing household of 0.13ha an area which is also the region's average. Sunflower is grown only in Ilala district. Vegetable production is of less importance in the district. Hence it has the smallest planted area with tomatoes and water melon (8 ha and 34 ha respectively). No planted area was recorded for chillies, okra, onions and bitter aubergine although they were grown elsewhere in the region. Traditional cash crops (e.g. tobacco and cotton) are not grown in Ilala district.

Compared to other districts in the region, Ilala has the smallest planted area with permanent crops (19%) which is dominated by coconuts (1,735 ha), cashew nuts (786 ha), oranges (401 ha), mangoes (383 ha), and bananas (77 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 and preparation is done by hand slashing, however a very small amount of land preparation is done by bush clearance followed by option of no land clearing compared to the two other districts.

The use of inputs in the region is very small, however district differences exist. Ilala has the least planted area with improved seeds in the region and this is due to the dominance within district in planted area of permanent crops which do not need frequent planting. However, it has the highest proportion of households using improved seeds (44%). The district has the least planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), however most of this is compost. Compared to other districts in the region, Ilala district has the lowest level of insecticides use. The use of fungicides was very low compared to other districts and the application was half as much as of herbicides in the district. It has the least area with irrigation compared to other districts with 167 ha of irrigated land. The most common source of water for irrigation is from wells and rivers using gravity. Bucket/watering cans and water hose are the two means of irrigation water application in Ilala district.

The most common method of crop storage in Ilala district is in airtight drums, however the proportion of households storing crops in the district is relatively low. Ilala district did not record any household selling crops as the amount which was produced was consumed by the household. Ilala is among the districts with the lowest percent of households processing crops in Dar es Salaam region and is almost all done by neighbours machine. Although very small, access to credit in the district is to women only and the main source is commercial banks only.

A moderately larger number of households receive extension services in Ilala district and all of this is from the government (96%) and other sources. The quality of extension services was rated between good and very good by the majority of the households.

Tree farming is of least importance in Ilala (with 260 planted trees) and is mostly Azadritachta Spp, Leucena Spp and Trichilia Spp. The lowest proportion of households with erosion control and water harvesting structures is found in Ilala district and is mostly erosion control bunds and water harvesting bunds.

The district has the least number of cattle in the region and they are almost all indigenous. Goat production and sheep is also lowest compared to other districts in the region. It has the second largest number of pigs in the region and the highest number of chicken mostly layers. Mostly ducks and turkeys are in addition found in the district. The least number of households reported tsetse and tick problems in Ilala district and it has the lowest percent of households de-worming livestock. The district has no neither households using draft animals or fish farming.

It has amongst the best access to secondary schools, primary schools, health clinics and primary and secondary markets compared to other districts. It also has one the best access to regional capital.

The percentages of households without toilet facility in Ilala district is 10 percent and it is among the districts with the lowest percent of households owning vehicles, tv/video and mobile phones and moderate number owning bicycles. 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 followed by hurricane lamp and practically all the agricultural households use firewood for cooking. The roofing material for some of the households in the district is grass/leaves (14.3%) and iron sheets (47.3%). The most common source of drinking water is from unprotected wells. It is one of the districts with a third of its households having three meals per day (33%). The district had the lowest percent of households that did not eat meat but a higher percent of those who did not eat fish during the week prior to enumeration, however most households seldom had problems with food satisfaction.

4.2.3 Temeke

Temeke district has the largest number of households in the region and it has 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 the smallest number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Temeke district is Annual Crop Farming, followed by Permanent Crop Farming. However, the district has the second highest 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, Temeke has the lowest percent of female headed households (17%) and also the lowest average age of the household head in the region. With an average household size of 5 members per household it is average for the region. Temeke has a comparatively high literacy rate among smallholder households and this is reflected by the concomitant relatively high level of school attendance in the region. The literacy rate for the heads of household is slightly lower than the two other districts in the region.

It has the highest utilized land area per household (2.0ha) than the regional average of 0.4ha and 74 percent of the allocated area is currently being utilised. The total planted area is lowest than in other districts in the region due to the absence of good wet and dry seasons. Also it has the lowest planted area per household (0.3ha) attributed to lowest in the region the number of smallholders in the district.

The district is not important for maize production in the region with a planted area of over 252ha, however the planted area per household is 0.3ha which is among the lowest in the region. Paddy production an annual crop which comes second in the region after cassava is of high importance with a planted area of 2,130 hectares. Bulrush millet, finger millet, wheat and barley are not produced in the district. The district has the largest planted area of cassava accounting for 41.4 percent of the cassava planted area in the region. The production of beans in Temeke is not given importance as none was recorded. Oilseed crops are of less importance in Temeke with 29 percent of the groundnuts grown in the district. Sunflower is not grown in the district. Vegetable production is important in the district. It has the largest planted area with tomatoes and water melon (800 ha and 359 ha respectively) than other districts in the region and accounts for 96.4 percent of the tomato production and 79 percent of the water melon production in the region. Traditional cash crops (e.g. tobacco and cotton) are not grown in Temeke district.

Permanent crops are very important in Temeke district (44% of the total permanent crop planted area in Dar es Salaam region is found in the district). The most prominent permanent crops in the district include coconuts (2,831 ha), cashew nuts (3,025 ha) mangoes (1,676 ha), oranges (316 ha) and bananas (314 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 and preparation is done by hand slashing and very small land preparation is done by tractor slashing in the long rainy season or bush clearance in the short rainy season.
The use of inputs in the region is very small, however district differences exist. Temeke has the second highest planted area with improved seed in Dar es Salaam region and this is due to the dominance of vegetable crops which need frequent planting. However, it has the least percentage of households using improved seeds. The district has the highest planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), however most of this is farm yard manure. Compared to other districts in the region, Temeke district has the highest application of insecticides and fungicides to its planted area. The use of herbicides is moderate, about a third of what Kinondoni uses. It has the largest area with irrigation compared to other districts with 456 ha of irrigated land. The most common source of water for irrigation is from rivers and wells using hand bucket. Bucket/watering cans, sprinklers and hoses are the most common means of irrigation water application.

The most common method of crop storage is in Temeke is sacks and open drums, however the proportion of households storing crops in the district is second highest in the region. The district has the highest percent of households selling crops, however for those few who did not sell, the main reason for not selling is insufficient production followed by a low price. Temeke district is one of the districts in Dar es Salaam region with a moderate percent of households processing crops and is almost all done on farm by hand and to a lesser extent, using a neighbour's machine. The district has the highest percent of households selling processed crops (53%) of which selling to trader at the farm ranks high in the district. Although very small, access to credit in the district is to males (100% of those who accessed credit) for fertilizer and labour purposes and the main sources are family friends/relatives (50%) and cooperative societies (50%).

The highest number of households receiving crop extension services are in Temeke district but the lowest in livestock extension services most of which are from the government. The quality of extension services was rated between good and very good by the majority of the households.

Tree farming although second highest in the region is of low priority in Temeke district (with 611 planted trees) and is mostly Senna Spp, azadritachta Spp with some Eucalyptus. The second highest proportion of households with water harvesting bunds and erosion control bunds is found in Temeke district. It also has the highest proportion of tree belts as a measure against erosion.

The district has one half of the number of cattle in the region and they are almost all indigenous. Goat and sheep production is moderate compared to other districts. It has the least number of pigs in the region and least number of chicken all of which are indigenous. However, the district has close to a third of all the indigenous chicken in the region. As for improved breed, a small number of layers but one third of the region's broilers are found Temeke. The district has the largest number of ducks, and no rabbits. All other unspecified types of other livestock category in the region are l found in Temeke. The highest number of households reporting tsetse and tick problems are in Temeke district. Though small, de-worming of livestock is moderately practiced. Temeke is the only district in the region using draft animals to cultivate the land. Also it is the only district which practice fish farming in the region.

It has a moderate access to secondary schools, primary schools, health clinics, feeder roads, all weather roads and primary markets compared to other districts. Also it has a moderate access to tertiary markets and the regional capital.

Temeke district has the highest percent (53%) of households with no toilet facilities and it has the lowest percent of households owning household facilities in general such as radio, iron, wheel barrows, and mobile phones but individually has the highest percent of bicycles and landlines, moderate number of vehicles and Tv/video. It has the second highest number of households using mains electricity in the region. The most common source of energy for lighting is the wick lamp followed by pressure lamp and practically all households use firewood for cooking. The district has the highest percent of households with grass roofs (61%) with 21 percent of households having iron sheets. The most common source of drinking water is from unprotected wells. Thirty eight percent of the households are in the district who reported having one or two meals per day and ranked first in households which reported having more than two meals per day. The district has a moderate percent of households that did not eat meat or fish during the week prior to enumeration, however most households sometimes had problems with food satisfaction.

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TYPE OF AGRICULTURE HOUSEHOLD

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

District	Agriculture, Non Agriculture and Urban Households								
	Rural Households Involved in Agriculture	% of Total Rural Households	Rural Households NOT Involved in Agriculture	% of Total Rural Households	Total Rural Households	% of Total Households	Urban Households	% of Total Households	Total Number of Households (from 2002 Pop. Census)
	Number	%	Number	%	Number	%	Number	%	Number
Kinondoni	6,712	59	4,681	41	11,393	4	248,876	96	260,269
Ilala	6,613	50	6,671	50	13,284	9	135,102	91	148,386
Temeke	7,069	57	5,330	43	12,399	7	175,210	93	187,609
Total	20,394	55	16,682	45	37,076	6	559,188	94	596,264

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

District	Type of Agriculture Household						Total Number of Agriculture Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Crops Only		Livestock Only		Crops & Livestock				
	Number of Households	%	Number of Households	%	Number of Households	%			
Kinondoni	4,947	73	239	4	1,526	23	6,712	6,473	1,765
Ilala	5,173	78	697	11	743	11	6,613	5,916	1,440
Temeke	5,724	81	194	3	1,151	16	7,069	6,875	1,345
Total	15,844	78	1,130	5	3,420	17	20,394	19,264	4,550

NUMBER OF AGRICULTURE HOUSEHOLDS

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

District	Male			Female			Total		Average Household Size
	Number	%	Average Household Size	Number	%	Average Household Size	Number	%	
Kinondoni	5,440	81	4	1,271	18.9	4	6,712	100	4
Ilala	5,276	80	5	1,337	20.2	4	6,613	100	5
Temeke	5,894	83	5	1,175	16.6	5	7,069	100	5
Total	16,611	81	5	3,783	18.6	4	20,394	100	5

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
Kinondoni	2	3	5	1	6	7	4
Ilala	2	1	5	3	6	7	4
Temeke	1	2	5	3	7	6	4
Total	1	3	5	2	6	7	4

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	285	585	259	5,043	343	94	82
Ilala	960	2,646	856	1,659	387	0	52
Temeke	2,897	1,858	130	1,546	55	480	82
Total	4,143	5,089	1,244	8,248	785	574	216

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	3,399	1,972	785	538	145	0	150
Ilala	2,913	1,439	263	1,113	194	47	643
Temeke	2,324	2,625	579	1,107	112	109	253
Total	8,637	6,037	1,627	2,757	452	156	1,047

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	1,592	2,422	632	239	98	33	1,226
Ilala	1,004	1,076	481	1,053	309	0	2,104
Temeke	813	1,126	1,116	2,219	447	135	1,063
Total	3,409	4,624	2,229	3,511	854	168	4,393

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	492	576	958	342	156	48	2,050
Ilala	269	367	604	672	157	0	2,395
Temeke	523	393	885	1,106	333	156	2,641
Total	1,284	1,336	2,447	2,120	646	204	7,085

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	58	247	311	69	86	0	1,287
Ilala	0	128	631	123	110	52	435
Temeke	90	148	542	374	183	106	1,743
Total	147	523	1,484	567	379	159	3,464

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	0	0	34	15	18	0	110
Ilala	0	0	105	0	147	0	105
Temeke	30	0	47	11	60	0	156
Total	30	0	186	26	226	0	371

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Kinondoni	0	0	0	0	25	0	0
Ilala	0	0	23	23	0	52	0
Temeke	43	0	0	0	0	0	0
Total	43	0	23	23	25	52	0

HOUSEHOLDS DEMOGRAPHS

3.2 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members by Sex and Age Group for the 2002/03 Agricultural Year (row %)

	Sex					
	Male		Female		Total	
Age Group	Number	%	Number	%	Number	%
Less than 4	5,034	46	5,877	54	10,912	100
05 - 09	6,822	54	5,861	46	12,684	100
10 - 14	6,719	47	7,558	53	14,277	100
15 - 19	6,134	57	4,565	43	10,699	100
20 - 24	4,419	47	4,947	53	9,365	100
25 - 29	3,216	45	3,889	55	7,105	100
30 - 34	3,236	55	2,680	45	5,916	100
35 - 39	2,427	48	2,596	52	5,023	100
40 - 44	2,318	50	2,304	50	4,622	100
45 - 49	1,954	49	2,051	51	4,005	100
50 - 54	1,588	47	1,765	53	3,353	100
55 - 59	1,517	54	1,279	46	2,797	100
60 - 64	1,488	58	1,085	42	2,573	100
65 - 69	1,234	61	782	39	2,016	100
70 - 74	918	50	920	50	1,838	100
75 - 79	497	50	501	50	998	100
80 - 84	358	64	200	36	558	100
Above 85	150	52	139	48	289	100
Total	50,030	51	49,000	49	99,030	100

3.3 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members by Sex and Age Group for the 2002/03 Agricultural Year (column %)

	Sex					
	Male		Female		Total	
Age Group	Number	%	Number	%	Number	%
Less than 4	5,034	10.1	5,877	12.0	10,912	11.0
05 - 09	6,822	13.6	5,861	12.0	12,684	12.8
10 - 14	6,719	13.4	7,558	15.4	14,277	14.4
15 - 19	6,134	12.3	4,565	9.3	10,699	10.8
20 - 24	4,419	8.8	4,947	10.1	9,365	9.5
25 - 29	3,216	6.4	3,889	7.9	7,105	7.2
30 - 34	3,236	6.5	2,680	5.5	5,916	6.0
35 - 39	2,427	4.9	2,596	5.3	5,023	5.1
40 - 44	2,318	4.6	2,304	4.7	4,622	4.7
45 - 49	1,954	3.9	2,051	4.2	4,005	4.0
50 - 54	1,588	3.2	1,765	3.6	3,353	3.4
55 - 59	1,517	3.0	1,279	2.6	2,797	2.8
60 - 64	1,488	3.0	1,085	2.2	2,573	2.6
65 - 69	1,234	2.5	782	1.6	2,016	2.0
70 - 74	918	1.8	920	1.9	1,838	1.9
75 - 79	497	1.0	501	1.0	998	1.0
80 - 84	358	0.7	200	0.4	558	0.6
Above 85	150	0.3	139	0.3	289	0.3
Total	50,030	100.0	49,000	100.0	99,030	100.0

3.4 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members by Sex and District for the 2002/03 Agricultural

District	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Kinondoni	15,433	53	13,650	47	29,083	100
Ilala	17,319	50	17,080	50	34,399	100
Temeke	17,277	49	18,271	51	35,548	100
Total	50,030	51	49,000	49	99,030	100

3.5 HOUSEHOLDS DEMOGRAPHICS: 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 Languag		Don't Read / Write		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	16,109	62	4,440	17	9	0	5,578	21	26,135	100
Ilala	19,220	65	3,228	11	0	0	7,327	25	29,775	100
Temeke	21,974	68	2,256	7	133	0	7,846	24	32,208	100
Total	57,303	65	9,924	11	141	0	20,750	24	88,118	100

3.6 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members 5 Years and Above by School Attendance and District , 2002/03 Agricultural Year

	School Attendancy							
	Attending School		Completed		Never Attended to School		Total	
District	Number	%	Number	%	Number	%	Number	%
Kinondoni	6,948	27	14,197	54	4,989	19	26,135	100
Ilala	10,380	35	12,392	42	7,003	24	29,775	100
Temeke	9,050	28	15,144	47	8,014	25	32,208	100
Total	26,377	30	41,734	47	20,007	23	88,118	100

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

	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping / Herding		Livestock Pastoralist		Fishing		Government / Parastatal	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	5,588	21	871	3	0	0	123	0	1,225	5
Ilala	12,527	42	1,803	6	0	0	105	0	212	1
Temeke	11,714	36	674	2	7	0	1,022	3	660	2
Total	29,829	34	3,348	4	7	0	1,250	1	2,098	2

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

	Main Activity									
	Private - NGO / Mission / etc		Self Employed (Non Farmimg) with Employees		Self Employed (Non Farmimg) without Employees		Unpaid Family Helper (Non Agriculture)		Not Working & Available	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	3,196	12	834	3	2,841	11	299	1	663	3
Ilala	888	3	1,661	6	433	1	393	1	174	1
Temeke	614	2	533	2	3,880	12	665	2	327	1
Total	4,699	5	3,027	3	7,153	8	1,357	2	1,164	1

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

	Main Activity											
	Not Working & Unavailable		Housemaker / Housewife		Student		Too Old / Retired / Sick / Disabled		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	211	1	1,262	5	6,455	25	2,207	8	359	1	26,135	100
Ilala	204	1	687	2	8,015	27	2,268	8	407	1	29,775	100
Temeke	1,571	5	588	2	8,488	26	1,193	4	273	1	32,208	100
Total	1,986	2	2,537	3	22,957	26	5,668	6	1,039	1	88,118	100

3.8 HOUSEHOLDS DEMOGRAPHICS: 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 Farm		Rarely Works on Farm		Never Works on Farm		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	5,698	22	5,120	20	7,664	29	7,652	29	26,135	100
Ilala	11,631	39	3,372	11	9,695	33	5,077	17	29,775	100
Temeke	10,548	33	4,571	14	7,001	22	10,087	31	32,208	100
Total	27,878	32	13,063	15	24,361	28	22,816	26	88,118	100

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

	Education Level									
	Under Standard One		Standard One		Standard Two		Standard Three		Standard Four	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	0	0	91	1	153	1	409	3	1,488	10
Ilala	52	0	55	0	170	1	571	5	1,026	8
Temeke	0	0	85	1	207	1	302	2	1,132	7
Total	52	0	230	1	530	1	1,282	3	3,646	9

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

	Education Level									
	Standard Seven		Standard Eight		Training After Primary		Pre Form One		Form One	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	7,694	54	536	4	0	0	0	0	0	0
Ilala	8,420	68	273	2	42	0	0	0	140	1
Temeke	10,953	72	266	2	0	0	0	0	33	0
Total	27,067	65	1,074	3	42	0	0	0	173	0

cont... HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members by Level of Formal Education Completed and District, 2002/03

	Education Level									
	Form Two		Form Three		Form Four		Form Six		Secondary Education	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	150	1	25	0	979	7	288	2	639	4
Ilala	71	1	0	0	678	5	167	1	91	1
Temeke	250	2	69	0	854	6	28	0	21	0
Total	471	1	94	0	2,511	6	484	1	751	2

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

	Education Level							
	Tertiary Education		Adult Education		applicable		Total	
District	Number	%	Number	%	Number	%	Number	%
Kinondoni	609	4	192	1	0	0	14,197	100
Ilala	39	0	142	1	0	0	12,392	100
Temeke	155	1	400	3	0	0	15,144	100
Total	803	2	734	2	0	0	41,734	100

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

District	Male			Female			Total		Average Household Size
	H/holds	%	Average Household Size	H/holds	%	Average Household Size	H/holds	%	
Kinondoni	5,440	81	4	1,271	19	4	6,712	100	4
Ilala	5,276	80	6	1,337	20	4	6,613	100	5
Temeke	5,894	83	5	1,175	17	5	7,069	100	5
Total	16,611	81	5	3,783	19	4	20,394	100	5

3.11 HOUSEHOLD DEMOGRAPHICS: Number of Agricultural Households by Number of Household Members with Off-farm Income Generating Activities and District, 2002/03

	Number of household members with Off farm income							
	One		Two		More than Two		Total	
District	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Kinondoni	3,155	50	2,130	34	1,071	17	6,355	100
Ilala	3,146	60	1,260	24	802	15	5,208	100
Temeke	2,602	40	2,588	40	1,324	20	6,514	100
Total	8,903	49	5,977	33	3,197	18	18,078	100

3.12 HOUSEHOLDS DEMOGRAPHICS: 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
Kinondoni	1,135	3,916	0	800	305	491	66	6,712
Ilala	1,748	4,004	0	636	91	39	95	6,613
Temeke	2,025	3,921	0	635	14	118	357	7,069
Total	4,907	11,841	0	2,071	410	648	517	20,394

3.13 HOUSEHOLDS DEMOGRAPHICS: Mean, Median, Mode of Age of Head of Agricultural Household and District

	Male			Female			Total		
District	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Kinondoni	47	46	40	54	55	50	48	49	50
Ilala	47	45	28	57	56	65	49	47	45
Temeke	46	43	32	50	50	60	46	45	32
Total	47	45	32	54	54	45	48	47	45

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 Heads	2,961	21,269	27,660	23,730	20,000	16,611
Female Heads	1,140	4,481	5,520	6,178	5,000	3,783
Total	**4,101**	**25,750**	**33,180**	**29,908**	**25,000**	**20,394**
Male headed (Percentage)	72	83	83	79	80	81
Female headed (Percentage)	28	17	17	21	20	19
Total	**100**	**100**	**100**	**100**	**100**	**100**

3.15 Literacy Rates of Heads of Households by Sex and District

	Literacy Rate (%)								
	Can Read and Write			Cannot Read and Write			Total		
District	Male	Female	Total	Male	Female	Total	Male	Female	Total
Kinondoni	92	51	84	8	49	16	81	19	100
Ilala	87	27	75	13	73	25	80	20	100
Temeke	82	32	74	18	68	26	83	17	100
Total	87	37	78	13	63	22	81	19	100

LAND ACCESS/OWNERSHIP

4.1 LAND ACCESS/OWNERSHIP: Number of Farming Households by Type of Land Ownership/Tenure and District for the 2002/03 Agricultural Year

District	Land Access													
	Leased/Certificate of Ownwership		Owned under Customary Law		Bought		Rented		Borrowed		Households with Area Shared Cropped		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	%
Kinondoni	681	8	1,997	24	3,055	37	290	4	1,288	16	151	0	711	9
Ilala	444	5	1,167	14	4,122	49	488	6	1,401	16	0	0	875	10
Temeke	126	1	4,349	50	2,453	28	844	10	747	9	57	0	186	2
Total	1,251	5	7,513	30	9,631	38	1,622	6	3,435	14	208	0.1	1,772	7

4.2 LAND ACCESS/OWNERSHIP: Area of Land (ha) by Ownership/Tenure (Hectare) and District for the 2002/03 Agricultural Year

District	Land Access/ Ownership (Hectare)							
	Area Leased/Certificate of Ownership	Area Owned Under Customary Law	Area Bought	Area Rented	Area Borrowed	Area Shared Cropped	Area Under Other Forms of Tenure	Total
Kinondoni	1,078	2,668	6,536	411	869	183	806	12,551
Ilala	788	1,099	4,038	351	883	0	1,904	9,063
Temeke	207	8,181	4,458	1,040	805	135	112	14,936
Total	2,073	11,949	15,032	1,801	2,557	318	2,822	36,551
%	5.7	32.7	41.1	4.9	7.0	0.9	7.7	100.0

LAND USE

5.1 LAND USE: Number of Agricultural Households by Type of Land Use and District for the 2002/03 Agricultural Year

Districts	Type of Land Use													
	Households with Temporary Mono Crops	Households with Temporary Mixed Crops	Households with Permanent Mono Crops	Households with Permanent Mixed Crops	Households with Permanent / Annual Mix	Households with Pasture	Households with Fallow	Households with Natural Bush	Households with Planted Trees	Households Rented to Others	Households Unusable	Households of Uncultivated Usable Land	Area of Land Utilized by Household	Total No. of Households
Kinondoni	1,598	1,868	1,213	1,398	3,784	430	529	97	727	52	237	883	10,521	6,473
Ilala	3,198	517	757	2,712	3,043	631	487	0	404	0	147	488	7,816	5,916
Temeke	3,326	849	677	1,423	4,361	258	404	19	376	178	107	562	13,227	6,875
Total	8,121	3,234	2,647	5,533	11,187	1,318	1,420	116	1,507	230	490	1,933	31,564	19,264

5.2 LAND USE: Area of Land (Ha) by type of Land Use and District for the 2002/03 Agricultural Year

District	**Land use area**												
	Area under Temporary Mono Crops	Area under Temporary Mixed Crops	Area under Permanent Mono Crops	Area under Permanent Mixed Crops	Area under Permanent / Annual Mix	Area under Pasture	Area under Fallow	Area under Natural Bush	Area under Planted Trees	Area Rented to Others	Area Unusable	Area of Uncultivated Usable Land	Total
Kinondoni	820	1,563	1,309	1,500	4,500	610	433	115	219	39	276	1,167	12,551
Ilala	1,547	277	572	2,519	2,665	167	538	0	69	0	163	546	9,063
Temeke	3,050	876	593	2,142	6,242	281	420	8	42	352	94	837	14,936
Total	5,417	2,716	2,474	6,160	13,408	1,059	1,391	123	330	392	533	2,550	36,551
%	14.8	7.4	6.8	16.9	36.7	2.9	3.8	0.3	0.9	1.1	1.5	7.0	100.0

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

District	Was all Land Available to the Hh Used During 2002/03?					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Kinondoni	4,583	71	1,889	29	6,473	100
Ilala	4,356	74	1,560	26	5,916	100
Temeke	5,807	84	1,068	16	6,875	100
Total	14,746	77	4,518	23	19,264	100

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

District	Do you Consider that you Have Sufficient Land for the Hh?					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Kinondoni	2,217	34	4,255	66	6,473	100
Ilala	2,291	39	3,625	61	5,916	100
Temeke	4,021	58	2,854	42	6,875	100
Total	8,529	44	10,735	56	19,264	100

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

District	Do any Female Members of the Hh own or have Customary Right for Land?					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Kinondoni	1,882	29	4,591	71	6,473	100
Ilala	1,538	26	4,377	74	5,916	100
Temeke	1,754	26	5,121	74	6,875	100
Total	5,174	27	14,090	73	19,264	100

TOTAL ANNUAL CROP & VEGETABLES PRODUCTION WET & DRY SEASONS

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

District	Dry Season		Wet Season		Total Area Planted (Hectare)	% Area Planted in Dry Season
	Number of households	Planted area (hectare)	Number of Households	Planted Area (hectare)		
Kinondoni	4,467	1,409	15,167	6,052	7,461	18.89
Ilala	5,120	1,077	10,659	4,115	5,192	20.75
Temeke	2,660	1,020	13,963	7,447	8,467	12.05
Total	12,247	3,507	39,789	17,614	21,121	16.60

7.1 & 7.2b TOTAL ANNUAL CROPS AND VEGETABLE PRODUCTION: Number of Crop Growing Households Planting Crops by Season and District.

District	Dry Season		Wet Season		Total Number of Crop Growing Households
	Number of households Growing Crops	Number of households NOT Growing Crops	Number of households Growing Crops	Number of households NOT Growing Crops	
Kinondoni	2,607	3,866	5,025	1,448	6,473
Ilala	3,165	2,751	4,131	1,785	5,916
Temeke	1,692	5,183	5,540	1,336	6,875
Total	7,464	11,799	14,695	4,568	19,264

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, Dar es Salaam Region

Crop	Dry season			Wet 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)
Maize	1576	213	135	2060	746	362	3635	959	264
Paddy	195	38	197	3872	1861	481	4067	1900	467
Sorghum	0	0	0	34	11	320	34	11	320
CEREALS	**1,770**	**251**		**5,966**	**2,618**		**7,736**	**2,869**	
Cassava	29	5	163	7834	10896	1391	7863	10901	1386
Sweet Potatoes	245	195	796	989	1036	1047	1235	1231	997
Irish Potatoes	0	0	0	31	27	865	31	27	865
Yams	6	3	567	8	1	79	14	4	276
ROOTS & TUBERS	**280**	**203**		**8,863**	**11,959**		**9,143**	**12,162**	
Mung Beans	2	5	2779	1	1	988	3	6	2090
Beans	1	1	519	20	5	249	21	6	263
Cowpeas	799	76	95	1302	328	252	2101	404	192
Green Gram	12	2	139	30	3	91	43	4	105
Field Peas	0	0	0	3	0	0	3	0	0
PULSES	**814**	**83**		**1,357**	**337**		**2,171**	**420**	
Sunflower	10	0	0	0	0		10	0	0
Simsim	0	0	0	47	5	114	47	5	114
Groundnuts	33	12	366	62	21	336	95	33	346
OIL SEEDS & OIL NUTS	**43**	**12**		**109**	**26**		**152**	**38**	
Okra	78	68	870	238	568	2381	316	635	2010
Bitter Aubergine	6	2	370	1	1	1170	7	3	499
Onions	0	0	0	25	47	1849	25	47	1849
Tomatoes	70	200	2837	760	2526	3325	830	2725	3283
Spinnach	0	0	0	2	2	843	2	2	843
Chillies	11	1	64	24	69	2818	35	69	1959
Amaranths	28	259	9264	36	41	1142	64	300	4695
Pumpkins	8	3	351	13	29	2211	22	32	1492
Cucumber	70	130	1846	50	177	3577	120	307	2561
Egg Plant	13	3	216	28	121	4318	41	124	2987
Water Mellon	315	933	2963	141	376	2669	456	1309	2872
FRUITS & VEGETABLES	**600**	**1,598**		**1,319**	**3,957**		**1,919**	**5,555**	
Total	**3,507**			**17,614**			**21,121**		

*The total area planted include the sum of the planted area for both Wet and Dry Season and it is an overestimation of the actual area due to being produced on the same land during the two seasons. Previous surveys have used the Long/Wet Season to estimate physical land area under production to different crops

7.1 & 7.2d TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agriculture Households by Area Planted (ha) and crop for the Agriculture Year 2002/03 - Wet and Dry Seasons, Dar es Salaam Region

Crop	Dry Season		Wet Season		Total Area Planted Dry & Wet Season	% Area Planted in Dry Season
	Number of Households	Planted Area (ha)	Number of Households	Planted area (ha)		
CEREALS	4,817	1,770	13,351	5,966	***7,736***	22.9
Maize	4,402	1,576	5,577	2,060	3,635	43.3
Paddy	415	195	7,705	3,872	4,067	5
Sorghum	0	0	69	34	34	0.0
ROOTS & TUBERS	905	280	15,469	8,863	***9,143***	3.1
Cassava	140	29	12,178	7,834	7,863	0
Sweet Potatoes	754	245	3,215	989		
Irish Potatoes	0	0	35	31	31	0
Yams	11	6	41	8	14	40.4
PULSES	4,632	814	6,539	1,357	***2,171***	37.5
Mung Beans	12	2	12	1	3	61.5
Beans	28	1	140	20	21	5
Cowpeas	4,550	799	6,258	1,302	2,101	38
Green Gram	42	12	100	30	43	29
Field Peas	0	0	28	3	3	0.0
OIL SEEDS & OIL NUTS	357	43	545	109	***152***	28.3
Sunflower	52	10	0	0	10	100.0
Simsim	0	0	123	47	47	0
Groundnuts	304	33	423	62	95	35.1
FRUITS & VEGETABLES	1,537	600	3,884	1,319	***1,919***	31.3
Okra	168	78	836	238	316	24.6
Bitter Aubergine	43	6	15	1	7	84
Onions	0	0	141	25	25	0
Tomatoes	187	70	1,435	760	830	8
Spinnach	0	0	30	2	2	0
Chillies	37	11	108	24	35	31
Amaranths	210	28	264	36	64	44
Pumpkins	60	8	116	13	22	39
Cucumber	369	70	261	50	120	59
Egg Plant	63	13	141	28	41	32
Water Mellon	400	315	537	141	456	69.1
Total	***1,273***	***3,507***	***763,656***	***17,614***	***21,121***	16.6

7.1 & 7.2e TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means of Soil Preparation and District Wet & Dry Season, Dar es Salaam

	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
District	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)
Kinondoni	209	238	254	124	7,170	4,523	7,632	4,886
Ilala	71	0	138	30	7,087	3,142	7,296	3,187
Temeke	57	83	602	790	6,573	4,383	7,232	5,256
Total	336	336	993	945	20,831	12,048	22,160	13,329
%		3		7		90		100

7.1 & 7.2f TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Fertilizer Use and District for the 2002/03 Agriculture Year - Wet & Dry Season, Dar es Salaam

	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
District	Number of Household	Planted Area (ha)	Number of Household	Planted Area (ha)	Number of Household	Planted Area (ha)	Number of Household	Planted Area (ha)	Number of Household	Planted Area (ha)
Kinondoni	1,493	1,133	674	628	381	303	5,997	5,396	8,544	7,461
Ilala	1,093	444	813	543	237	136	6,543	4,069	8,686	5,192
Temeke	1,618	2,263	256	202	641	655	5,205	5,348	7,720	8,467
Total	4,203	3,840	1,743	1,373	1,259	1,094	17,745	14,814	24,950	21,121

7.1 & 7.2g TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION:Total Number of Agriculture Households and Planted Area by Irrigation Use and District during Wet Season, 2002/03 Agriculture Year

	Irrigation Use						% of Area Planted Under Irrigation
	Households Using Irrigation		Households Not Using Irrigation		Total		
District	Number of Household	Planted Area (Ha)	Number of Household	Planted Area (Ha)	Number of Household	Planted Area (Ha)	
Kinondoni	4,611	4,601	3,933	2,860	8,544	7,461	61.67
Ilala	4,126	3,469	4,560	1,723	8,686	5,192	66.81
Temeke	3,745	5,101	3,975	3,366	7,720	8,467	60.25
Total	12,482	13,172	12,468	7,949	24,950	21,121	62.36

7.1 & 7.2h TOTAL ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Insecticide Use and District for the 2002/03 Agriculture Year - Wet & Dry Season.

District	Insecticide Use						% of Planted Area Using Insecticides
	Households Using Insecticides		Households Not Using Insecticides		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	840	822	7,704	6,639	8,544	7,461	11.02
Ilala	1,089	681	7,597	4,511	8,686	5,192	13.12
Temeke	1,879	2,713	5,842	5,754	7,720	8,467	32.05
Total	3,807	4,217	21,143	16,904	24,950	21,121	19.96

7.1 & 7.2i TOTAL ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Herbicide Use and District for the 2002/03 Agriculture Year - Wet & Dry Season.

District	Herbicide Use						% of Planted Area Using Herbicides
	Households Using Herbicide		Households Not Using Herbicide		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	70	41	8,474	7,420	8,544	7,461	0.55
Ilala	159	55	8,527	5,137	8,686	5,192	1.06
Temeke	120	126	7,600	8,341	7,720	8,467	1.49
Total	348	223	24,602	20,898	24,950	21,121	1.05
%	1.4	1.1	98.6	98.9	100	100	

7.1 & 7.2j TOTAL ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Fungicides Use and District for the 2002/03 Agriculture Year Wet & Dry Season.

District	Fungicide Use						% of Planted Area Using Fungicides
	Households Using Fungicide		Households Not Using Fungicide		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	394	296	8,150	7,165	8,544	7,461	3.96
Ilala	218	73	8,468	5,119	8,686	5,192	1.42
Temeke	1,399	2,582	6,321	5,885	7,720	8,467	30.49
Total	2,011	2,951	22,939	18,169	24,950	21,121	13.97

7.1 & 7.2k TOTAL ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Improved Seed Use and District for the 2002/03 Agriculture Year - Wet & Dry Season.

District	Improved Seed Use						% of Planted Area Using Improved Seeds
	Households Using Improved Seed		Households Not Using Improved Seed		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	4,658	3,150	2,975	1,736	7,632	4,886	64.46
Ilala	5,868	2,382	1,428	805	7,296	3,187	74.74
Temeke	2,852	2,831	4,379	2,426	7,232	5,256	53.85
Total	13,377	8,362	8,782	4,967	22,160	13,329	62.73

ANNUAL CROP & VEGETABLES PRODUCTION
SHORT RAINY SEASON

7.1a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Households and Planted Area by Means Used for Soil Preparation and District - SHORT RAINY SEASON, Dar es Salaam Region.

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
Kinondoni	81	87	110	68	2,416	1,255	2,607	1,409
Ilala	0	0	55	13	3,110	1,064	3,165	1,077
Temeke	25	5	148	162	1,519	853	1,692	1,020
Total	106	92	313	243	7,046	3,173	7,464	3,507
%	0.0	0.0	4.2	6.9	94.4	90.5	100.0	100.0

7.1b ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Crop Growing Households and Planted Area by Fertilizer Use and District during 2002/03 Agriculture Year - SHORT RAINY SEASON, Dar es Salaam Region

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
Kinondoni	543	320	286	172	153	65	1,626	853	2,607	1,409
Ilala	467	109	134	82	118	47	2,446	839	3,165	1,077
Temeke	632	363	83	118	176	163	801	375	1,692	1,020
Total	1,641	792	502	372	448	276	4,873	2,067	7,464	3,507
%	22.0	22.6	0.0	0.0	0.0	0.0	65.3	58.9	100.0	100.0

7.1c ANNUAL CROP AND VEGETABLE PRODUCTION:Total Number of Crop Growing Households and Planted Area by Irrigation Use and District during SHORT RAINY SEASON, 2002/03 Agriculture Year, Dar es Salaam Region

District	Irrigation Use						% of Planted Area Under Irrigation in Dry Season
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	242	97	2,366	1,312	2,607	1,409	7
Ilala	129	55	3,036	1,022	3,165	1,077	5
Temeke	234	176	1,458	844	1,692	1,020	17
Total	604	328	6,860	3,179	7,464	3,507	9
%	8.1	9.3	91.9	90.7	100.0	100.0	

7.1d ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Insecticide Use and District for the 2002/03 Agriculture Year - SHORT RAINY SEASON.

	Insecticide Use						% of Planted Area Using Insecticides
	Household Using Insecticides		Households Not Using Insecticides		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	184	84	2,424	1,326	2,607	1,409	5.95
Ilala	432	156	2,733	921	3,165	1,077	14
Temeke	537	423	1,155	597	1,692	1,020	41.45
Total	1,153	663	6,311	2,844	7,464	3,507	18.89

7.1e ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Herbicides Use and District for the 2002/03 Agriculture Year - SHORT RAINY SEASON.

	Herbicide Use						% of Planted Area Using Herbicides
	Household Using Herbicidess		Households Not Using Herbicides		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	13	11	2,595	1,399	2,607	1,409	0.78
Ilala	71	9	3,094	1,069	3,165	1,077	0.80
Temeke	0	0	1,692	1,020	1,692	1,020	0.00
Total	84	20	7,381	3,487	7,464	3,507	0.56

7.1f ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Fungicide Use and District for the 2002/03 Agriculture Year - SHORT RAINY SEASON.

	Fungicide Use						% of Planted Area Using Fungicides
	Household Using Fungicides		Households Not Using Fungicides		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	87	52	2,520	1,358	2,607	1,409	3.69
Ilala	130	27	3,035	1,050	3,165	1,077	3
Temeke	411	353	1,281	667	1,692	1,020	34.64
Total	628	433	6,837	3,074	7,464	3,507	12.33

7.1g ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - SHORT RAINY SEASON

District	Improved Seed Use						% of Planted Area Using Improved Seed
	Households Using Improved Seed		Households Not Using Improved Seed		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kinondoni	1,757	990	850	420	2,607	1,409	70.21
Ilala	2,871	1,007	294	70	3,165	1,077	93
Temeke	760	543	932	477	1,692	1,020	53.25
Total	5,388	2,540	2,077	967	7,464	3,507	72.43
%	72	72	28	28	100	100	

ANNUAL CROP & VEGETABLES PRODUCTION
LONG RAINY SEASON

7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Households and Planted Area by Means Used for Soil Preparation and District - LONG RAINY SEASON, Dar es Salaam Region.

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
Kinondoni	127	152	144	57	4,754	3,268	5,025	3,476
Ilala	71	14	83	17	3,977	2,078	4,131	2,109
Temeke	32	78	454	629	5,054	3,530	5,540	4,236
Total	230	244	680	702	13,785	8,876	14,695	9,822
%	2	2	5	7	94	90	100	100

7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Crop Growing Households and Planted Area by Fertilizer Use and District during 2002/03 Agriculture Year - LONG RAINY SEASON, Dar es Salaam Region

	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
Kinondoni	950	813	388	456	228	238	4,371	4,544	5,937	6,052
Ilala	626	335	679	461	118	89	4,097	3,230	5,521	4,115
Temeke	986	1,899	173	83	465	491	4,403	4,973	6,028	7,447
Total	2,563	3,047	1,240	1,001	811	818	12,871	12,747	17,486	17,614

7.2c ANNUAL CROP AND VEGETABLE PRODUCTION:Total Number of Crop Growing Households and Planted Area by Irrigation Use and District during LONG RAINY SEASON, 2002/03 Agriculture Year, Dar es Salaam Region

District	Irrigation Use						% of Planted Area Under Irrigation in Dry Season
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	4,369	4,504	1,567	1,548	5,937	6,052	74
Ilala	3,997	3,414	1,524	701	5,521	4,115	83
Temeke	3,511	4,926	2,517	2,521	6,028	7,447	66
Total	11,878	12,844	5,608	4,770	17,486	17,614	73
%	68	73	32	27	100	100	

7.2d ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Insecticide Use and District for the 2002/03 Agriculture Year - LONG RAINY SEASON.

District	Insecticide Use						% of Planted Area Using Insecticides
	Households Using Insecticides		Households Not Using Insecticides		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	656	738	5,281	5,313	5,937	6,052	12.20
Ilala	657	525	4,864	3,590	5,521	4,115	12.77
Temeke	1,341	2,291	4,687	5,157	6,028	7,447	30.76
Total	2,654	3,554	14,831	14,060	17,486	17,614	20.18

7.2e ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Herbicide Use and District for the 2002/03 Agriculture Year - LONG RAINY SEASON.

District	Herbicide Use						% of Planted Area Using Herbicides
	Households Using Herbicide		Households Not Using Herbicide		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	58	30	5,879	6,021	5,937	6,052	0.50
Ilala	88	46	5,433	4,069	5,521	4,115	1.12
Temeke	120	126	5,908	7,321	6,028	7,447	1.70
Total	265	203	17,221	17,411	17,486	17,614	1.15
%	1.5	1.2	98.5	98.8	100	100	

7.2f ANNUAL CROP & VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Fungicide Use and District for the 2002/03 Agriculture Year - LONG RAINY SEASON

District	Fungicide Use						% of Planted Area Using Fungicides
	Households Using Fungicide		Households Not Using Fungicide		Total		
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Kinondoni	307	244	5,629	5,808	5,937	6,052	4.03
Ilala	88	46	5,433	4,069	5,521	4,115	1.12
Temeke	989	2,229	5,039	5,219	6,028	7,447	29.93
Total	1,384	2,519	16,102	15,095	17,486	17,614	14.30

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

District	Improved Seed Use						% of planted area under irrigation in dry season
	Households Using Improved Seed		Households Not Using Improved Seed		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Kinondoni	2,901	2,160	2,125	1,317	5,025	3,476	62.13
Ilala	2,997	1,375	1,134	735	4,131	2,109	65.17
Temeke	2,092	2,287	3,447	1,949	5,540	4,236	54.00
Total	7,990	5,822	6,706	4,000	14,695	9,822	59.27
%	54	59	46	41	100	100	

Table 7.2h: Planted Area and Number of Crop Growing Households During LONG RAINY SEASON by Method of Land Clearing and Crops; 2002/03 Agriculture Year

Crop	Land Clearing											
	Mostly Bush Clearance		Mostly Hand Slashing		Mostly Tractor Slashing		Mostly Burning		Not Cleared		Total	
	Number of House-holds	Planted Area	Number of House-holds	Planted Area	Number of House-holds	Planted Area	Number of House-holds	Planted Area	Number of House-holds	Planted Area	Number of House-holds	Planted Area
CEREALS		**142**		**5,632**		**74**		**0**		**117**		**5,966**
Maize	184	77	5,157	1,904	52	3	0	0	184	75	5,577	2,060
Paddy	145	65	7,381	3,695	60	70	0	0	120	42	7,705	3,872
Sorghum	0	0	69	34	0	0	0	0	0	0	69	34
ROOTS & TUBERS		**31**		**1,024**		**0**		**0**		**16**		**1,071**
Cassava	0	0	121	42	0	0	0	0	0	0	121	42
Sweet Potatoes	63	31	3,116	942	0	0	0	0	36	16	3,215	989
Irish Potatoes	0	0	35	31	0	0	0	0	0	0	35	31
Yams	0	0	41	8	0	0	0	0	0	0	41	8
PULSES		**61**		**1,195**		**12**		**0**		**85**		**1,354**
Mung Beans	0	0	12	1	0	0	0	0	0	0	12	1
Beans	0	0	100	17	0	0	0	0	0	0	100	17
Cowpeas	180	61	5,766	1,143	80	12	0	0	231	85	6,258	1,302
Green Gram	0	0	100	30	0	0	0	0	0	0	100	30
Field Peas	0	0	28	3	0	0	0	0	0	0	28	3
OIL SEEDS & OIL NUTS		**0**		**109**		**0**		**0**		**0**		**109**
Sunflower	0	0	0	0	0	0	0	0	0	0	0	0
Simsim	0	0	123	47	0	0	0	0	0	0	123	47
Groundnuts	0	0	423	62	0	0	0	0	0	0	423	62
FRUITS & VEGETABLES		**19**		**1,251**		**12**		**23**		**7**		**1,310**
Okra	47	8	744	227	0	0	0	0	46	4.0	836	238
Bitter Aubergine	0	0	15	1	0	0	0	0	0	0.0	15	1
Onions	0	0	141	25	0	0	0	0	0	0.0	141	25
Tomatoes	40	7	1,302	708	31	12	29	23	11	0.5	1,413	751
Spinnach	0	0	30	2	0	0	0	0	0	0.5	30	2
Chillies	0	0	108	24	0	0	0	0	0	0.5	108	24
Amaranths	0	0	264	36	0	0	0	0	0	0.5	264	36
Pumpkins	23	1	93	12	0	0	0	0	0	0.5	116	13
Cucumber	18	2	243	48	0	0	0	0	0	0.5	261	50
Egg Plant	18	2	123	26	0	0	0	0	0	0.0	141	28
Water Mellon	0	0	537	141	0	0	0	0	0	0.5	537	141
Total		**253**		**9,211**		**98**		**23**		**226**		**9,810**
%		**3**		**94**		**1**		**0**		**2**		**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

Maize											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	1,947	848	61	0.072	3,515	1,480	412	0.279	2,328	473	0.203
Ilala	2,216	657	110	0.168	1,476	399	99	0.249	1,055	209	0.198
Temeke	239	71	42	0.588	586	181	235	1.293	252	276	1.095
Total	4,402	1,576	213	0.135	5,577	2,060	746	0.362	3,635	959	0.264

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

Bulrush millet											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Paddy											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	18	19	0	0.000	1,407	567	97	0.170	586	97	0.165
Ilala	52	8	0	0.000	3,119	1,343	257	0.192	1,352	257	0.000
Temeke	344	168	38	0.229	3,180	1,962	1,507	0.768	2,130	1,546	0.000
Total	415	195	38	0.197	7,705	3,872	1,861	0.481	4,067	1,900	0.467

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

Sorghum											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	40	16	0	0	16	0	0.000
Ilala	0	0	0	0	0	0	0	0	0	0	0.000
Temeke	0	0	0	0	29	17	11	0	17	11	0.618
Total	0	0	0	0	69	34	11	0	34	11	0.320

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

Finger millet											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Ilala	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Temeke	0	0	0	0.000	0	0	0	0.000	0	0	0.000
Total	0	0	0	0.000	0	0	0	0.000	0	0	0.000

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

Beans											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	112	19	5	0.256	19	5	0.256
Ilala	28	1	1	0.519	28	1	0	0.124	2	1	0.321
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	28	1	1	0.519	140	20	5	0.249	21	6	0.263

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

Green gram											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	28	8	0	0.036	84	26	3	0.106	34	3	0.089
Ilala	0	0	0	0	17	5	0	0.011	5	0	0.011
Temeke	14	4	1	0.329	0	0	0	0	4	1	0.329
Total	42	12	2	0.139	100	30	3	0.091	43	4	0.105

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

Mung beans											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	12	2	5	2.779	12	1	1	0.988	3	6	2.090
Total	12	2	5	2.779	12	1	1	0.988	3	6	2.090

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

Cowpeas											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	1,657	352	18	0.052	3,484	839	94	0.112	1,190	112	0.094
Ilala	2,346	331	23	0.070	1,066	166	14	0.082	497	37	0.074
Temeke	547	116	34	0.297	1,708	298	221	0.740	414	255	0.616
Total	4,550	799	76	0.095	6,258	1,302	328	0.252	2,101	404	0.192

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

Bambaranuts											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Chick peas											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Cassava											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	101	23	0	0.000	4,497	2,578	2,345	0.909	2,601	2,345	0.901
Ilala	0	0	0	0	3,937	2,006	3,508	1.749	2,006	3,508	1.749
Temeke	39	6	5	0.796	3,744	3,250	5,043	1.552	3,256	5,048	1.550
Total	140	29	5	0.163	12,178	7,834	10,896	1.391	7,863	10,901	1.386

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

Sweet potatoes											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	191	56	18	0.314	913	311	185	0.595	367	203	0.552
Ilala	80	17	3	0	468	98	74	0.756	115	77	0.671
Temeke	483	172	174	1.014	1,834	581	777	1.337	753	951	1.263
Total	754	245	195	0.796	3,215	989	1,036	1.047	1,235	1,231	0.997

Table 7.2.14: 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 Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	35	31	27	0.865	31	27	0.865
Total	0	0	0	0	35	31	27	0.865	31	27	0.865

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

Groundnuts											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	155	13	3	0.213	160	15	1	0.048	28	3	0.125
Ilala	94	4	1	0	161	30	15	0.488	34	16	0.464
Temeke	55	17	8	0.507	102	17	5	0.310	34	14	0.408
Total	304	33	12	0.366	423	62	21	0.336	95	33	0.346

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

Sunflower											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	52	10	0	0.000	0	0	0	0	10	0	0.000
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	52	10	0	0.000	0	0	0	0	10	0	0.000

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

Simsim											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	120	46	5	0.109	46	5	0.109
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	3	1	0	0.593	1	0	0.593
Total	0	0	0	0	123	47	5	0.114	47	5	0.114

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

Soya beans											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Cabbage											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Okra											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	67	26	8	0.314	185	33	15	0.467	59	24	0.400
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	101	52	60	1.144	651	205	552	2.690	257	612	2.377
Total	168	78	68	0.870	836	238	568	2.381	316	635	2.010

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

Radish											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Tumeric											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Onions											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	141	25	47	1.849	25	47	1.849
Total	0	0	0	0	141	25	47	1.849	25	47	1.849

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

Tomatoes											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	96	22	19	0.863	22	19	0.863
Ilala	47	4	142	37	52	4	0	0.000	8	142	17.638
Temeke	140	67	58	0.867	1,286	734	2,507	3.416	800	2,565	3.204
Total	187	70	200	2.837	1,435	760	2,526	3.325	830	2,725	3.283

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

Spinach											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	4	0	0	0.148	0	0	0.148
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	26	2	2	0.898	2	2	0.898
Total	0	0	0	0	30	2	2	0.843	2	2	0.843

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

Carrot											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	0	0	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

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

Chillies											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	37	11	1	0.064	40	16	42	2.623	27	43	1.583
Ilala	0	0	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	68	8	26	3.201	8	26	3.201
Total	37	11	1	0.064	108	24	69	2.818	35	69	1.959

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

Amaranths											
	Short Rainy Season				Long Rainy Season				Total		
District	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Number of Households	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Kinondoni	41	4	3	0.680	78	6	22	3.423	10	24	2.347
Ilala	82	8	3	0	161	26	17	0.653	34	20	0.579
Temeke	88	15	254	16.398	26	4	3	0.668	19	256	13.255
Total	210	28	259	9.264	264	36	41	1.142	64	300	4.695

PERMANENT CROPS

7.3.1 PERMANENT CROPS: Production of Permanent Crops by Crop Type and District - Dar es Salaam

District/Crop		(ha)	(ha)	(tons)	Yield (Kgs/ha)
Kinondoni	Pigeon Pea	72	56	10	177
	Palm Oil	75	58	353	6,110
	Coconut	1,723	731	853	1,166
	Cashewnut	1,434	1,404	51	36
	Sugarcane	12	12	1	66
	Tamarin	1	0	0	0
	Jack Fruit	34	34	1	24
	Mpesheni	22	19	11	573
	Banana	813	382	521	1,362
	Avocado	1	0	0	0
	Mango	1,019	658	508	772
	Pawpaw	97	63	179	2,852
	Pineapple	211	55	378	6,826
	Orange	1,306	402	3,251	8,090
	Mandarine/Tangerine	12	12	119	9,880
	Lime/Lemon	125	55	65	1,167
	Bilimbi	0	0	0	0
	Total	6,956	3,941	6,301	1,599
Ilala	Pigeon Pea	15	11	4	378
	Star Fruit	1	1	0	124
	Palm Oil	42	42	27	631
	Coconut	1,735	477	396	830
	Cashewnut	786	376	367	975
	Sugarcane	3	3	0	49
	Jack Fruit	11	11	51	4,448
	Mpesheni	16	16	5	288
	Banana	77	70	102	1,456
	Mango	383	323	319	989
	Pawpaw	16	15	15	970
	Pineapple	9	1	7	4,940
	Orange	401	306	1,903	6,229
	Mandarine/Tangerine	14	2	0	0
	Guava	5	5	21	3,915
	Lime/Lemon	11	11	25	2,194
	Total	3,527	1,671	3,241	1,939
Temeke	Sour Soup	12	3	4	1,317
	Pigeon Pea	8	7	2	354
	Star Fruit	1	0	0	0
	Palm Oil	8	6	1	115
	Coconut	2,831	1,879	3,418	1,819
	Cashewnut	3,025	1,802	2,109	1,170
	Jack Fruit	7	3	4	1,026
	Mpesheni	1	1	1	618
	Banana	314	211	1,341	6,350
	Mango	1,676	929	6,375	6,865
	Pawpaw	17	17	27	1,578
	Pineapple	91	29	174	5,966
	Orange	316	146	3,135	21,444
	Grape	7	7	72	10,002
	Guava	48	24	110	4,638
	Lime/Lemon	30	37	19	529
	Total	8,392	5,102	16,791	3,291
Total	Sour Soup	12	3	4	1,317
	Pigeon Pea	96	74	17	224
	Star Fruit	2	1	0	124
	Palm Oil	125	106	381	3,588
	Coconut	6,289	3,088	4,667	1,511
	Cashewnut	5,245	3,582	2,526	705
	Sugarcane	15	15	1	63
	Tamarin	1	0	0	0
	Jack Fruit	52	49	56	1,145
	Mpesheni	39	36	16	446
	Banana	1,204	663	1,963	2,960
	Avocado	1	0	0	0
	Mango	3,078	1,909	7,203	3,772
	Pawpaw	130	95	222	2,321
	Pineapple	311	86	558	6,504
	Orange	2,022	854	8,290	9,711
	Grape	7	7	72	10,002
	Mandarine/Tangerine	26	14	119	8,336
	Guava	53	29	131	4,505
	Lime/Lemon	166	103	109	1,055
	Bilimbi	0	0	1	0
	Total	18,875	10,714	26,334	2,458

7.3.2 PERMANENT CROP: Area Planted by Crop Type - Dar es Salaam Region

Crop	Area Planted	%
Coconut	6,289	33.32
Cashewnut	5,245	27.79
Mango	3,078	16.31
Orange	2,022	10.71
Banana	1,204	6.38
Pineapple	311	1.65
Lime/Lemon	166	0.88
Pawpaw	130	0.69
Palm Oil	125	0.66
Pigeon Pea	96	0.51
Guava	53	0.28
Jack Fruit	52	0.27
Mpesheni	39	0.21
Mandarine/Tangerine	26	0.14
Sugarcane	15	0.08
Sour Soup	12	0.06
Grape	7	0.04
Star Fruit	2	0.01
Avocado	1	0.01
Tamarin	1	0.01
Bilimbi	0	0.00
Total	18,875	100.00

7.3.3 PERMANENT CROPS: Area Planted with Coconuts by District

Coconuts					
District	Area Planted with Coconuts	Total Area Planted (Ha)	% of Total Area Planted	Households with Coconuts	Average Planted Area per Household
Kinondoni	1,723	6,956	24.8	2,711	0.6
Ilala	1,735	3,527	49	3,039	0.0
Temeke	2,831	8,392	33.7	3,617	0.8
Total	6,289	18,875	33.3	9,366	0.7

7.3.4 PERMANENT CROPS: Area planted with Orange by District

Orange					
District	Area Planted with Orange	Total Area Planted (Ha)	% of Total Area Planted	Households with Orange	Average Planted Area per Household
Kinondoni	1,306	6,956	18.8	1,897	0.7
Ilala	401	3,527	11	1,877	0.2
Temeke	316	8,392	3.8	510	0.6
Total	2,022	18,875	10.7	4,283	0.5

7.3.5 PERMANENT CROPS: Area planted with Mango by District

Mango					
District	Area Planted with Mango	Total Area Planted (Ha)	% of Total Area Planted	Households with Mango	Average Planted Area per Household
Kinondoni	1,019	6,956	14.64	1,651	0.62
Ilala	383	3,527	11	1,527	0.25
Temeke	1,676	8,392	19.97	2,593	0.65
Total	3,078	18,875	16.31	5,771	0.53

7.3.6 PERMANENT CROPS: Area Planted with Cashewnuts by District

Cashewnuts					
District	Area Planted with Cashewnut	Total Area Planted (Ha)	% of Total Area Planted	Households with Cashewnuts	Average Planted Area per Household
Kinondoni	1,434	6,956	20.62	557	2.58
Ilala	785.85	3,527.00	22.28	2,405.32	0.33
Temeke	3,025	8,392	36.05	3,940	0.77
Total	5,245	18,875	27.79	6,901	0.76

7.3.7 PERMANENT CROPS: Planted Area with Fertilizer by Fertilizer Type and Crop

Crop	Fertilizer Use				
	Mostly Farm Yard Manure	Mostly Compost	Mostly Inorganic Fertilizer	No Fertilizer Applied	Total
Sour Soup	0	0	0	12	12
Pigeon Pea	10	0	0	85	95
Star Fruit	0	0	0	2	2
Palm Oil	6	0	0	119	125
Coconut	797	118	39	5,334	6,287
Cashewnut	201	153	59	4,832	5,245
Sugarcane	0	0	0	15	15
Tamarin	0	0	0	1	1
Jack Fruit	16	0	0	35	52
Mpesheni	24	0	0	15	39
Banana	330	88	3	767	1,188
Avocado	1	0	0	0	1
Mango	390	39	5	2,641	3,075
Pawpaw	59	3	0	68	130
Pineapple	150	0	0	134	284
Orange	1,090	13	2	887	1,993
Grape	0	0	0	7	7
Mandarine/Tang	12	0	0	14	26
Guava	4	0	0	49	53
Lime/Lemon	5	10	0	151	166
Bilimbi	0	0	0	0	0
Total	3,095	424	109	15,168	18,796

7.3.7 PERMANENT CROPS: (cont) Planted Area with Fertilizer by Fertilizer Type and Crop

Crop	Mostly Farm Yard Manure	Total	%
Sour Soup	0	12	0.0
Pigeon Pea	10	95	11
Star Fruit	0	2	0
Palm Oil	6	125	5
Coconut	797	6,287	13
Cashewnut	201	5,245	4
Sugarcane	0	15	0
Tamarin	0	1	0
Jack Fruit	16	52	32
Mpesheni	24	39	61
Banana	330	1,188	28
Avocado	1	1	100
Mango	390	3,075	13
Pawpaw	59	130	45
Pineapple	150	284	53
Orange	1,090	1,993	55
Grape	0	7	0
Mandarine/Tangerine	12	26	47
Guava	4	53	7
Lime/Lemon	5	166	3
Bilimbi	0	0	0.0
Total	3,095	18,796	16.5

7.3.7 PERMANENT CROPS: (cont) Planted Area with Fertilizer by Fertilizer Type and Crop

Crop	Mostly Inorganic Fertilizer	Total	%
Sour Soup	0	12	0.0
Pigeon Pea	0	95	0
Star Fruit	0	2	0
Palm Oil	0	125	0
Coconut	39	6,287	1
Cashewnut	59	5,245	1
Sugarcane	0	15	0
Tamarin	0	1	0
Jack Fruit	0	52	0
Mpesheni	0	39	0
Banana	3	1,188	0
Avocado	0	1	0
Mango	5	3,075	0
Pawpaw	0	130	0
Pineapple	0	284	0
Orange	2	1,993	0
Grape	0	7	0
Mandarine/Tangerine	0	26	0
Guava	0	53	0
Lime/Lemon	0	166	0
Bilimbi	0	0	0.0
Total	109	18,796	0.6

7.3.7 PERMANENT CROPS: (cont) Planted Area with Fertilizer by Fertilizer Type and Crop

Crop	Mostly Compost	Total	%
Sour Soup	0	12	0.0
Pigeon Pea	0	95	0
Star Fruit	0	2	0
Palm Oil	0	125	0
Coconut	118	6,287	2
Cashewnut	153	5,245	3
Sugarcane	0	15	0
Tamarin	0	1	0
Jack Fruit	0	52	0
Mpesheni	0	39	0
Banana	88	1,188	7
Avocado	0	1	0
Mango	39	3,075	1
Pawpaw	3	130	3
Pineapple	0	284	0
Orange	13	1,993	1
Grape	0	7	0
Mandarine/Tangerin	0	26	0
Guava	0	53	0
Lime/Lemon	10	166	6
Bilimbi	0	0	0.0
Total	424	18,796	2.3

AGROPROCESSING

8.1.1a: Number of Crop Growing Households Reported to Have Processed Crops by District; 2002/03 Agriculture Year

	Households that Processed Crops		Households that did not Process Crops		Total	
District	Number	%	Number	%	Number	%
Kinondoni	4,323	64	2,389	36	6,712	100
Ilala	17	0	6,596	100	6,613	100
Temeke	3,464	49	3,606	51	7,069	100
Total	7,803	38	12,591	62	20,394	100

8.1.1b Number of Crop Growing Households by Method of Processing and District; 2002/03 Agricultural Year

	Method of Processing						
District	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Trader	Other	By Factory	Total
Kinondoni	2,380	1,292	613	0	13	25	4,323
Ilala	17	0	0	0	0	0	17
Temeke	2,940	37	378	27	82	0	3,464
Total	5,337	1,329	990	27	95	25	7,803

8.1.1c AGRO PROCESSING: Number of Crop Growing Households Processing Crops During 2002/03 Agricultural Year by Location and Crop, Dar es Salaam Region

	Method of Processing						
Crop	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Trader	Other	By Factory	Total
Maize	532	1,121	954	27	0	50	2,683
Paddy	1,731	103	293	0	0	0	2,127
Cassava	1,407	28	80	0	0	0	1,515
Cowpeas	25	0	0	0	0	0	25
Groundnut	59	0	0	0	13	0	72
Oil Palm	86	0	40	0	0	0	126
Coconut	3,062	339	29	0	82	0	3,512
Cashewnut	4	0	0	0	0	0	4
Mango	31	4	0	0	0	0	35
Orange	11	0	0	0	0	0	11

8.1.1d AGRO PROCESSING: Number of Crop Growing Households Reporting Processing Crops During 2002/03 Agricultural Year by Use of Product and Crop, Dar es Salaam Region

	Product Use				
Crop	Household / Human Consumption	Sale Only	Animal Consumption	Did Not Use	Total
Maize	2,603	0	0	80	2,683
Paddy	2,079	0	0	47	2,127
Cassava	1,515	0	0	0	1,515
Cowpeas	25	0	0	0	25
Groundnut	72	0	0	0	72
Oil Palm	86	40	0	0	126
Coconut	3,404	14	57	37	3,512
Cashewnut	4	0	0	0	4
Mango	31	4	0	0	35
Orange	11	0	0	0	11
Total	9,830	59	57	165	10,110

8.1.1e AGRO PROCESSING: Number of Crop Growing Households Reporting Processing Crops During 2002/03 Agricultural Year by Location of Sale of Product and Crop, Dar es Salaam Region

	Where Sold						
Crop	Neighbours	Local Market / Trade Store	Farmers Association	Trader at Farm	Other	Did not Sell	Total
Maize	70	0	0	40	19	2,554	2,683
Paddy	40	58	0	59	19	1,951	2,127
Cassava	116	29	0	0	23	1,347	1,515
Cowpeas	0	0	0	0	0	25	25
Groundnut	0	0	0	0	0	72	72
Oil Palm	81	0	40	0	0	4	126
Coconut	29	14	0	146	0	3,324	3,512
Cashewnut	0	0	0	0	0	4	4
Mango	0	0	4	0	0	31	35
Orange	0	0	0	0	0	11	11
Total	337	101	44	244	61	9,324	10,110

8.1.1f AGRO PROCESSING: Number of Crop Growing Households By Main Product and District During 2002/03 Agriculture Year, Dar es Salaam Region

	Main Product						
District	Flour / Meal	Grain	Oil	Juice	Pulp	Other	Total
Kinondoni	2,696	299	458	77	4	789	4,323
Ilala	0	0	0	17	0	0	17
Temeke	523	1,259	1,530	12	48	92	3,464
Total	3,219	1,558	1,987	105	53	881	7,803

8.1.1g AGRO PROCESSING: Number of Crop Growing Households By Use of Primary Processed Product and District During 2002/03 Agriculture Year, Dar es Salaam Region

	Product Use				
District	Household / Human Consumption	Sale Only	Animal Consumption	Did Not Use	Total
Kinondoni	4,180	44	0	99	4,323
Ilala	17	0	0	0	17
Temeke	3,371	14	31	47	3,464
Total	7,568	59	31	146	7,803

8.1.1h AGRO PROCESSING: Number of Crop Growing Households By Where Product Sold and District During 2002/03 Agriculture Year, Dar es Salaam Region

District	Where Sold						
	Neighbours	Local Market / Trade Store	Farmers Association	Trader at Farm	Other	Did not Sell	Total
Kinondoni	192	0	44	40	23	4,024	4,323
Ilala	0	0	0	0	0	17	17
Temeke	116	71	0	133	19	3,125	3,464
Total	308	71	44	173	42	7,166	7,803

8.1.1i AGRO PROCESSING: Number of Crop Growing Households By type of By-Product and District During 2002/03 Agriculture Year, Dar es Salaam Region

District	By Product										
	Bran	Cake	Husk	Juice	Fiber	Pulp	Oil	Shell	No by-product	Other	Total
Kinondoni	2,331	889	210	25	40	0	4	73	708	43	4,323
Ilala	0	0	0	0	0	0	0	0	17	0	17
Temeke	470	253	1,371	0	0	14	32	43	258	1,023	3,464
Total	2,801	1,142	1,581	25	40	14	36	116	982	1,066	7,803

MARKETING

10.1: Number of Crop Growing Households Reported to have Sold Agricultural Produce by District During 2002/03; Dar es Salaam Region

	Households that Sold		Households that Did not Sell		Total Number of households
	Number	%	Number	%	
Kinondoni	3,803	56.7	2,908	43.3	6,712
Ilala	3,971	60.1	2,642	39.9	6,613
Temeke	6,202	87.7	868	12.3	7,069
Total	13,976	68.5	6,418	31.5	20,394

10.2: Number of Households who Reported Main Reasons for Not Selling their Crops by District During 2002/03Agriccultural Year, Dar es Salaam Region

	Main Reasons for Not Selling Crops									
District	Open Market Price Too Low	No Transport	Transport Cost Too High	No Buyer	Market too Far	Government Regulatory Board Problems	Lack of Market Information	Other	Not applicable	Total
Kinondoni	910	28	155	58	191	0	25	23	2,413	3,803
Ilala	42	85	0	0	0	0	0	0	3,844	3,971
Temeke	289	0	108	0	148	12	0	0	5,645	6,202
Total	1,242	113	263	58	339	12	25	23	11,902	13,976

10.3 Proportion of Households who Reported Main Reason for Not Selling Their Crops by District during 2002/03 Agricultural Year, Dar es Salaam Region

	Main Reasons for Not Selling Crops									
District	Open Market Price Too Low	No Transport	Transport Cost Too High	No Buyer	Market too Far	Government Regulatory Board Problems	Lack of Market Information	Other	Not applicable	Total
Kinondoni	23.9	0.7	4.1	1.5	5.0	0.0	0.7	0.6	63.4	100.0
Ilala	1.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	96.8	100.0
Temeke	4.7	0.0	1.7	0.0	2.4	0.2	0.0	0.0	91.0	100.0
Total	8.9	0.8	1.9	0.4	2.4	0.1	0.2	0.2	85.2	100.0

IRRIGATION/EROSION CONTROL

11.1 Number and Percent of Households Reporting use of irrigation during 2002/03 Agricultural year by District

District	Households Practicing Irrigation		Households not Practicing Irrigation		Total	
	Number of Household	%	Number of Household	%	Number of Household	%
Kinondoni	629	9.4	6,083	90.6	6,712	100
Ilala	382	5.8	6,231	94.2	6,613	100
Temeke	966	13.7	6,104	86.3	7,069	100
Total	1,977	9.7	18,417	90.3	20,394	100

11.2 IRRIGATION: Area (ha) of Irrigatable and NON Irrigated Land by District during 2002/03 Agriculture Year

District	Irrigatable Area (ha)	Irrigated Land (ha)	% of Irrigatable land used
Kinondoni	387	374	96.5
Ilala	167	155	93.3
Temeke	456	329	72.0
Total	1,010	858	84.9

11.3: IRRIGATION: Number of Agriculture Households using irrigation by Source of Irrigation Water by Districts During the 2002/03 Agricultural Year

District	Source of Irrigation Water							
	River	Lake	Dam	Well	Borehole	Canal	Pipe water	Total
Kinondoni	152	13	45	207	0	0	213	629
Ilala	55	0	47	227	52	0	0	382
Temeke	465	0	92	273	76	43	17	966
Total	672	13	184	707	129	43	230	1,977

11.4: IRRIGATION: Number of Agriculture Households by Method Used to obtain water and District during 2002/03 Agricultural Year

District	Method of Obtaining Water					
	Gravity	Hand Bucket	Hand Pump	Motor Pump	Other	Total
Kinondoni	74	474	0	28	53	629
Ilala	0	335	0	47	0	382
Temeke	55	821	13	77	0	966
Total	129	1,630	13	152	53	1,977

11.5 IRRIGATION: Number of Agricultulture 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	Bucket / Watering Can	Total
Kinondoni	17	13	117	482	629
Ilala	0	0	47	335	382
Temeke	29	63	55	819	966
Total	46	76	219	1,636	1,977

11.6: 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	%	
Kinondoni	718	11	5,994	89	6,712
Ilala	271	4	6,342	96	6,613
Temeke	165	2	6,904	98	7,069
Total	1,155	6	19,239	94	20,394

11.7 EROSION CONTROL: Number of Erosion Control/Water Harvesting Structures By Type and District as of 2002/03 Agricultural Year

District	Type of Erosion Control							
	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Total
Kinondoni	56	14,848	1,844	96	500	80	85	17,510
Ilala	0	866	0	0	85	376	0	1,327
Temeke	33	1,753	0	11	717	186	54	2,755
Total	90	17,467	1,844	107	1,302	643	138	21,591

ACCESS TO FARM INPUTS

Table 12.1.1 ACCESS TO INPUTS: Number of Crop Growing Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Using Chemical Fertilizer		NOT Using Chemical Fertilizer		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	611	9	6,068	91	6,679
Ilala	398	6	6,215	94	6,613
Temeke	1,471	21	5,582	79	7,053
Total	2,480	12	17,865	88	20,345

Table 12.1.2 ACCESS TO INPUTS: Number of Crop Growing Households Using Farm Yard Manure by District during 2002/03 Agricultural Year

District	Using Farm Yard Manure		Not Using Farm Yard Manure		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	2,179	32	4,578	68	6,757
Ilala	1,420	21	5,193	79	6,613
Temeke	2,359	33	4,727	67	7,086
Total	5,958	29	14,498	71	20,456

Table 12.1.3 ACCESS TO INPUTS: Number of Crop Growing Households Using COMPOST Manure by District during 2002/03 Agricultural Year

District	Using Compost		Not Using Compost		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	822	12	5,890	88	6,712
Ilala	1,866	28	4,747	72	6,613
Temeke	705	10	6,364	90	7,069
Total	3,393	17	17,001	83	20,394

Table 12.1.4 ACCESS TO INPUTS: Number of Crop Growing Households Using Insecticide/Fungicides by District during 2002/03 Agricultural Year

District	Using Insecticides/Fungicide		Not Using Insecticide/Fungi		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	725	11	5,987	89	6,712
Ilala	710	11	5,903	89	6,613
Temeke	1,869	26	5,200	74	7,069
Total	3,304	16	17,090	84	20,394

Table 12.1.5 ACCESS TO INPUTS: Number of Crop Growing Households Using Herbicides by District during 2002/03 Agricultural Year

District	Using Herbicides		Not Using Herbicides		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	0	0	6,712	100	6,712
Ilala	142	2	6,471	98	6,613
Temeke	14	0	7,055	100	7,069
Total	156	1	20,238	99	20,394

Table 12.1.6 ACCESS TO INPUTS: Number of Crop Growing Households using Improved Seeds by District during 2002/03 Agricultural Year

District	Using Improved Seeds		Not Using Improved Seeds		Total Number of Crop growing households
	No of households	%	No of households	%	
Kinondoni	3,808	57	2,891	43	6,699
Ilala	4,799	73	1,814	27	6,613
Temeke	2,308	33	4,761	67	7,069
Total	10,915	54	9,466	46	20,381

Table 12.1.7 ACCESS TO INPUTS: Number of Agricultural Households by Source of Chemical Fertilizer and District, 2002/03 Agricultural Year

	Co-operative		Local Farmers Group		Local Market / Trade Store		Crop Buyers		Locally Produced by Household		Neighbour		Not applicable		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	29	0	0	0	582	9	0	0	0	0	0	0	6,068	91	6,679	100
Ilala	0	0	0	0	398	6	0	0	0	0	0	0	6,215	94	6,613	100
Temeke	0	0	22	0	1,373	19	32	0	32	0	11	0	5,582	79	7,053	100
Total	29	0	22	0	2,353	12	32	0	32	0	11	0	17,865	88	20,345	100

Table 12.1.8 ACCESS TO INPUTS: Number of Agricultural Households by Source of Farm Yard Manure and District, 2002/03 Agricultural Year

	Co-operative		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Large Scale Farm	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	38	1	34	0	13	0	4	0	30	0	223	3
Ilala	0	0	71	1	212	3	0	0	0	0	237	4
Temeke	7	0	223	3	25	0	28	0	27	0	213	3
Total	44	0	328	2	250	1	32	0	56	0	672	3

Table 12.1.8 ACCESS TO INPUTS: Number of Agricultural Households by Source of Farm Yard Manure and District, 2002/03 Agricultural Year

	Locally Produced by Household		Neighbour		Other		Not applicable		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	990	15	847	13	0	0	4,578	68	6,757	100
Ilala	451	7	450	7	0	0	5,193	79	6,613	100
Temeke	738	10	1,055	15	43	1	4,727	67	7,086	100
Total	2,179	11	2,353	12	43	0	14,498	71	20,456	100

Table 12.1.9 ACCESS TO INPUTS: Number of Agricultural Households and Source of COMPOST Manure by District, 2002/03 Agricultural Year

	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Crop Buyers		Locally Produced by Household		Neighbour		Not applicable		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	138	2	0	0	13	0	0	0	41	1	593	9	38	1	5,890	88	6,712	100
Ilala	323	5	54	1	0	0	42	1	0	0	1,446	22	0	0	4,747	72	6,613	100
Temeke	0	0	0	0	29	0	0	0	0	0	582	8	94	1	6,364	90	7,069	100
Total	461	2	54	0	42	0	42	0	41	0	2,621	13	132	1	17,001	83	20,394	100

Table 12.1.10 ACCESS TO INPUTS: Number of Agricultural Households and Source of Insecticides/Fungicides by District, 2002/03 Agricultural Year

	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Neighbour		Not applicable		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	0	0	0	0	698	10	0	0	13	0	0	0	14	0	5,987	89	6,712	100
Ilala	0	0	100	2	558	8	52	1	0	0	0	0	0	0	5,903	89	6,613	100
Temeke	201	3	120	2	1,499	21	31	0	0	0	19	0	0	0	5,200	74	7,069	100
Total	201	1	220	1	2,755	14	83	0	13	0	19	0	14	0	17,090	84	20,394	100

Table 12.1.11 ACCESS TO INPUTS: Number of Agricultural Households by Source of Herbicides and District, 2002/03 Agricultural Year

	Local Market / Trade Store		Not applicable		Total	
District	Number	%	Number	%	Number	%
Kinondoni	0	0	6,712	100	6,712	100
Ilala	142	2	6,471	98	6,613	100
Temeke	14	0	7,055	100	7,069	100
Total	156	1	20,238	99	20,394	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 Group		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Large Scale Farm	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	0	0	18	0	3,494	52	0	0	0	0	25	0	26	0
Ilala	0	0	75	1	3,991	60	52	1	52	1	54	1	108	2
Temeke	31	0	26	0	2,130	30	31	0	31	0	0	0	0	0
Total	31	0	119	1	9,615	47	83	0	83	0	79	0	134	1

cont……12.1.12 ACCESS TO INPUTS: Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year

District	Locally Produced by Household		Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	18	0	187	3	40	1	2,891	43	6,699	100
Ilala	208	3	259	4	0	0	1,814	27	6,613	100
Temeke	26	0	13	0	22	0	4,761	67	7,069	100
Total	252	1	458	2	62	0	9,466	46	20,381	100

12.1.13 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total Number
	Number	%	Number	%	Number	%	Number	%	Number	%	
Kinondoni	29	5	39	6	297	49	145	24	101	17	611
Ilala	109	27	0	0	47	12	71	18	171	43	398
Temeke	71	5	119	8	358	24	290	20	632	43	1,471
Total	209	8	158	6	702	28	507	20	904	36	2,480

12.1.14 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Kinondoni	1,570	72	361	17	102	5	142	7	4	0	2,179
Ilala	837	59	307	22	182	13	0	0	95	7	1,420
Temeke	1,237	52	603	26	306	13	132	6	80	3	2,359
Total	3,644	61	1,270	21	590	10	274	5	179	3	5,958

12.1.15 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of COMPOST Manure by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Total
	Number	%	Number	%	
Kinondoni	822	100	0	0	822
Ilala	1,823	98	42	2	1,866
Temeke	705	100	0	0	705
Total	3,351	99	42	1	3,393

12.1.16 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 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Kinondoni	364	10	22	1	1,382	36	1,481	39	558	15	3,808
Ilala	721	15	611	13	1,334	28	748	16	1,385	29	4,799
Temeke	90	4	148	6	411	18	463	20	1,196	52	2,308
Total	1,175	11	781	7	3,127	29	2,692	25	3,140	29	10,915

12.1.17 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Insecticide/Fungicides by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Kinondoni	66	9	39	5	294	41	154	21	173	24	725
Ilala	107	15	108	15	155	22	138	19	203	29	710
Temeke	265	14	79	4	289	15	368	20	869	46	1,869
Total	438	13	225	7	737	22	660	20	1,244	38	3,304

12.1.18 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	220	4	4,476	74	186	3	28	0	158	3	771	13	229	4	6,068	100
Ilala	405	7	4,054	65	99	2	42	1	261	4	488	8	866	14	6,215	100
Temeke	243	4	4,348	78	200	4	50	1	127	2	426	8	189	3	5,582	100
Total	868	5	12,877	72	484	3	120	1	547	3	1,684	9	1,284	7	17,865	100

12.1.19 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	2,677	58	788	17	426	9	84	2	86	2	378	8	139	3	4,578	100
Ilala	779	15	2,476	48	687	13	71	1	129	2	283	5	768	15	5,193	100
Temeke	908	19	1,184	25	1,027	22	141	3	1,055	22	213	4	200	4	4,727	100
Total	4,364	30	4,448	31	2,140	15	296	2	1,270	9	873	6	1,107	8	14,498	100

12.1.20 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by Household		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	790	13	777	13	2,900	49	293	5	546	9	366	6	0	0	218	4	5,890	100
Ilala	632	13	1,608	34	1,445	30	0	0	147	3	337	7	28	1	549	12	4,747	100
Temeke	730	11	1,430	22	1,173	18	243	4	2,387	38	147	2	0	0	253	4	6,364	100
Total	2,152	13	3,816	22	5,519	32	536	3	3,081	18	850	5	28	0	1,021	6	17,001	100

12.1.21 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT Using Insecticides/Fungicides by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by Household		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	169	3	3,839	64	324	5	14	0	330	6	1,167	19	25	0	118	2	5,987	100
Ilala	69	1	3,863	65	262	4	0	0	311	5	555	9	0	0	843	14	5,903	100
Temeke	88	2	3,627	70	218	4	25	0	610	12	461	9	0	0	171	3	5,200	100
Total	326	2	11,329	66	804	5	39	0	1,251	7	2,182	13	25	0	1,133	7	17,090	100

12.1.22 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	103	2	3,292	49	189	3	66	1	1,281	19	1,642	24	138	2	6,712	100
Ilala	87	1	3,924	61	303	5	0	0	522	8	903	14	732	11	6,471	100
Temeke	159	2	4,470	63	274	4	63	1	1,071	15	814	12	203	3	7,055	100
Total	349	2	11,686	58	766	4	130	1	2,875	14	3,359	17	1,073	5	20,238	100

12.1.23 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT Using Improved Seeds by District, 2002/03 Agricultural Year

	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by Household		Other		Total	
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	313	11	1,948	67	226	8	0	0	41	1	225	8	0	0	138	5	2,891	100
Ilala	70	4	750	41	151	8	0	0	54	3	83	5	0	0	704	39	1,814	100
Temeke	678	14	3,238	68	209	4	25	1	276	6	136	3	28	1	171	4	4,761	100
Total	1,062	11	5,936	63	587	6	25	0	371	4	444	5	28	0	1,013	11	9,466	100

Table 12.1.24 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Chemical Fertilizers by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	150	24	388	64	73	12	0	0	611	100
Ilala	52	13	298	75	47	12	0	0	398	100
Temeke	363	25	1,054	72	41	3	13	1	1,471	100
Total	565	23	1,741	70	161	6	13	1	2,480	100

12.1.25 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	%
Kinondoni	728	33	1,381	63	70	3	2,179	100
Ilala	246	17	1,052	74	123	9	1,420	100
Temeke	354	15	1,828	78	176	7	2,359	100
Total	1,328	22	4,261	72	369	6	5,958	100

12.1.26 ACCESS TO INPUTS: Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	232	28	525	64	25	3	40	5	822	100
Ilala	320	17	1,518	81	28	1	0	0	1,866	100
Temeke	37	5	525	74	143	20	0	0	705	100
Total	589	17	2,568	76	195	6	40	1	3,393	100

12.1.27 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Insecticides/Fungicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Total	
	Number	%	Number	%	Number	%	Number	%
Kinondoni	143	20	552	76	29	4	725	100
Ilala	160	23	550	77	0	0	710	100
Temeke	684	37	1,020	55	165	9	1,869	100
Total	988	30	2,122	64	194	6	3,304	100

12.1.28 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year

District	Good		Average		Total	
	Number	%	Number	%	Number	%
Kinondoni	142	100	0	0	142	100
Ilala	0	0	14	100	14	100
Temeke	142	91	14	9	156	100
Total	99	24	317	76	3,304	100

12.1.29 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Does not Work		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	901	24	2,450	64	350	9	106	3	0	0	3,808	100
Ilala	1,015	21	3,424	71	361	8	0	0	0	0	4,799	100
Temeke	778	34	1,399	61	59	3	55	2	17	1	2,308	100
Total	2,694	25	7,273	67	770	7	161	1	17	0	10,915	100

12.1.30 ACCESS TO INPUTS: Number of Agricultural

District	Agricultural Households With Plan to use Chemical Fertilizers Next Year		Agricultural Households With NO Plan to use Next Year Chemical Fertilizers		Total	
	Number	%	Number	%	Number	%
Kinondoni	1,299	19	5,380	81	6,679	100
Ilala	1,963	30	4,650	70	6,613	100
Temeke	3,313	47	3,740	53	7,053	100
Total	6,575	32	13,770	68	20,345	100

12.1.31 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Farm Yard Manure Next Year by District, 2002/03 Agricultural Year

District	Agricultural Households With a Plan to Use Next Year Farm Yard Manure		Agricultural Households With NO Plan to Use Next Year Farm Yard Manure		Total
	Number	%	Number	%	
Kinondoni	3,505	52	3,252	48	6,757
Ilala	2,667	40	3,946	60	6,613
Temeke	4,765	67	2,321	33	7,086
Total	10,937	53	9,520	47	20,456

12.1.32 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use COMPOST Manure Next Year by District, 2002/03 Agricultural Year

District	Agricultural Households With a Plan to Use COMPOST ManureNext Year		Agricultural Households With NO Plan to use COMPOST Manure Next Year		Total
	Number	%	Number	%	
Kinondoni	1,833	27	4,878	73	6,712
Ilala	2,275	34	4,338	66	6,613
Temeke	2,842	40	4,227	60	7,069
Total	6,950	34	13,444	66	20,394

12.1.33 ACCESS TO INPUTS: Number of Agricultural Households With a Plan to Use Insecticides/Fungicides Next Year by District, 2002/03 Agricultural Year

District	Agricultural Households With Plan to use Pesticides/Fungicides Next Year		Agricultural Households With NO Plan to use Pesticides/FungicidesNext Year		Total
	Number	%	Number	%	
Kinondoni	1,555	23	5,157	77	6,712
Ilala	2,551	39	4,062	61	6,613
Temeke	3,309	47	3,760	53	7,069
Total	7,416	36	12,978	64	20,394

12.1.34 ACCESS TO INPUTS: Number of Agricultural Households With a Plan to Use Herbicides Next Year by District, 2002/03 Agricultural Year

District	Agricultural Households With a Plan to Use Herbicides Next Year		Agricultural Households With NO Plan to use Herbicides Next Year		Total
	Number	%	Number	%	
Kinondoni	312	5	6,400	95	6,712
Ilala	1,084	16	5,529	84	6,613
Temeke	1,286	18	5,783	82	7,069
Total	2,682	13	17,712	87	20,394

Table 12.1.35 ACCESS TO INPUTS: Number of Agricultural Households with Plan to Use Improved Seeds Next Year by District, 2002/03 Agricultural Year

District	Agricultural Households With a Plan to Use Improved Seeds Next Year		Agricultural Households With NO Plan to Use Improved Seeds Next Year		Total
	Number	%	Number	%	
Kinondoni	4,723	71	1,976	29	6,699
Ilala	4,812	73	1,801	27	6,613
Temeke	4,729	67	2,341	33	7,069
Total	14,264	70	6,117	30	20,381

AGRICULTURE CREDIT

13.1a AGRICULTURE CREDIT: Number of Agriculture Households Receiving Credit by Sex of Household Head and District During the 2002/03 Agriculture Year

District	Male		Female		Total
	Number	%	Number	%	
Kinondoni	4	23	15	77	19
Ilala	0	0	42	100	42
Temeke	44	100	0	0	44
Total	49	46	57	54	106

13.1b AGRICULTURE CREDIT: Number of Households Receiving Credit By Main Source of Credit and District; 2002/03 Agriculture Year.

District	Source of Credit				Total
	Family, Friend and Relative	Commercial Bank	Saving & Credit Society	Religious Organisation / NGO / Project	
Kinondoni	0	0	0	19	19
Ilala	0	42	0	0	42
Temeke	22	0	22	0	44
Total	22	42	22	19	106

13.2a AGRICULTURE CREDIT: Number of Households Reporting the Main Reasons for Not Using Credit by District During the 2002/03 Agriculture Year

District	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
Kinondoni	394	353	816	223	3,067	368	66	30	1,375	6,693
Ilala	564	471	1,321	828	1,974	582	50	0	782	6,571
Temeke	197	1,151	509	568	2,248	625	188	39	1,499	7,025
Total	1,156	1,976	2,646	1,618	7,289	1,574	305	69	3,656	20,288

13.2b AGRICULTURE CREDIT: Number of Credits Received by Main Purpose of Credit and District During the 2002/03 Agriculture Year

District	Labour	Seeds	Fertilizers	Agro-chemicals	Tools / Equipment	Other	Total Credits
Kinondoni	0	4	0	0	0	15	19
Ilala	42	42	0	0	0	0	85
Temeke	0	11	22	11	11	22	78
Total	42	58	22	11	11	37	182

TREE FARMING AND AGROFORESTRY

14.1 ON FARM TREE PLANTING: Number of Planted Trees by Specie and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Senna Spp	Gravellis	Afzelia Quanzensis	Acacia Spp	Pinus Spp	Eucalyptus Spp	Melicia excelsa	Casurina Equisetfilia	Tectona Grandis	Terminalia Catapa	Terminalia Ivorensis
Kinondoni	452	4,780	0	0	0	2,213	500	2	14	0	7
Ilala	33	2	5	2	0	0	0	13	0	0	1
Temeke	261	7	0	31	7	70	0	16	0	15	2
Total	746	4,789	5	33	7	2,283	500	31	14	15	10
%	10.4	3.1	10.7	25.5	27.0	0.4	0.2	25.5	27.0	0.4	0.2

14.1 ON FARM TREE PLANTING: Number of Planted Trees by Specie and District During the 2002/03 Agriculture Year, Dar es Salaam Regiont

District	Leucena Spp	Syszygium Spp	Azadritachta Spp	Jakaranda Spp	Kyaya Spp	Calliandra Spp	Moringa Spp	Saraca Spp	Trichilia Spp
Kinondoni	2,032	0	624	57	0	10	51	226	0
Ilala	48	1	67	0	0	0	33	15	40
Temeke	0	4	91	3	6	0	60	38	0
Total	2,080	5	782	60	6	10	144	279	40
%	0.1	11.2	1.3	8.9	0.0	1.1	0.2	100.0	1.1

14.2 TREE FARMING: Number of Households with Planted Trees on Their Land and Number of Trees by Planting Location and District During the 2002/03 Agriculture Year, Dar es SalaamRegion

	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
Kinondoni	41	4,707	25	6,245	1	16	67	10,968
Ilala	9	148	10	109	1	3	20	260
Temeke	45	387	13	224	0	0	58	611
Total	95	5,242	48	6,578	2	19	145	11,839

14.3 ON FARM TREE PLANTING: Number of Responses by Main Use of Planted Trees and District for the 2002/03 agriculture year, Dar es Salaam Region

	Main Use							
District	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	Total
Kinondoni	7	12	0	22	51	5	6	103
Ilala	1	4	0	13	14	3	0	35
Temeke	12	4	1	3	66	3	3	92
Total	20	20	1	38	131	11	9	230

14.4TREE FARMING: Number of Agriculture Households Classified by Distance to Community Planted Forest (Km) By District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Distance to Community Planted Forest (km)					
	1-9	1-19	20-29	30-39	60+	Total
Kinondoni	99	0	446	0	0	545
Ilala	96	0	0	0	0	96
Temeke	26	26	205	336	52	645
Total	221	26	652	336	52	1,287
%	17.2	2.0	50.6	26.1	4.0	100.0

14.5 ON FARM TREE PLANTING: Number of responses by Second use of planted trees and District for the 2002/03 agriculture year, Dar es Salaam Region

District	Second Use						
	Planks / Timber	Poles	Fuel for Wood	Shade	Medicinal	Other	Total
Kinondoni	3	28	30	28	7	7	103
Ilala	0	4	11	15	5	0	35
Temeke	8	7	43	15	18	1	92
Total	11	39	84	58	30	8	230

CROP EXTENSION

15.1 CROP EXTENSION: Number of Agriculture Households Receiving Extension Messages by District During the 2002/03 Agriculture Year, Dar es Salaam Region

	Households Receiving Extension Advice		Households Not Receiving Extension Advice		Total Number of Households
	Number	%	Number	%	
Kinondoni	3,516	52	3,196	48	6,712
Ilala	4,688.3	70.9	1,924.6	29.1	6,613.0
Temeke	4,917	70	2,152	30	7,069
Total	13,122	64	7,272	36	20,394

15.2 CROP EXTENSION: Number of Households By Quality of Extension Services and District During the 2002/03

	Very Good		Good		Average		Poor		No Good		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	486	13.9	2,281	65.4	556	16.0	146	4.2	18	0.5	3,487	100.0
Ilala	708	15.1	3,393	72.4	516	11.0	0	0.0	71	1.5	4,688	100.0
Temeke	723	14.9	3,648	75.1	416	8.6	45	0.9	23	0.5	4,855	100.0
Total	1,916	14.7	9,322	71.5	1,489	11.4	190	1.5	112	0.9	13,030	100.0

15.3 EXTENSION MESSAGES: Number of Agriculture Households By Source of Crop Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

	Government		NGO / Development Project		Cooperative		Large Scale Farm		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	3,405	97.3	0	0.0	0	0.0	72	2.0	9	0.2	13	0.4	3,498	100.0
Ilala	4,394	96.2	0	0.0	0	0.0	69	1.5	105	2.3	0	0.0	4,568	100.0
Temeke	4,379	95.3	94	2.1	19	0.4	91	2.0	0	0.0	12	0.3	4,595	100.0
Total	12,178	96.2	94	0.7	19	0.1	232	1.8	113	0.9	25	0.2	12,660	100.0

15.4 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Plant Spacing by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Spacing						Total Number of Households	% of total number of households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	3,062	0	48	9	0	3,119	6,712	46.5
Ilala	4,133	0	69	52	0	4,254	6,613	64.3
Temeke	3,734	94	68	0	12	3,908	7,069	55.3
Total	10,929	94	185	61	12	11,281	20,394	55.3

15.5 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Agrochemicals by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Use of Agrochemicals							Total Number of Households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	1,850	54	0	21	9	36	1,970	6,712	29.3
Ilala	1,214	0	0	0	52	0	1,266	6,613	19.1
Temeke	2,760	51	125	95	29	63	3,123	7,069	44.2
Total	5,823	105	125	116	90	99	6,359	20,394	31.2

15.6 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Erosion Control by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Erosion Control						Total Number of Households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total		
Kinondoni	1,079	0	0	37	23	1,139	6,712	17.0
Ilala	1,273	0	0	33	52	1,359	6,613	20.6
Temeke	1,421	17	29	75	0	1,541	7,069	21.8
Total	3,773	17	29	145	76	4,039	20,394	19.8

15.7 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Organic Fertilizer Use by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Organic Fertilizer Use							Total Number of Households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	2,028	15	0	37	4	0	2,084	6,712	31
Ilala	1,914	0	0	17	52	0	1,983	6,613	30
Temeke	3,073	49	25	106	79	29	3,361	7,069	48
Total	7,015	63	25	159	136	29	7,428	20,394	36

15.8 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Inorganic Fertilizer Use by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Inorganic Fertilizer Use						Total Number of Households	% of total number of households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	1,475	69	21	9	23	1,597	6,712	24
Ilala	782	28	0	52	54	916	6,613	14
Temeke	2,285	44	14	29	51	2,423	7,069	34
Total	4,542	141	35	90	128	4,936	20,394	24

15.9 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Use of Improved Seed						Total Number of Households	% of total number of households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	2,542	15	44	9	0	2,609	6,712	39
Ilala	3,258	0	86	105	298	3,746	6,613	57
Temeke	3,506	75	14	29	68	3,692	7,069	52
Total	9,307	90	144	142	365	10,048	20,394	49

15.10 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Mechanization/LST by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Mechanisation / LST				Total Number of Households	% of Total Number of Households
	Government	NGO / Development Project	Not applicable	Total		
Kinondoni	392	0	0	392	6,712	6
Ilala	112	28	160	300	6,613	5
Temeke	398	0	0	398	7,069	6
Total	903	28	160	1,091	20,394	5

15.11 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Irrigation Technology by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Irrigation Technology						Total Number of Households	% of Total Number of Households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	543	0	21	9	0	573	6,712	9
Ilala	223	0	0	52	54	330	6,613	5
Temeke	1,304	73	44	0	41	1,462	7,069	21
Total	2,070	73	66	61	95	2,365	20,394	12

15.12 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Crop Storage by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Crop Storage							Total Number of Households	% of Total Number of Households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	885	0	0	0	0	0	885	6,712	13
Ilala	917	0	0	0	0	0	917	6,613	14
Temeke	1,962	92	19	129	160	39	2,400	7,069	34
Total	3,765	92	19	129	160	39	4,203	20,394	21

15.13 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Vermin Control by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Vermin Control						Total Number of Households	% of Total Number of Households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	475	0	8	0	0	483	6,712	7
Ilala	1,250	0	0	0	0	1,250	6,613	19
Temeke	1,481	27	132	29	28	1,697	7,069	24
Total	3,205	27	141	29	28	3,430	20,394	17

15.14 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Agro-processing by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Agro-progressing						Total Number of Households	% of Total Number of Households
	Government	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	531	0	0	0	0	531	6,712	8
Ilala	140	0	0	0	0	140	6,613	2
Temeke	1,565	19	57	274	47	1,962	7,069	28
Total	2,236	19	57	274	47	2,633	20,394	13

15.15 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Agro-forestry by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Agro-forestry						Total Number of Households	% of Total Number of Households
	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total		
Kinondoni	879	0	8	0	0	887	6,712	13
Ilala	1,024	0	52	17	0	1,093	6,613	17
Temeke	819	197	45	7	35	1,103	7,069	16
Total	2,722	197	106	23	35	3,084	20,394	15

15.16 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Bee keeping by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Beekeeping			Total Number of Households	% of Total Number of Households
	Government	Not applicable	Total		
Kinondoni	81	0	81	6,712	1
Ilala	139	0	139	6,613	2
Temeke	68	17	84	7,069	1
Total	287	17	304	20,394	1

15.17 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Fish Farming by Source of Extension Messages and District During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Fish Farming				Total Number of Households	% of Total Number of Households
	Government	Large Scale Farm	Not applicable	Total		
Kinondoni	104	0	0	104	6,712	2
Ilala	159	0	0	159	6,613	2
Temeke	49	14	17	79	7,069	1
Total	312	14	17	343	20,394	2

15.18 CROP EXTENSION: Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 1) During the 2002/03 Agriculture Year, Dar es Salaam Region

District	Spacing			Use of Agrochemicals			Erosion Control		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kinondoni	3,105	2,959	95	1,685	897	53	924	625	68
Ilala	4,254	4,028	95	1,266	1,065	84	1,237	1,194	97
Temeke	3,867	3,293	85	3,158	1,932	61	1,512	1,154	76
Total	11,226	10,280	92	6,109	3,895	64	3,672	2,973	81

15.19 CROP EXTENSION: Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 2) During the 2002/03 Agriculture Year, Dar es Salaam Region

	Organic Fertilizer Use			Inorganic Fertilizer Use			Use of Improved Seed		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kinondoni	2,071	1,552	75	1,420	756	53	2,563	2,383	93
Ilala	1,870	1,756	94	740	504	68	3,789	3,545	94
Temeke	3,318	2,185	66	2,319	1,546	67	3,644	2,206	61
Total	7,259	5,493	76	4,479	2,805	63	9,996	8,135	81

15.20 CROP EXTENSION: Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 3) During the 2002/03 Agriculture Year, Dar es Salaam Region

	Mechanisation / LST			Irrigation Technology			Crop Storage		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kinondoni	132	525	398	319	567	178	766	494	64
Ilala	85	0	0	330	287	87	925	691	75
Temeke	380	238	63	1,133	938	83	2,333	2,123	91
Total	596	763	128	1,782	1,792	101	4,024	3,307	82

15.21 CROP EXTENSION: Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 4) During the 2002/03 Agriculture Year, Dar es Salaam Region

	Vermin Control			Agro-progressing			Agro-forestry		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Kinondoni	229	494	215	308	493	160	670	692	103
Ilala	1,321	1,113	84	98	55	57	1,067	955	89
Temeke	1,580	702	44	1,738	1,345	77	977	848	87
Total	3,130	2,309	74	2,144	1,893	88	2,714	2,495	92

15.22 CROP EXTENSION: Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 5) During the 2002/03 Agriculture Year, Dar es Salaam Region

	Beekeeping			Fish Farming		
District	Received	Adopted	%	Received	Adopted	%
Kinondoni	28	182	642	40	147	0
Ilala	85	0	0	137	52	38
Temeke	27	19	73	41	87	214
Total	140	201	144	218	287	132

ANIMAL CONTRIBUTION TO CROP PRODUCTION

17.1 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Number of Agriculture Households Using Draft Animal to cultivate Land by District During 2002/03 Agriculture Year, Dar es Salaam Region

District	Households Using Draft Animals		Household Not Using Draft Animals		Total households
	Number	%	Number	%	
Kinondoni	0	0	6,712	100	6,712
Ilala	0	0	6,613	100	6,613
Temeke	115	2	6,954	98	7,069
Total	115	1	20,279	99	20,394

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft by Number Owned, Used and Area Cultivated (Hectares) By District during 2002/03 Agriculture Year, Dar es Salaam Region

District	Type of Craft					
	Oxen			Bulls		
	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)
Kinondoni	0	0	0	0	0	0
Ilala	0	0	0	0	0	0
Temeke	157	289	239	0	0	0
Total	157	289	239	0	0	0

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owned, Used and Area Cultivated (Hectares) By District during 2002/03 Agriculture Year, Dar es Salaam Region

District	Type of Draft								
	Cows			Donkeys			Total		
	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)
Kinondoni	0	0	0	0	0	0	0	0	0
Ilala	0	0	0	0	0	0	0	0	0
Temeke	0	0	0	0	0	0	157	289	239
Total	0	0	0	0	0	0	157	289	239

17.3 ANIMAL CONTRIBUTION TO CROPS: Number of Crop Growing Households Using Organic Fertilizer by District During 2002/03 Agriculture Year, Dar es Salaam

District	Did you apply organic fertilizer during 2002/03?					
	Using Organic Fertilizer		Not Using Organic Fertilizer		Total	
	Number	%	Number	%	Number	%
Kinondoni	2,278	34.0	4,394	32.7	6,672	33.2
Ilala	2,157	32.2	4,348	32.4	6,505	32.3
Temeke	2,271	33.9	4,675	34.8	6,946	34.5
Total	6,706	100.0	13,417	100.0	20,123	100.0

17.4 ANIMAL CONTRIBUTION TO CROPS: Area of Farm Yard Manure and Compost Application by District during 2002/03 Agriculture Year, Dar es Salaam Region

	Farm Yard Manure Area Applied		Compost Area Applied		Total Area aplied with Organic Fertilizers	
District	Area (Ha)	%	Area (Ha)	%	Area (Ha)	%
Kinondoni	2,178	48.4	325	18.3	2,503	39.9
Ilala	990	22.0	1,196	67.4	2,187	34.9
Temeke	1,330	29.6	253	14.3	1,583	25.2
Total	4,498	100.0	1,774	100.0	6,273	100.0

CATTLE PRODUCTION

18.1 CATTLE PRODUCTION: Total Number Households Rearing Cattle by District during 2002/03 Agriculture Year, Dar es Salaam Region

Distcrict	Households Rearing Cattle		Households Not Rearing Cattle		Total Agriculture Households	Total livestock Keeping Households
	Number	%	Number	%		
Kinondoni	239	4	6,473	96	6,712	1,765
Ilala	697	11	5,916	89	6,613	1,440
Temeke	194	3	6,875	97	7,069	1,345
Total	1,130	6	19,264	94	20,394	4,550

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	%
Kinondoni	81	455	11	70	197	5	765	3,650	85	840	4,302	33
Ilala	77	785	37	0	0	0	558	1,352	63	558	2,137	16
Temeke	374	3,421	51	37	105	2	442	3,231	48	674	6,756	51
Total	532	4,660	35.3	107	302	2.3	1,765	8,233	62.4	2,072	13,195	100.0

18.3 CATTLE PRODUCTION: Number of Households Rearing Cattle, Head of Cattle and Average Head per Household by Herd Size as of 1st October, 2003

Herd Size	Cattle Rearing Households		Heads of Cattle		Average Number Per Household
	Number	%	Number	%	
1-5	1,377	66	3,399	26	2
6-10	348	17	2,475	19	7
11-15	112	5	1,466	11	13
16-20	103	5	1,769	13	17
21-30	58	3	1,406	11	24
31-40	53	3	1,689	13	32
41-50	20	1	991	8	49
Total	2,072	100	13,195	100	6

18.4 CATTLE PRODUCTION: Number of Cattle by Category and Type of Cattle; on 1st October 2003

Category of Cattle	Indigenous Cattle		Improved Beef Cattle		Improved Dairy Cattle		Total	
	Number	%	Number	%	Number	%	Number	%
Bulls	1,256	59.7	172	8.2	675	32.1	2,103	15.9
Cows	1,618	31.2	28	0.5	3,535	68.2	5,182	39.3
Steers	446	85.2	31	5.8	47	8.9	523	4.0
Heifers	597	23.5	0	0.0	1,946	76.5	2,542	19.3
Male Calves	405	30.1	57	4.2	884	65.7	1,345	10.2
Female Calves	340	22.7	14	0.9	1,146	76.4	1,500	11.4
Total	4,660	35.3	302	2.3	8,233	62.4	13,195	100.0

18.5 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and District as on 1st October, 2003

District	Category - Indigenous						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kinondoni	0	210	0	87	57	100	455
Ilala	730	0	0	55	0	0	785
Temeke	526	1,408	446	454	347	239	3,421
Total	1,256	1,618	446	597	405	340	4,660

18.6 CATTLE PRODUCTION: Number of Improved Beef Cattle By Category and District as on 1st October, 2003

District	Category - Improved Beef Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kinondoni	98	28	0	0	57	14	197
Ilala	0	0	0	0	0	0	0
Temeke	74	0	31	0	0	0	105
Total	172	28	31	0	57	14	302

18.7 CATTLE PRODUCTION: Number of Improved Dairy Cattle By Category and District as on 1st October, 2003

District	Category - Improved Dairy Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kinondoni	351	1,495	18	903	412	471	3,650
Ilala	226	447	0	511	98	70	1,352
Temeke	98	1,594	29	531	373	605	3,231
Total	675	3,535	47	1,946	884	1,146	8,233

18.8 CATTLE PRODUCTION: Number of Cattle By Category and District as on 1st October, 2003

District	Total Cattle						
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Kinondoni	449	1,732	18	991	526	585	4,302
Ilala	956	447	0	566	98	70	2,137
Temeke	698	3,002	505	986	721	845	6,756
Total	2,103	5,182	523	2,542	1,345	1,500	13,195

GOATS PRODUCTION

19.1 GOAT PRODUCTION: Total Number of Goats by Type and District as on 1st October, 2003

District	Indigenous Goats			Improved for Meat			Improved Dairy			Total Goats		
	Number of Households	Number of Goats	%	Number of Households	Number of Goats	%	Number of Households	Number of Goats	%	Number of Households	Number of Goats	%
Kinondoni	950	12,656	99.3	13	26	0.2	15	61	0.5	950	12,743	57.2
Ilala	186	944	54.4	0	0	0.0	156	793	45.6	288	1,737	7.8
Temeke	580	6,931	88.7	32	752	9.6	35	129	1.7	603	7,812	35.0
Total	1,715	20,531	92.1	45	778	3.5	207	983	4.4	1,840	22,292	100.0

19.2 GOAT PRODUCTION: Number of Households Rearing Goats by Herd Size on 1st October, 2003

Herd Size	Goat Rearing Households		Number of Goats		Average Number Per Household
	Number	%	Number	%	
1-4	613	33	1,886	8	3
5-9	453	25	3,076	14	7
10-14	329	18	3,854	17	12
15-19	114	6	1,962	9	17
20-24	132	7	2,789	13	21
25-29	44	2	1,238	6	28
30-39	48	3	1,534	7	32
40+	106	6	5,953	27	56
Total	1,840	100	22,292	100	12

19.3 Total Number of Goats by Category and Type of Goat as of 1st October, 2003 and District

Category of Goats	Indigenous Goats		Improved Meat Goats		Improved Dairy Goats		Total	
	Number	%	Number	%	Number	%	Number	%
Billy Goat	4,134	94.4	13	0.3	233	5.3	4,379	19.6
Castrated Goat	642	100.0	0	0.0	0	0.0	642	2.9
She Goat	10,286	91.1	498	4.4	503	4.5	11,288	50.6
Male Kid	2,566	89.5	142	4.9	160	5.6	2,868	12.9
She Kid	2,904	93.2	125	4.0	87	2.8	3,115	14.0
Total	20,531	92.1	778	3.5	983	4.4	22,292	100.0

19.4 Total Number of Indigenous Goat by Category and District as on 1st October, 2003

District	Number of Indigenous Goats					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kinondoni	2,850	362	5,750	1,846	1,848	12,656
Ilala	340	0	396	0	208	944
Temeke	943	280	4,140	720	848	6,931
Total	4,134	642	10,286	2,566	2,904	20,531

19.5 GOAT PRODUCTION: Number of Improved Goat for Meat by Category and District as on 1st October, 2003

District	Number of Improved Meat Goats					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kinondoni	13	0	13	0	0	26
Ilala	0	0	0	0	0	0
Temeke	0	0	486	142	125	752
Total	13	0	498	142	125	778

19.6 Number of Improved Dairy Goat by Category and District on 1st October, 2003

District	Number of Improved Dairy Goats					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kinondoni	0	0	0	46	15	61
Ilala	210	0	428	101	54	793
Temeke	23	0	76	13	18	129
Total	233	0	503	160	87	983

19.7 Total Number of Goats by Category and District on 1st October, 2003

District	Total Goat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Kinondoni	2,863	362	5,763	1,892	1,863	12,743
Ilala	550	0	823	101	262	1,737
Temeke	966	280	4,701	875	990	7,812
Total	4,379	642	11,288	2,868	3,115	22,292

SHEEP PRODUCTION

20.1 Total Number of Sheep By Breed and on 1st October 2003

Breed	Number of Indigenous sheep		Number of Improved for Mutton		Total Sheep	
	Number	%	Number	%	Number	%
Ram	300	100	0	0	300	23
Castrated Sh	100	100	0	0	100	8
She Sheep	656	100	0	0	656	51
Male Lamb	130	100	0	0	130	10
She Lamb	103	100	0	0	103	8
Total	1,290	100	0	0	1,290	100

20.2 Number of Households Raising or Managing Sheep by District on 1st October, 2003

District	Households Raising Sheep		Households Not Raising Sheep		Number of Agricultural Households	Total Livestock keeping Households
	Number	%	Number	%		
Kinondoni	205	3	6,507	97	6,712	1,765
Ilala	0	0	6,613	100	6,613	1,440
Temeke	80	1	6,989	99	7,069	1,345
Total	284	1	20,110	99	20,394	4,550

20.3 Number of Sheep by Type of Sheep and District as 1st October, 2002/03

District	Number of Indigenous		Number of Improved for Mutton		Total Sheep	
	Number	%	Number	%	Number	%
Kinondoni	886	100	0	0	886	69
Ilala	0	0	0	0	0	0
Temeke	404	100	0	0	404	31
Total	1,290	100	0	0	1,290	100

20.4 Number of Households and Heads of Sheep by Herd Size on 1st October 2003

Herd Size	Number of Household	%	Number of Sheep	%	Average Number Per Household
1-4	171	60	373	29	2
5-9	96	34	652	51	7
15-19	17	6	266	21	16
Total	284	100	1,290	100	5

20.5 Average Number of Sheep by Type of Sheep and District on 1st October 2003, Dodoma Region

District	Number of Indigenous		Number of Improved for Mutton		Total Sheep	
	Number of Households	Average sheep	Number of Households	Average sheep	Number of Households	Average sheep
Kinondoni	205	4	0	0	205	4
Ilala	0	0	0	0	0	0
Temeke	80	5	0	0	80	5
Total	284	5	0	3	284	5

20.6 Total Number of Indigenous Sheep by Sheep Type and District on 1st October 2003

District	Number of Indigenous Sheep					
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	Total
Kinondoni	266	17	448	97	58	886
Ilala	0	0	0	0	0	0
Temeke	35	83	208	33	45	404
Total	300	100	656	130	103	1,290

20.7 Total Number of Improved Mutton Sheep by Type and District on 1st October 2003

District	Number of Improved for Mutton					
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	Total
Kinondoni	0	0	0	0	0	0
Ilala	0	0	0	0	0	0
Temeke	0	0	0	0	0	0
Total	0	0	0	0	0	0

20.8 Total Number of Sheep by Sheep Type and District on 1st October 2003

District	Total Sheep					
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	Total
Kinondoni	266	17	448	97	58	886
Ilala	0	0	0	0	0	0
Temeke	35	83	208	33	45	404
Total	300	100	656	130	103	1,290

PIGS PRODUCTION

21.1 Number of Households and Pigs by Herd Size on 1st October 2003

Herd Size	Pig Rearing Households		Heads of Pigs		Average Number Per Household
	Number	%	Number	%	
1-4	147	21	371	3	3
5-9	61	9	366	3	6
10-14	21	3	221	2	11
15-19	135	19	2,320	18	17
20-24	117	17	2,441	19	21
25-29	76	11	1,990	15	26
30-39	115	16	3,474	27	30
40+	31	4	1,810	14	59
Total	703	100	12,993	100	18

21.2 Number of Households and Pigs by District on 1st October 2003

District	Number of Households	Number of Pig	Average Number Per Households
Kinondoni	521	9,690	19
Ilala	137	2,464	18
Temeke	44	839	19
Total	703	12,993	18

21.3 Number of Pigs by Type and District on 1st October, 2003

District	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	Total
Kinondoni	973	989	2,018	2,741	2,969	9,690
Ilala	175	833	404	456	597	2,464
Temeke	43	120	291	169	217	839
Total	1,190	1,941	2,713	3,366	3,783	12,993

LIVESTOCK PESTS AND PARASITE CONTROL

22.1 PESTS AND PARASITE: Number of Livestock Rearing Households Deworming Livestock by District during 2002/03 Agricultural Year

District	Deworming Livestock		Not Deworming Livestock		Total
	Number of Households	%	Number of Households	%	
Kinondoni	878	56	697	44	1,575
Ilala	550	42	760	58	1,310
Temeke	853	64	473	36	1,326
Total	2,281	54	1,930	46	4,211

22.2 PESTS AND PARASITE: Number of Livestock Rearing Households that Dewormed Livestock by Type of Livestock and District during the 2002/03 Agricultural Year

District	Goats		Cattle		Sheep		Pigs	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Kinondoni	438	49	533	29	67	78	376	69
Ilala	130	14	494	27	0	0	83	15
Temeke	329	37	796	44	19	22	88	16
Total	898	100	1,823	100	86	100	547	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.

District	Ticks Problems		No Ticks Problems		Total
	Number of Households	%	Number of Households	%	
Kinondoni	318	22	1,108	78	1,426
Ilala	196	16	1,032	84	1,228
Temeke	442	35	807	65	1,248
Total	956	24	2,946	76	3,902

22.4 LIVESTOCK PESTS AND PARASITE CONTROL: Number of Livestock Rearing Households by Methods of Ticks Control Use and District During the 2002/03 Agricultural Year

District	Method of Tick Control							
	None		Spraying		Smearing		Total	
	Number	% age	Number	% age	Number	% age	Number	% age
Kinondoni	46	15	222	70	49	15	318	100
Ilala	0	0	196	100	0	0	196	100
Temeke	51	12	347	79	43	10	442	100
Total	98	10	766	80	92	10	956	100

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

District	Tsetse Flies Problems		No Tsetse Flies Problems		Total
	Number of Households	%	Number of Households	%	
Kinondoni	196	12	1,374	88	1,570
Ilala	157	12	1,121	88	1,278
Temeke	321	25	953	75	1,274
Total	674	16	3,448	84	4,123

22.6 LIVESTOCK PESTS AND PARASITE CONTROL: Number of Livestock Rearing Households by Methods of Tsetse Flies Control Use and District During the 2002/03 Agricultural Year

District	Method of Tsetse Flies Control				
	None		Spray		Total
	Number of Households	%	Number of Households	%	
Kinondoni	40	21	155	79	196
Ilala	0	0	157	100	157
Temeke	31	10	291	90	321
Total	71	11	603	89	674

OTHER LIVESTOCK

23a OTHER LIVESTOCK: Total Number of Other Livestock by Type on 1st October 2003

	Chicken		Others	
Type	Number	%	Type	Number
Indigenous	182,449	35	Ducks	13,462
Layer	310,601	59	Turkeys	983
Broiler	32,002	6	Donkeys	465
Total	525,052	100	Total	14,910

23b OTHER LIVESTOCK: Number of Chicken by Category of Chicken and District on 1st October 2003

	Number of Chicken			Total Number of Chicken
District	Indigenous Chicken	Layer	Broiler	
Kinondoni	68,848	15,052	20,169	104,069
Ilala	57,523	286,772	591	344,886
Temeke	56,078	8,778	11,241	76,097
Total	182,449	310,601	32,002	525,052

23c OTHER LIVESTOCK: Number of Other Livestock by Type of Livestock and District

	Type of Livestock				
District	Ducks	Turkeys	Rabbits	Donkeys	Other
Kinondoni	3,425	913	70	394	0
Ilala	3,698	28	0	0	0
Temeke	6,340	42	0	71	242
Total	13,462	983	70	465	242

23d OTHER LIVESTOCK: Total Number of Households and Chicken Raised by Flock Size as of 1st October 2003

	Chicken Rearing Households		Number of Chicken	Average Chicken per Household
Flock Size	Number	%		
1 - 4	1,324	12	3,953	3
5 - 9	2,203	19	14,951	7
10 - 19	3,072	27	40,467	13
20 - 29	2,111	18	48,016	23
30 - 39	591	5	19,053	32
40 - 49	504	4	21,109	42
50 - 99	562	5	35,523	63
100+	1,058	9	341,981	323
Total	11,424	100	525,052	46

23e OTHER LIVESTOCK: Livestock/Poultry Population Trend

Livestock/Poultry	1999	2003
Cattle	14,000	13,195
Goats	23,000	22,292
Sheep	1,200	1,290
Pigs	7,000	12,993
Total Chicken	478,000	525,052

FISH FARMING

28.1 FISH FARMING: Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year

District	Agricultural Households Doing Fish Farming		Agricultural Households NOT Doing Fish Farming		Total
	Number	%	Number	%	
Kinondoni	0	0.0	6,712	100.0	6,712
Ilala	0	0.0	6,613	100.0	6,613
Temeke	22	0.3	7,047	99.7	7,069
Total	22	0.1	20,372	99.9	20,394

28.2 FISH FARMING: Number of Agricultural Households by System of Fish Farming and District during the 2002/03 Agricultural Year

District	Fish Farming System	
	Dug out Pond	Total
Kinondoni	0	0
Ilala	0	0
Temeke	22	22
Total	22	22

28.3 FISH FARMING: Number of Agricultural Households By Source of Fingerlings and District during the 2002/03 Agricultural Year

District	Source of Fingerling	
	Other	
	Number	Total
Kinondoni	0	0
Ilala	0	0
Temeke	22	22
Total	22	22

28.4 FISH FARMING: Number of Agricultural Households By Location of Selling Fish and District during the 2002/03 Agricultural Year

District	Did not Sell	
	Number	Total
Kinondoni	0	0
Ilala	0	0
Temeke	66	66
Total	66	66

28.5 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
Kinondoni	0	0	0
Ilala	0	0	0
Temeke	10,885	242	22
Total	10,885	242	22

LIVESTOCK EXTENSION

29.1a LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension by District During the 2002/03 Agricultural Year

District	Received Livestock Advice		Did Not Receive Livestock		Total	Total Number of Households Raising Livestock	% receiving advice out of total
	Number	%	Number	%			
Kinondoni	1,533	23	5,179	77	6,712	1,765	87
Ilala	1,094	17	5,519	83	6,613	1,440	76
Temeke	1,368	19	5,702	81	7,069	1,345	102
Total	3,994	20	16,400	80	20,394	4,550	88

29.1b LIVESTOCK EXTENSION SERVICE PROVIDERS: Number of Agricultural Households by Source of Extension Services and District during the 2002/03 Agricultural Year

District	Source of extension advice											
	Government		NGO / Development Project		Co-operative		Large Scale Farmer		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Kinondoni	1,284	54	364	15	256	11	256	11	228	10	2,388	100
Ilala	917	25	818	23	746	21	746	21	385	11	3,613	100
Temeke	1,142	73	145	9	14	1	165	11	92	6	1,559	100
Total	3,343	44	1,327	18	1,017	13	1,168	15	705	9	7,560	100

29.2 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding by Source and District, 2002/03 Agricultural Year

District	Source of Advice on Feeds and Proper Feeding					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	721	23	0	151	895	1,765	50.7
Ilala	788	0	23	50	860	1,440	59.7
Temeke	692	20	17	11	740	1,345	55.0
Total	2,201	43	39	212	2,496	4,550	54.8
%	88.2	1.7	1.6	8.5	100.0		

29.3 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Housing					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	643	35	0	107	785	1,765	44.5
Ilala	434	0	0	50	484	1,440	33.6
Temeke	861	59	31	11	962	1,345	71.5
Total	1,938	93	31	168	2,231	4,550	49.0
%	86.9	4.2	1.4	7.6	100.0		

29.4 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Proper Milking by Source and District, 2002/03 Agricultural Year

District	Source of Advice on Proper Milking					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	193	28	0	74	295	1,765	16.7
Ilala	216	0	0	17	232	1,440	16.1
Temeke	204	20	35	0	259	1,345	19.3
Total	612	48	35	91	786	4,550	17.3
%	77.9	6.1	4.5	11.6	100.0		

29.5 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Milk Hygiene by Source and District, 2002/03 Agricultural Year

District	Source of Advice on Milk Hygiene				Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Other	Total		
Kinondoni	256	28	86	369	1,765	20.9
Ilala	216	0	17	232	1,440	16.1
Temeke	180	45	0	225	1,345	16.7
Total	651	73	103	827	4,550	18.2
%	78.8	8.8	12.4	100.0		

29.6 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Disease Control					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	466	42	0	166	674	1,765	38.2
Ilala	325	0	0	33	358	1,440	24.9
Temeke	669	32	29	26	755	1,345	56.1
Total	1,460	74	29	225	1,788	4,550	39.3
%	81.7	4.1	1.6	12.6	100.0		

29.7 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 on Herd/Flock Size				Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Other	Total		
Kinondoni	140	23	40	203	1,765	11
Ilala	407	0	17	423	1,440	29
Temeke	122	20	0	142	1,345	11
Total	668	43	57	768	4,550	17
%	87.0	5.6	7.4	100		

29.8 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Pasture Establishment and Selection				Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Other	Total		
Kinondoni	49	23	37	108	1,765	6
Ilala	101	0	17	118	1,440	8
Temeke	77	20	0	98	1,345	7
Total	227	43	53	324	4,550	7
%	70.2	13.4	16.4	100		

29.9 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Group Formation and Strengthening By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Group Formation and Strengthening					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	108	23	0	0	131	1,765	7.4
Ilala	463	17	17	17	513	1,440	35.6
Temeke	76	47	0	0	123	1,345	9.1
Total	647	86	17	17	767	4,550	16.9
%	84.4	11.3	2.2	2.2	100.0		

29.10 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Calf Rearing					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	238	43	0	44	324	1,765	18.4
Ilala	243	0	0	33	276	1,440	19.2
Temeke	102	45	29	0	175	1,345	13.0
Total	582	88	29	77	776	4,550	17.0
%	75.1	11.3	3.7	9.9	100.0		

29.11 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 on Use of Improved Bulls					Total Number of Households Raising Livestock	% Receiving Advice out of Total
	Government	NGO / Development Project	Large Scale Farmer	Other	Total		
Kinondoni	163	28	0	107	298	1,765	16.9
Ilala	278	72	0	17	366	1,440	25.5
Temeke	261	20	35	0	317	1,345	23.5
Total	702	119	35	124	981	4,550	21.6
%	71.6	12.2	3.6	12.6	100.0		

29.12 LIVESTOCK EXTENSION: Number of Agricultural Households by Quality of Extension Services and District, 2002/03 Agricultural Year

	Quality of Service										
	Very Good		Good		Average		Poor		No Good		
District	Number	%	Number	%	Number	%	Number	%	Number	%	Total
Kinondoni	214	14	815	53	417	27	72	5	25	2	1,542
Ilala	99	4	717	26	776	28	853	31	297	11	2,742
Temeke	121	8	1,064	70	291	19	26	2	17	1	1,519
Total	434	7	2,596	45	1,484	26	951	16	339	6	5,803

ACCESS TO INFRASTRUCTURE AND OTHER SERVICES

33.01a Mean Distances from Household Dwellings to Infrastructures and Services by Districts

District	Mean Distance to										
	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	Regional Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmac Roads
Kinondoni	10.1	2.5	2.2	0.7	26.1	4.4	33.3	8.3	9.3	30.0	7.2
Ilala	9.1	2.4	1.3	0.6	25.2	4.1	29.1	2.4	4.3	25.4	6.3
Temeke	24.5	3.1	2.5	1.0	31.4	7.3	34.1	11.9	19.2	27.9	15.9
Total	14.8	2.7	2.0	0.8	27.6	5.3	32.2	7.6	11.1	27.8	9.9

Regional Capital	32.2
Tertiary Market	27.8
Hospitals	27.6
Secondary Schools	14.8
Secondary Market	11.1
Tarmac Roads	9.9
Primary Markets	7.6
Health Clinics	5.3
Primary Schools	2.7
All weather roads	2.0
Feeder Roads	0.8

33.01b: Number of Households by Distance to Secondary School by District for 2002/03 Agriculture Year

District	Distance to Secondary School										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Kinondoni	1,661	24.7	2,792	41.6	2,007	29.9	226	3.4	26	0.4	6,712	2.5
Ilala	530	8.0	4,198	63.5	1,842	27.8	0	0.0	42	0.6	6,613	2.4
Temeke	1,860	26.3	3,426	48.5	1,697	24.0	0	0.0	87	1.2	7,069	3.1
Total	4,051	19.9	10,416	51.1	5,546	27.2	226	1.1	155	0.8	20,394	2.7

33.01c: Number of Households by Distance to All Weather Road by District for 2002/03 Agriculture Year

District	Distance to All Weather Road										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Kinondoni	3,070	45.7	1,677	25.0	1,925	28.7	40	0.6	0	0.0	6,712	2.2
Ilala	2,790	42.2	2,769	41.9	1,007	15.2	0	0.0	47	0.7	6,613	1.3
Temeke	3,743	52.9	2,000	28.3	988	14.0	43	0.6	296	4.2	7,069	2.5
Total	9,603	47.1	6,445	31.6	3,920	19.2	83	0.4	343	1.7	20,394	2.0

33.01d: Number of Households by Distance to Feeder Road by District for 2002/03 Agriculture Year

District	Distance to Feeder Road										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Kinondoni	5,308	79.1	736	11.0	668	10.0	0	0.0	0	0.0	6,712	0.7
Ilala	4,253	64.3	2,172	32.8	188	2.8	0	0.0	0	0.0	6,613	0.6
Temeke	4,449	62.9	1,663	23.5	957	13.5	0	0.0	0	0.0	7,069	1.0
Total	14,009	68.7	4,572	22.4	1,813	8.9	0	0.0	0	0.0	20,394	0.8

33.01e: Number of Households by Distance to Hospital by District for 2002/03 Agriculture Year

District	Distance to hospital										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	282	4.2	178	2.7	694	10.3	1,202	17.9	4,355	64.9	6,712	26.1
Ilala	0	0.0	0	0.0	495	7.5	1,106	16.7	5,013	75.8	6,613	25.2
Temeke	0	0.0	0	0.0	550	7.8	828	11.7	5,692	80.5	7,069	31.4
Total	282	1.4	178	0.9	1,738	8.5	3,136	15.4	15,060	73.8	20,394	27.6

33.01f: Number of Households by Distance to Health Clinic by District for 2002/03 Agricultural Year

District	Health clinic										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	1,011	15.1	2,013	30.0	2,694	40.1	928	13.8	66	1.0	6,712	4.4
Ilala	54	0.8	1,454	22.0	5,105	77.2	0	0.0	0	0.0	6,613	4.1
Temeke	1,035	14.6	2,727	38.6	2,923	41.4	213	3.0	171	2.4	7,069	7.3
Total	2,100	10.3	6,194	30.4	10,722	52.6	1,141	5.6	237	1.2	20,394	5.3

33.01g: Number of Households by distance to Primary School for 2002/03 Agriculture Year

District	Distance to Primary School										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	1,661	24.7	2,792	41.6	2,007	29.9	226	3.4	26	0.4	6,712	2.5
Ilala	530	8.0	4,198	63.5	1,842	27.8	0	0.0	42	0.6	6,613	2.4
Temeke	1,860	26.3	3,426	48.5	1,697	24.0	0	0.0	87	1.2	7,069	3.1
Total	4,051	19.9	10,416	51.1	5,546	27.2	226	1.1	155	0.8	20,394	2.7

33.01h: Number of Households by Distance to Regional Capital by District for 2002/03 Agriculture Year

District	Distance to Regional Capital										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	13	0.2	13	0.2	0	0.0	788	11.7	5,898	87.9	6,712	33.3
Ilala	0	0.0	42	0.6	254	3.8	1,136	17.2	5,180	78.3	6,613	29.1
Temeke	33	0.5	17	0.2	137	1.9	1,116	15.8	5,767	81.6	7,069	34.1
Total	46	0.2	72	0.4	391	1.9	3,041	14.9	16,845	82.6	20,394	32.2

33.01i: Number of Households by Distance to District Capital by District for 2002/03 Agriculture Year

District	Distance to District Capital										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	18	0.3	0	0.0	17	0.3	1,113	16.6	5,563	82.9	6,712	28.8
Ilala	0	0.0	0	0.0	339	5.1	1,207	18.3	5,067	76.6	6,613	26.0
Temeke	66	0.9	17	0.2	123	1.7	1,097	15.5	5,766	81.6	7,069	33.2
Total	84	0.4	17	0.1	480	2.4	3,417	16.8	16,397	80.4	20,394	29.4

33.01j: Number of Households by Distance to Tarmac Road by District for 2002/03 Agricultural Year

District	Tarmac Road										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	467	7.0	333	5.0	3,785	56.4	2,127	31.7	0	0.0	6,712	7.2
Ilala	473	7.2	1,178	17.8	3,140	47.5	1,822	27.6	0	0.0	6,613	6.3
Temeke	1,368	19.4	622	8.8	1,273	18.0	1,338	18.9	2,468	34.9	7,069	15.9
Total	2,307	11.3	2,133	10.5	8,198	40.2	5,288	25.9	2,468	12.1	20,394	9.9

33.01k: Number of Households by Distance to Primary Market by District for 2002/03 Agricultural Year

District	Primary Market										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	864	12.9	71	1.1	4,396	65.5	1,317	19.6	63	0.9	6,712	8.3
Ilala	4,701	71.1	762	11.5	853	12.9	269	4.1	28	0.4	6,613	2.4
Temeke	1,321	18.7	1,227	17.4	2,469	34.9	44	0.6	2,009	28.4	7,069	11.9
Total	6,886	33.8	2,061	10.1	7,717	37.8	1,630	8.0	2,100	10.3	20,394	7.6

33.01l: Number of Households by Distance to Tertiary Market by District for 2002/03 Agricultural Year

District	Tertiary Market										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	91	1.4	58	0.9	526	7.8	814	12.1	5,222	77.8	6,712	30.0
Ilala	385	5.8	0	0.0	427	6.5	1,119	16.9	4,682	70.8	6,613	25.4
Temeke	358	5.1	7	0.1	726	10.3	2,117	30.0	3,861	54.6	7,069	27.9
Total	835	4.1	65	0.3	1,679	8.2	4,050	19.9	13,765	67.5	20,394	27.8

33.01m: Number of Households by Distance to Secondary Market by District for 2002/03 Agricultural Year

District	Secondary Market										Total Number of Households	Mean Distance
	Less than 1 km		1-2.9 km		3.0-9.9		10.0-19.9		Above 20 km			
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%		
Kinondoni	1,052	15.7	142	2.1	1,575	23.5	3,797	56.6	146	2.2	6,712	9.3
Ilala	3,080	46.6	923	14.0	1,005	15.2	1,443	21.8	162	2.4	6,613	4.3
Temeke	1,946	27.5	98	1.4	418	5.9	1,655	23.4	2,952	41.8	7,069	19.2
Total	6,079	29.8	1,163	5.7	2,998	14.7	6,896	33.8	3,260	16.0	20,394	11.1

33.19a TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Veterinary Clinic and District, 2002/03 Agricultural Year

District	Satisfaction of Using Veterinary Clinic										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	202	12	748	43	490	28	103	6	205	12	1,748
Ilala	311	2	2,306	17	3,935	30	6,256	47	470	4	13,279
Temeke	231	7	990	31	1,510	47	248	8	261	8	3,240
Total	745	4	4,045	22	5,935	32	6,606	36	936	5	18,267

33.19b TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Extension Centre and District, 2002/03 Agricultural Year

District	Extension Centre										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	28	4	411	55	254	34	51	7	0	0	745
Ilala	71	3	729	27	898	33	1,014	37	0	0	2,712
Temeke	94	5	790	46	769	45	41	2	29	2	1,723
Total	194	4	1,930	37	1,921	37	1,106	21	29	1	5,180

33.19c TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Research Station and District, 2002/03 Agricultural Year

District	Research Station										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	25	38	23	35	13	20	4	7	0	0	65
Ilala	0	0	202	9	763	34	1,226	55	42	2	2,234
Temeke	17	7	0	0	122	50	57	23	51	21	247
Total	42	2	225	9	898	35	1,288	51	93	4	2,546

33.19d TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Plant Protection Lab. and District, 2002/03 Agricultural Year

District	Plant Protection Lab										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	0	0	23	84	0	0	4	16	0	0	28
Ilala	71	4	119	7	502	28	950	53	150	8	1,792
Temeke	0	0	0	0	108	58	29	15	51	27	188
Total	71	4	142	7	610	30	983	49	201	10	2,007

33.19e TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Land Registration Office and District, 2002/03 Agricultural Year

District	Land Registration Office										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	131	29	75	17	31	7	4	1	205	46	446
Ilala	0	0	166	8	562	27	1,267	61	96	5	2,092
Temeke	80	21	13	3	177	46	41	11	73	19	384
Total	210	7	254	9	770	26	1,313	45	375	13	2,922

33.19f TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Livestock Development Centre and District, 2002/03 Agricultural Year

District	Livestock Development Centre										Total Number of Households
	Very Good		Good		Average		Poor		No good		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	
Kinondoni	0	0	23	47	26	53	0	0	0	0	49
Ilala	0	0	156	8	546	29	992	53	181	10	1,875
Temeke	14	7	0	0	130	64	29	14	29	14	202
Total	14	1	179	8	702	33	1,021	48	210	10	2,126

HOUSEHOLD FACILITIES

Table 34.1 Number of Agriculture Households by Type of Toilet and District During the 2002/03 Agriculture Year

District	Type of toilet					
	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine - hh Owned	Other Type	Total
Kinondoni	205	713	5,592	202	0	6,712
Ilala	52	782	5,478	301	0	6,613
Temeke	287	448	5,978	346	12	7,069
Total	544	1,943	17,048	848	12	20,394
%	2.7	9.5	83.6	4.2	0.1	100.0

34.2 Number of Agriculture Households by type of Roofing Material and District, 2002/03 Agricultural Yea

District	Average Number of Rooms per Household	Iron Sheets	Tiles	Concrete	Asbestos	Grass / Leaves	Grass & Mud	Other	Total Number of Households
Kinondoni	3	5,138	241	25	25	949	315	18	6,712
Ilala	3	4,643	125	52	0	1,646	147	0	6,613
Temeke	3	2,667	77	0	92	4,044	178	11	7,069
Total	3	12,449	444	77	117	6,638	640	30	20,394
%		61.0	2.2	0.4	0.6	32.6	3.1	0.1	100

Table 34.3: Number of Agricultural Households by Type of Owned Assets and District during 2002/03 Agricultural Year

Type of Owned Asset	District							
	Kinondoni		Ilala		Temeke		TOTAL	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Radio	5,453	31	5,923	33	6,307	36	17,683	43.7
Landline phone	139	44	33	11	141	45	314	0.8
Mobile phone	931	42	512	23	776	35	2,219	5.5
Iron	2,102	34	2,260	36	1,913	30	6,275	15.5
Wheelbarrow	901	43	379	18	807	39	2,088	5.2
Bicycle	2,193	25	2,688	30	4,049	45	8,930	22.1
Vehicle	699	52	309	23	329	25	1,337	3.3
Television / Video	835	52	170	11	606	38	1,612	4.0
Total Number of Households	13,254	33	12,275	30	14,928	37	40,457	100.0

34.4: Number of Agricultural Households by Main Source of Energy Used for Lighting during 2002/03 Agricultural Year

Main Source of Energy for Lighting	District							
	Kinondoni		Ilala		Temeke		TOTAL	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Mains Electricity	626	57	56	5	414	38	1,096	5.4
Solar	42	100	0	0	0	0	42	0.2
Hurricane Lamp	2,392	32	2,639	35	2,412	32	7,444	36.5
Pressure Lamp	580	49	250	21	349	30	1,180	5.8
Wick Lamp	3,072	29	3,668	35	3,850	36	10,589	51.9
Candles	0	0	0	0	44	100	44	0.2
Total	6,712	33	6,613	32	7,069	35	20,394	100.0

34.5: Number of Agricultural Households by Main Source of Energy Used for Cooking during 2002/03 Agricultural Year

Main Source of Energy for Cooking	District							
	Kinondoni		Ilala		Temeke		TOTAL	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Mains Electricity	4	7	0	0	57	93	62	0.3
Solar	0	0	0	0	32	100	32	0.2
Gas (Biogas)	0	0	0	0	34	100	34	0.2
Bottled Gas	0	0	23	90	3	10	25	0.1
Parraffin / Kerocine	63	25	106	42	86	34	255	1.3
Charcoal	1,238	39	932	29	1,026	32	3,196	15.7
Firewood	5,406	32	5,552	33	5,794	35	16,753	82.1
Crop Residues	0	0	0	0	38	100	38	0.2
Total	6,712	33	6,613	32	7,069	35	20,394	100.0

34.6: Number of Agricultural Households by Main Source of Drinking Water by Season (wet and dry) and District during 2002/03 Agricultural Year

Source	Season	District			
		Kinondoni	Ilala	Temeke	Total
Piped Water	wet season	1,532	420	693	2,645
	dry season	1,962	420	641	3,023
Protected Well	wet season	377	1,163	1,386	2,927
	Dry season	469	969	1,362	2,799
Protected / Covered Spring	wet season	34	368	14	417
	Dry season	84	417	14	516
Uprotected Well	wet season	2,219	4,106	4,448	10,773
	Dry season	1,620	3,992	4,626	10,237
Unprotected Spring	wet season	791	441	165	1,397
	Dry season	679	581	177	1,437
Surface Water (Lake / Dam / River / Stream)	wet season	56	23	153	231
	Dry season	1,215	0	81	1,295
Covered Rainwater Catchment	wet season	49	42	26	117
	Dry season	28	42	40	111
Uncovered Rainwater Catchment	wet season	1,569	0	170	1,738
	Dry season	104	0	41	145
Water Vendor	wet season	69	33	14	117
	Dry season	319	175	89	583
Tanker Truck	wet season	15	17	0	32
	Dry season	233	17	0	249
Total Agricultural Households per District		6,712	6,613	7,069	20,394

34.7: Proportion of Agricultural Households by Main Source of Drinking Water by Season (wet and dry) and District during 2002/03 Agricultural Year

Source	Season	District			
		Kinondoni	Ilala	Temeke	Total
Piped Water	wet season	58	16	26	13
	dry season	65	14	21	15
Protected Well	wet season	13	40	47	14
	Dry season	17	35	49	14
Protected / Covered Spring	wet season	8	88	3	2
	Dry season	16	81	3	3
Uprotected Well	wet season	21	38	41	53
	Dry season	16	39	45	50
Unprotected Spring	wet season	57	32	12	7
	Dry season	47	40	12	7
Surface Water (Lake / Dam / River / Stream)	wet season	24	10	66	1
	Dry season	94	0	6	6
Covered Rainwater Catchment	wet season	42	36	22	1
	Dry season	26	38	36	1
Uncovered Rainwater Catchment	wet season	90	0	10	9
	Dry season	72	0	28	1
Water Vendor	wet season	59	28	12	1
	Dry season	55	30	15	3
Tanker Truck	wet season	48	52	0	0
	Dry season	93	7	0	1
Total Agricultural Households per District		33	32	35	100

34.8: Number of Households Reporting Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) by District for 2002/03 agriculture year

Time Spent to and from Main Source of Drinking Water	Season	District		
		Kinondoni	Ilala	Temeke
Less than 10	wet season	435	89	330
	Dry season	345	66	371
10 - 19 Minutes	wet season	2,247	3,222	2,089
	Dry season	729	2,854	1,628
20 - 29 Minutes	wet season	1,072	242	782
	Dry season	532	162	709
30 - 39 Minutes	wet season	1,156	1,309	978
	Dry season	702	1,307	1,079
40 - 49 Minutes	wet season	454	474	192
	Dry season	292	544	262
50 - 59 Minutes	wet season	782	737	1,129
	Dry season	445	604	972
above one Hour	wet season	567	539	1,569
	Dry season	3,667	1,076	2,049

34.9: Proportion of Households Reporting Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) by District for 2002/03 agriculture year

Time Spent to and from Main Source of Drinking Water	Season	District		
		Kinondoni	Ilala	Temeke
Less than 10	wet season	51	10	39
	Dry season	44	8	47
10 - 19 Minutes	wet season	30	43	28
	Dry season	14	55	31
20 - 29 Minutes	wet season	51	12	37
	Dry season	38	12	51
30 - 39 Minutes	wet season	34	38	28
	Dry season	23	42	35
40 - 49 Minutes	wet season	40	42	17
	Dry season	27	50	24
50 - 59 Minutes	wet season	30	28	43
	Dry season	22	30	48
above one Hour	wet season	21	20	59
	Dry season	54	16	30

34.10: Number of Agricultural Households by Number of Meals the Household Normally Took per Day by District

Number of Meals per Day	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
One	348	36	550	57	69	7	966	5
Two	2,224	34	1,806	28	2,477	38	6,507	32
Three	4,140	32	4,257	33	4,420	34	12,818	63
Four	0	0	0	0	103	100	103	1
Total	6,712	33	6,613	32	7,069	35	20,394	100

34.11: Number of Households by Number of Days the Household Consumed Meat during the Preceding Week by District

Number of Days	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	2,524	34	1,874	25	2,985	40	7,383	36
One	2,268	34	2,247	33	2,216	33	6,731	33
Two	1,122	28	1,587	39	1,329	33	4,038	20
Three	426	31	625	46	313	23	1,364	7
Four	206	36	252	44	111	19	569	3
Five	38	31	28	23	57	46	123	1
Six	32	100	0	0	0	0	32	0
Seven	95	62	0	0	59	38	154	1
Total	6,712	33	6,613	32	7,069	35	20,394	100

34.12: Number of Households by Number of Days the Household Consumed Fish during the Preceding Week by District

Number of Days	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	1,023	49	799	39	245	12	2,068	10
One	1,892	56	1,066	31	447	13	3,406	17
Two	1,474	35	1,235	30	1,464	35	4,172	20
Three	1,094	26	1,862	45	1,188	29	4,144	20
Four	671	23	879	30	1,411	48	2,962	15
Five	311	17	530	29	1,010	55	1,851	9
Six	143	13	137	12	825	75	1,105	5
Seven	104	15	105	15	478	70	687	3
Total	6,712	33	6,613	32	7,069	35	20,394	100

34.13: Number of Households Reporting the Status of Food Satisfaction of the Household during the Preceding Year by District

Status of Food Satisfaction	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Never	2,975	37	2,065	26	2,935	37	7,974	39.1
Seldom	1,836	25	2,588	36	2,791	39	7,215	35.4
Sometimes	489	36	691	50	192	14	1,372	6.7
Often	1,129	43	525	20	985	37	2,639	12.9
Always	283	24	744	62	166	14	1,194	5.9
Total	6,712	33	6,613	32	7,069	35	20,394	100.0

34.14: Number of Households by Type of Roofing Materials and District during the 2002/03 Agricultural Year

Roofing Materials	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Iron Sheets	5,138	41	4,643	37	2,667	21	12,449	61.0
Tiles	241	54	125	28	77	17	444	2.2
Concrete	25	32	52	68	0	0	77	0.4
Asbestos	25	21	0	0	92	79	117	0.6
Grass / Leaves	949	14	1,646	25	4,044	61	6,638	32.6
Grass & Mud	315	49	147	23	178	28	640	3.1
Other	18	62	0	0	11	38	30	0.1
Total	6,712	33	6,613	32	7,069	35	20,394	100.0

34.15: Number of Households by Main Source of Cash Income and District during 2002/03 Agriculture Year

Main Source of Cash Income	District						Total	
	Kinondoni		Ilala		Temeke			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Sales of Food Crops	274	6	1,642	38	2,432	56	4,348	21.3
Sale of Livestock	55	39	23	16	65	46	142	0.7
Sale of Livestock Products	222	23	677	71	55	6	955	4.7
Sales of Cash Crops	554	13	1,274	31	2,302	56	4,130	20.2
Sale of Forest Products	27	33	28	33	29	34	84	0.4
Business Income	1,162	33	1,406	39	994	28	3,562	17.5
Wages & Salaries in Cash	1,486	65	369	16	435	19	2,290	11.2
Other Casual Cash Earnings	2,256	80	441	16	112	4	2,809	13.8
Cash Remittance	358	39	477	52	81	9	916	4.5
Fishing	94	15	0	0	518	85	612	3.0
Other	224	41	276	50	47	9	548	2.7
Total	6,712	33	6,613	32	7,069	35	20,394	100.0

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)
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
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☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
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☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
☐☐		☐☐☐☐	☐☐☐☐	
	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
District _____ Code
Ward _____ Code
Village _____ Code

Name of Sub-village Leaader _____
Subvillage leader code
Name of Sub-village _____

Household Number	Household head name	Number of										✓ if the respodent qualifies to be a farmer *	Farmer Serial Numbers
			Cattle										
		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 .....

	Hour	Minutes
Start time	□□	□□
End time	□□	□□

Date Enumerated □□ / □□ / □□ (d d / m m / y y)

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					
					Mother	Father	Read & Write	Education Status	Education Level reached	Involvement in farming	Main activity (for aged 5 & above)	Off-farm Income Yes=1 No=2
	(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)
……																	
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……																	

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 rent-ed	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:

16.1	the 5 most important problems		16.2	the 5 least important problems	
	Order of most importance	Constraint		Order of least importance	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. Recovered	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 con sumed 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-rtance 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 respo-nsib-ility**
	(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 for subsistance**	**Estimate % used for no 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 Name	Number of Kgs Standard Bag	Standard Tin	Non-standard Name	Non-standard 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 Name	Number of Kgs Standard Bag	Standard Tin	Non-standard Name	Non-standard 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 ☐