United Republic of Tanzania

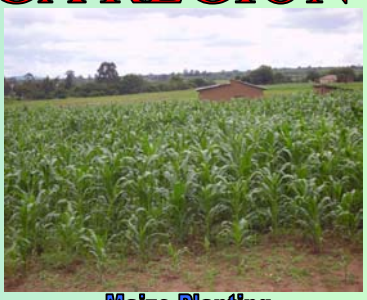
NATIONAL SAMPLE CENSUS OF AGRICULTURE
2002/2003

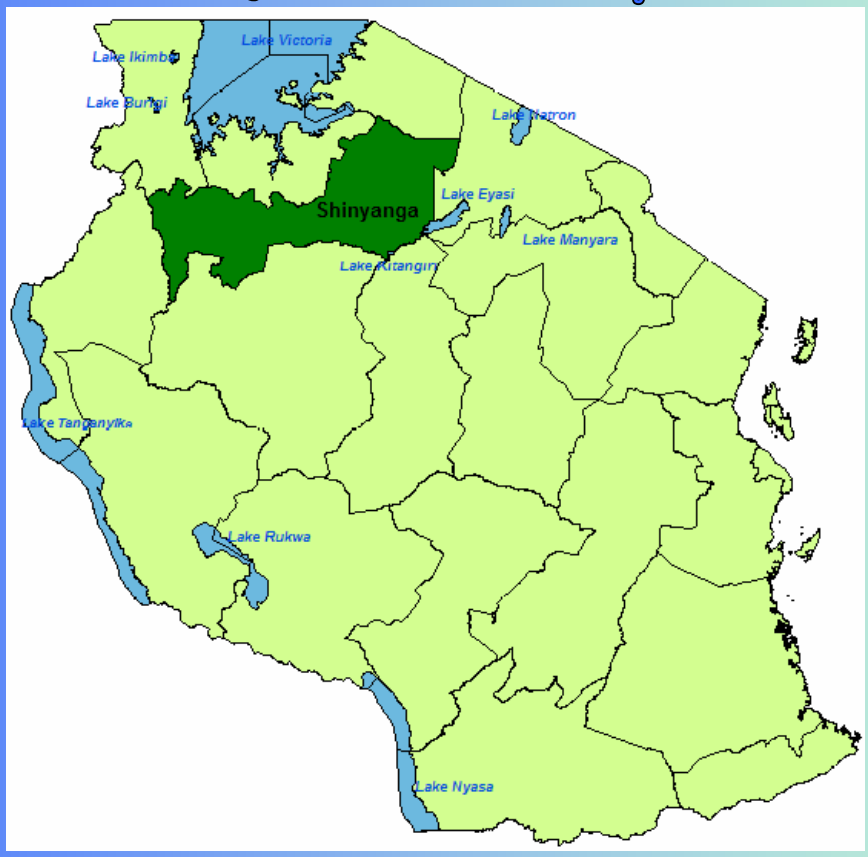
Volume Vq: REGIONAL REPORT: SHINYANGA REGION

Cattle Rearing

Fish Harvesting

Eggs Production


Maize Planting



Paddy Growing

Hand Cultivation

Indigenous Chicken

Irrigation Practice

Orange Marketing

Cassava Planting

Goats Rearing

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

Table of contents i
Acronyms v
Preface vi
Executive summary vii
Illustrations xii

ENSUS RESULT ANALYSIS

PART I: BACKGROUND INFORMATION 1

1.1 Introduction 1
1.2 Geographical Location and Boundaries **1**
1.3 Land Area 1
1.4 Climate 1
1.4.1 Temperature 1
1.4.2 Rainfall 1

1.5 Population 1
1.6 Socio-economic Indicators 2

PART II: INTRODUCTION 3

2.1 The Rationale for Conducting the National Sample Census of Agriculture 3
2.2 Census Objectives 3
2.3 Census Coverage and Scope 4
2.4 Legal Authority of the National Sample Census of Agriculture 5
2.5 Reference Period 5
2.6 Census Methodology 5
2.6.1 Census Organization 5
2.6.2 Tabulation Plan 6
2.6.3 Sample Design 6
2.6.4 Questionnaire Design and Other Census Instruments 7
2.6.5 Field Pre-Testing of the Census Instruments 7
2.6.6 Training of Trainers, Supervisors and Enumerators 7
2.6.7 Information, Education and Communication (IEC) Campaign 7
2.6.8 Household Listing 8
2.6.9 Data Collection 8
2.6.10 Field Supervision and Consistency Checks 8
2.6.11 Data Processing 8
- Manual Editing 9
- Data Entry 9
- Data Structure Formatting 9
- Batch Validation 9
- Tabulations 9
- Analysis and Report Preparations 9
- Data Quality 10

2.7 Funding Arrangements 10

PART III: CENSUS RESULTS AND ANALYSIS 11

3.1 Household Characteristics 11
3.1.1 Type of Household 11
3.1.2 Livelihood Activities/Source of Income 11
3.1.3 Sex and Age of Heads of Households 11
3.1.4 Number and age of Household Members 15
3.1.5 Level of Education 15
- Literacy 15
- Literacy Level for Household Members 15
- Literacy Rates for Heads of Households 15
- Educational Status 16

3.1.6 Off-farm Income 16

3.2 Land Use 17
3.2.1 Area of Land Utilised 17
3.2.2 Types of Land use 18

3.3 Annual Crops and Vegetable Production 18

3.3.1 Area Planted 18
3.3.2 Crop Importance 20
3.3.3 Crop Types 20
3.3.4 Cereal Crop Production 22
3.3.4.1 Maize 23
3.3.4.2 Paddy 23
3.3.4.3 Sorghum 26
3.3.4.4 Other Cereals .....

3.3.5 Roots and Tuber Crops Production 26
3.3.5.1 Cassava 27
3.3.5.2 Sweet Potatoes 28

3.3.6 Pulse Crops Production 28
3.3.6.1 Chick Peas 30

3.3.7 Oil Seed Production 32
3.3.7.1 Groundnuts 32

3.3.8 Fruits and Vegetables 33
3.3.8.1 Tomatoes 35
3.3.8.2 Onions 37

3.3.9 Other Annual Crops Production 40
3.3.9.1 Cotton 40
3.3.9.2 Tobacco 40

3.4 Permanent Crops 40
3.4.1 Mango 43

3.5 Inputs/Implements Use 48
3.5.1 Methods of Land Clearing 48
3.5.2 Methods of Soil Preparation 48
3.5.3 Improved Seeds Use 50
3.5.4 Fertilizers Use 51
3.5.4.1 Farm Yard Manure Use 51
3.5.4.2 Inorganic Fertilizer Use 52
3.5.4.3 Compost Use 53

3.5.5 Pesticide Use 54
3.5.5.1 Insecticide Use 54
3.5.5.2 Herbicide Use 55
3.5.5.3 Fungicide Use 55

3.5.6 Harvesting Methods 56

3.5.7 Threshing Methods 56

3.6 Irrigation 56
3.6.1 Area Planted with Annual Crops and Under Irrigation 56
3.6.2 Sources of Water Used for Irrigation 57
3.6.3 Methods of obtaining water for irrigation 59
3.6.4 Methods of Water Application 59

3.7 Crop Storage, Processing and Marketing 59

3.7.1 Crop Storage 59
3.7.1.1 Method of Storage 60
3.7.1.2 Duration of Storage 60
3.7.1.3 Purpose of Storage 62
3.7.1.4 The Magnitude of Storage Loss 62

3.7.2 Agro processing and By-products 63
3.7.2.1 Processing Methods 63
3.7.2.2 Main Agro-processing Products 63
3.7.2.3 Main use of primary processed Products 64
3.7.2.4 Outlet for Sale of Processed Products 64

3.7.3 Crop Marketing 65
3.7.3.1 Main Marketing Problems 65
3.7.3.2 Reasons for Not Selling 65

3.8 Access to Crop Production Services 66

3.8.1 Access to Agricultural Credits 66
3.8.1.1 Source of Agricultural Credits 66
3.8.1.2 Use of Agricultural Credits 66
3.8.1.3 Reasons for not using agricultural credits 67

3.8.2 Crop Extension 67
3.8.2.1 Sources of Crop Extension Messages 67
3.8.2.2 Quality of Extension 69

3.9 Access to Inputs 69

3.9.2 Inorganic Fertilizers 69

3.9.3 Improved Seeds 70

3.9.4 Insecticides and Fungicide 70

3.10 Tree Planting 71

3.11 Irrigation and Erosion Control Facilities 72

3.12 Livestock Results 74

3.12.1 Cattle Production 74
3.12.1.1 Cattle Population 74
3.12.1.2 Herd size 74
3.12.1.3 Cattle Population Trend 76
3.12.1.4 Improved Cattle Breeds 76

3.12.2 Goat Production 76
3.12.2.1 Goat Population 76
3.12.2.2 Goat Herd Size 78
3.12.2.3 Goat Breeds 78
3.12.2.4 Goat Population Trend 78

3.12.3 Sheep Production 78
3.12.3.1 Sheep Population 78
3.12.3.2 Sheep Population Trend 80

3.12.4 Pig Production 80
3.12.4.1 Pig Population Trend 80

3.12.5 Chicken Production 82
3.12.5.1 Chicken Population 82
3.12.5.2 Chicken Population Trend 82
3.12.5.3 Chicken Flock Size 82
3.12.5.4 Improved Chicken Breeds (layers and broilers) 84

3.12.6 Other Livestock 84

3.12.7 Pests and Parasites Incidences and Control 84
3.12.7.1 Deworming 86

3.12.8 Access to Livestock Services 86
3.12.8.1 Access to livestock extension Services 86
3.12.8.2 Access to Veterinary Clinic 86
3.12.8.3 Access to village watering points/dam 87

3.12.9 Animal Contribution to Crop Production 87

3.12.9.1 Use of Draft Power 87
3.12.9.2 Use of Farm Yard Manure 88
3.12.9.3 Use of Compost 88

3.12.10 Fish Farming 88

3.13 Poverty Indicators 91
3.13.1 Access to Infrastructure and Other Services 91
3.13.2 Type of Toilets 91
3.13.3 Household's Assets 91
3.13.4 Sources of Light for Energy 91
3.13.5 Sources of Energy for Cooking 91
3.13.6 Roofing Materials 94
3.13.7 Access to Drink Water 94
3.13.8 Food Consumption Pattern 95
3.13.8.1 Number of Meals per Day 95
3.13.8.2 Meat Consumption Frequencies 95
3.13.8.3 Fish Consumption Frequencies 95

3.13.9 Food Security 97
3.13.10 Main Source of Cash Income 97

PART IV: SHINYANGA PROFILES 99

4.1 Region Profile 99
4.2 District Profiles 100
4.2.1 Bariadi 100
4.2.2. Maswa 102
4.2.3 Shinyanga Rural 104
4.2.4 Kahama 104
4.2.5 Bukombe 106
4.2.6 Meatu 108
4.2.7 Shinyanga Urban 110
4.2.8 Kishapu 111

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	*Wety 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	*Dry Season*
TOT	*Training of Trainers*
ULG	*Ultek Laurence Gould*
UNDP	*United Nations Development Programme*
UNFAO	*United Nations Food and Agriculture Organization*
VPO	*Vice President Office*

PREFACE

At the end of the 2002/03 Agriculture Year, the National Bureau of Statistics, Tanzania Mainland and the Office of the Chief Government Statistician, Tanzania Zanzibar in collaboration with the Ministries of Agriculture and Food Security; Water and Livestock Development; Cooperatives and Marketing as well as the President's 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 (data on household characteristics and livestock count were collected in 1993/1994 while data on crop area and production were collected 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 Shinyanga region data disaggregated to district level. Due to numerous variables collected, the analysis is based on the most important smallholder variables. More variables can be found in the table of results annex.

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.

Special thanks should go to all those who in one-way or the other contributed to the success of the survey. In particular, I would 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, 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).

Finally, let me extend my sincere gratitude to all professional staff of the National Bureau of Statistics and Office of the Chief Government Statistician, the sector Ministries of Agriculture and PORALG, the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. I am also indepted to the respondents, particularly the heads of households, for spending much of their valuable time in providing data and all necessary information during enumeration. Certainly without their dedication, the census would not have been successful.

Albina A. Chuwa
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 Shinyanga region who were selected using statistical sampling techniques. The results in the report do not cover urban areas and large-scale farmers.

The highlights describe the important findings in relation to agricultural production, productivity, husbandry, access to resources, levels of involvement in agricultural related activities and poverty in Shinyanga 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 Shinyanga region were 377,857 out of which 201,316 (53%) were involved in growing crops only, 2,310 (1%) rearing livestock only and 174,232 (46%) were involved in crop production as well as livestock keeping. In summary, Shinyanga region had 375,547 households involved in crop production and 176,542 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, fishing/hunting tree/forest resources, permanent crop farming, livestock keeping/herding and remittances.

The region has a literacy rate of 59 percent. The highest literacy rate is in District Kishapu (65%), Shinyanga Urban (64%), Maswa (61%), Bukombe (60%), Shinyanga Rural (60%) and Meatu (60%). Kahama na Baridi districts have the lowest literacy rates of 59 and 56 percent Respectively. The literacy rate for the heads of households in the region was 59 percent.

The number of heads of agricultural households with formal education in Shinyanga region was 191,081 (72%), those without formal education were 70,819 (27%) and those with only adult education were 3,298 (1%). The majority of heads of agricultural households (69%) had primary level education whereas only 3 percent had post primary education.

In Shinyanga region 113,528 household members (59%) were involved in one off-farm income generating activity, 50,868 (26%) involved in two off-farm income generating activities and 28,310 (15%) involved in more than two off-farm income generating activities.

ii) Crop Production

- **Land Area**

The total area of land available to smallholders was 1,299,023 ha. The regional average land area utilised for crop production per crop growing household was only 3.4 ha. This figure is above the national average of 2.0 hectares.

- **Planted Area**

The area planted with annual crops and vegetables was 960,250 hectares out of which 2,826 hectares (0.29%) were planted during Dry season and 957,423 hectares (99.71%) during Wety season.

An estimated area of 591,416 ha (60% of the total planted area with annual and vegetable crops) was with cereals, followed by 67,809 hectares (7%) of pulses, 66,153 ha (7%) of oil seeds and nuts, 48,081 ha (5%) of roots and tubers, 1,421 ha (0.1%) of fruit and vegetables, 205,020 ha (21%) of cash crops.

- **Maize**

Maize is the dominant annual crop grown in Shinyanga region and it had a planted area 3.4 times greater than Paddy, which had the second largest planted area. The area planted with maize constitutes 68 percent of the total area planted with annual food crops. Other crops in order of their importance (based on area planted) are Cotton, Paddy, Sorghum, Ground nuts, Beans, cassava, cowpeas, tomatoes, green gram, groundnuts and sweet potatoes.

There was a decrease in maize production over the period 1995 to 1996 (52%), after which the production almost remained constant over the period 1996 to 97. Production gradually increased over the period 1997 to 1998 and remained constant over the period from 1998 to 1999 and thereafter declined over the period 1999 to 2003. The average area planted with maize per household was 1.06 hectares; however it ranged from 0.7 hectares in Shinyanga Urban district to 1.31 hectares in Bariadi district. Bariadi had the largest planted area of maize (101,952 ha) followed by Kahama (79,905 ha), Bukombe (64,833 ha), Shinyanga Rural (44,228 ha) , Maswa (35,159), Meatu (31,192) and Shinyanga Urban (7,505 ha)

- **Paddy**

Paddy is the Second dominant cereal crop in terms of production in the region. The number of households growing Paddy in Shinyanga region during the wet season was 136,046 (36% of the total crop growing households in the region during the wet season). The total production of Paddy was 104,847 tonnes from a planted area of 118,916 hectares resulting in a yield of 0.88 t/ha

- **Sorghum**

Sorghum is the third most important cereal crop in the region in terms of planted area. The number of households that grew sorghum in Shinyanga region during the wet season was 59,619. This represents 16 percent of the total crop growing households in Shinyanga region. The total production of sorghum was 17,286 tonnes from a planted area of 65,868 hectares resulting in a yield of 0.26 t/ha.

The district with the largest planted area of sorghum was Meatu (24,353 ha) followed by Kishapu (21,030 ha), Bariadi (9,971 ha) and Maswa (7,950 ha) (Map 3.15). The Largest planted area per household for sorghum was observed in Meatu (0.77 ha) and Kishapu (0.59 ha). There was a large reduction in the production of sorghum from 114,000 tonnes in 1995/96 to 17,000 tonnes in 2002/03

- **Roots and Tuber Crops Production**

The Common Roots and Tuber Crops grown in Shinyanga Region were Sweet Potatoes and Cassava. The total production of both Cassava and Sweet Potatoes was 39,658 tonnes. Sweet Potatoes production was higher than that of Cassava in the region with a total production of 25,059 tonnes representing 63 percent of the total root and tuber crop production

- **Pulse Crops Production**

The total area planted with pulses was 66,153 hectares, of which 23,933ha were planted with Chick Peas (36% of the total area planted with pulses), followed by Beans (16,396 ha, 25%), Cow Peas (3,376 ha, 5%), Green Gram (2,898ha 4%) and Bambaranuts (1,382 ha, 2%).

- **Oil Seed Production**

The total production of oilseed crops was 31,568 tonnes, planted on an area of 65,985 hectares. Groundnuts was the most important oilseed crop with 64,188 ha (97% of the total area planted with oil seeds), followed by sunflower (2%) and simsim (1%).

- **Fruit and Vegetables**

The total production of vegetables was 3,381 tonnes. The most cultivated vegetable crop was tomatoes with a production of 1,977 tonnes (58% of the total vegetables produced) followed by onions (503t, 15%) and Cabbages (461t, 14%). The production of the other vegetable crops was relatively small.

- **Permanent Crops**

The planted area of smallholders with permanent crops was 53,420 hectares (5.2% of the area planted with annual and permanent crops in the region). The most important permanent crop in Shinyanga region is Mango which accounts for a planted area of 28,067.0 ha, (53% of the planted area of all permanent crops) followed by Pawpaw (6,337 ha, 12%), Sisal (5,719 ha, 11%), and Banana (3,763 ha, 11%).

- **Improved Seeds Use**

The planted area with improved seeds was 261,066 ha which represents 27 percent of the total area planted with the annual crops and vegetables. Cash Crops had the largest planted area with improved seeds (159,104 ha, 69% of the planted area with improved seeds) followed by Cereals crops (57,738 ha, 25%). Other crop types had insignificant area planted with improved seeds (Chart 3.42). Among the Cash Crops Cotton had the largest area of improved seeds application which was 155,842 ha 98% of area planted by cash crops.

- **Fertilizer Use**

The use of fertilisers on annual crops was very small with a planted area of only 171,943 ha (18% of the total planted area in the region). The planted area without fertiliser for annual crops was 785,481 hectares representing 82 percent of the total planted area with annual crops. Of the planted area with fertiliser application, farm yard manure was applied to 137,161 ha which represents 14 percent of the total planted area (80% of the area planted with fertiliser application in the region). This was followed by Inorganic Fertilizers (20,380ha, 12% of the planted area with fertiliser and 2% of the total

planted area in the region), Compost (14,404ha, 8% of the planted area with fertiliser and 2% of the total planted area in the region).

The largest planted area with fertiliser (all types) was in Kahama district (60154 ha, 35.0% of the total planted area with fertilizer in the region, followed by Bariadi (27,350, 16%), Shinyanga Rural (20,901 12%), Bukombe (20,582 12%), Maswa (14,692 9%), Kishapu (14,010 8%) and Shinyanga Urban (4,188, 2%) Table 3.8 and (Charts 3.60 and 3.61).

- **Irrigation**

The district with the highest proportion of area under irrigation with annual crops was Shinyanga Urban 5.5 percent of the planted area with annual crops in the District. This is followed by Kahama (3.2%), Shinyanga Rural (3.1%), Bariadi (2.7%) and Kishapu 2.1%. Other Districts had lower than 2% of the proportion of area under Irrigation

- **Crop Storage**

The most important stored crop was maize with 284,899 households storing 101,693 tonnes as of 1st January 2004. This was followed by Paddy (112,839 households, 55,481t), Groundnuts/Bambaranuts (63,962 households, 10,223t) and Beans/Pulses (50,197 households, 5,247t). Other crops were stored in very small amounts

- **Crop Marketing**

The number of households that reported selling crops was 219,317 which represents 58 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Maswa (79%) followed by Bariadi (66%), Meatu (59%), Kahama (59%), Bukombe (54%), Kishapu (59%), Shinyanga Rural (44%) and Shinyanga Urban (8%) (Chart 3.99 and Map 3.40).

- **Agricultural Credit**

The census results shows that very few agricultural households (7,054, 2%) in Shinyanga region accessed credit, of which 5,402 (77%) were male-headed households and 1,651 (24%) were female headed households. The number of those who accessed credits was higher in Bariadi (31%) followed by Kahama (31%), Bukombe (12%) and Maswa (12%). Other Districts have less than 10% of those who accessed credits, (

- **Crop Extension Services**

The number of agricultural households that received crop extension was 104,252 (28% of total crop growing households in the region) (Chart 3.105). Some districts have more access to extension services than others, with Kishapu having a relatively high proportion of households that received crop extension messages (51%) followed by Meatu (47%), Kahama (36%), Shinyanga Urban (33%), Shinyanga Rural (27%), Bariadi (21%), and Bukombe (14%.

- **Soil Erosion and Water Harvesting 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 in Shinyanga region was 15,199 which represent 4 percent of the total number of agricultural households in the region

iii) Livestock and Poultry Production

- **Cattle**

The total number of cattle in the region was 2,604,105 which the largest population of Livestock in the Country regional wise. Cattle are the dominant livestock type in the region followed by goats, sheep and pigs. The region had 15.4 percent of the total cattle population on Tanzania Mainland. The number of indigenous cattle in Shinyanga region was 2,591,532 (92.6 % of the total number of cattle in the region), 1,375 cattle (0.1%) were dairy breeds and 11,198 cattle (7.3%) were beef breeds.

- **Goats**

Goat rearing was the second most important livestock keeping activity in the region followed by sheep and pig rearing. In terms of total number of goats on the Mainland, Shinyanga region ranked 11 out of the 21 regions with 4.4 percent of the total goats on the Mainland. The number of goat-rearing-households in Shinyanga region was 124,019 (33% of all agricultural households in the region) with a total of 1,277,929 goats giving an average of 10 head of goats per goat-rearing-household.

- **Sheep**

Sheep rearing was the third important livestock keeping activity in Shinyanga region after cattle and goats. The region ranked 9 out of 21 Mainland regions and had 4 percent of all sheep on Tanzania Mainland. The number of sheep-rearing households was 58,545 (15% of all agricultural households in Shinyanga region) rearing 517,144 sheep, giving an average of 9 heads of sheep per sheep-rearing household.

- **Pigs**

The number of pig-rearing households in the region was 656 (0.2% of the total agricultural households) rearing about 3,266 pigs. This gives an average of 5 pigs per pig-rearing household.

- **Chicken**

The number of households keeping chicken was 257,044 raising about 2,979,590 chickens. This gives an average of 12 chickens per chicken-rearing household. In terms of total number of chickens in the country, Shinyanga region was ranked first for having the largest number of chicken out of the 21 Mainland regions.

- **Use of Draft Power**

Use of draft animals to cultivate land in Shinyanga region is highly practiced with a total 246,196 (65%) agricultural households Practicing it. Kishapu, Shinyanga Rural and Bariadi Districts are the best in use of draft animals in farming practices with over 80% of all agricultural households in these districts using the method. The Percent of Agricultural households using this method in Maswa, Meatu and Shinyanga Urban was 79%, 78% and 86% respectively. The method is scarcely practiced in Kahama and Bukombe Districts.

- **Fish Farming**

The number of households involved in fish farming in Shinyanga region was very small which was 430, representing 0.1 percent of the total agricultural households in the region. This Practice was only reported in Kahama District.

iv) Poverty Indicators

- **Access to Infrastructure and Other Services**

The results indicate that among the evaluated services, regional capital was a service located very far from most of the household's dwellings than any other service. It was located at an average distance of 131 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were Tarmac Road (68), Hospital (41), District Capital (39, Tertiary Market (34) Secondary School (19) Secondary Market (17), Primary Market (8), Health Clinic / Dispensary (8), All weather Road (7), Primary School (2), Feeder Road (2)

- **Availability of Toilets**

A large number of rural agricultural households use traditional pit latrines (318,745 households, 84% of all rural agricultural households) 12,686 households (3%) use Flush Toilets and 2,450 households (1%) use Improved Pit Latrine. The remaining 474 household (0.13%) use other toilets facilities. However, 12,686 households (12%) in the region had no toilet facilities.

- **Household Assets**

Bicycles are owned by most rural agricultural households in Shinyanga region with 246,531 households (65% of the agriculture households in the region) owning the asset. followed by Radios (192,251 households, 51%), iron (64,449 households, 17%), wheelbarrow (39,393 households, 10%), mobile phone (5,725 households, 2%), television/video (3,692 households, 0.96), vehicle (4,236 households, 1.1%) and landline phone (858 households, 0.23%) (Chart 3.152).

- **Source of Lighting Energy**

Wick lamp is the most common source of lighting energy in the region. with 81 percent of the total rural households using this source of energy followed by hurricane lamp (14%), Pressure lamp (3%), Firewood and Electricity (1%).

- **Energy for Cooking**

The most prevalent source of energy for cooking was firewood, which was used by 95 percent of all rural agricultural households in Shinyanga region. This is followed by charcoal (4%). The rest of energy sources accounted for 1 percent. These were bottled gas (0.05%), crop residues (0.64%), mains electricity (0.15%), livestock dung (0.26%), paraffin/kerosene (0.1%) and gas/biogas (0.05%)

- **Roofing Materials**

The most common material used for roofing of the main dwelling was grass and/or leaves and it was used by 35 percent of the rural agricultural households. This was closely followed by iron sheets (33%) and grass/mud (30%). Tiles (0.54%), (0.28%) and Concrete (0.06%) roofing style were scarcely used in the region.

- **Access to Drinking Water**

The main source of drinking water for rural agricultural households in Shinyanga region was unprotected Wells (33 percent of households use unprotected wells during the wet season and 31 percent of the households during the dry seasons). This is followed by protected wells (26% and 28% of households for wet and dry seasons respectively), Surface water (16% of households during the wet season and 19% in the dry season), Piped water (12% of households in the wet season and 13%

during dry season). Other sources of drinking water like uncovered rain water catchments, Unprotected/protected Spring, Bottled Water, Water vendor and Tank truck are scarcely used in the region

- **Number of Meals per Day**

The majority of households in Shinyanga region normally have 3 meals per day (54 percent of the households in the region). This is followed by 2 meals per day (44 percent) and 1 meal per day (2 percent). A small number of Agricultural Households 0.27 percent normally have 4 meals per day.

- **Food Security**

In Shinyanga region, 134,001 households (35% of the total agricultural households in the region) said they seldom experienced problems in satisfying the household food requirement. However 55,062 (14%) said they often experience problems, 38,789 always experienced problems and 6.4 percent sometimes had problems in satisfying the household food requirement. About 33 percent of the agricultural households said they did not experience any food sufficiency problems.

- **Main Source of Cash Income**

The main cash income of the households in Shinyanga region was from selling food crops
(39.2 percent of smallholder households), followed by Sales of Cash Crops (31.8), Casual Cash earnings 13%), businesses income and Sales of Livestock each 4.9%. Other Means of income were Wages and Salaries (2.1%), Cash Remittances (1.1%), Sales of Forestry Products (1%), Sales of Livestock Products (1%) a and cash remittances (1%) and Fishing (1%).,

ILLUSTRATIONS

List of Tables

2.1 Census Sample Size 6
3.1 The Livelihood Activities/Source of Income of the Households Raked in Order of Importance by District .. 11
3.2 Area, Production and Yield of cereal crops by Season 22
3.3 Area, Production and Yield of Root and Tuber Crops by Season 27
3.4 Area, Production and Yield of Pulse by Season 28
3.5 Area, Quantity Harvested and Yield of Oil Seed Crops by Season 32
3.6 Area, Production and Yield of Fruits and Vegetables by Season 35
3.7 Area, Production and Yield of Annual Cash Crops by Season 37
3.8 Land Clearing Methods 48
3.9 Planted Area by Type of Fertiliser Use and District – Long and Dry Season 51
3.10 Number of Crop Growing Households and Planted Area (ha) by Fertilizer Use and District during the Wety Season 51
3.11 Number of Households Storing Crops by Estimated Storage Loss and District 62
3.12 Reasons for Not Selling Crop Produce 65
3.13 Number of Agricultural Households that Received Credit by Sex of Household head and District 66
3.14 Access to Inputs 69
3.15 Number of Households and Chickens Raised by Flock Size 82
3.16 Number of Other Livestock by Type of Livestock and District 84
3.17 Mean distances from dwellings to infrastructure and services by districts 91
3.18 Number of Households by Number of meals the Household normally takes per Day and District 95

List of Charts

3.1 Agricultural Households by Type of Holdings 11
3.2 Percentage Distribution of Agricultural Households by Sex of Household Head 11
3.3 Percentage Distribution of Population by Age and Sex in 2003 15
3.4 Percentage Literacy Level of Household Members by District 15
3.5 Literacy Rates for Heads of Household by Sex and District 15
3.6 Percentage Distribution of Persons Aged 5 years and above in Agricultural Households by Education Status 16
3.7 Percentage of Population Aged 5 years and above by District and Educational Status 16
3.8 Percentage Distribution of Heads of Household by Educational Attainment 16
3.9 Number of Households by number of members with Off Farm Income – Shinyanga Region 17
3.10 Percentage Distribution of Agricultural Households by Number of Off-farm Activities 17
3.11 Utilized and Usable Land per Household by District 17
3.12 Land Area by Type of Land Use 18
3.13 Area Planted with Annual Crops (ha) by Season 18
3.14 Area Planted with Annual Crops by Season and Region 18
3.15 Area Planted with Annual Crops per Household by Season and District 20
3.16 Planted Area for the Main Annual Crops (ha) 20
3.17a Planted Area per Household by Selected Crops 20
3.17b Percentage Distribution of Area planted with Annual Crops by Crop Type 22
3.18 Area planted with Annual Crops by Type of Crops and Season 22
3.19 Area Planted and Yield of Major Cereal Crops 22
3.20 Time Series Data on Maize Production – Shinyanga Region 23
3.21 Maize: Total Area Planted and Planted Area per Household by District 23
3.22 Time Series of Maize Planted Area and Yield – Shinyanga Region 23
3.23 Total Planted Area and Area of Paddy per Household by District 26
3.24 Time Series Data on Paddy Production – Shinyanga Region 26
3.25 Time Series of Paddy Planted Area and Yield – Shinyanga Region 26
3.26 Area Planted With Sorghum, Finger Millet and Wheat by District 26
3.27 Area Planted and Yield of Major Root and Tuber Crops 26
3.28 Area planted with Cassava during the census/survey years 27
3.29 Percent of Cassava Planted Area and percent of Total Land with Cassava by District 28
3.30 Cassava Planted Area per Cassava Growing Households by District 28

3.31 Total Area Planted and Planted Area per Household by District ... 28
3.32 Area Planted and Yield of Major Pulse Crops ... 30
3.33 Percent of Bean Planted Area and Percent of Total Land with Beans by District ... 30
3.34 Area Planted per Bean Growing Household by District (Wety Season Only) ... 30
3.35 Time Series Data on Bean Production – Shinyanga Region ... 30
3.36 Time Series of Beans Planted Area and Yield - Shinyanga ... 32
3.37 Area Planted and Yield of Major Oil Seed Crops ... 32
3.38 Time Series Data on Groundnut planted area – Shinyanga Region ... 32
3.39 Percent of Groundnuts Planted Area and Percent of Total Land with Groundnuts by District ... 33
3.40 Area Planted per Groundnut Growing Household by District (Wety Season Only) ... 33
3.42 Area Planted and Yield of Fruit and Vegetables ... 33
3.43 Percent of Tomato Planted Area and Percent of Total Land with Tomato by District ... 35
3.44 Area Planted per Tomato Growing Household by District (Dry Season Only) ... 35
3.45 Percent of Cabbage Planted Area and Percent of Total Land with Cabbage by District ... 37
3.46 Percent of Chillies Planted Area and Percent of Total Land with Chillies by District ... 37
3.47 Area planted with Annual Cash Crops ... 40
3.48 Percent of Tobacco Planted Area and Percent of Total Land with Tobacco by District ... 40
3.49 Area Planted for Annual and Permanent Crops ... 40
3.50 Area Planted with the Main Permanent Crops ... 43
3.51 Percent of Area Planted and Average Planted Area with Permanent Crops by District ... 43
3.52 Percent of Area Planted with Coconuts and Average Planted Area per Household by District ... 43
3.53 Percent of Area Planted with Oranges and Average Planted Area per Household by District ... 45
3.54 Percent of Area Planted with Banana and Average Planted Area per Household by District ... 45
3.55 Percent of Area Planted with Cashew nuts and Average Planted Area per Household by District ... 48
3.56 Number of Households by Method of Land Clearing during the Wety Season ... 48
3.57 Area Cultivated by Cultivation Method ... 48
3.58 Area Cultivated by Method of Cultivation and District ... 50
3.59 Planted Area of Improved Seeds – Shinyanga ... 50
3.60 Planted Area with Improved Seed by Crop Type ... 50
3.61 Percentage of Crop Type Planted Area with Improved Seed – Annuals ... 50
3.62 Area of Fertilizer Application by Type of Fertilizer ... 51
3.63 Area of Fertilizer Application by Type of Fertilizer and District ... 51
3.64 Planted Area with Farm Yard Manure by Crop Type - Wety Season ... 52
3.65a Percentage of Crop Type Planted Area with Farm Yard Manure – Annuals ... 52
3.65b Proportion of Planted Area Applied with Farm Yard Manure by District ... 52
3.66 Planted Area with Inorganic Fertiliser by Crop type – Annuals ... 52
3.67a Percentage of Planted Area with Inorganic Fertiliser by Crop Type ... 53
3.67b Proportion of Planted Area Applied with Inorganic Fertiliser by District ... 53
3.68a Planted Area with Compost by Crop Type ... 53
3.68b Percentage of Planted Area with Compost by Crop Type ... 53
3.68c Proportion of Planted Area Applied with Compost by District ... 53
3.69 Planted area (ha) by Pesticide use ... 54
3.70 Planted Area applied with Insecticides by Crop Type ... 54
3.71 Percentage of Crop Type Planted Area applied with insecticides ... 54
3.72 Proportion of Planted Area applied with Insecticides by District during the Wety Season ... 54
3.73 Planted Area applied with herbicides by Crop Type ... 55
3.74 Percentage of Crop Type Planted Area applied with herbicides ... 55
3.75 Proportion of Planted Area applied with Herbicides by District during the Wety Season ... 55
3.76 Planted Area applied with Fungicides by Crop Type ... 55
3.77 Percentage of Crop Type Planted Area applied with Fungicides ... 56
3.78 Proportion of Planted Area applied with Fungicides by District during the Wety Season ... 56
3.79 Area of Irrigated Land ... 56
3.80 Planted Area and Percentage of Planted Area with Irrigation by District ... 57
3.81 Time Series of Households with Irrigation – Shinyanga ... 57
8.82 Number of Households with Irrigation by Source of Water ... 57
3.83 Number of Households by Method of Obtaining Irrigation Water ... 57
3.84 Number of Households with Irrigation by Method of Field Application ... 59
3.85 Number of Households and Quantity Stored by Crop Type ... 59
3.86 Number of households by Storage Methods ... 60
3.87 Number of households by method of storage and District (based on the most important household crop) ... 60

3.88 Normal Length of Storage for Selected Crops 60
3.89 Quantity of Maize Produced (tonnes), Stored and Percent Stored by District 62
3.90 Number of Households by Purpose of Storage and Crop Type 62
3.91a Percentage of Households Processing Crops by District 63
3.91b Percent of Households Processing Crops by District 63
3.92 Percent of Crop Processing Households by Method of Processing 63
3.93 Percent of Households by Type of Main Processed Product 63
3.94 Number of Households by Type of By-product 64
3.95 Use of Processed Product 64
3.96 Percentage of Households Selling Processed Crops by District 64
3.97 Location of Sale of Processed Products 64
3.98 Percent of Household selling Processed Products by Outlets for Sale and Distance 65
3.99 Number of Crop Growing Households Selling Crops by District 65
3.100 Percentage Distribution of Households that Reported Marketing Problems by Type of Problem 65
3.101 Percentage Distribution of Households Receiving Credit by Main Sources 66
3.102 Number of Households Receiving Credit by Main Source of Credit and District 66
3.103 Proportion of Households Receiving Credit by Main Purpose of the Credit 66
3.104 Reasons for Not using Credit (% of Household) 66
3.105 Number of Households Receiving Extension Advice 67
3.106 Number of Households Receiving Extension by District 67
3.107 Number of Households Receiving Extension Messages by Type of Extension Provider 67
3.108 Number of Households Receiving Extension by Quality of Services 67
3.109 Number of Households by Source of Inorganic Fertiliser 69
3.110 Number of Households Reporting Distance to Source of Inorganic Fertiliser 69
3.111 Number of Households by Source of Improved Seed 70
3.112 Number of Households reporting Distance to Source of Improved Seed 70
3.113 Number of Households by Source of Insecticide/Fungicide 70
3.114 Number of Households Reporting Distance to Source of Insecticides/Fungicides 70
3.115 Number of Households with Planted Trees by District 71
3.116 Number of Planted Trees by Species 71
3.117 Number of Trees Planted by Smallholders by Species and District 71
3.118 Number of Trees Planted by Location 71
3.119 Number of Households by purpose of Planted Trees 72
3.120 Number of Households with Erosion Control/Water Harvesting Facilities 72
3.121 Number of Households with Erosion Control/Water Harvesting Facilities by District 72
3.122 Number of Erosion Control/Water Harvesting structures by Type of Facility 72
3.123 Total Number of Cattle ('000') by District 74
3.124 Numbers of Cattle by Type and District 74
3.125 Cattle Population Trend 76
3.126 Improved Cattle Population Trend 76
3.127 Total Number of Goats ('000') by District 76
3.128 Goat Population Trend 78
3.129 Total Number of Sheep by District 78
3.130 Sheep Population Trend 80
3.131 Total Number of Pigs by District 80
3.132 Pig Population Trend 80
3.133 Total Number of Chicken by District 82
3.134 Chicken Population Trend 82
3.135 Number of Improved Chicken by Type and District 84
3.136 Improved Chicken Population Trend 84
3.137 Percentage of Livestock Keeping Households Reporting Tsetse flies and Ticks Problems by District 84
3.138 Percent of Livestock Rearing Households that Dewormed Livestock by Livestock Type and District 86
3.139 Percentage Distribution of Livestock Rearing Households by Quality of Livestock Extension Services 86
3.140 Number of Households by Distance to Veterinary Clinic 87
3.141 Number of Households by Distance to Veterinary Clinic and District 87
3.142 Number of Households by Distance to Village Watering Point 87
3.143 Number of Households by Distance to Watering Point and District 87
3.144 Number of Households using Draft Animals 87
3.145 Number of Households using Draft Animals by District 87
3.146 Number of Households using Organic Fertiliser 88

3.147 Area of Application of Organic Fertiliser by District 88
3.148 Number of Households Practicing Fish Farming – Shinyanga 88
3.149 Number of Households Practicing Fish Farming by District – Shinyanga 91
3.150 Fish Production 91
3.151 Agricultural Households by Type of Toilet Facility 92
3.152 Percentage Distribution of Households Owning the Assets 92
3.153 Percentage Distribution of Households by Main Source of Energy for Lighting 92
3.154 Percentage Distribution of Households by Main Source of Energy for Cooking 92
3.155 Percentage Distribution of Households by Type of Roofing Material 94
3.156 Percentage Distribution of Households with Grassy/Leafy Roofs by District 94
3.157 Percentage of Households by Main Source of Drinking Water and Season 94
3.158 Percentage of Households by Distance to Main Source of Water and Season 94
3.159 Number of Agriculture Households by Number of Meals per day 95
3.160 Number of Households by Frequency of Meat and Fish Consumption 95
3.161 Percentage Distribution of the Number of Households by Main Source of Income 97

List of Maps

3.1 Total Number of Agricultural Households by District 12
3.2 Number of Agricultural Households per Square Km of Land by District 12
3.3 Number of Crop Growing Households by District 13
3.4 Percent of Crop Growing Households by District 13
3.5 Number of Crop Growing Households per Square Kilometer of Land by District 14
3.6 Percent of Crop and Livestock Households by District 14
3.7 Utilized Land Area Expressed as a Percent of Available Land 22
3.8 Total Planted Area (annual crops) by District 22
3.9 Area planted and Percentage During the Dry Season by District 23
3.10 Area Planted with Cereals and Percent of Total Land Planted with Cereals by District 23
3.11 Planted Area and Yield of Maize by District 26
3.12 Area Planted per Maize Growing Household 26
3.13 Planted Area and Yield of Beans by District 27
3.14 Area Planted per Beans Growing Household 27
3.15 Planted Area and Yield of Sorghum by District 28
3.16 Area Planted per Sorghum Growing Household 28
3.17 Planted Area and Yield of Groundnuts by District 32
3.18 Area Planted per Groundnuts Growing Household 32
3.19 Planted Area and Yield of Tomato by District 33
3.20 Area Planted per Tomato Growing Household 33
3.21 Planted Area and Yield of Cassava by District 35
3.22 Area Planted per Cassava Growing Household 35
3.23 Planted Area and Percent of Planted Area with No Application of Fertilizer by District 49
3.24 Area Planted and Percent of Total Planted Area with Irrigation by District 49
3.25 Percent of households storing crops for 3 to 6 weeks by district 50
3.26 Number of Households and Percent of Total Households Selling Crops by District 50
3.27 Number of Households and Percent of Total Households Receiving Crop Extension Services by District 57
3.28 Number and Percent of Crop Growing Households using Improved Seed by District 57
3.29 Number and percent of smallholder planted trees by district 58
3.30 Cattle population by District as of 1st Octobers 2003 62
3.31 Cattle Density by District as of 1st October 2003 62
3.32 Goat population by District as of 1st Octobers 2003 63
3.33 Goat Density by District as of 1st October 2003 63
3.34 Sheep population by District as of 1st Octobers 2003 67
3.35 Sheep Density by District as of 1st October 2003 67
3.36 Pig population by District as of 1st Octobers 2003 68
3.37 Pig Density by District as of 1st October 2003 68
3.38 Number of Chickens by District as of 1st October 2003 69
3.39 Density of Chickens by District as of 1st October 2003 69
3.40 Number and Percent of Households Infected with Ticks by District 74
3.41 Number and Percent of Households Using Draft Animals by District 74
3.42 Number and Percent of Households Using Farm Yard Manure by District 75

3.43 Number and Percent of Households using Compost by District 75
3.44 Number and Percent of Households Practicing Fish Farming by District 77
3.45 Number and Percent of Households without Toilets by District 77
3.46 Number and Percent of Households using Grass/Leaves for roofing material by District 83
3.47 Number and Percent of Households eating 3 meals per day by District 83
3.48 Number and Percent of Households eating Meat Once per Week by District 84
3.49 Number and Percent of Households eating Fish Once per Week by District 84
3.50 Number and percent of Households Reporting food insufficiency by District 85

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

Shinyanga region is situated at the North of Tanzania between 2^0 and 3^0degrees below the Equator and $31^0 – 35^0$ degrees East of the Greenwich Meridian. Shinyanga shares borders with Mwanza Region to the North, Tabora and Singida regions to the South, Kigoma region to the West and the Arusha region to the East.

The region comprises eight districts namely Bariadi, Maswa, Kishapu, Shinyanga Rural, Shinyanga Urban, Meatu, Kahama, and Bukombe. The region headquarters is located in Shinyanga District.

1.3 Land Area

The region has an area of 19,483 square kilometers

1.4 Climate

1.4.1 Temperature

The dominant climate is tropical type of climate with clearly distinguished rainy and dry seasons. The average rainfall ranges from 600mm to 900mm. The rainy season usually starts between mid – October and December, and ends in May.

1.4.2 Rainfall

Shinyanga Region has a tropical type of Climate with clearly distinguished rainy and dry seasons. The average rainfall ranged from 600mm to 900mm. The rainy season usually starts between mid October and December and ends in May.

1.5 Population

According to the 2002 Population and Housing Census, there were 2,805,580 inhabitants in Shinyanga region. The population of Shinyanga region ranked 2nd of the 21 regions in Tanzania.

1.6 Socio - Economic Indicators

The Economy of Shinyanga is predominantly based on subsistence agriculture and livestock rearing. The regional Gross Domestic Product (GDP) at current prices for the year 2003 was estimated to be TShs 667,886 million with a per capita income of shillings 238,056. The region held 3rd position among regions on GDP and contributed about 6.80 percent to the national GDP[1]

[1] Hali ya Uchumi wa Taifa Katika Mwaka 2003

Shinyanga region has mineral deposits of Diamond and Gold situated at Mwadui Village and Kahama District Respectively.

The Main cash crops are cotton and tobacco while the main food crops are maize, paddy, sorghum, millet, Cassava, beans and sweet potatoes.

Livestock reared are Cattle, sheep and goats, with chicken mostly dominated by indigenous bread. Modern diary farming and poultry keeping are confined to urban centers.

Industrial activities mostly include cotton ginning, cotton seed oil extraction and small scale industries. Shinyanga Region is well served with communication network with the rest of the country by road and railway lines. There is an airport which is situated in shinyanga municipality.

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 237 villages were from Shinyanga 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 pre-testing 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 Arc View 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 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 this 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 the 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,,Shinyanga, 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 was 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 was 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 complexes 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

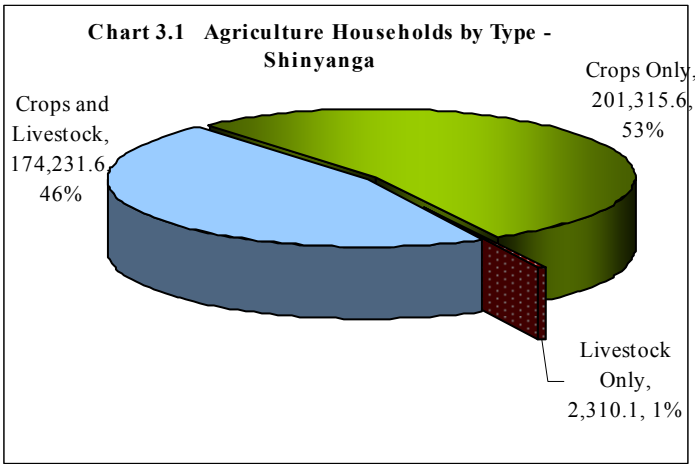
This part of the report presents the results of the census for Shinyanga region, based on the statistical tables presented in Appendix A2. The results are presented in different forms including brief summaries, charts, condensed tables, graphs and maps in order to make it easy for the users to understand.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

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Shinyanga region was 377,857. The largest number of agriculture households was in Kahama (81,217) followed by Bariadi (77,572), Bukombe (53,240), Shinyanga Rural (45,263) Maswa (43,252) Kishapu (35,624), Meatu (31,492) and Shinyanga Urban (10,198) (Map 3.1). Most households (201,316, 53.3%) were involved in growing crops only, 174,232 (46%) were involved in crop production as well as livestock keeping and 2,310 (0.6%) rearing livestock only (Chart 3.1) (Map 3.3, 3.4, 3.5 and 3.6).

Chart 3.1 Agriculture Households by Type - Shinyanga



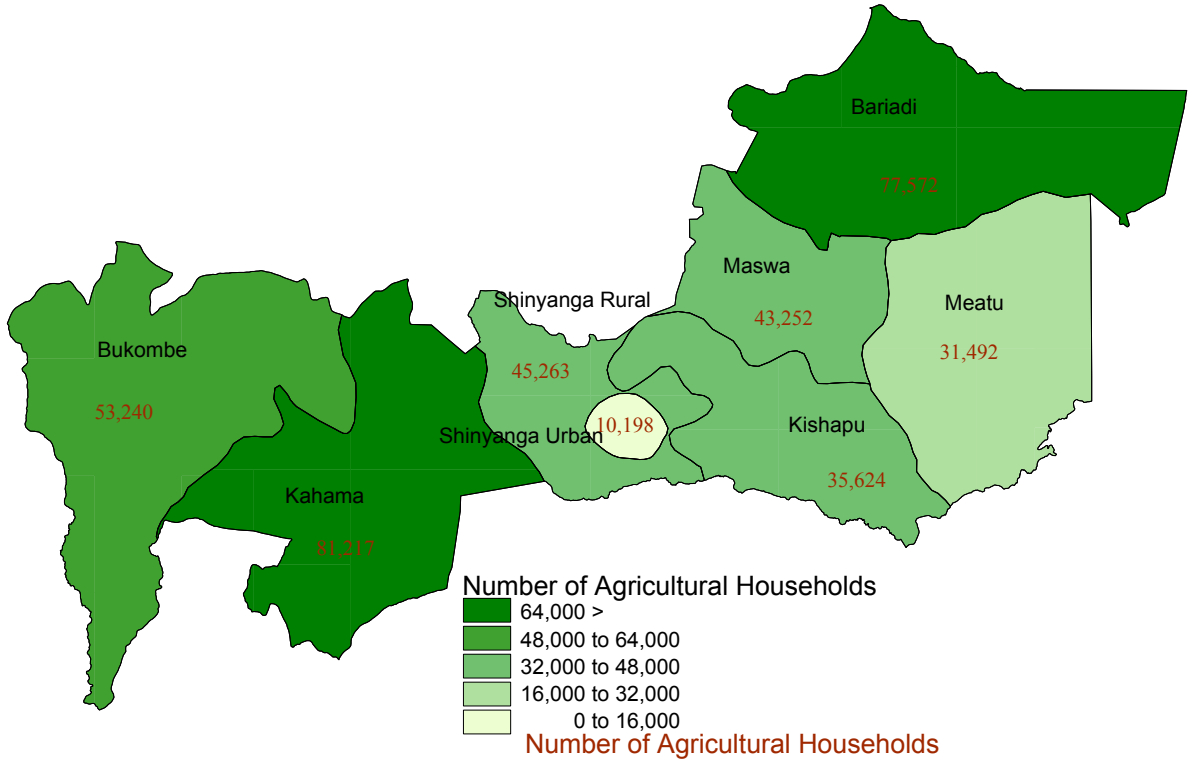
3.1.2 Livelihood Activities/Source of Income

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

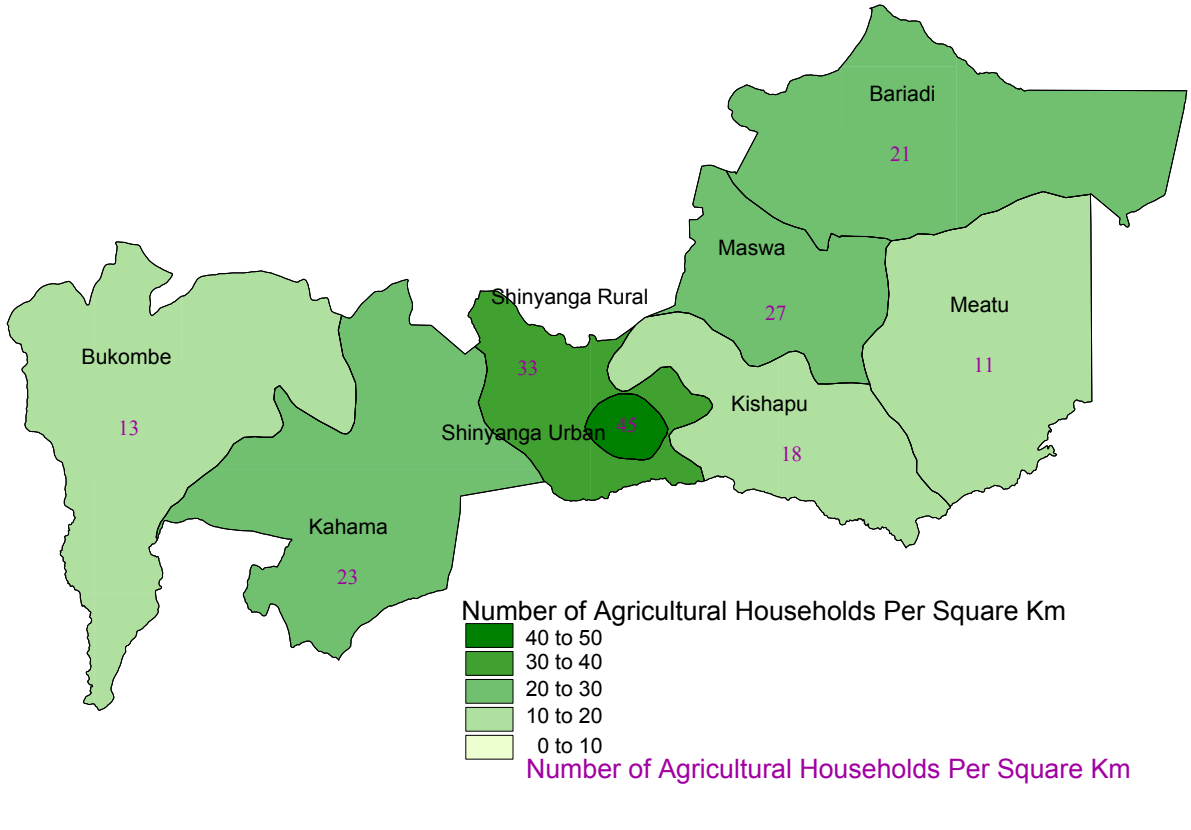
District	Livelihood Activity						
	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Bariadi	1	6	3	2	4	7	5
Maswa	1	4	2	3	6	7	5
Shinyanga Ru	1	4	3	2	5	7	6
Kahama	1	5	2	3	6	7	4
Bukombe	1	4	2	3	5	7	6
Meatu	1	6	2	3	5	7	4
Shinyanga Ur	1	4	2	3	5	7	6
Kishapu	1	6	2	4	5	7	3
Total	**1**	**5**	**2**	**3**	**6**	**7**	**4**

The census results for Shinyanga region indicates that most of the agricultural households in all districts ranked annual crop farming as an activity that contributes to most of their livelihood followed by Livestock Keeping and Off-farm income (Table 3.1). Other activities with low contribution to livelihood were Tree/forest resources (4), Permanent crop Farming (5), Remittances (6) and Fishing/ Hunting (7)

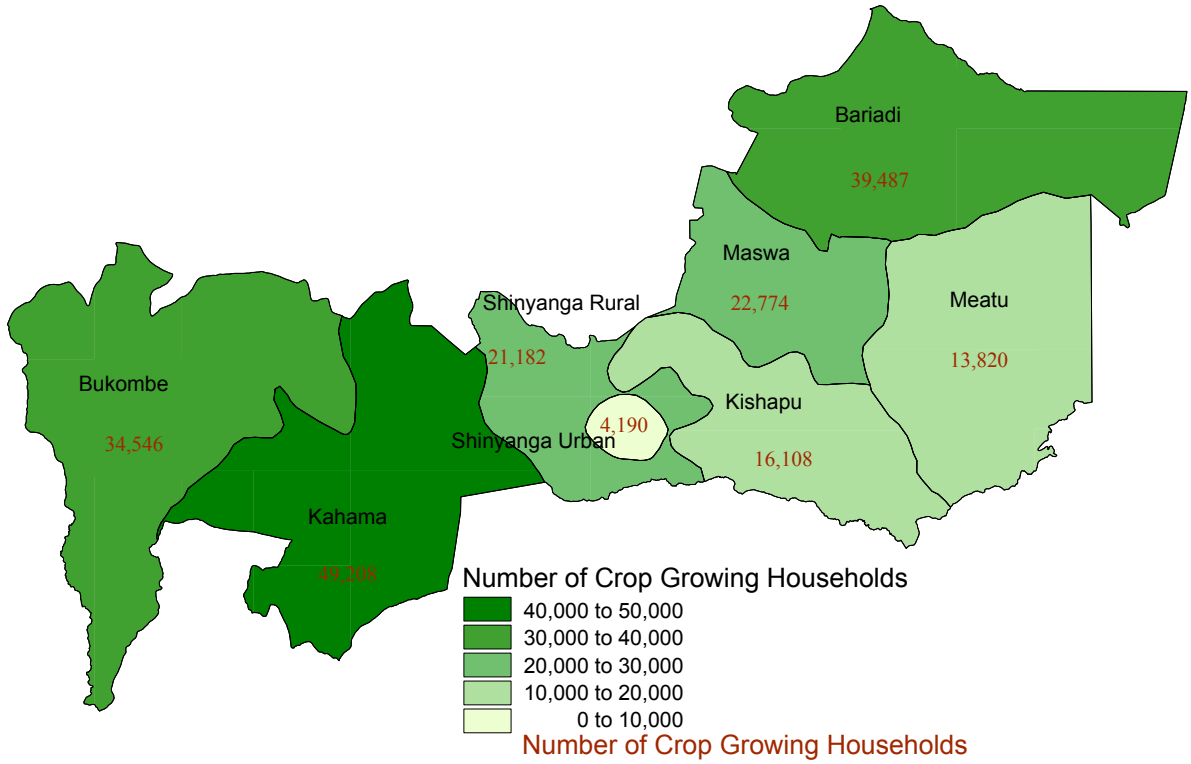
Map 3.01 SHINYANGA
Toatal Number of Agricultural Households by District



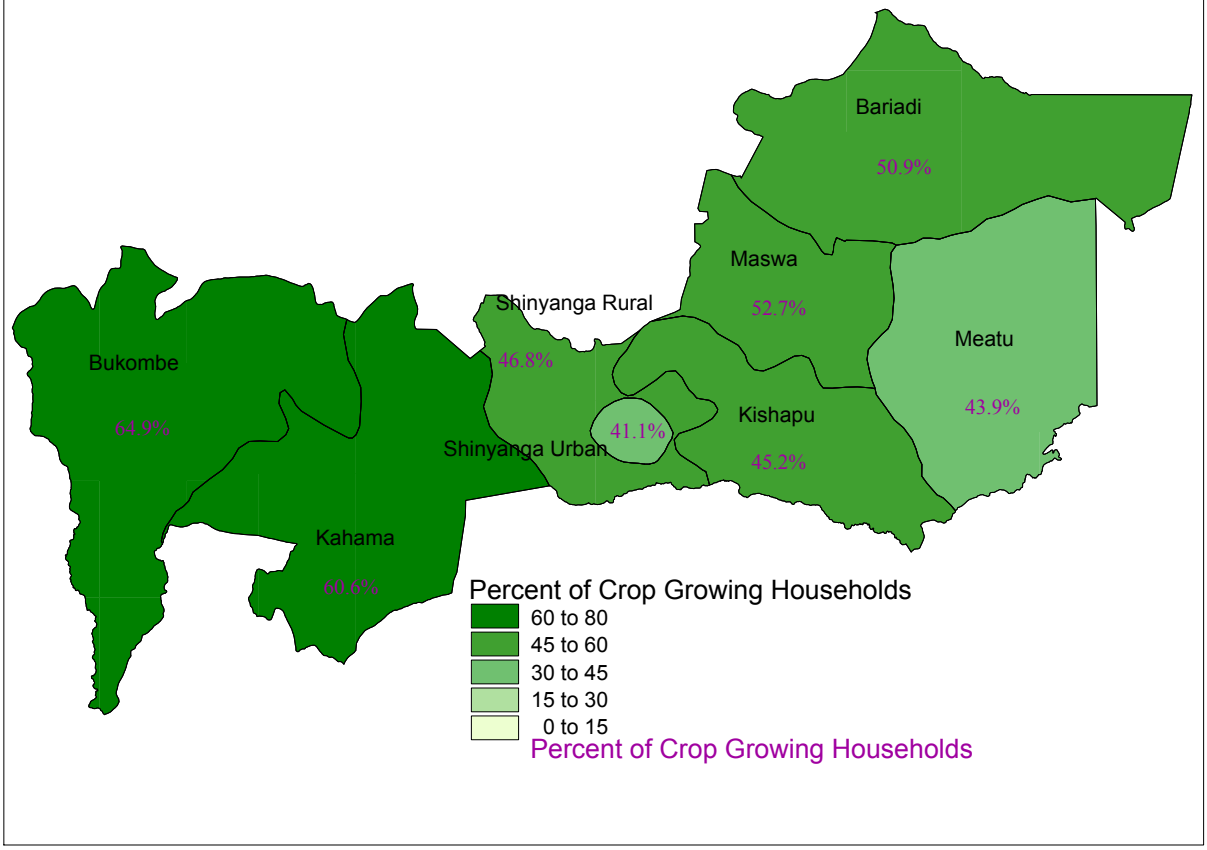
Map 3.02 SHINYANGA
Number of Agricultural Households Per Square Kilometer of Land by District



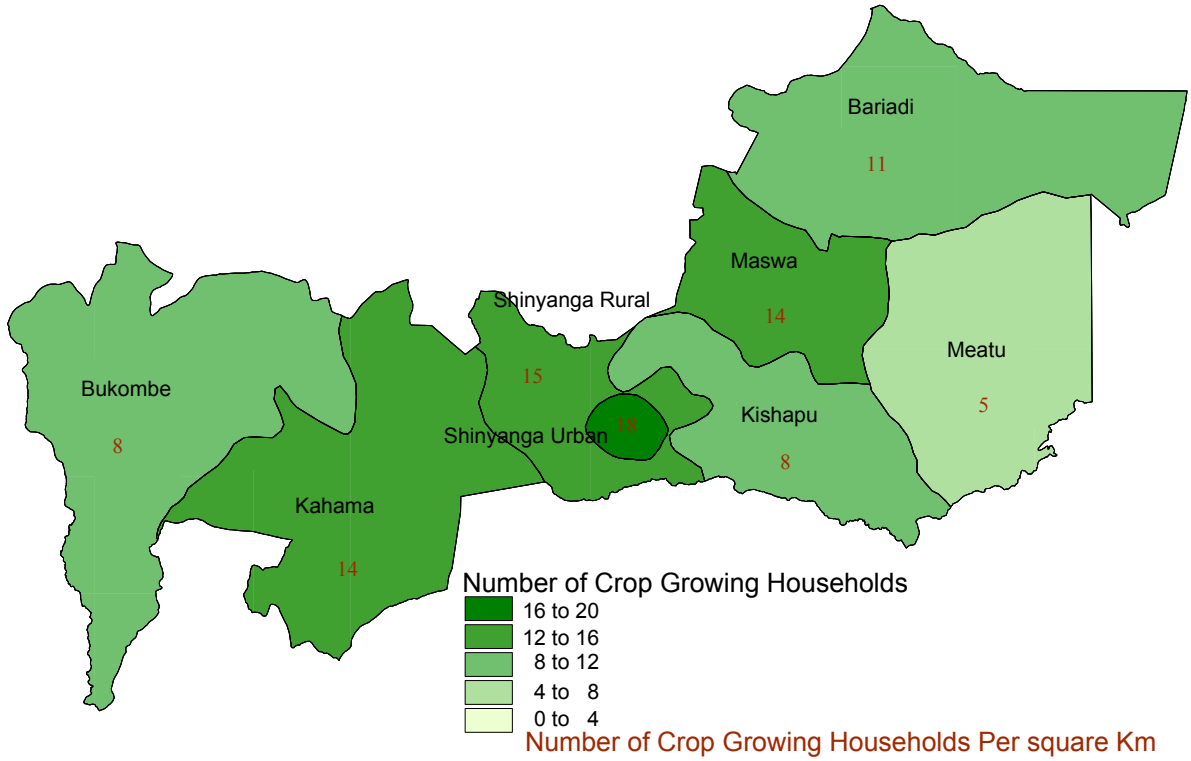
Map 3.03 SHINYANGA
Number of Crop Growing Households by District



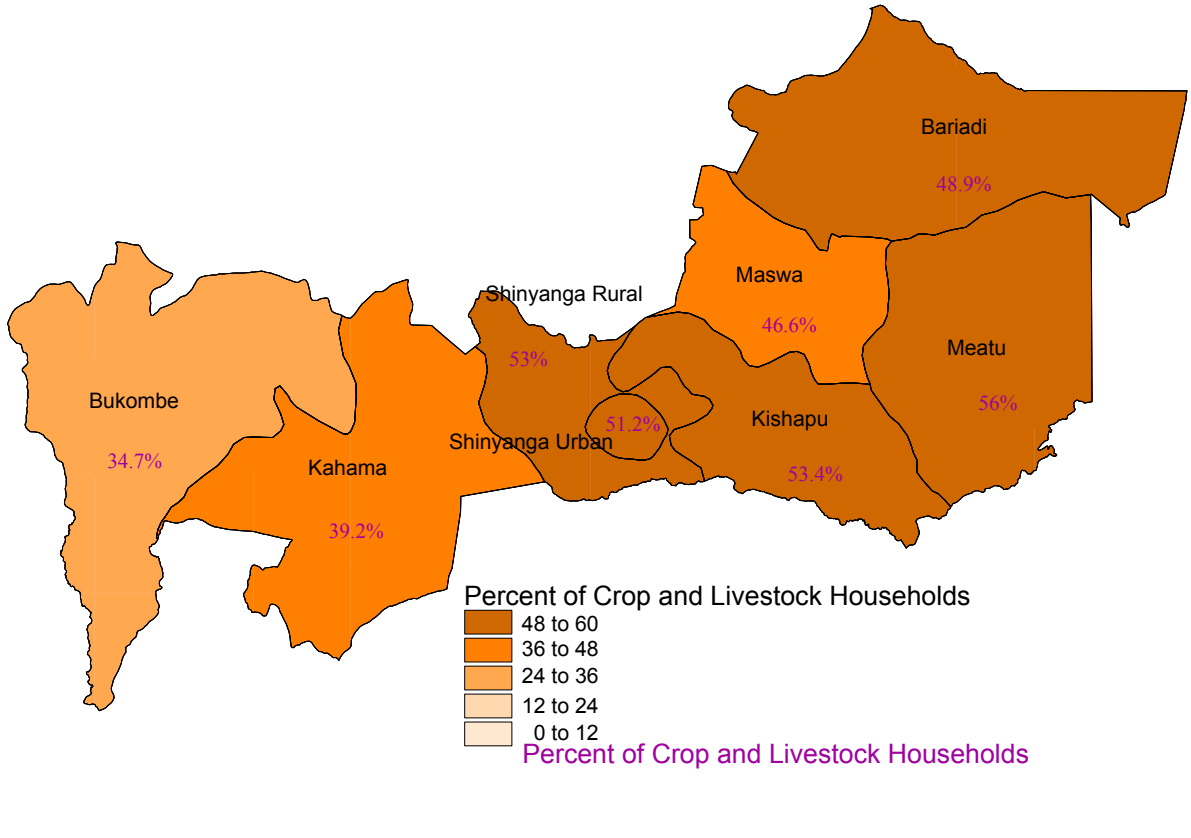
Map 3.04 SHINYANGA
Percent of Crop Growing Households by District



Map 3.05 SHINYANGA
Number of Crop Growing Households Per Square Kilometer of Land by District



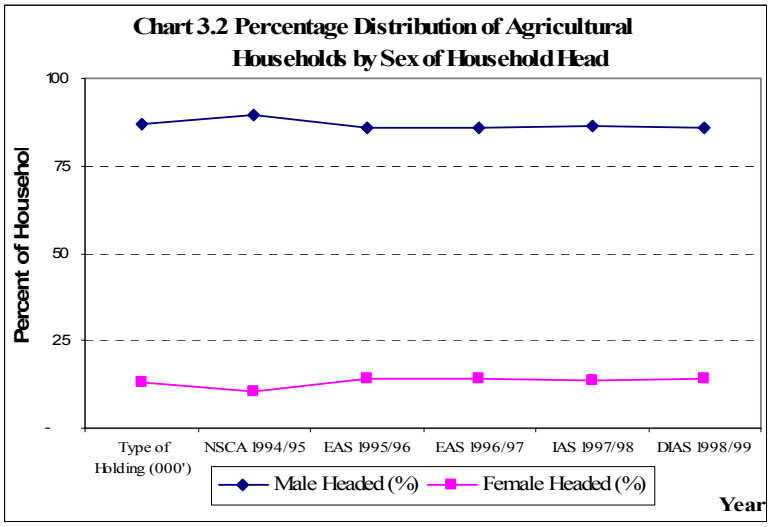
Map 3.06 SHINYANGA
Percent of Crop and Livestock Households by District



3.1.3 Sex and Age of Heads of Households

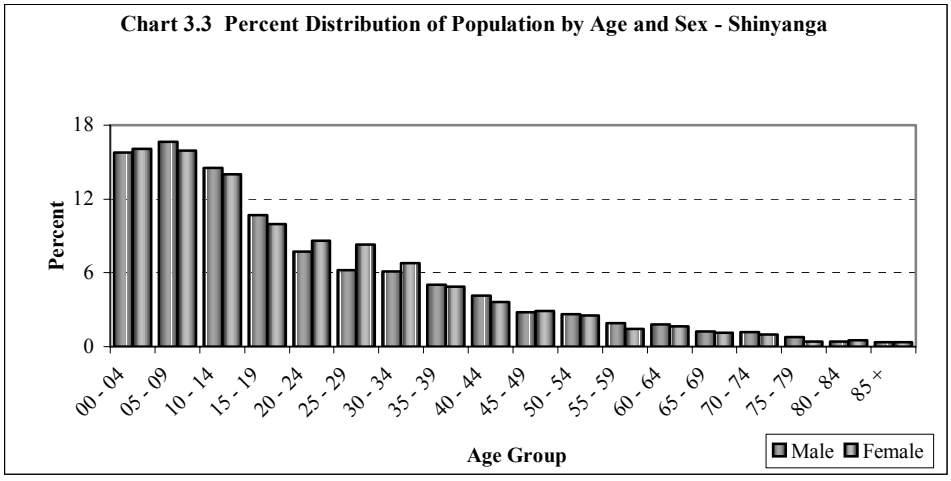
The number of male-headed agricultural households in Shinyanga region was 323,921 (86%) of the total regional agricultural households) whilst the female-headed households were 53,936 (14%) of the total regional agricultural households). The mean age for household heads was 46 years (42 years for male heads and 51 years for female heads) (Chart 3.2)

The percentage trend for six censuses/surveys 'years shows that there has been no significant change in the distribution of agricultural households between male and female headed households.



3.1.4 Number and Age of Household Members

Shinganga region had a total rural agricultural population of 2,426,406 of which 1,240,1827 (51%) were males and 1,186,224 (49%) were females. Whereas age group 0-14 constituted 46 percent of the total rural agricultural population, age group 15–64 (active population) was only 50 percent. Shinyanga region had an average household size of 4 with Shinyanga Urban district having the lowest household size of 5 (Chart 3.3).



3.1.5 Level of Education

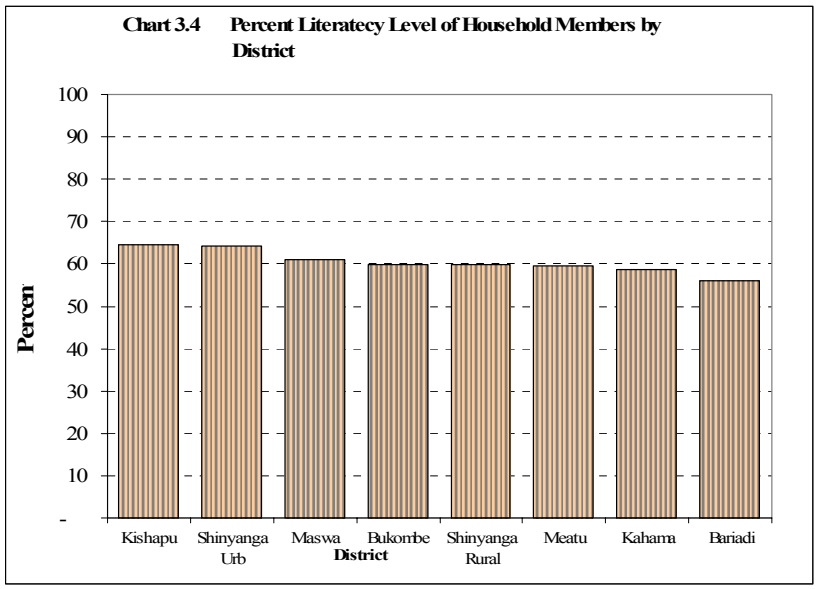
In order to obtain information on the level of education, information on literacy and education attainment were obtained for all persons aged five years and above in all households.

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 was based on the ability to read and write Swahili, English or both.

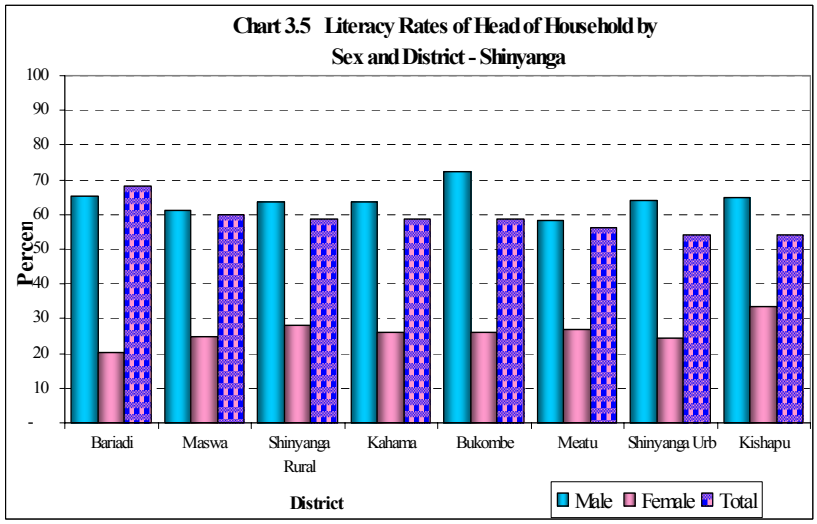
Literacy Level for Household Members

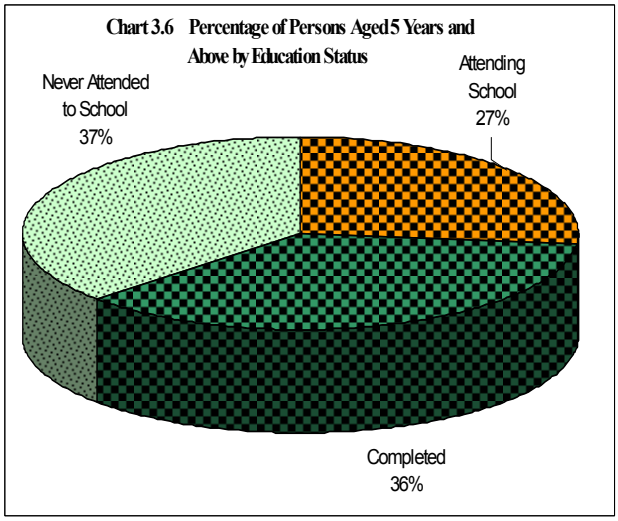
Shinyanga region had a total literacy rate of 59 percent. The highest literacy rate was found in Kishapu district (64.6%) followed by Shinyanga Urban district (64.2%) and Maswa district (61%). Bariadi and Kahama districts had the lowest literacy rates of 55 and 58 percent respectively (Chart 3.4).

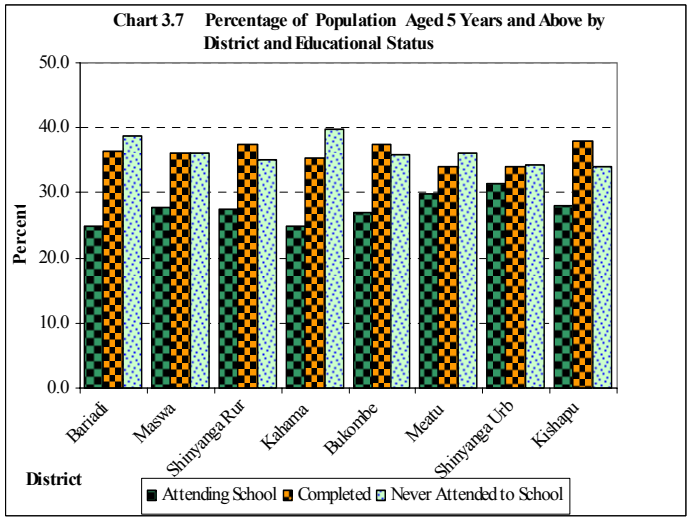


Literacy Rates for Heads of Households

The literacy rate for the heads of households in the region was 59 percent. The literacy rates for the male heads was 65 percent and that of female heads was 26 percent. Literacy rate of Male heads was higher than that of female heads in all districts. The district with the highest literacy rate amongst heads of households was Bariadi (68%) followed by Maswa (60%). Shinyanga Rural, Kahama and Bukombe had a literacy rate of 59%). The lowest literacy rates among heads of households were recorded in Kishapu (54%), Shinyanga Urban (54%) and Meatu (56%) districts (Chart 3.5).



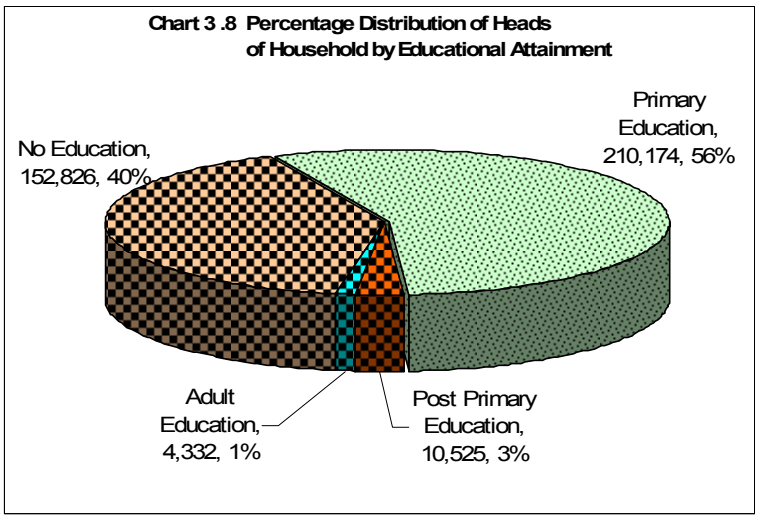




Educational Status

Information on educational status was collected from individual agricultural households. The results show that 36 percent of the population aged 5 years and above in agricultural households in the region had completed different levels of education and 27 percent were still attending school. Those who have never attended school were 37 percent (Chart 3.6).

Agricultural households in Kishapu district had the highest percentage (38%) of population aged 5 years and above who had completed different levels of education. This was followed by Shinyanga Rural and Bukombe districts with 37.4 and 37.3 percent respectively. Meatu and Shinyanga Urban districts had the lowest percentages of 34.1 and 34.2 respectively (Chart 3.7).

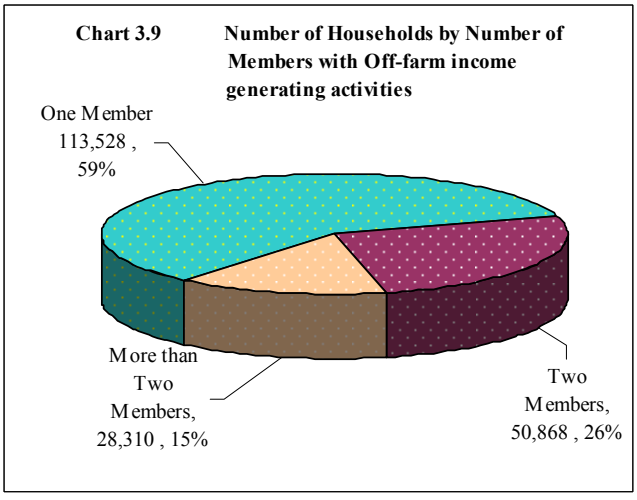


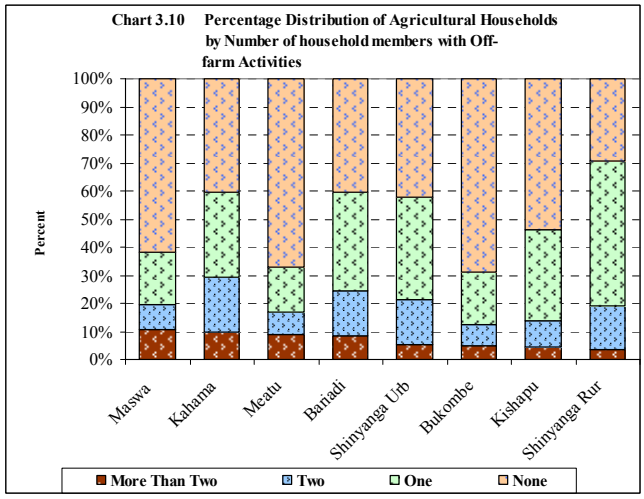
The number of heads of agricultural households with Primary education in Shinyanga region was 210,174 (56%), those with Post Primary education were 10,525 (3%) and those with only adult education were 4,332 (1%). The number of those who were reported to have no education at all was 152,825 (40%) (Chart 3.8).

With regard to the heads of agricultural households with no education in Shinyanga Region, Kahama district had the highest percentages (22.6%). This was followed by Bariadi (20%), Maswa (13%), Shinyanga Rural (12%) and Bukombe, Meatu, Kishapu, both with (10%) of agricultural households with no education. The least number of households with no education was found in Shinyanga Urban (3%).

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. In Shinyanga region 112,528 households (59%) had only one member aged 5 and above involved in off-farm income generating activity, 50,868 households (26%) had two members involved in off-





farm income generating activities and 28,310 households (15%) had more than two members involved in off-farm income generating activities (Chart 3.9).

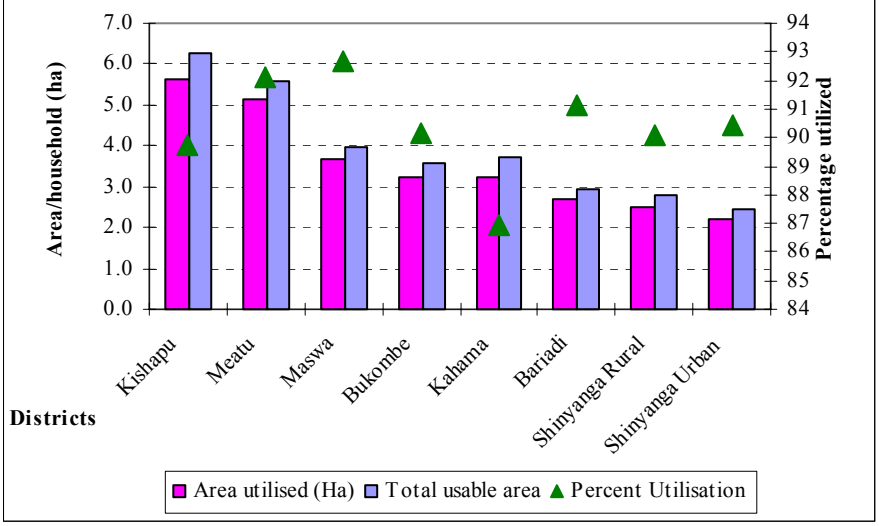
Shinyanga Rural district had the highest percentage of agriculture households with off-farm income (over 70% of total agriculture households in the district). Other districts with high percents of agriculture households with off-farm income were Kahama (60%), Bariadi (85%) and Shinyanga Urban (58%). Bukombe and Meatu districts had the lowest percent of agriculture households with off-farm income (31% and 33% respectively). The district with the highest percent of agriculture households with more than one member with off-farm income was Kahama (30%). Kishapu and Bukombe districts had very few households with more than one member having off-farm income (14% and 13% respectively) (Chart (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 it in one year. Planted area is the total area of crops planted in a year and the area is summed if there were more than one crop on the same land per year. A number of terms are used in this section which requires defining for clarification as follows:

Land available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does NOT mean the total area of land that is designated as agriculture land in the country; but 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.

Chart 3.11 Utilized and Usable Land per Household by District



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

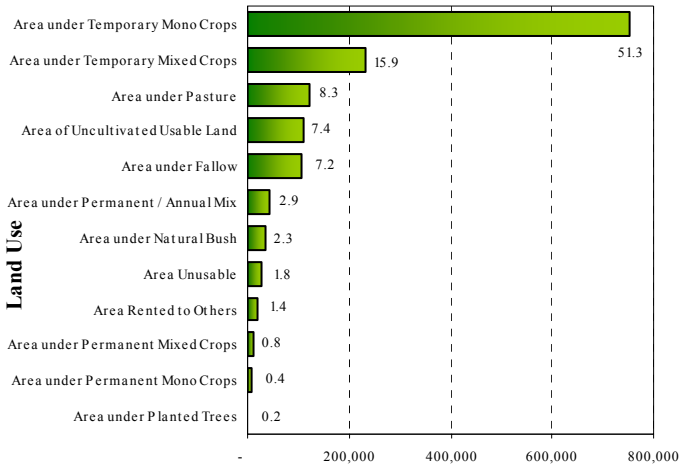
The total area of land available to smallholders was 1,468,142 ha. The regional average land area utilised for agriculture per household was 3.4 ha. This figure is above the national average which is estimated at 2.0 hectares. About ninety percent of the total land available to smallholders was utilised. Only 7.5 percent of usable land available to smallholders was not used (Chart 3.11 and Map 3.7).

There were large differences in land area utilised per household between districts with Kishapu and Shinyanga Urban utilizing between 5.6 and 2.2 ha per household. The percentage utilized of the usable land per household was highest in Maswa (93%) and lowest in Kahama (87%).

3.2.2 Types of Land Use

The area of land under temporary monocrop was 753,616 hectares (51% of the total land available to smallholders in Shinyanga), followed by temporary mixed crops (233,347 ha, 16%), area under pasture (121,381 ha, 8%), area of uncultivated usable land 108,572 ha, 7%) and area under fallow 105,297 ha 7%. The area under permanent mono and permanent mixed crops was very small about 1% of the total land area. (Chart 3.12)

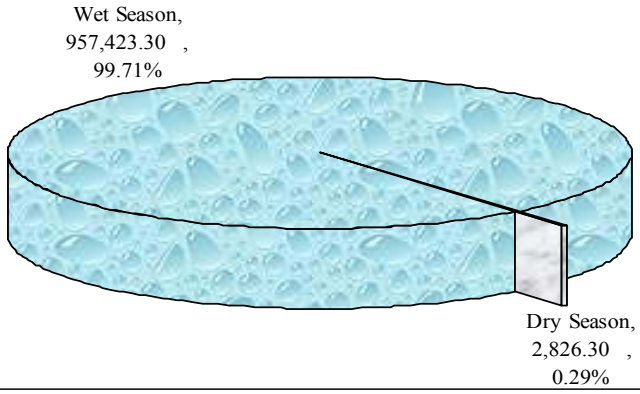
Chart 3.12 Land Area by Type of Use



3.3 Annual Crop and Vegetable Production

Shinyanga region has a unimodal rainfall pattern with the rain starting in November and ending in March. With the exception of some irrigated annual crops and vegetables grown in the dry season, the rest of the crops are grown during the wet season. The quantity of crops produced in both seasons will be used as a basis for comparison with the past surveys and censuses.

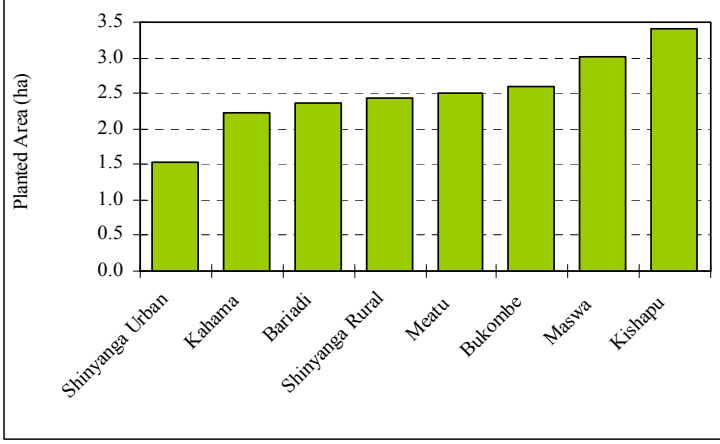
Chart 3.13 Area Planted with Annual Crops by Season (Hectares)



3.3.1 Area Planted

The area planted with annual crops and vegetables was 960,250 hectares out of which 957,423 hectares (99.71%) were planted during Wet season and 2,826 hectares (0.29%) during Dry season. The Wet Season is the most important agricultural season in the region for agricultural productivity. Because of this, the analysis in this report will be restricted to the information on Wet season, (Chart 3.13). The average area planted per household was 2.5 ha (Chart 3.14).

Chart 3.14 Average Area Planted per household by District

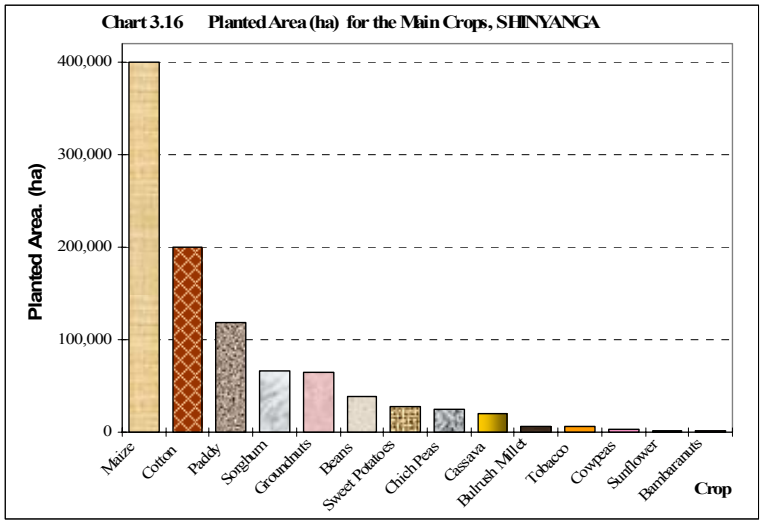


The districts with the largest area planted per household were Kishapu (3.4 ha) followed by Maswa (3.0 ha), Bukombe (2.6 ha), Meatu (2.5 ha), Shinyanga Rural (2.4 ha), Bariadi (2.4 ha) and Kahama (2.2 ha). The district with the smallest average area planted per household was Shinyanga Urban (1.5 ha).

The crop type with the largest planted area was cereals 591,416 ha (62% of the total area planted with annuals). This was followed by cash crops (205,020 hectares, 21%), oil Seeds and oil nuts (66,153 hectares, 6.7%), pulses (48,130 hectares, 5%), roots and tubers (48,081 hectares, 5%) and fruit and vegetables (1,421 hectares, 0.1%).

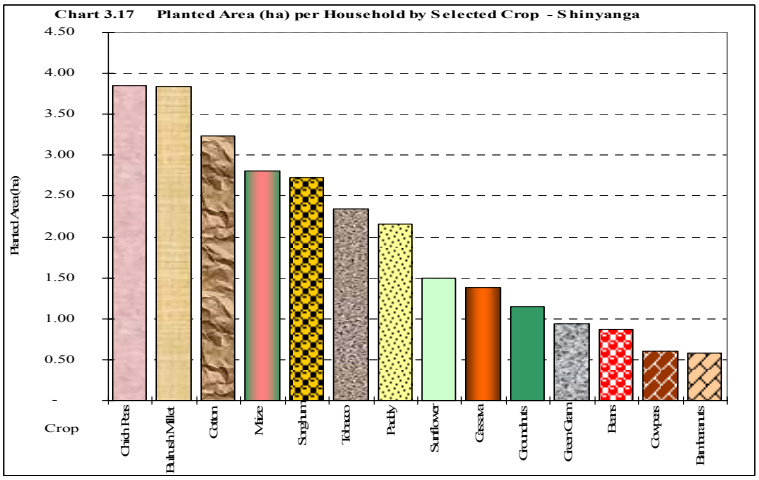
Analysis of the Most Important Crops

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 of production based on crop types.

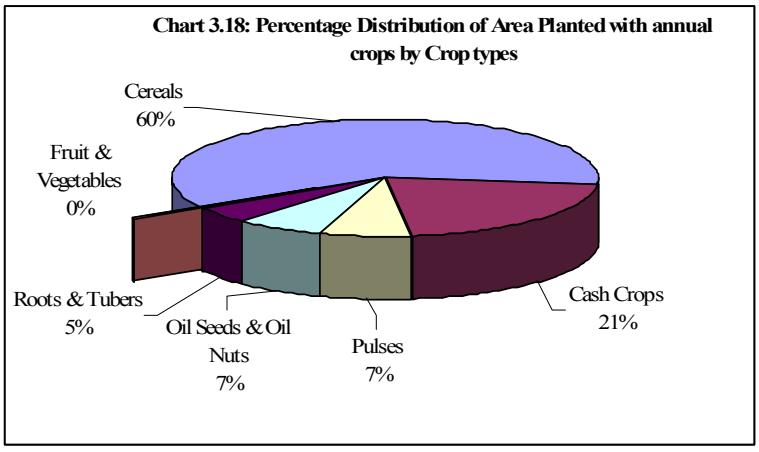


3.3.2 Crop Importance

Maize was the dominant food crop grown in Shinyanga region and it had a planted area 3.4 times greater than Paddy. The area planted with maize constitutes 41.7 percent of the total area planted with annual crops in the region.



Other annual crops in order of their relative importance in the region (based on area planted) include Cotton 199,390 ha, Sorghum 65,917 ha, Groundnuts 64,355 ha, and Beans 38,944 ha. Other crops planted in Shinyanga Region were Sweet Potatoes 27,601 ha, Chick Peas 23,933 ha, Cassava 19,235 ha, Bulrush Millet 6,024 ha, Tobacco 5,630 ha, Cowpeas 3,376 ha, Green Gram 2,898 ha, Sunflower 1,434 ha, Bambaranuts 1,382 ha. A small amount of Yams 641 ha, Irish Potatoes 562 ha, Tomatoes 524 ha, Simsim 364 ha, Finger Millet 289 ha, Onions 57 ha, Egg Plant 203 ha, Radish 199 ha, Cabbage 104 ha, Amaranths 74 ha, Mung Beans 64 ha, Cocoyam 41 ha, Pumpkins 26 ha,



Cucumber 23 ha and Chillies 10 ha are also grown in the region (Chart 3.16). Other annual crops are grown in minor quantities.

Chart 3.17 shows the area planted per household growing selected crops. Households that grew Chick Peas, Bulrush Millet and Cotton have a larger planted area per household than those growing other crops. Vegetable crops have smaller planted areas per household than cereals, roots and tubers and oilseed crops.

3.3.3 Crop Types

Cereals are the main crops grown in Shinyanga region. The area planted with cereals was 591,416 ha (60% of the total planted area), followed by Cash Crops with 205,898 ha (21%), Pulses 67,809 ha (6.9%), Oil Seeds & Nuts 66,153 (6.8%) and Roots and Tubers 48,081 ha (4.9%). Fruits and Vegetables were scarcely grown in Shinyanga, having 1,421 ha 0.1 % of the total Planted Area. The main cash crop was cotton but a small amount of tobacco (5,630 ha) was also grown (Chart 3.18).

Almost all crops are grown in the wet season and only a few crops are also grown in dry season. The dry season production was therefore very small, it is inappropriate to make detailed comparisons between the two seasons.

3.3.4 Cereal Crop Production

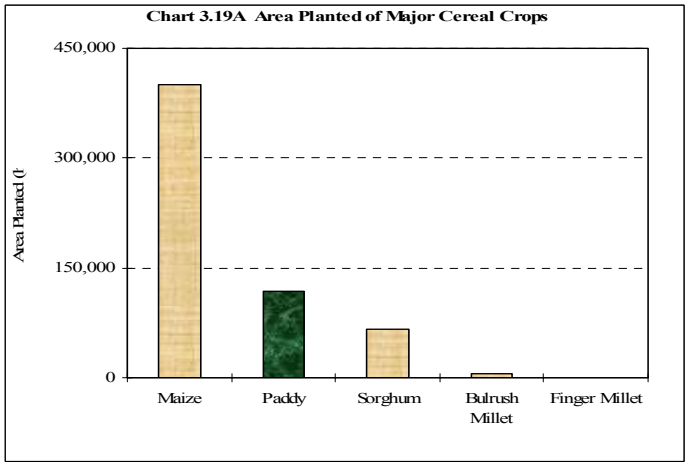
Table 3.2: Area, Production and Yield of Cereal Crops by Season

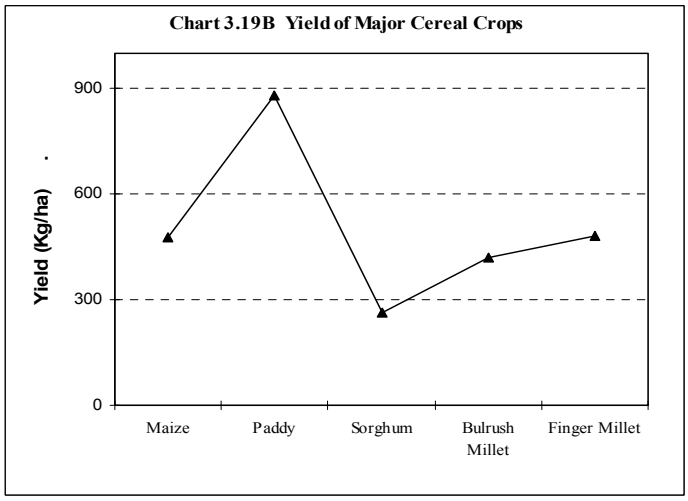
Crop	Dry Season			Wet Season			Total		
	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Maize	1,541	647	420	398,729	190,755	478	400,270	191,402	478
Paddy	244	439	1,802	118,673	104,408	880	118,916	104,847	882
Sorghum	63	14	228	65,854	17,255	262	65,917	17,269	262
Bulrush Millet	26	38	1,482	5,998	2,491	415	6,024	2,530	420
Finger Millet	0	0	0	289	139	481	289	139	481
Total	**1,873**	**1,139**		**589,543**	**315,047**		**591,416**	**316,187**	

The total production of cereals was 316,187 tonnes. Maize was the dominant cereal crop at 191,402 tonnes which was 61 percent of total cereal crops produced, followed by paddy 104,847 tonnes (33%), sorghum 17,269 tonnes (5%), Bulrush Millet (0.8%) and finger millet (0.04%).

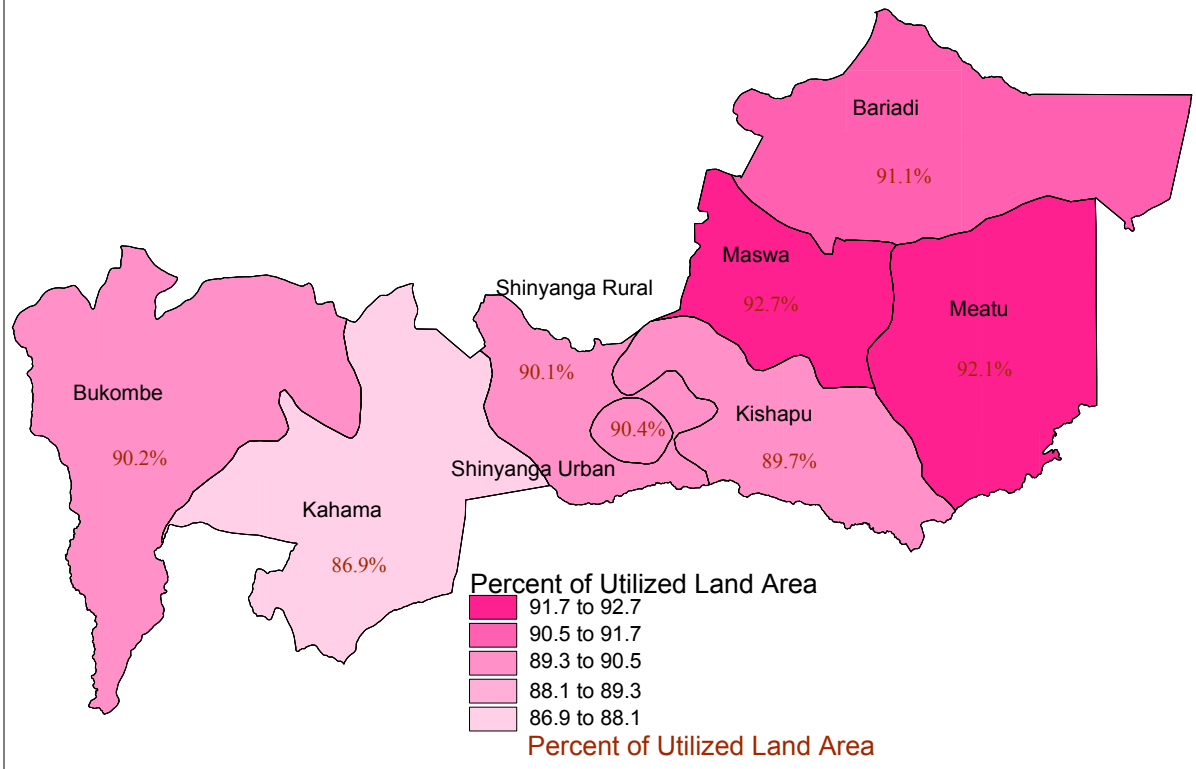
The total area planted with cereals during the year was 591,416 ha, of which 589,543 ha (99.7%) was planted during the wet season and 1,873 ha (0.3%) was planted in dry season. The Wet season accounts for 99.6 percent of the total cereals produced in both seasons. Maize was dominant and it represented 67.6 percent of the total area planted with cereal crops, then followed by Paddy (20%), sorghum (11%), bulrush millet (1%) and finger millet (0.4%) (Chart 3.19A, Table 3.2).

The yield of paddy was 882 kg/ha, followed by Finger Millet 481Kg/ha, Maize 478Kg/ha, Bulrush Millet 430kg/ha and Sorghum 262 kg/ha, (Chart 3.19B).

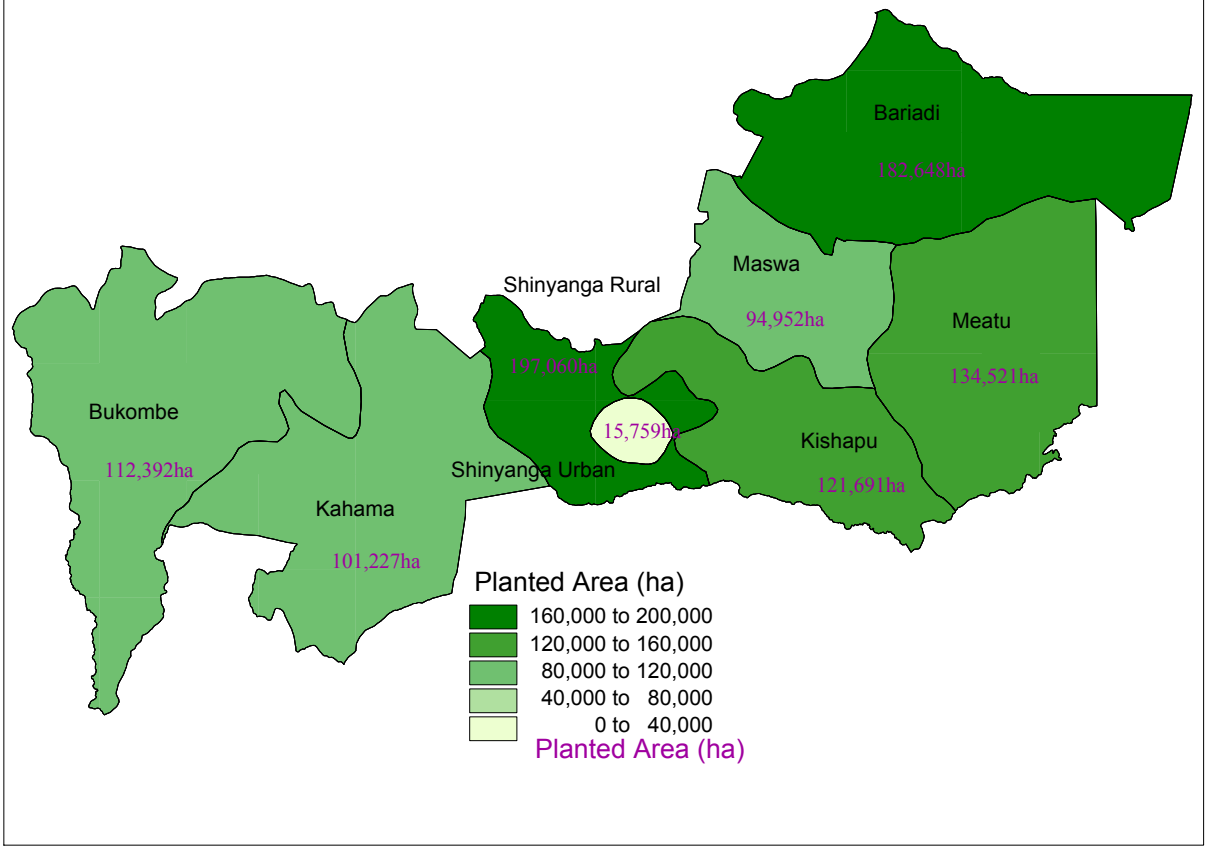




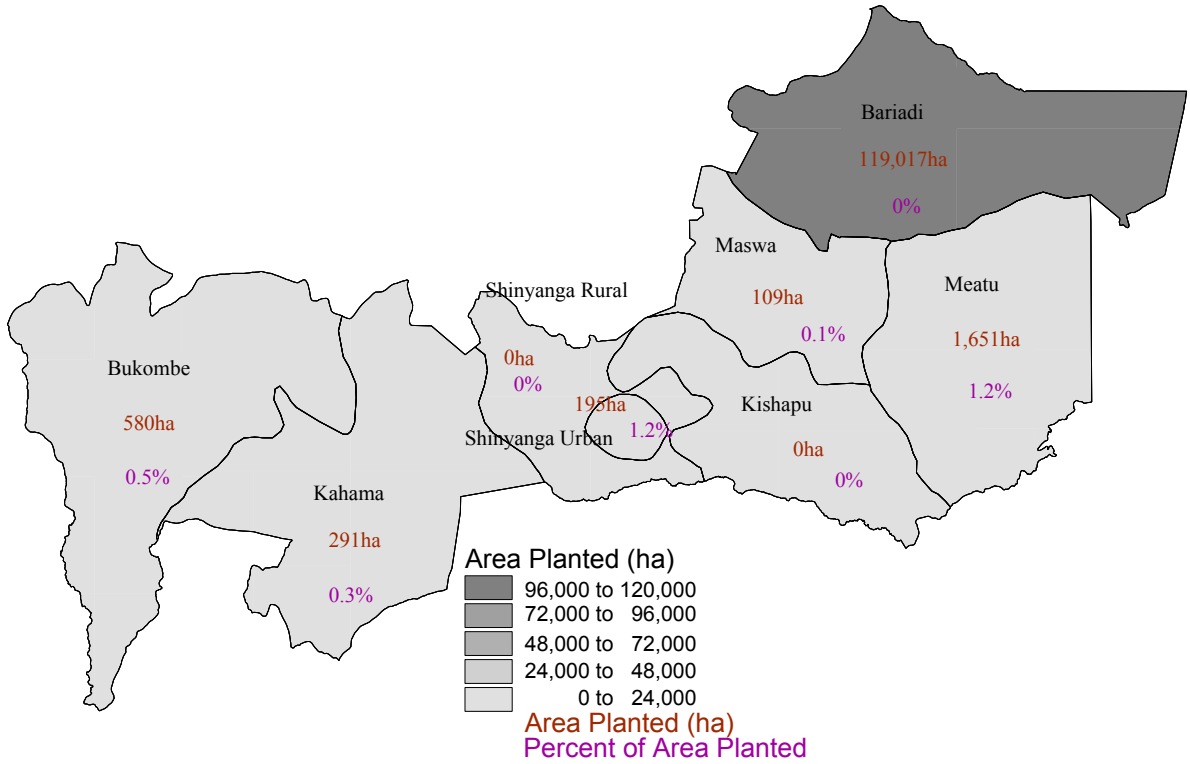
Map 3.07 SHINYANGA
Utilized Land Area Expressed as a Percent of Available Land by District



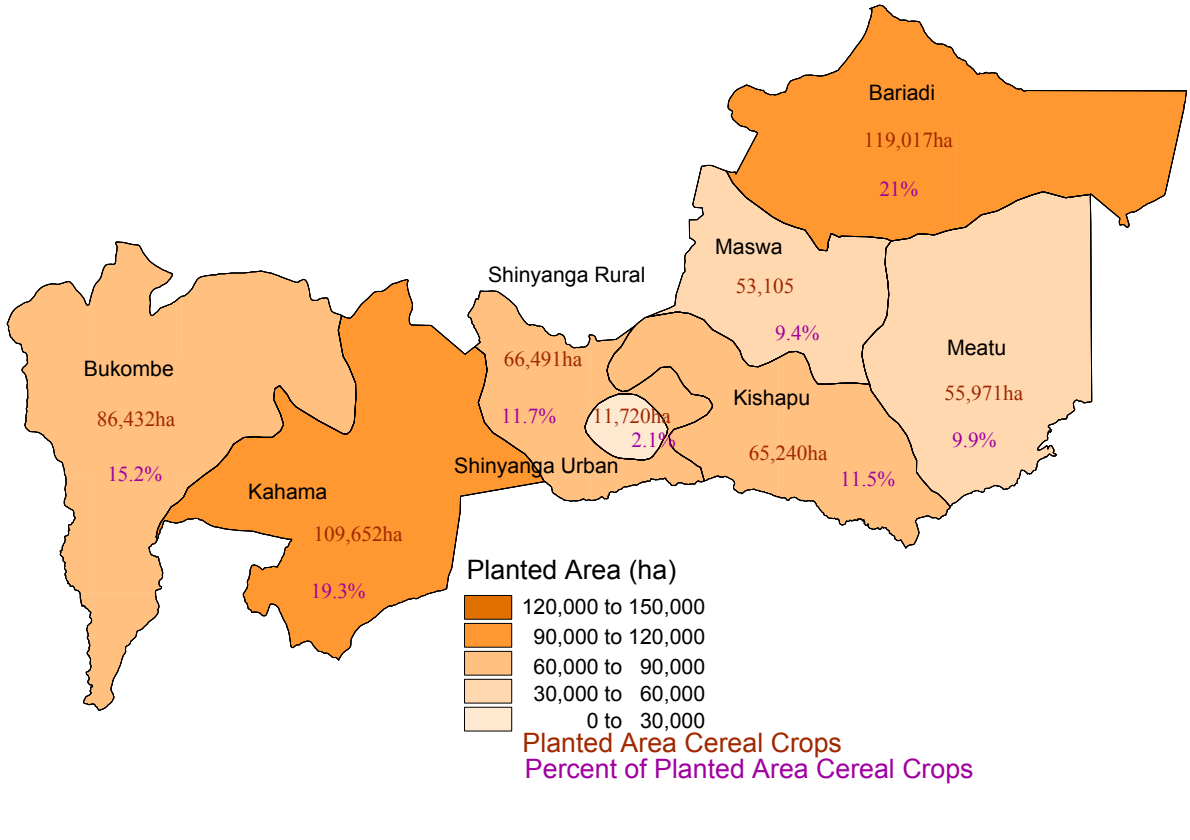
Map 3.08 SHINYANGA
Total Planted Area With Annual Crops by District



Map 3.09 SHINYANGA
Area planted and Percentage
During the Short Rainy Season
by District

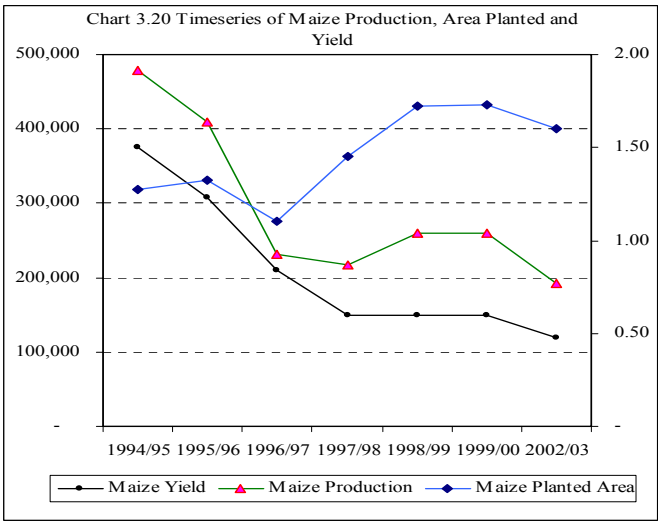


Map 3.10 SHINYANGA
Area Planted with Cereals and
Percent of Total Land Planted
With Cereals by District

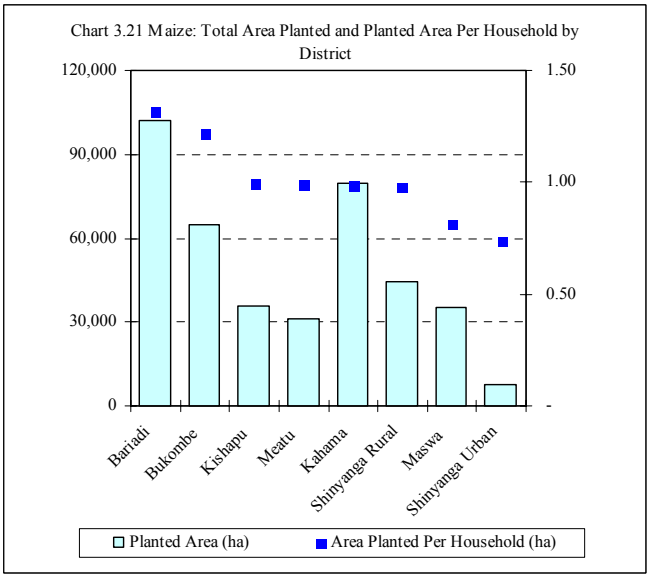


Maize

Maize dominates the production of cereal crops in the region. The number of households growing maize in Shinyanga region during the wet season was 351,234 (93.7% of the total number of households growing annual crops in the region during the wet season). The total production of maize was 191,402 tonnes from a planted area of 400,270 hectares resulting in a yield of 0.48 t/ha. Chart 3.20 presents the maize production trend.



The yield declined over the entire eight year period from 1995 to 2003. Alongside the decrease in yield the production also more or less declined over the entire period except in 1999 when production increased somewhat and remained the same level up to the year 2000 before declining over the remaining period up to the year 2003. The mentioned increase in production was due to a substantial increase in the planted area over the period 1997 to 2000 after which it also declined over the remaining period up to the year 2003, (Chart 3.20).



The average area planted with maize per household was 1.1 hectares; however it ranged from 0.7 hectares in Shinyanga Urban district to 1.31 hectares in Bariadi district (Map 3.11). Bariadi had the largest planted area of maize (101,952 ha) followed by Kahama (79,905 ha), Bukombe (64,833 ha), Shinyanga Rural (44,228 ha), Kishapu (35,496 ha), Maswa (35,159), Meatu (31,192) and Shinyanga Urban (7,505 ha) (Chart 3.21 and Map 3.12)

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3.3.4.1 Paddy

Paddy was the Second dominant cereal crop in terms of production in the region. The number of households growing Paddy in Shinyanga region during the wet season was 136,046 (36% of the total households growing annual crops in the region during the wet season). The total production of Paddy was 104,847 tonnes from a planted area of 118,916 hectares resulting in a yield of 0.88 t/ha.

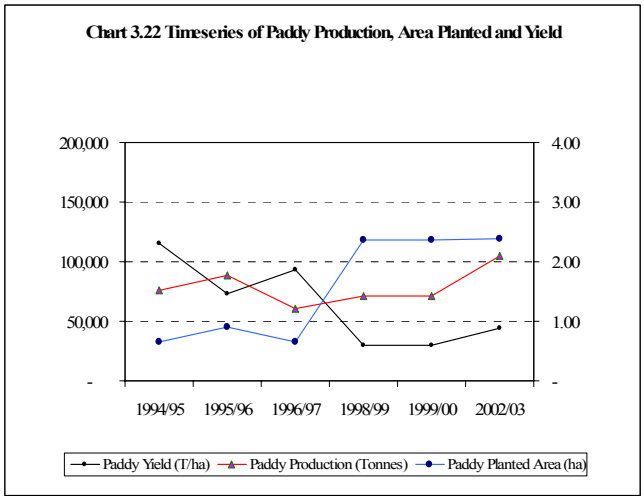
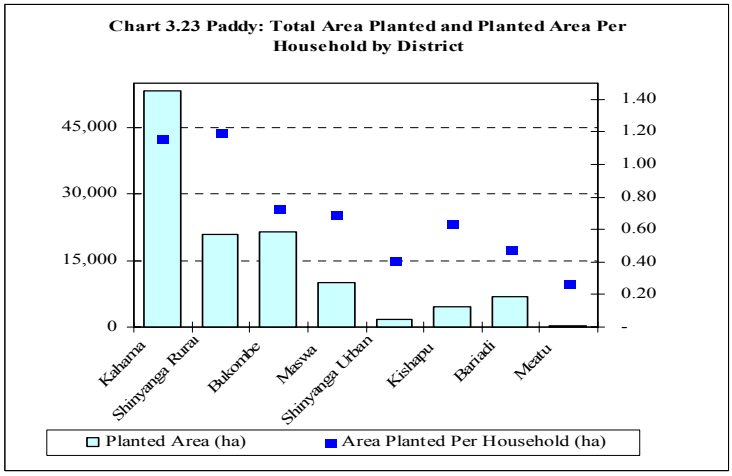


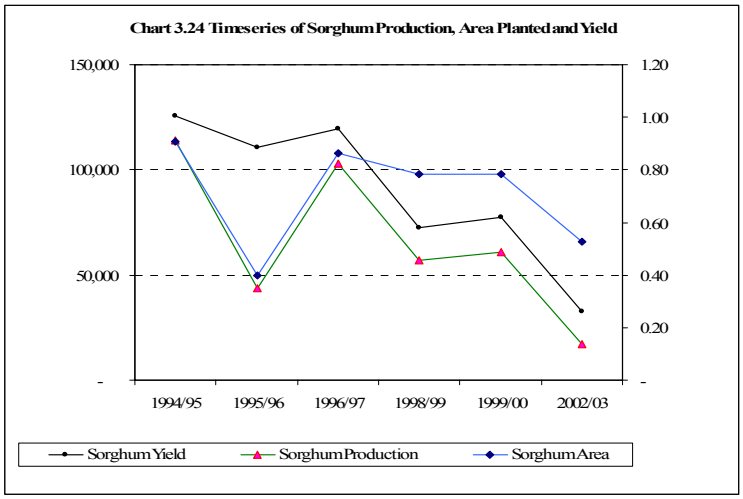
Chart 3.22 presents Paddy production trend. The chart shows that there was a decrease in Paddy production over the period 1996 to 1997, after which the production stabilized over the period 1997 to 2000. Production gradually increased sharply over the period 2000 to 2003 (Chart 3.22).

Chart 3.22 also shows that the planted area of Paddy increased sharply between 1997 and 1998 and has remained almost constant since then. Conversely, the yield declined constantly between 1994 and 2002 and has remained at this low level since then.

Whilst Chart 3.22 shows that, there has been a slight increase in the production of Paddy over the last 10 years, this can be explained by the increase in the planted area. (Chart 3.22).

The average area planted with Paddy per household was 0.87 hectares; however it ranged from 1.19 hectares in Shinyanga Rural district to 0.27 hectares in Meatu district (Map 3.11). Kahama had the largest planted area of Paddy (53,283 ha) followed by Bukombe (21,371 ha), Shinyanga Rural (20,937 ha), Maswa (9,975 ha), Bariadi (6,914 ha), Kishapu (4,459 ha), Shinyanga Urban (1,628 ha) and Meatu (349 ha) (Chart 3.23 and Map 3.12).

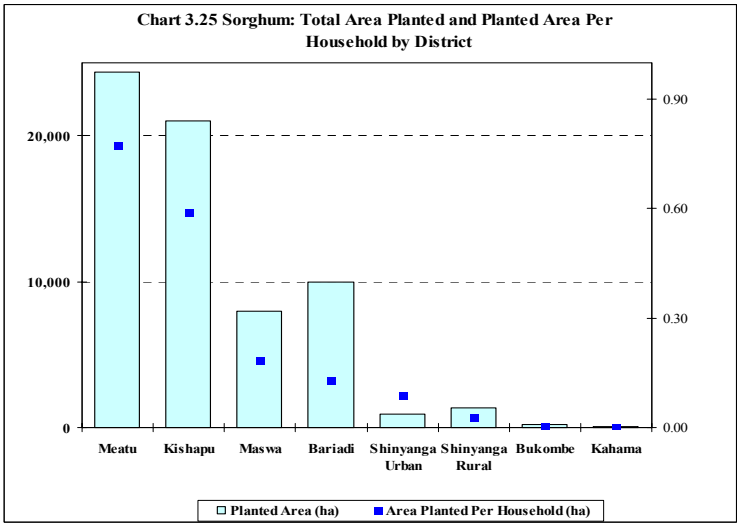




3.3.4.3 Sorghum

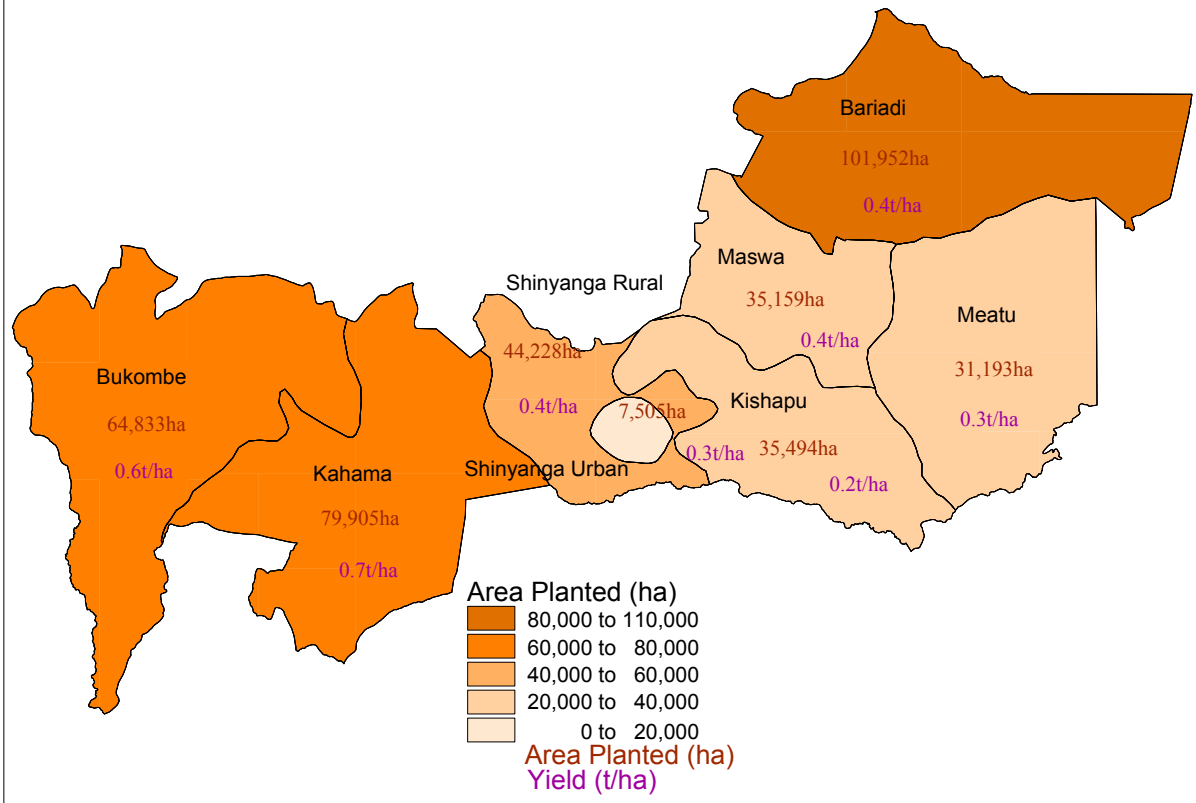
Sorghum was the third most important cereal crop in the region in terms of planted area. The number of households that grew sorghum in Shinyanga region during the wet season was 59,619. This represented 16 percent of the total households growing annual crops in Shinyanga region during the wet season. The total production of sorghum was 17,269 tonnes from a planted area of 65,917 hectares resulting in a yield of 0.26 t/ha.

The district with the largest planted area of sorghum was Meatu (24,353 ha) followed by Kishapu (21,030 ha), Bariadi (9,971 ha) and Maswa (7,950 ha) (Map 3.15). The Largest planted area per household for sorghum was found in Meatu (0.77 ha) and Kishapu (0.59 ha). Shinyanga Rural had the smallest planted area per household (0.03 ha) (Chart 3.25 and Map 3.16).

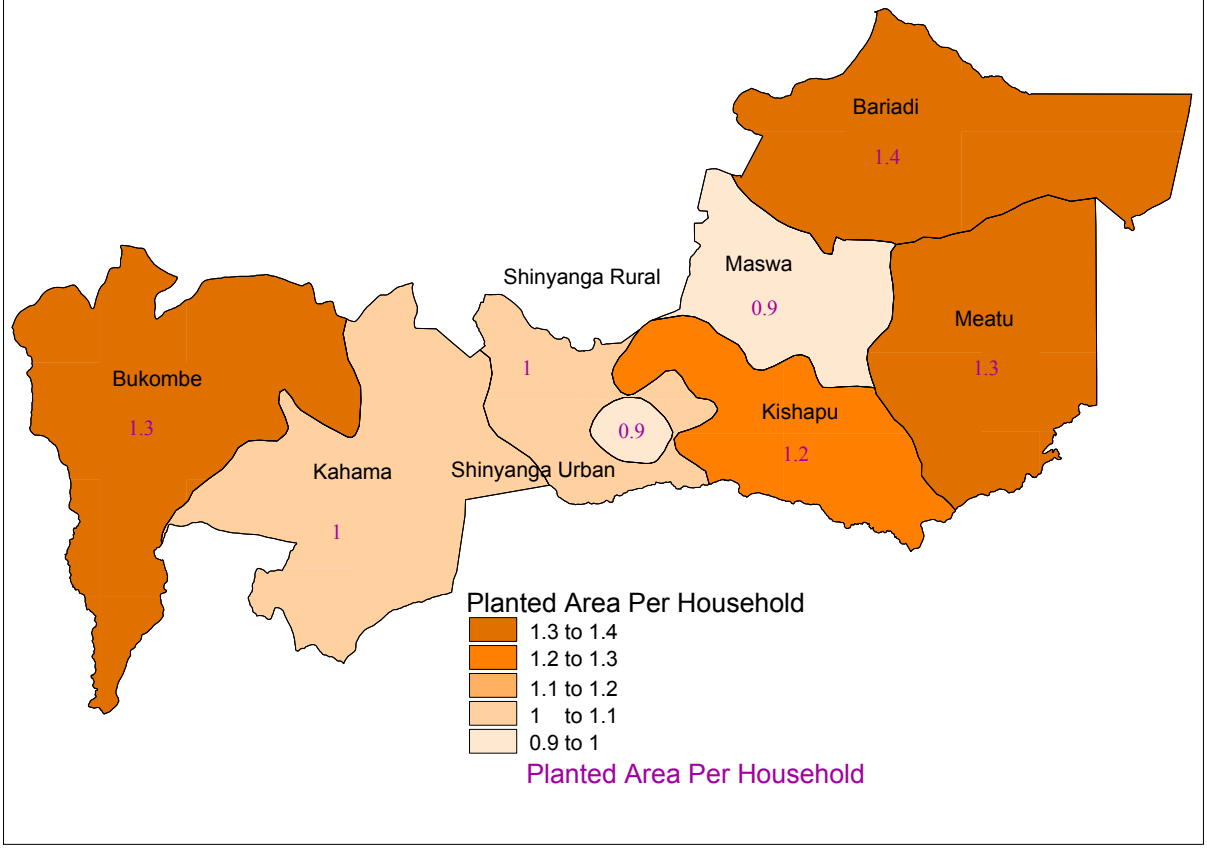


There was a large reduction in the production of sorghum from 114,000 tonnes in 1994/95 to 17,000 tonnes in 2002/03 (Chart 3.24). Chart 3.24 also shows that there was a gradual reduction in the area planted with sorghum and a persistent

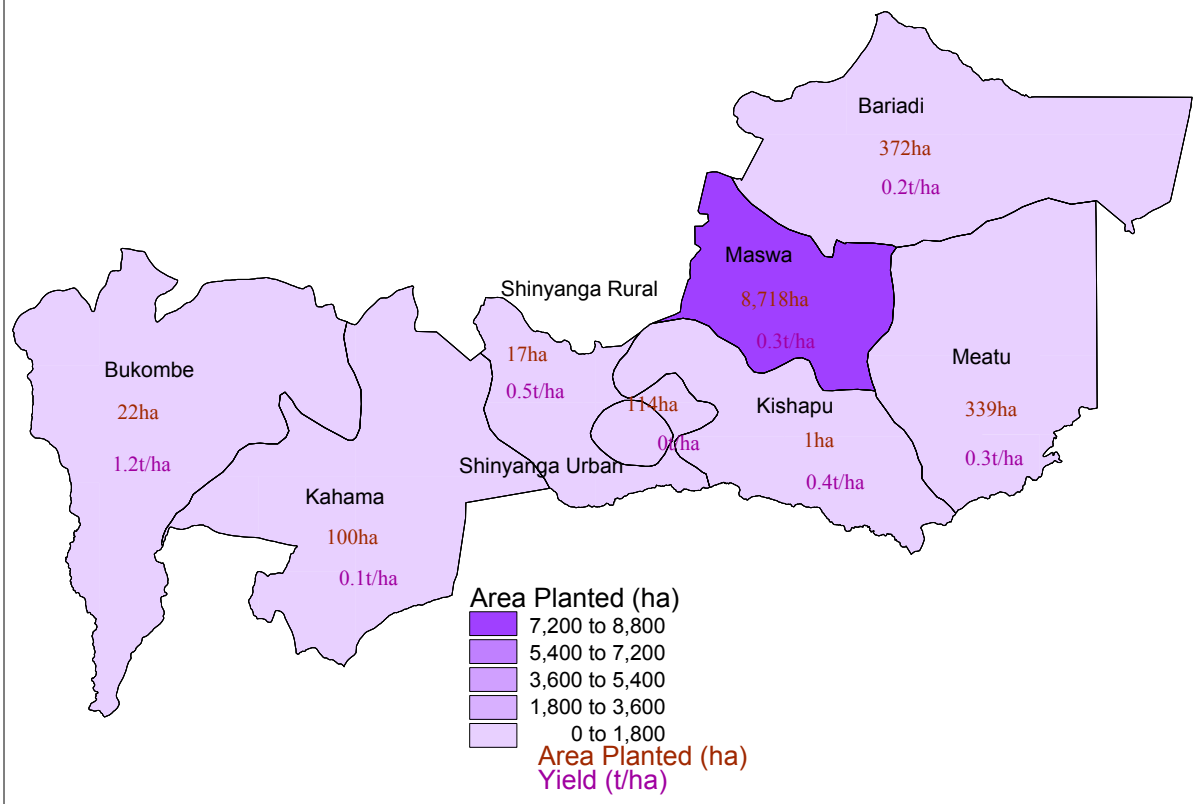
Map 3.11 SHINYANGA
Planted Area and Yield of Maize by District



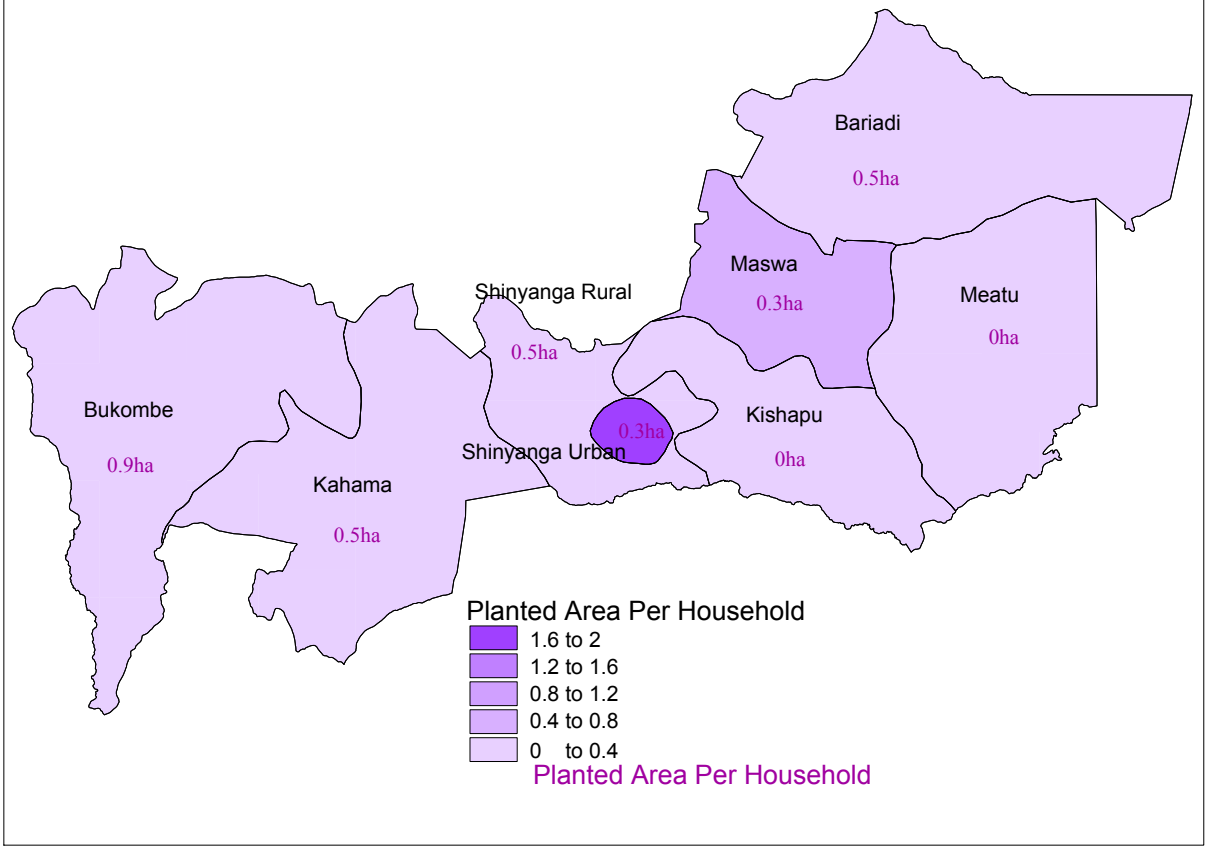
Map 3.12 SHINYANGA
Area Planted Per Maize Growing Household by District



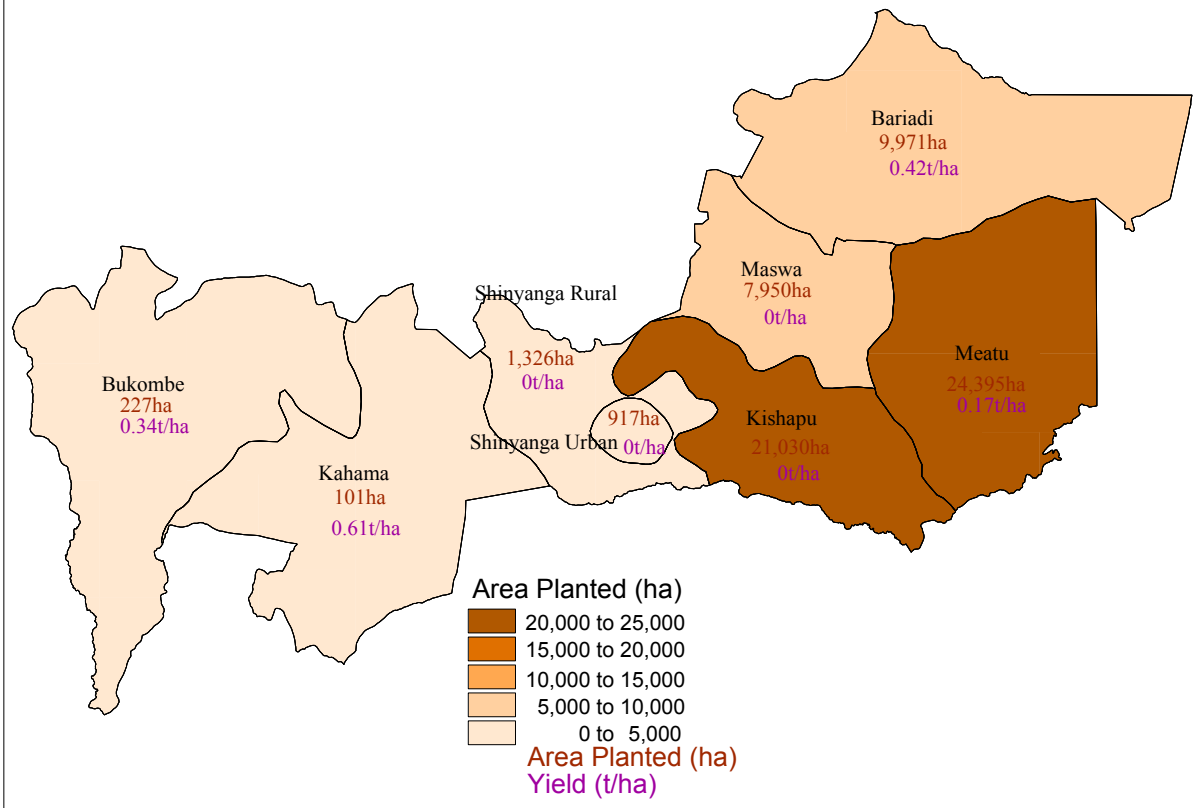
Map 3.13 SHINYANGA
Planted Area and Yield of Beans by District



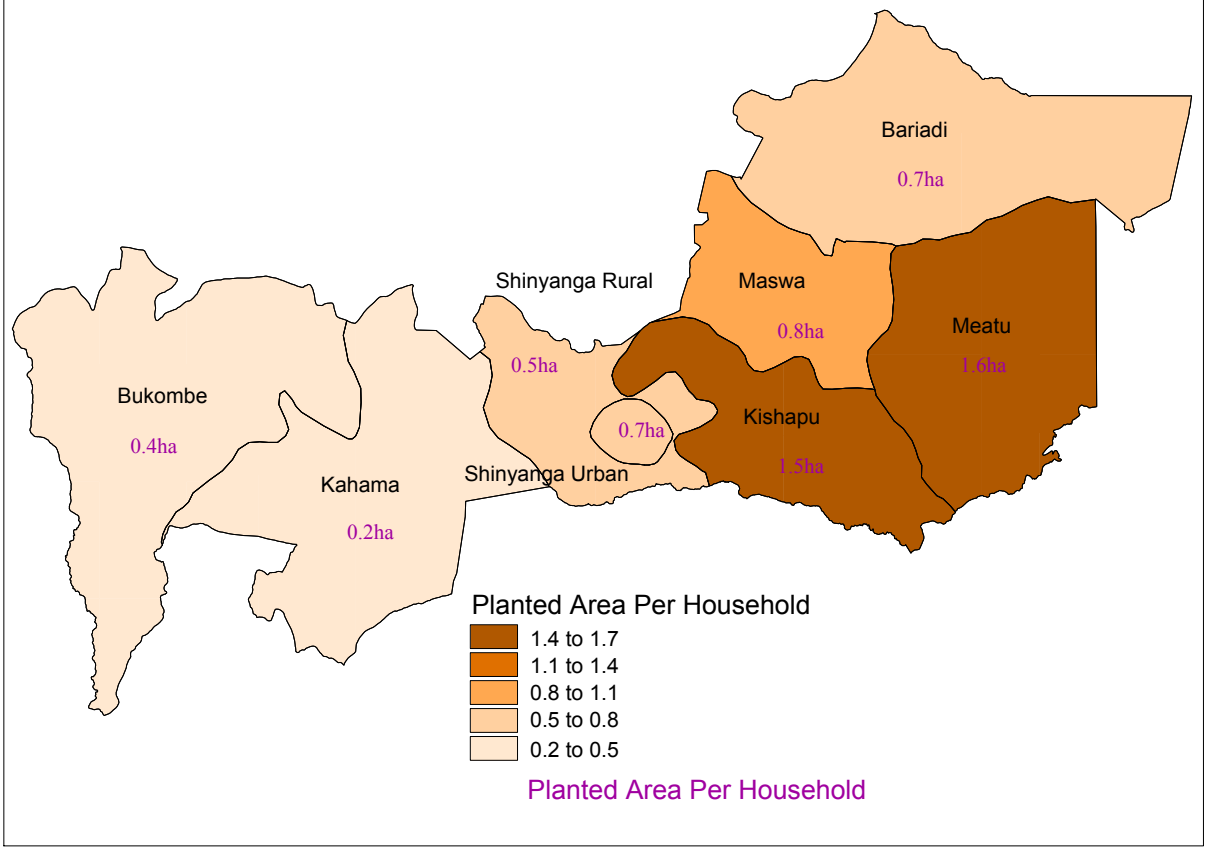
Map 3.14 SHINYANGA
Area Planted per Beans Growing Household by District



Map 3.15 SHINYANGA
Planted Area and Yield of Sorghum by District



Map 3.16 SHINYANGA
Area Planted per Sorghum Growing Household by District



decline in yield. This implies that the dramatic reduction in the quantity of sorghum production over the reported period was due to both reductions in area planted as well as declining yields.

3.3.4.4 Other Cereals

Other cereals that were produced in small quantities were Bulrush Millet and finger millet. The district with the largest area planted with Bulrush Millet was Kishapu (4,256 ha) and Shinyanga Urban (1,645 ha) with other districts having small planted areas. The largest area planted with finger millet was in Bariadi district (180 ha). Other districts had insignificant planted areas of finger millet.

3.3.5 Roots and Tuber Crops Production

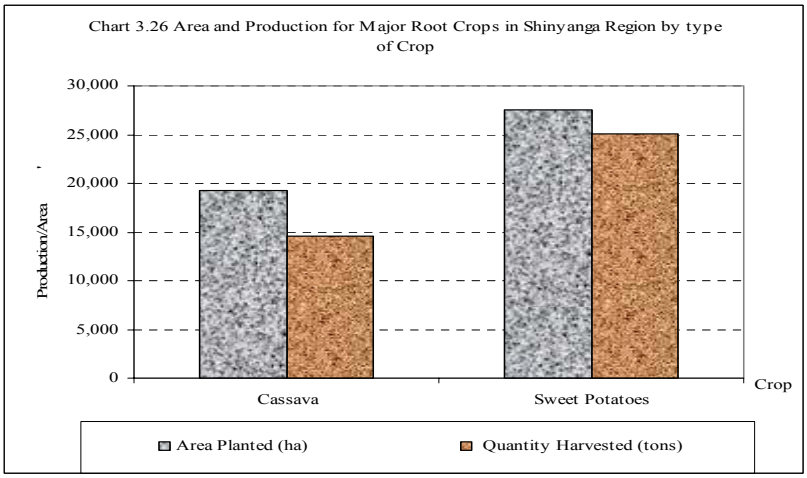
The Common Roots and Tuber Crops grown in Shinyanga Region were Sweet Potatoes and Cassava. The total production of both Cassava and Sweet Potatoes was 39,975 tonnes. Sweet Potatoes production was higher than that of Cassava in the region with a total production of 25,376 tonnes representing 63 percent of the total root and tuber crop production. (Chart 3.26 and Table 3.3).

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

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)
Cassava	0	0	0	19,235	14,599	759	19,235	14,599	759
Sweet Potatoes	45	317	7120	27,556	25,059	909	27,601	25,376	919
TOTAL	45	317	7120	46,791	39,658	800	46,836	39,975	800

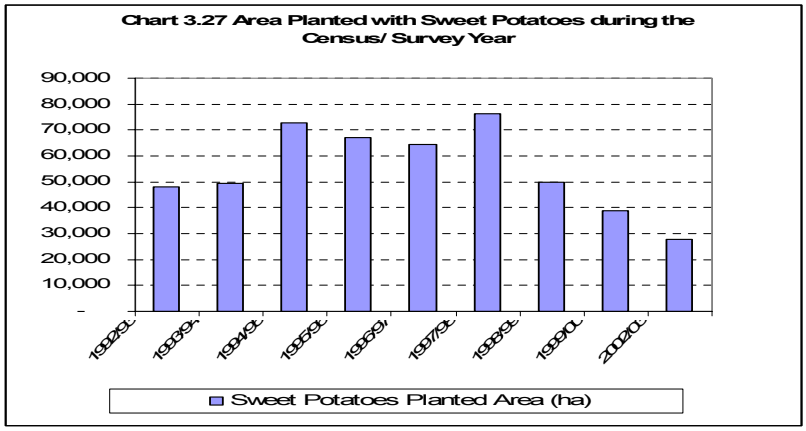
Note: Cassava is produced in both the Wet and Dry Season. However, it was not possible to separate cassava production in the different growing seasons as the growth period spans both seasons and even over a year in certain varieties. Because of this, cassava has been combined and is reported in the Wet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

The area planted with Sweet Potatoes was the largest and therefore sweet potatoes was the most important root and tuber crop in Shinyanga in terms of planted area.



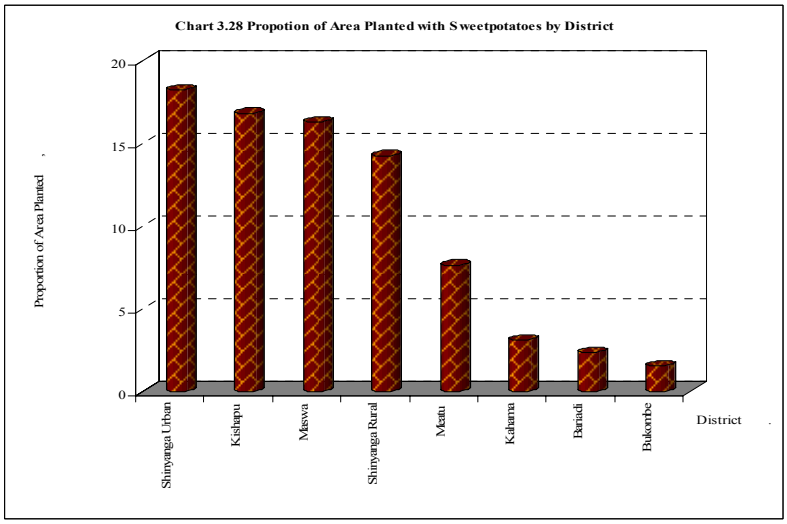
3.3.5.1 Sweet Potatoes

The number of households growing Sweet Potatoes in the region was 95,342. This represented 25 percent of the total households growing crops during the wet season in the region. The total production of Sweet Potatoes during the census year was 25,376 tonnes from a planted area of 27,601 hectares resulting in a yield of 0.92t/ha.



Previous censuses and surveys indicate that the area planted with Sweet Potatoes increased gradually over the period 1992/93 to 1997/98 (Chart 3.27) and thereafter decreased gradually up to 2002/03. The area planted with Sweet Potatoes accounted for 2.82 percent of the total area planted with annual crops and vegetables in the census year.

Shinyanga Rural district had the largest planted area of Sweet Potatoes (6,310 ha, 23% of the Sweet Potatoes planted area in the region), followed by Kishapu (5,971 ha, 22%), Maswa (5,729 ha, 21%) , Kahama (2,471ha, 9%), Bariadi (2,384 ha, 9%), Meatu (2,378 ha, 9%) Shinyanga Urban (1,368 ha, 5%) and Bukombe (989 ha, 3%) (Map 3.17). However, the highest proportion of land planted with Sweet Potatoes, expressed as a percent of the total planted area was in Shinyanga Urban district (18.8%). This was followed by Kishapu (17%), Maswa (16%) Shinyanga rural (14%) and Meatu (7.6%) (Chart 3.28).



The average Sweet Potatoes planted area per Sweet Potatoes growing households was 0.07 hectares. The area planted per Sweet Potatoes growing household was greatest in Kishapu (0.17 ha), followed by Shinyanga Rural (.17ha), Shinyanga Urban (0.13 ha), Maswa (0.13 ha), Meatu (0.08 ha), Bariadi (0.03 ha), Kahama (0.03 ha) and Bukombe (0.02 ha) (Map 3.18).

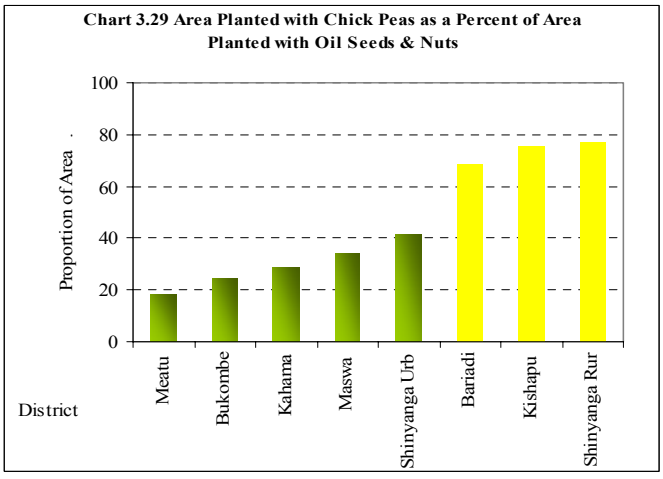
3.3.5 Pulse Crops Production

The total area planted with pulses was 47,984 hectares, of which 23,933ha were planted with Chick Peas (50% of the total area planted with pulses), followed by Beans (16,396 ha, 34%), Cow Peas (3,376 ha, 7%), Green Gram (2,898ha 6%) and Bambaranuts (1,382 ha, 3%).

Table 3.4 Area, Production and Yield of Pulses by Season

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)
Beans	101	25	248	16,295	5,383	330	16,396	5,408	330
Cowpeas	-	-	-	3,376	851	252	3,376	851	252
Green Gram	-	-	-	2,898	630	217	2,898	630	217
Chich Peas	-	-	-	23,933	10,315	431	23,933	10,315	431
Bambaranuts	3	2	533	1,379	1,295	939	1,382	1,296	938
Total	**104**	**32**		**47,880**	**18,473**		**47,984**	**18,500**	

The total production of pulses was 18,500 tonnes. Chick Peas was the highest producing pulse crop (10,315 tonnes) and accounted for 56 percent of the total pulse production. This was followed by Beans (5,408t, 29%), Bambaranuts (1,296t, 7%), Cowpeas (851t, 5%) and green gram (630t, 3%). The Highest Yield was recorded on Bambaranuts (938 kg/ha) followed by Chick Peas (431kg/ha,), Beans 330 Kg/ha, Cow Peas 252kg/ha and Green gram 217 kg/ha, (Table 3.4).



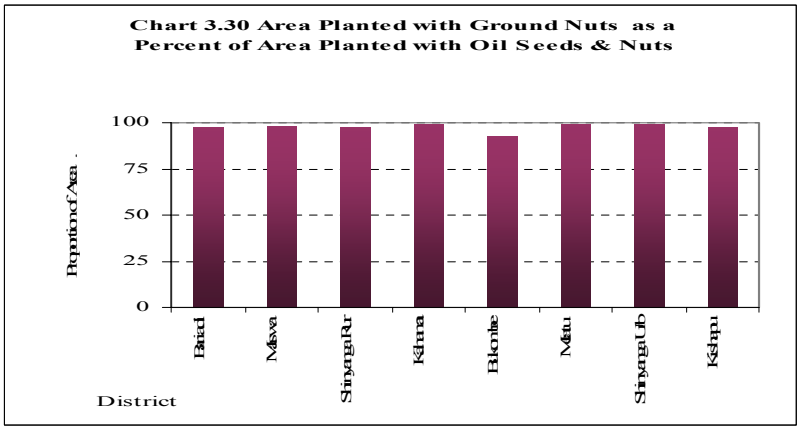
3.3.5.3 Chick Peas

Chick Peas dominate the production of pulse crops in the region. The number of households growing Chick Peas in Shinyanga region was 15,333 (4% of all crop growing households in the region). The total production of Chick Peas in the region was 10,315 tonnes from a planted area of 23,933 hectares resulting in yield of 0.4 t/ha. The largest area planted with

Chick Peas in the region was in Shinyanga Rural district with 8,927 ha (37% of the total area planted with Chick Peas in the region). Of the total area Planted with Pulses the highest proportion of area planted with chick peas was recorded in Shinyanga rural (77%), followed by Kishapu (76%) and Bariadi (69%) districts (Chart 3.29).

3.3.6 Oil Seed Production

The total production of oilseed crops was 31,561 tonnes, planted on an area of 66,057 hectares. Groundnuts was the most important oilseed crop with 64,355 ha (97% of the total area planted with oil seeds), followed by sunflower (2%) and simsim (1%), (Table 3.5).



The yield of Simsim was the highest for oil seed crops (578 kg/ha) followed by Ground nuts (481 kg/ha) and sunflower (317 kg/ha). The total production of groundnuts was 30,951 tonnes, accounting for 98 percent of the total production of oil seeds, followed by simsim and sunflower (1% each), (Chart 3.30).

3.3.7 Vegetables

The collection of fruit and vegetable 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 for household consumption. Most fruit production is from permanent crops. Reliable historical data for time series analysis of fruit and vegetables was not available.

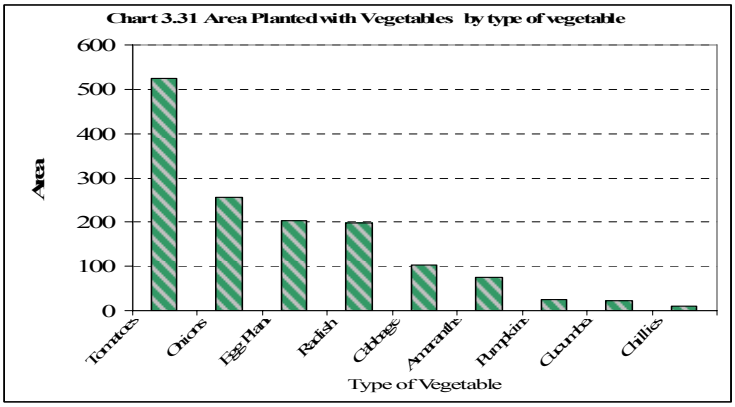
Table 3.5: Area, Quantity Harvested and Yield of Oil Seed Crops by Season

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)
Sunflower	0	-	0	1,434	455	317	1,434	455	317
Simsim	0	-	0	268	155	578	268	155	578
Groundnuts	167	32	482	64,188	30,919	482	64,355	30,951	482
Total	**167**	**32**		**65,890**	**31,529**		**66,057**	**31,561**	

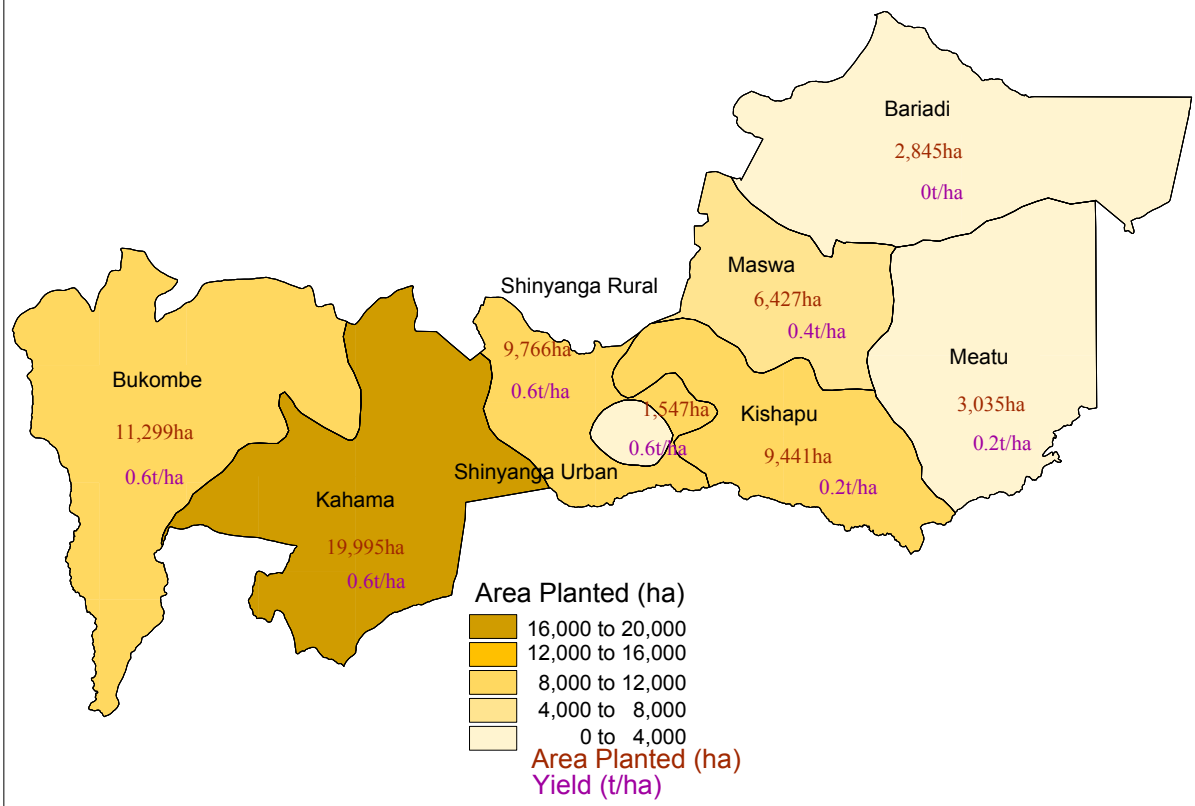
Table 3.6: Area, Production and Yield of Fruit and vegetables by Season

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)
Tomatoes	0	0	0	524	1,977	3,773	524	1,977	3,773
Onions	0	0	0	257	503	1,956	257	503	1,956
Egg Plant	0	0	0	203	83	408	203	83	408
Radish	0	0	0	199	121	609	199	121	609
Cabbage	0	0	0	104	461	4,443	104	461	4,443
Amaranths	0	0	0	74	140	1,880	74	140	1,880
Pumpkins	0	0	0	26	1	55	26	1	55
Cucumber	0	0	0	23	43	1,878	23	43	1,878
Chillies	0	0	0	10	51	5,039	10	51	5,039
Total	**0**	**0**		**1,421**	**3,381**		**1,421**	**3,381**	

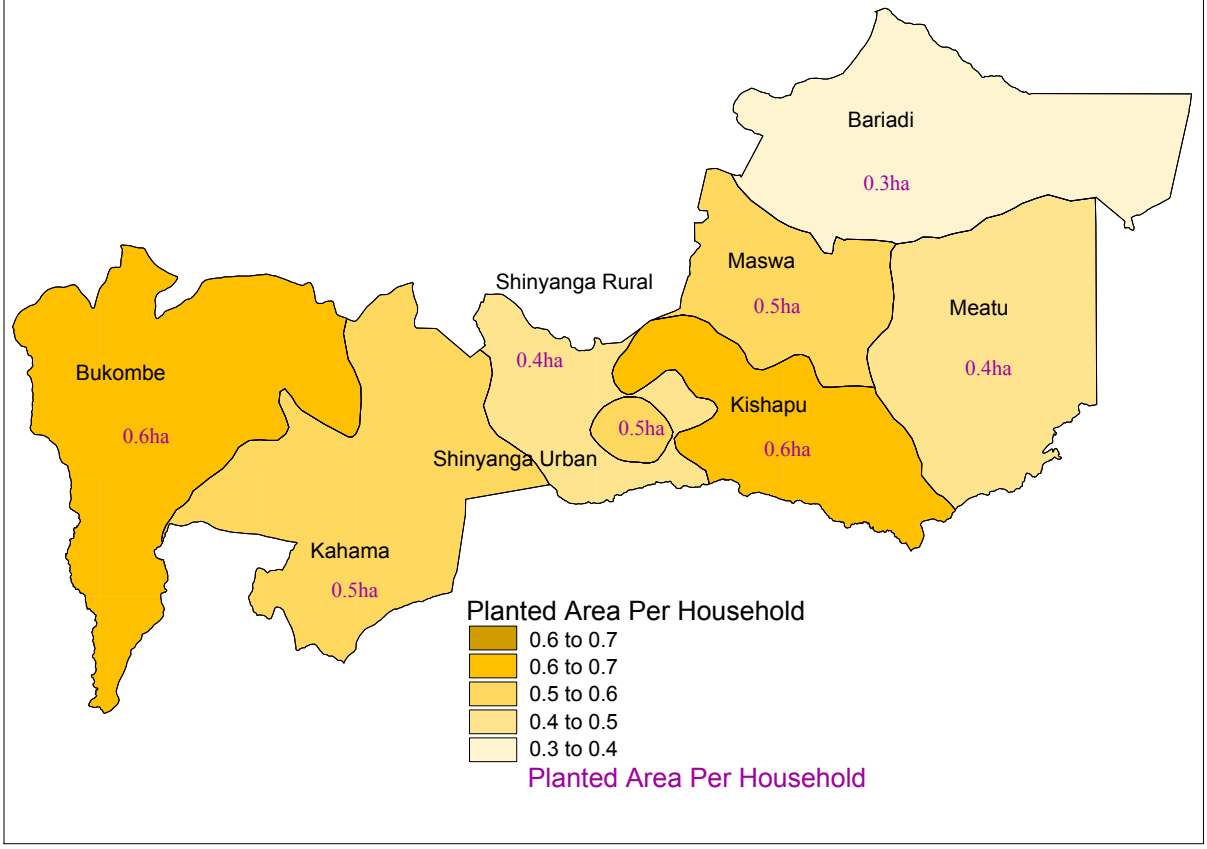
The total production of vegetables was 3,381 tonnes. The most cultivated vegetable crop was tomatoes with a production of 1,977 tonnes (58% of the total vegetables produced) followed by onions (503t, 15%) and Cabbages (461t, 14%). The production of the other vegetable crops was relatively small (Chart 3.31, Table 3.6). Chillies had the highest yield (5,039 kg/ha) followed by Cabbages (4,443kg/ha), Tomatoes 3,773kg/ha and onions (1,956kg/ha). Pumpkins, Egg plant and Radish had the lowest yields of 55, 408 and 609 kg/ha respectively (Table 3.6).



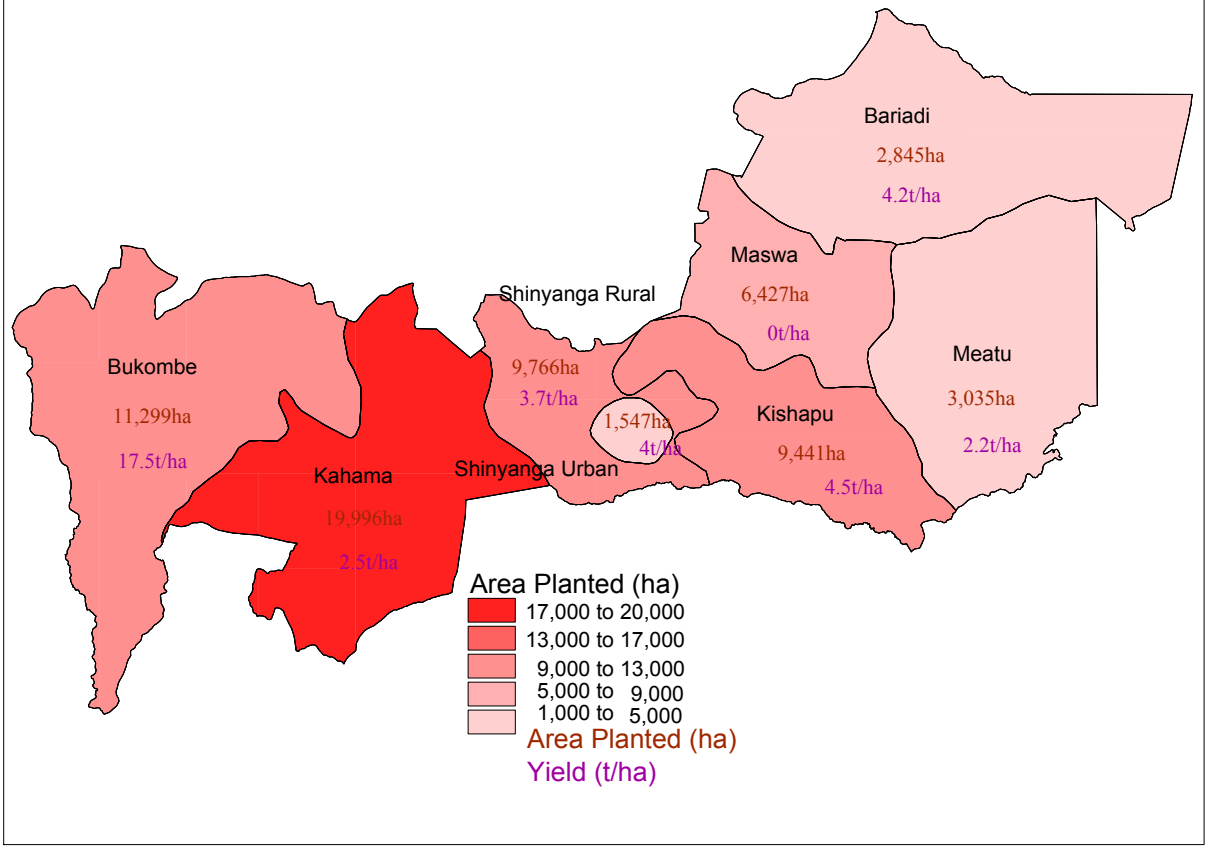
Map 3.17 SHINYANGA
Planted Area and Yield of Groundnuts by District



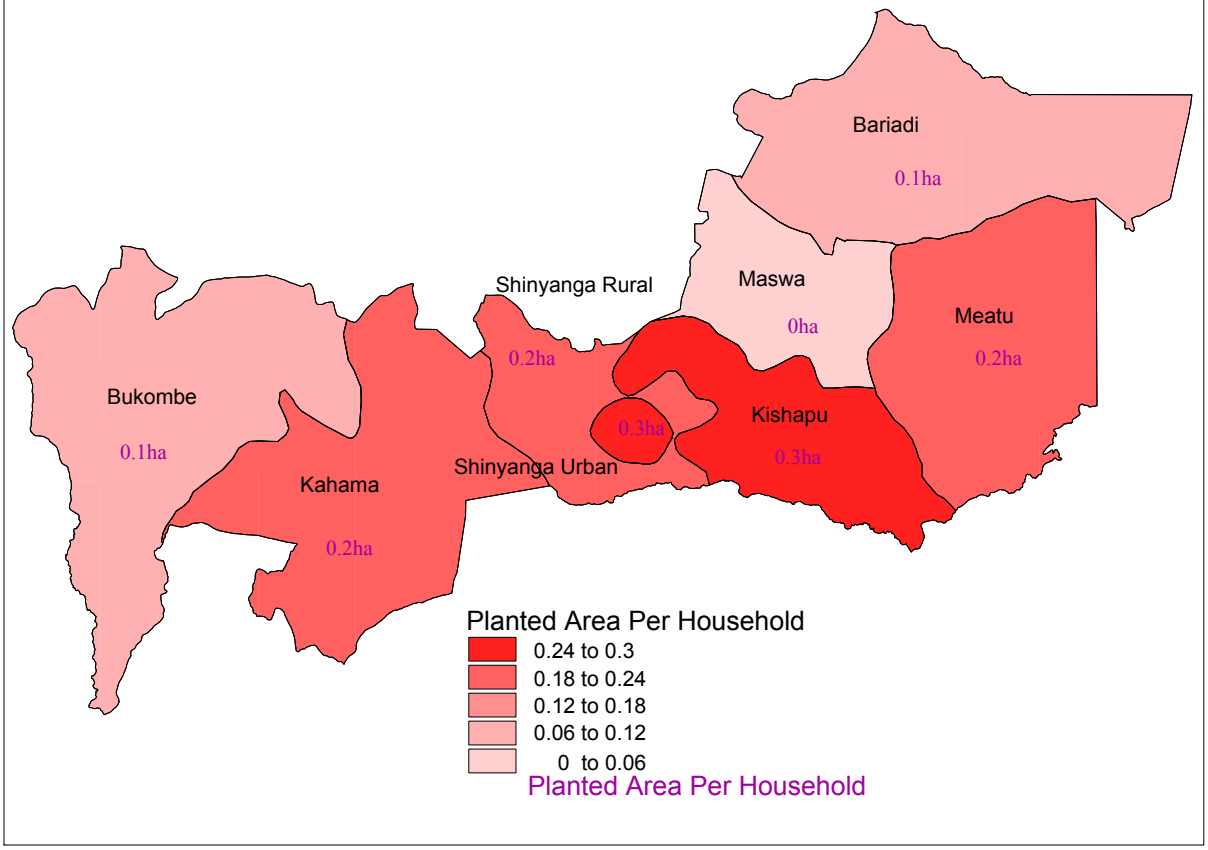
Map 3.18 SHINYANGA
Area Planted per Groundnuts Growing Household by District



Map 3.19 SHINYANGA
Planted Area and Yield of Tomatoes by District

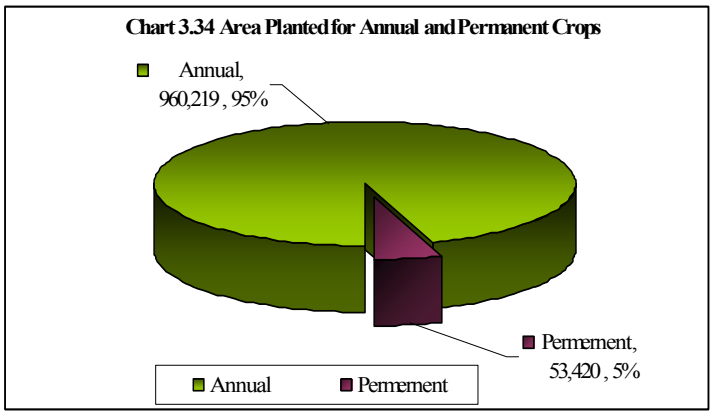


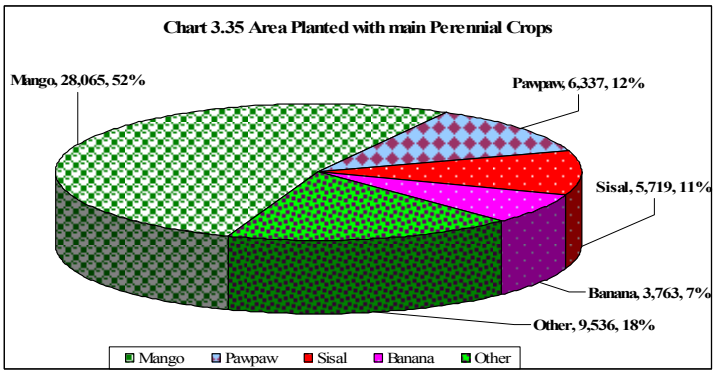
Map 3.20 SHINYANGA
Area Planted per Tomatoes Growing Household by District



3.4 Permanent Crops

Permanent crops (sometimes referred to as perennial crops) 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 produces several harvests. In this census, cassava is 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 time series analysis cannot be made in this section.





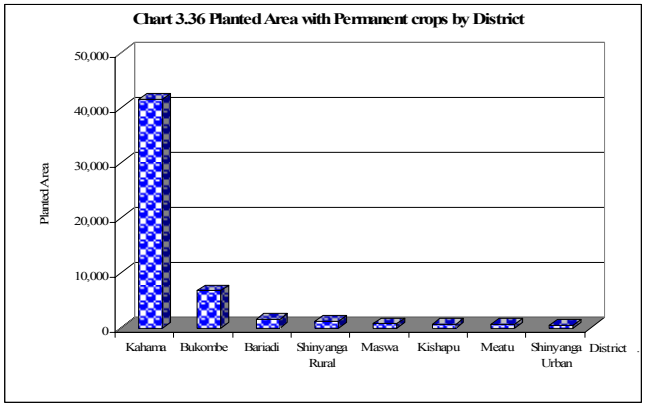
For small holders the planted area with permanent crops was 53,420 hectares (5.2% of the area planted with annual and permanent crops in the region). However, the area planted with annual crops is not the actual physical land area as it includes the area of crops planted more than once on the same land, whilst the planted area for permanent crops is the same as the physical planted land area. So the percentage of the physical area planted with permanent crops would be higher than indicated in Chart 3.34.

The most important permanent crop in Shinyanga region is Mango which accounts for a planted area of 28,067.0 ha, (53% of the planted area of all permanent crops) followed by Pawpaw (6,337 ha, 12%), Sisal (5,719 ha, 11%), and Banana (3,763 ha, 11%). Each of the remaining permanent crops had an area of less than 5 percent of the total area planted with permanent crops (Chart 3.35).

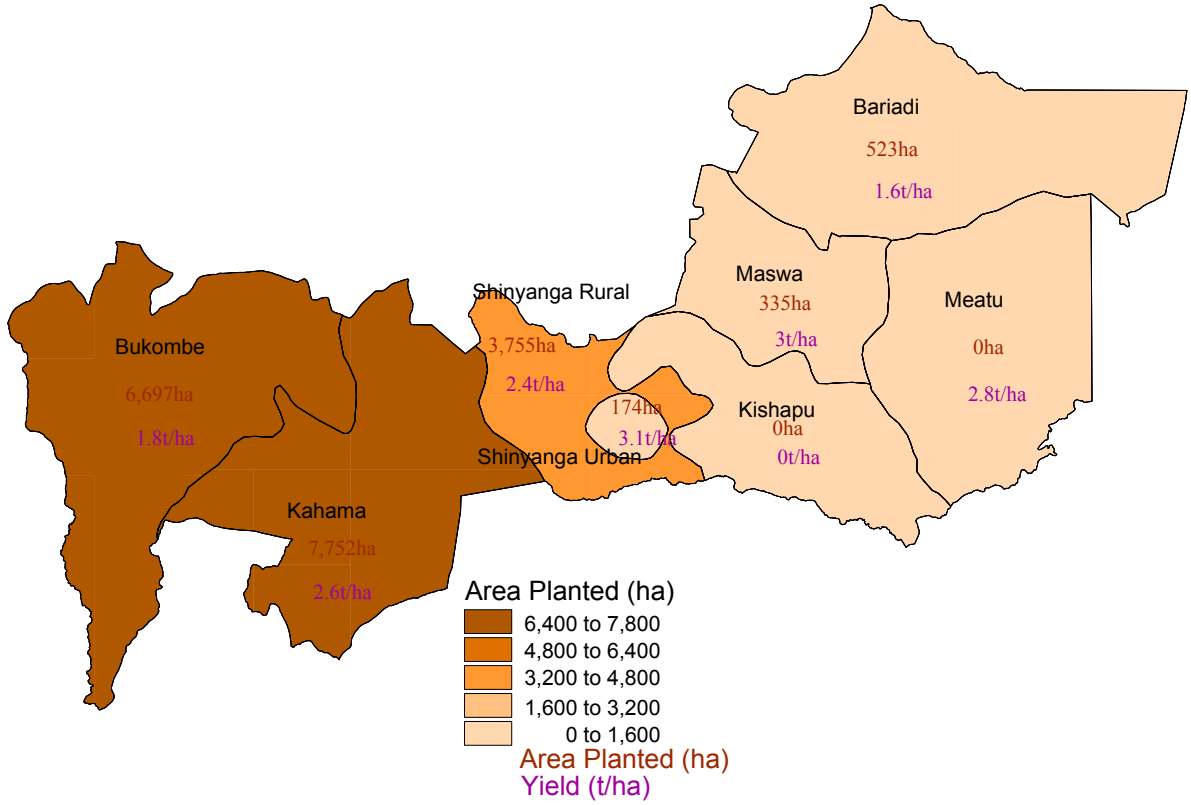
Table 3.7 Land Clearing Methods

Method of Land Clearing	Number of Households	Area Planted	%
Mostly Bush Clearance	25,886	73,450	8
Mostly Hand Slashing	306,419	786,468	82
Mostly Tractor Slashing	1,215	2,251	0
Mostly Burning	10,135	19,590	2
No Land Clearing	30,424	73,327	8
Total	374,078	955,086	100

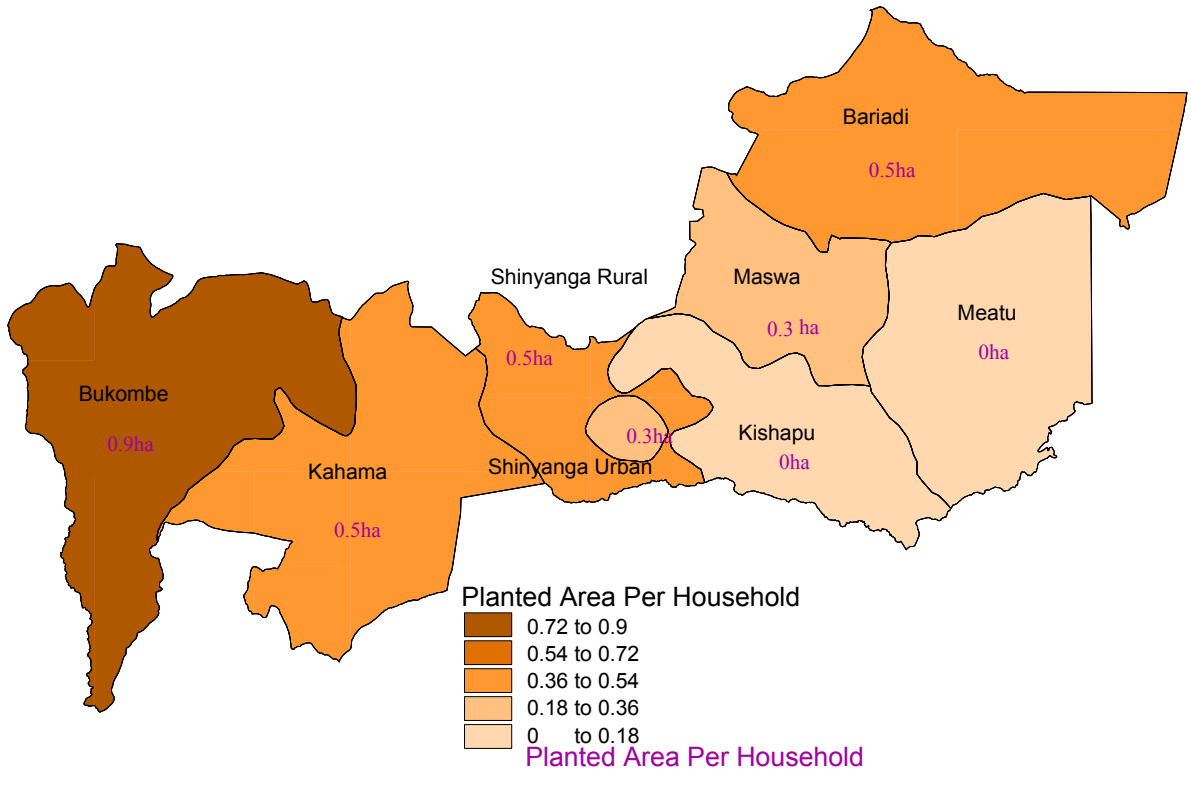
Kahama district had the largest area under smallholder permanent crops (41,573 ha, 78%). This is followed by Bukombe (6,738 ha, 13%). With the exception of these two districts, other districts have relatively low percentages, less than 5% of land allocated to permanent crops farming (Chart 3.36).



Map 3.21 SHINYANGA
Planted Area and Yield of Cassava by District



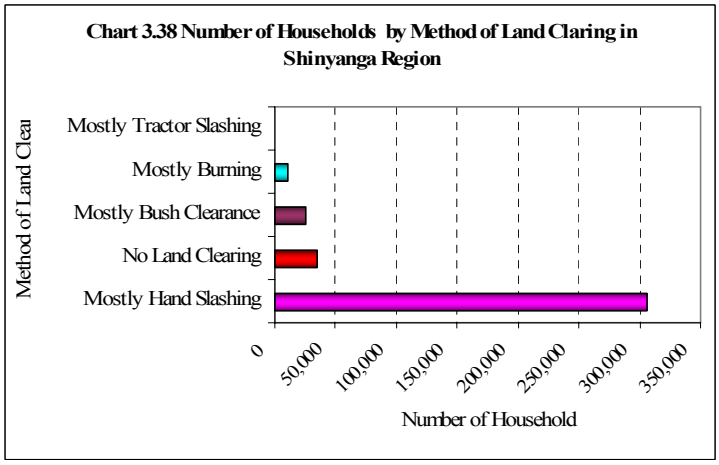
Map 3.22 SHINYANGA
Area Planted per Cassava Growing Household by District



3.5 Inputs/Implements Use

3.5.1 Methods of Land Clearing

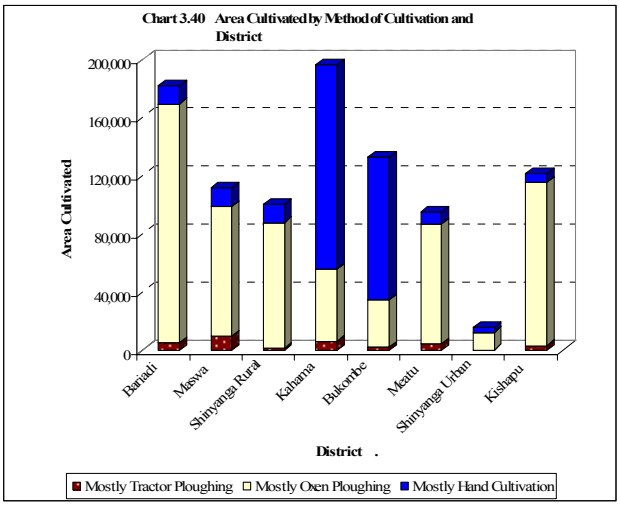
Land clearing is a common pre-tillage operation practiced by most farmers in the region. Land clearing is divided into two categories; bush clearing, which by definition implies either expansion into virgin areas or into areas which have been left fallow for a long period. The other category, which includes burning, hand slashing or tractor slashing, is normally an annual clearing exercise to remove vegetation growth from the previous season. Hand slashing is the most widespread method used for land clearing. The area cleared by hand slashing in the region was 786,468 ha which represents 82 percent of the total planted area. Burning, bush clearance and tractor slashing are less important methods of land clearing and they represent 2, 0.3 and 7.7 percents respectively (Table 3.7, Chart 3.38)

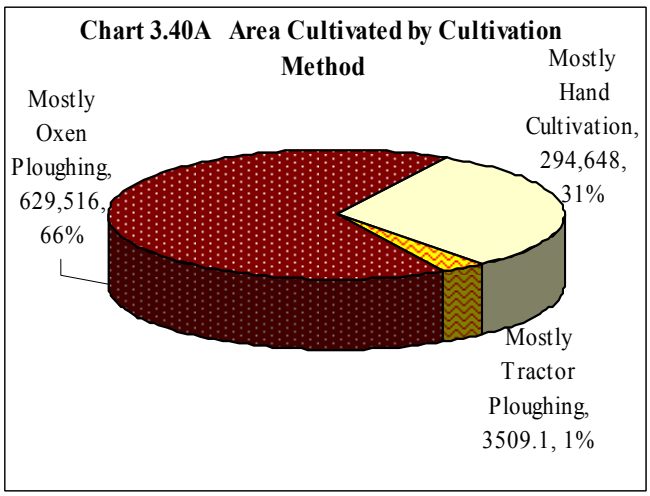


3.5.2 Methods of Soil Preparation

Oxen Ploughing is mostly used for soil preparation as it has been used in an area of 629,516 ha which represents 66 percent of the total planted area, followed by Hand Cultivation (294,648 ha, 31%) and tractor ploughing (3,509 ha, 1%) (Chart 3.40).

In Shinyanga region, Bariadi district has the largest planted area cultivated using oxen (164,355 hectares, 40.6%) followed by Kishapu (112,432 ha, 18%), Maswa (89,475 ha, 14%) and Shinyanga Rural (86,690 ha, 14%), Meatu (82,344 ha, 13%), Kahama (49,833 ha, 8%), Bukombe (32,312 ha, 5%) and Shinyanga Urban (12,077 ha, 2%) (Chart 3.40, 3.40A).

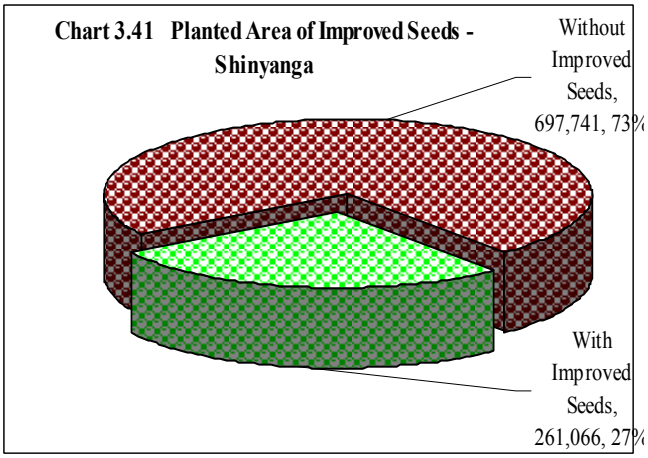


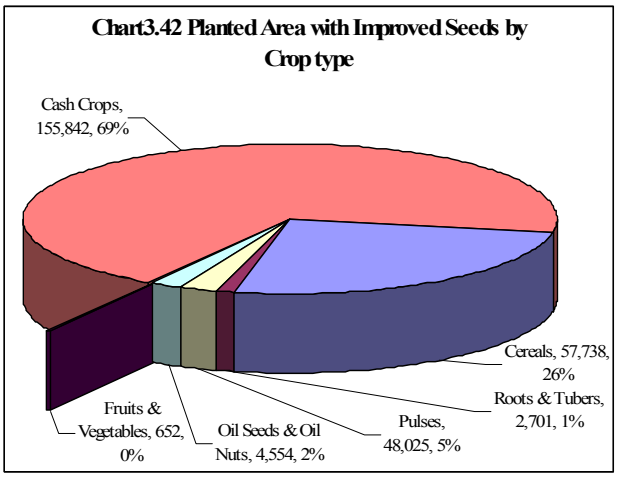


Tractor ploughing was more prominent in Maswa district with 29 percent of the area cultivated using tractors in the region followed by Kahama District 19 %, Bariadi District 17%, Meatu District and Kishapu District 10%.

3.5.3 Improved Seeds Use

The planted area with improved seeds was 261,066 ha which represents 27 percent of the total area planted with the annual crops and vegetables.





Cash Crops had the largest planted area with improved seeds (159,104 ha, 69% of the planted area with improved seeds) followed by Cereals crops (57,738 ha, 25%). Other crop types had insignificant area planted with improved seeds (Chart 3.41, 3.42). Among the Cash Crops Cotton had the largest area of improved seeds application which was 155,842 ha 98% of area planted by cash crops.

3.5.4 Fertilizer Use

The use of fertilisers on annual crops was very small with a planted area of only 171,943 ha (18% of the total planted area in the region). The planted area without fertiliser for annual crops was 785,481 hectares representing 82 percent of the total planted area with annual crops. Of the planted area with fertiliser application, farm yard manure was applied to 137,161 ha which represents 14 percent of the total planted area (80% of the area planted with fertiliser application in the region). This was followed by Inorganic Fertilizers (20,380ha, 12% of the planted area with fertiliser and 2% of the total planted area in the region), Compost (14,404ha, 8% of the planted area with fertiliser and 2% of the total planted area in the region), Chart 3.43.

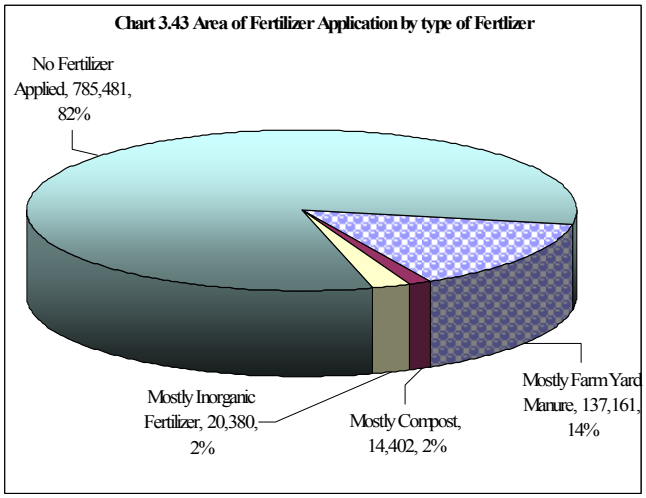
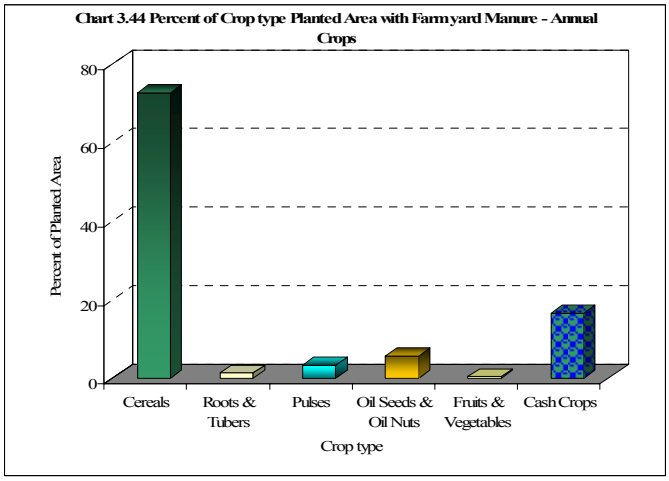


Table 3.8 Number of Crop Growing Households and Planted Area by Type of Fertilizer Use and District

District	Fertilizer Use								
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		Area Planted with Fertilizer (ALL TYPES)	Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Planted Area	Number of Households	Planted Area
Bariadi	6,857	25,192	1,064	2,158	0		27,350	77,393	182,648
Maswa	4,374	13,327	420	1,190	216	175	14,692	42,935	111,811
Shinyanga Rural	8,776	20,436	569	465	0		20,901	45,161	100,937
Kahama	14,913	38,280	2,314	3,538	6,722	18,336	60,154	81,074	197,060
Bukombe	4,611	16,482	1,553	3,169	358	931	20,582	52,643	132,870
Meatu	2,335	9,394	83	671	0		10,065	31,111	94,843
Shinyanga Urban	2,584	3,252	294	826	32	110	4,188	9,260	15,564
Kishapu	3,266	10,798	567	2,386	79	827	14,011	35,124	121,691
Total	47,716	137,161	6,864	14,402	7,407	20,380	171,943	374,699	957,423

The largest planted area with fertiliser (all types) was in Kahama district (60,154 ha, 35.0% of the total planted area with fertilizer in the region, followed by Bariadi (27,350, 16%), Shinyanga Rural (20,901 12%), Bukombe (20,582 12%), Maswa (14,692 9%), Kishapu (14,010 8%) and Shinyanga Urban (4,188, 2%) Table 3.8 and (Charts 3.60 and 3.61).

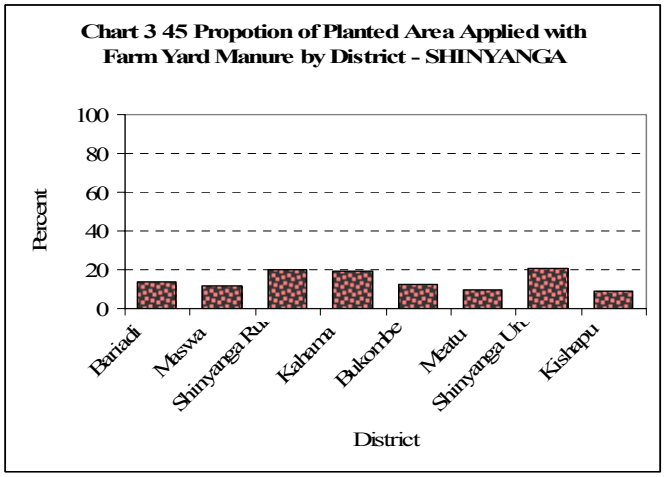
Most annual crop growing households in Shinyanga **do not** use any fertiliser (312,714 households, 83%) (Map 3.37). The percentage of the planted area with applied fertilizer was highest for Cereals (73% of the planted area with fertilizer application. This was followed by Cash Crops (17%), Oil seeds and Nuts (6%) and Pulses (3%), (Chart 3.44). Other Crop types had insignificant area under fertilizer application.



3.5.4.1 Farm Yard Manure Use

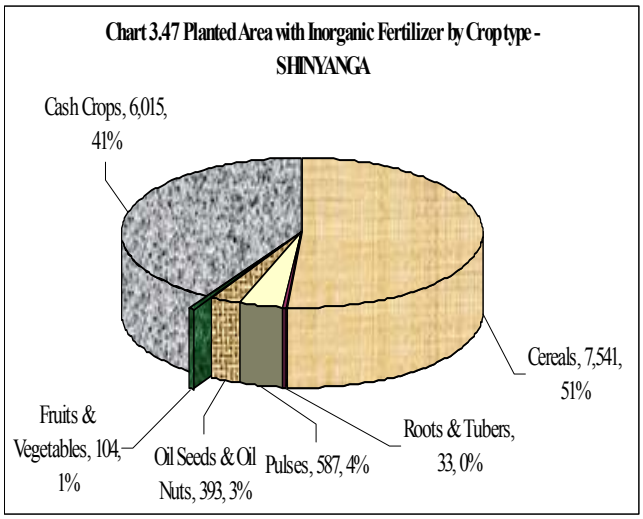
The number of households that applied farm yard manure in their annual crops was 47,716 and it was applied to 137,161 ha representing 14 percent of the total area planted during that season and 80 percent of the total planted area with fertiliser in the region.

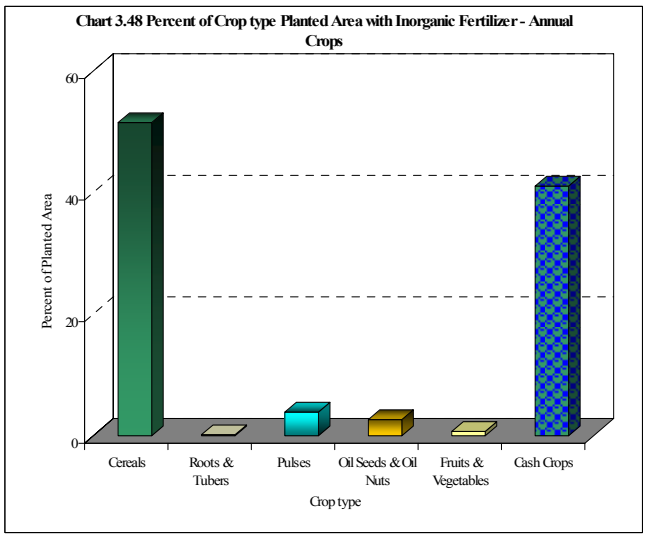
Cereals had the highest percent of the planted area applied with farm yard manure (73%), followed by Cash Crops 16%), Oil Seeds (6%), pulses (3%), fruits & vegetables (0.4%) and roots and tubers (1%) (Chart 3.44).



The Proportion of area planted with farm yard manure show that, farm yard manure is mostly used in Shunyanga Urban (21%), of the total planted area in the district), followed by Shinyanga Rural and 20% other districts have lower than 15% of their total area planted with farm yard manure (Chart 3.45).

3.5.4.2 Inorganic Fertiliser Use

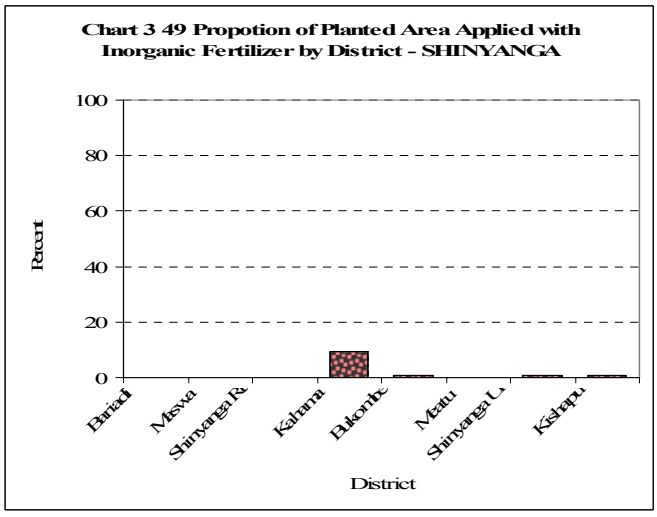




The total planted area applied with inorganic fertilisers in Shinyanga region was 20,389 ha which represents 2 percent of the total planted area with annuals in the region and 2.6 percent of the total planted area with fertiliser.

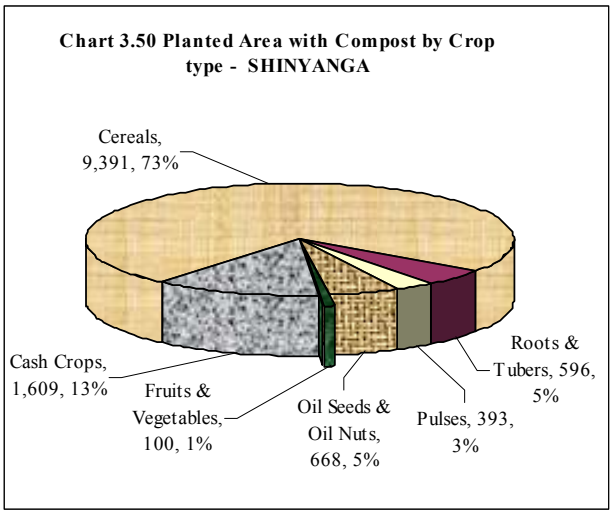
The number of households that applied inorganic fertiliser on their annual crops was 7,407. The largest area applied with inorganic fertilisers was on Cereals (51% of the total area applied with inorganic fertilisers), followed by Cash Crops (41%).

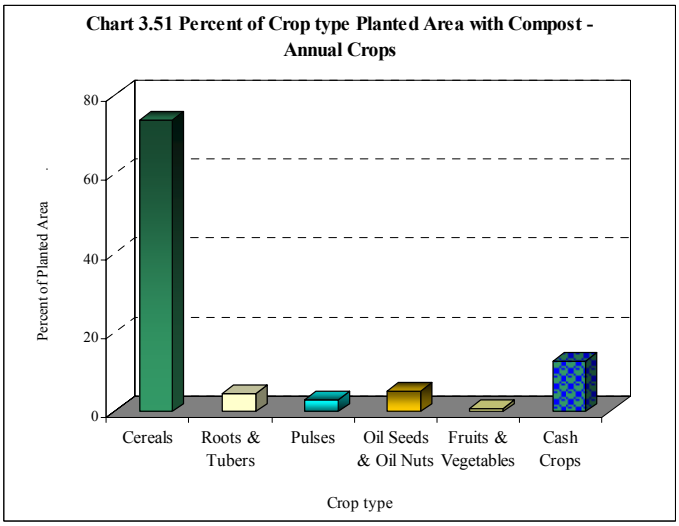
The proportion of the area applied with Inorganic Fertilizer at district level was very low ranging from 0 to 9% in Kahama district; (Chart 3.49).



3.5.4.3 Compost Use

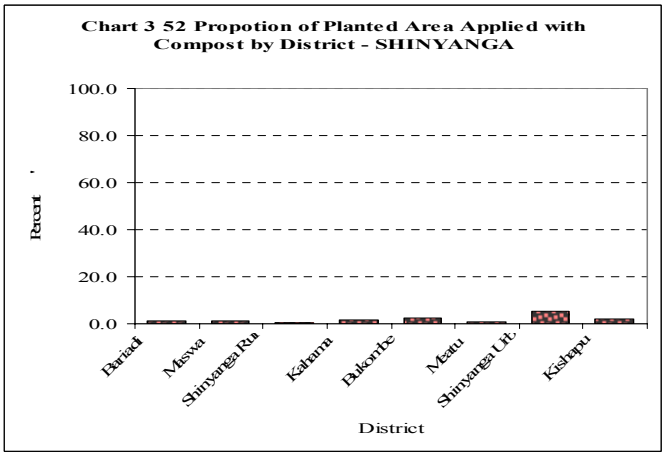
The total planted area applied with compost was 14,402 ha which represents only 2 percent of the total planted area with annual crops in the region and 8 percent of the total planted area with fertiliser in the region. The number of households that applied Compost on their annual crops was 6,864 (Table 3.8).





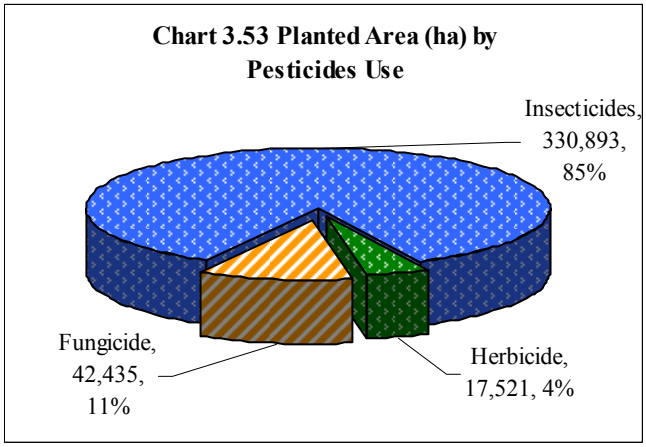
Cereals had the highest percent of the planted area applied with Compost (73%), followed by Cash Crops 13%), Oil Seeds (5%), roots and tubers (5%) pulses (3%) and fruits & vegetables (1%) (Chart 3.50, 3.51).

The proportion of the area applied with compost was very low for each district ranging from 0.5% lowest in Shinyanga Rural to 5.3% highest in Shinyanga Urban Districts (Chart 3.52).



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 Shinyanga region. Insecticides are the most common pesticide used in the region (85% of the total area applied with pesticides). This was followed by fungicides (11%) and herbicides (4%) (Chart 3.53).



3.5.6 Harvesting Methods

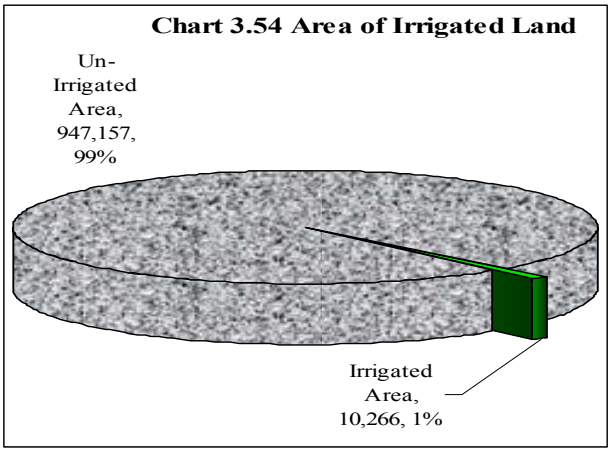
The main harvesting method for cereals was by hand. All other cereals (Maize Paddy, Sorghum, Bulrush Millet, and Finger Millet) were mainly harvested by hand. Like cereals, other annual Crops were also mainly harvested by hand.

3.5.7 Threshing Methods

Hand threshing was the most common method used, with 96 percent of the total area planted with cereals being threshed by hand. Draft animals, human powered tools and engine driven machines were scarcely used on threshing crops and the percentage area utilized was 1,1 and 3 respectively.

3.6 Irrigation

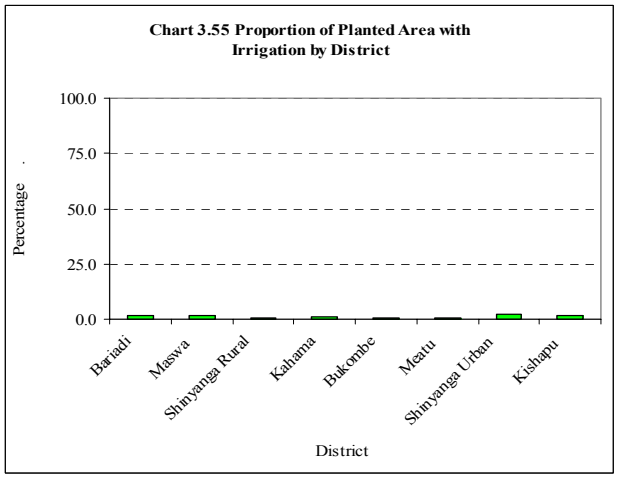
Water is the limiting fact or to crop prod uction in the majority of areas in Tanzania and without water most other agricultural practices applied to crops do not result in significant increases in yields. This section deals with the area under irrigation for different crops and the means by which water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



3.6.1 Area Planted with Annual Crops and Under Irrigation

In Shinyanga region, the area of annual crops under irrigation was 10,266 ha representing 1.1 percent of the total area planted (Chart 3.54).

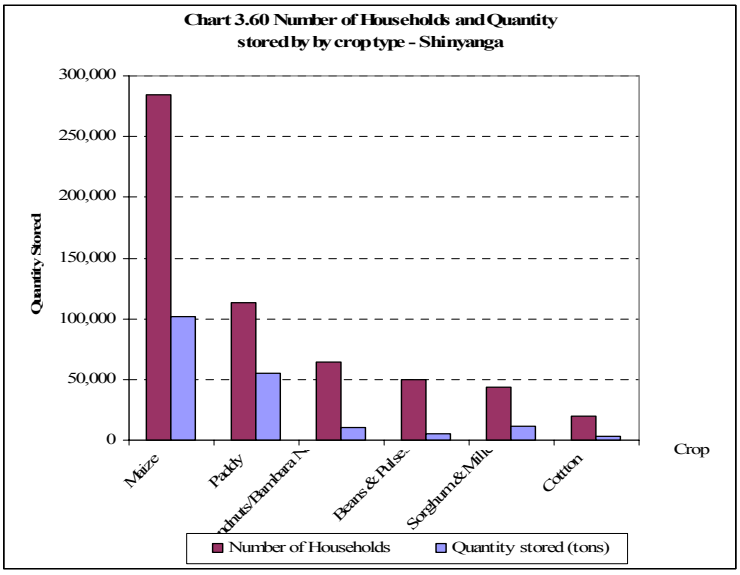
The district with the highest proportion of area under irrigation with annual crops was Shinyanga Urban 2 percent of the planted area with annual crops in the District. This is followed by Maswa (1.7%) and Bariadi (1.5%). Other districts had insignificant areas planted under Irrigation. (Chart 3.55 and Map 3.38).



3.7 Crop Storage, Processing and Marketing

3.7.1 Crop Storage

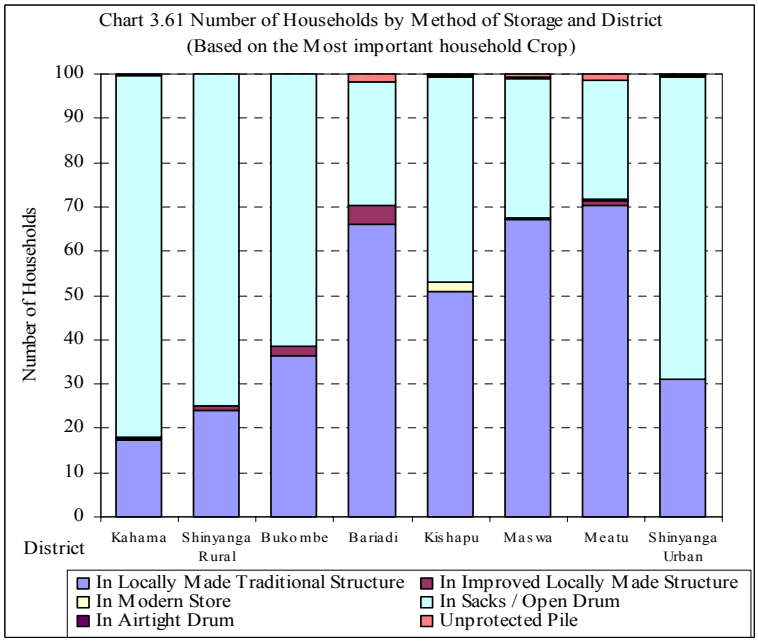
Crop storage means keeping a crop for a certain period of time as food for the household, in order to sell at higher prices or as seed for planting in the following season.



The most important stored crop was maize with 284,899 households storing 101,693 tonnes as of 1st October 2003. This was followed by Paddy (112,839 households, 55,481t), Groundnuts/ Bambaranuts (63,962 households, 10,223t) and Beans/Pulses (50,197 households, 5,247t). Other crops were stored in very small quantities (Chart 3.60).

3.7.1.1 Methods of Storage

The region had 172,157 crop growing households storing their produce in sacks and/or open drums (55% of households that stored crops in the region). The number of households that stored their produce in locally made traditional structures was 132,594 (42%). This was followed by improved locally made structure (4,668 households, 1.5%), airtight drum (204 households, 0.1%), unprotected piles (1,801 households, 0.6%) and modern stores (936 households, 0.3%) (Chart 3.61). Storage in sacks and/or open drum was the dominant storage method in most districts, with kahama having the highest percent of households using this method (36% of the total number of households storing crop products). This was followed by Shinyanga Rural (18%), Bukombe (17%), Bariadi (11%), Kishapu (7%), Maswa (5%), Meatu (4%) and Shinyanga Urban (3%).



The highest percent of households using improved locally made structures was in Bariadi and Bukombe districts (57% and 20% of the total number of households storing crops respectively), other districts had relatively small numbers of households using the method, (less than 10% each). (Chart 3.61).

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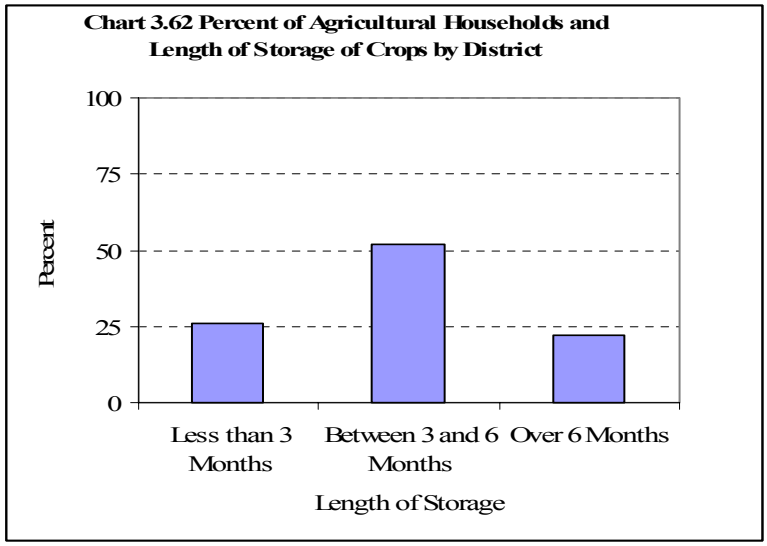
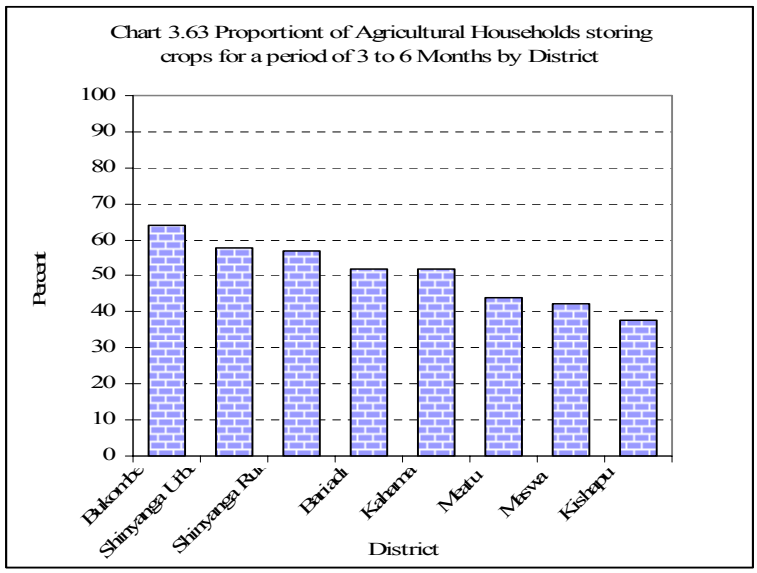
3.7.1.2 Duration of `Storage

Most households stored their produce for a period of 3 to 6 months (52% of the households storing crops) followed by those who stored for a period of Less than three months (26%) and those who stored their crop for a period of more than six months (22%), Chart 3.62).

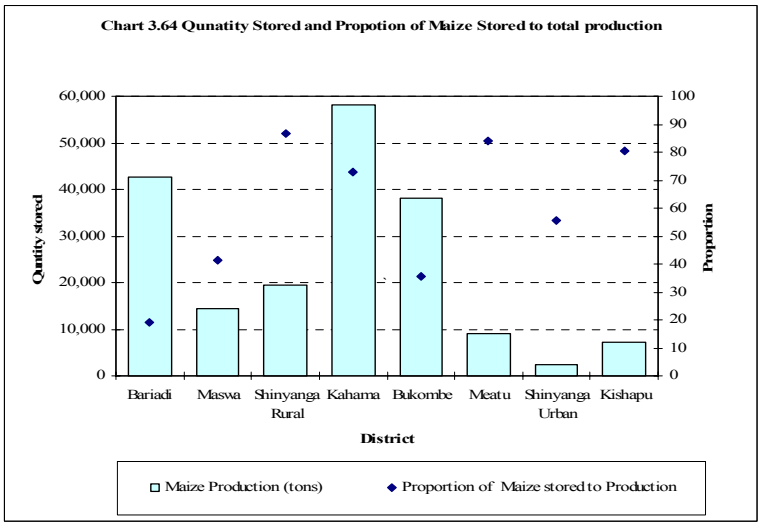


Most households stored Maize for a period of 3 to 6 months (52% of the households storing crops) followed by those who stored crops for a period of less than three months and those who stored their for a period of more than six months.

The proportion of number of households that stored their produce for the duration of 3 to 6 months was highest in Bukombe district (64%) followed by Shinyanga Urban (58%), Shinyanga Rural (57%), Bariadi (52%), Kahama (52%), Meatu (44%), Maswa (42%) and Kishapu (38%) (Chart 3.63, Map 3.39).



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 3.64). However, households in Bariadi, Maswa and Bukombe Districts had proportionally stored little maize in comparison to the total quantity produced.



3.7.1.3 Purposes of Storage

Subsistence food crops (maize, paddy, sorghum and millet,) are mainly stored for household consumption. The percent of households that stored Crops for household consumption as the main purpose of storage was 95 percent, followed by seed for planting (3%) and selling at higher price (2%). A high percent of the households that stored pulses and groundnuts was for planting purpose (seeds) (8.5% and 12.8 respectively), Table 3.09.

Table 3.09: Number of Households Storing Crops By Main Purpose of Storage and District

District	Main Purpose				
	Food for the Household	To Sell for Higher Price	Seeds for Planting	Other	Total
Bariadi	64,018	1,224	0	0	65,243
Maswa	24,475	209	1,188	0	25,873
Shinyanga Rural	40,721	203	605	0	41,528
Kahama	75,633	928	1,237	0	77,798
Bukombe	42,354	2,179	2,809	0	47,342
Meatu	23,048	273	388	81	23,791
Shinyanga Urban	6,216	52	250	32	6,550
Kishapu	22,398	0	3,003	0	25,401
Total	298,864	5,068	9,480	113	313,525
%	95	2	3	0	100

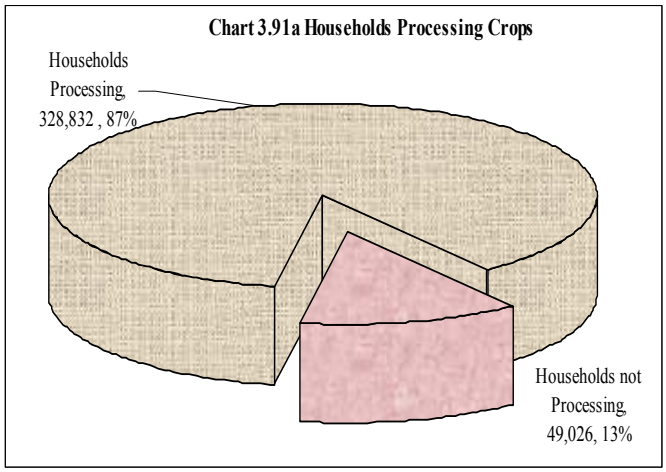
3.7.1.4 The Magnitude of Storage Loss

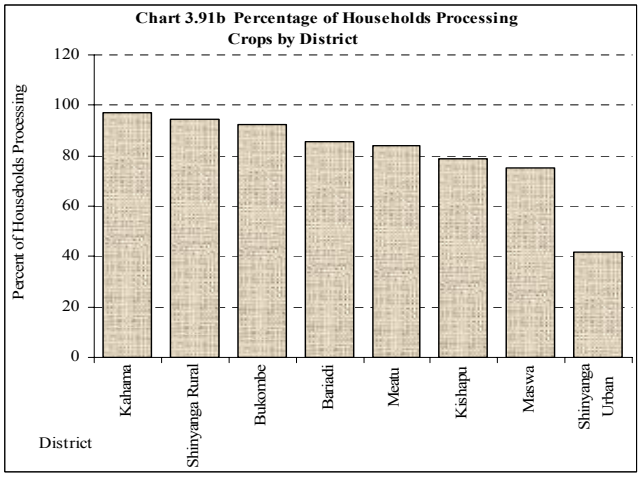
About 86 percent of households that stored crops had little or no loss, however the proportion of households that experienced a loss of more than a quarter was higher for food crops than crops that are stored for seeds such as groundnut and bambara nuts.

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

Crop	Estimated Storage Loss								Total
	Little or no Loss		Up to 1/4 Loss		Between 1/4 and 1/2 Loss		Over 1/2 Loss		
	Number of House holds	%	Number of House holds	%	Number of House holds	%	Number of House holds	%	
Maize	243,033	85.3	31,313	11.0	8,708	3.1	1,845	0.6	284,899
Paddy	108,487	95.9	3,067	2.7	1,529	1.4	0	0.0	113,083
Sorghum & Millet	35,913	82.6	5,858	13.5	1,448	3.3	272	0.6	43,490
Beans & Pulses	47,291	92.6	2,828	5.5	677	1.3	251	0.5	51,047
Groundnuts/Bambara Nuts	60,951	94.9	2,344	3.6	840	1.3	95	0.1	64,230

The proportion of households that reported a storage loss of more than a quarter was greatest for Maize and millets (4% of the total number of households that stored crops). This was followed by Beans & Pulses (2%), Paddy and Groundnuts both had scored 1% (Table 3.10).

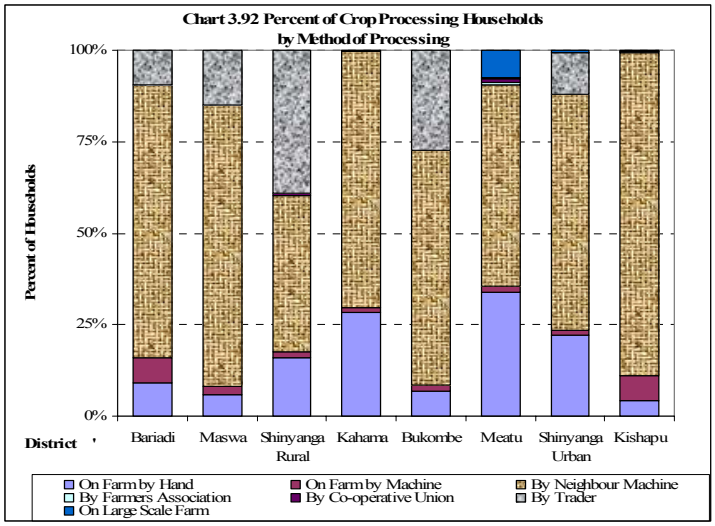




3.7.2 Agro-processing and By-products

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 crop. Agro-processing was practiced in most crop growing households in Shinyanga region (328,832 households, 87% of the total crop growing households) (Chart 3.91a).

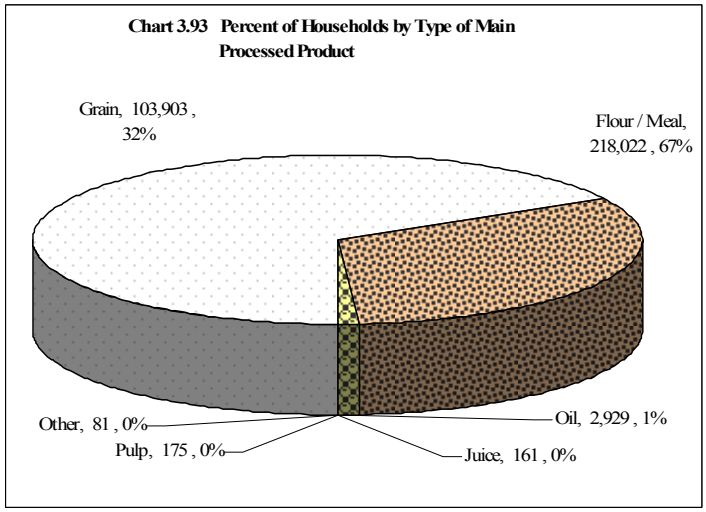
The percent of households processing crops was very high (above 80%) in most districts except Kishapu (79%), Maswa (75%) and Shunyanga Urban 42% (Chart 3.91b).

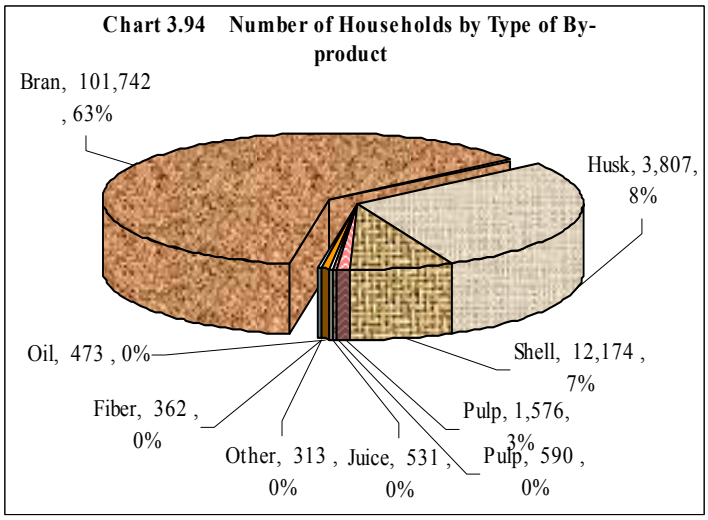


3.7.2.1 Processing Methods

Most crop processing households processed their crops using neighbour's machines (221,237 households, 67% of households processing crops). This was followed by those processing on-farm by hand (51,589 households, 16%), by trader (42,017 households, 13%) and on farm by machine (10,071 households, 3%).

Although processing by neighbours machine was the most common processing method in all districts in Shinyanga region, district differences existed. Kahama had a higher percent of hand processing on farm than other districts (43%), followed by Meatu (17%), Shinyanga Rural (13%) and Bariadi (12%). Processing by trader was mostly practised in Shinyanga Rural (39%) , Bukombe (32%), Bariadi (15%) and Maswa (12%), whilst processing on farm by machine though small, was more prevalent in Bariadi and Kishapu (Chart 3.92).





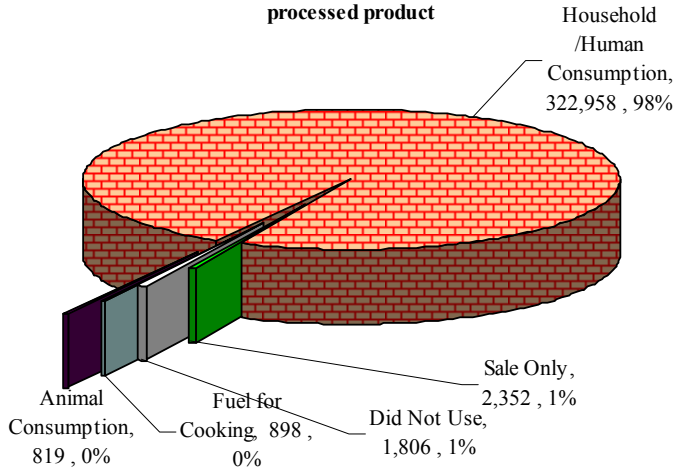
3.7.2.2 Main Agro-processing Products

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 product after processing. For example the main product after processing maize is normally flour whilst the by-product is the bran.

The main processed product was flour/meal with 218,022 households processing crops into flour (67%) followed by grain with 103,903 households (32%). The remaining products were produced by a small number of households (Chart 3.93).

The number of households producing by-products accounted for 50 percent of the households processing crops. The most common by-product produced by crop processing households was bran (101,742) households 62%), followed by Husk (46,899 households, 29%), shell 12,174 households, 7%). The remaining by-products were produced by a small number of households (Chart 3.94).

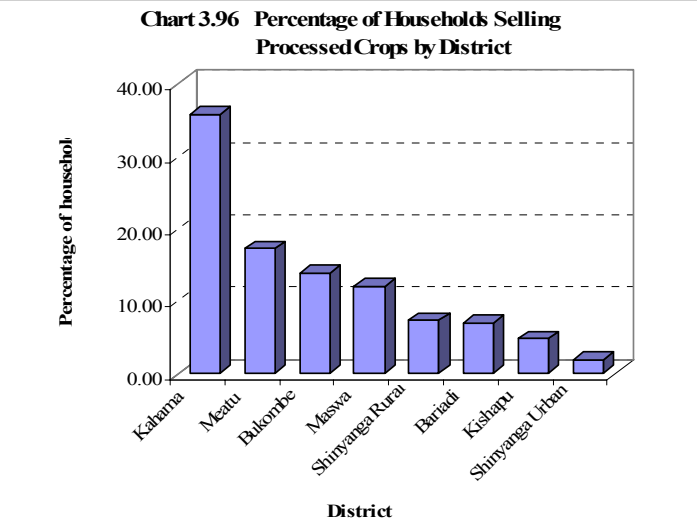
Chart 3.95 Number of Households and use of processed product



3.7.2.3 Main Use of Primary Processed Products

Primary processed products were mainly used for household/human consumption, fuel for cooking, for selling and for animal consumption. The most important use was for household/human consumption which was reported by 98 percent of the total households that used primary processed product (Chart 3.95).

Chart 3.96 Percentage of Households Selling Processed Crops by District



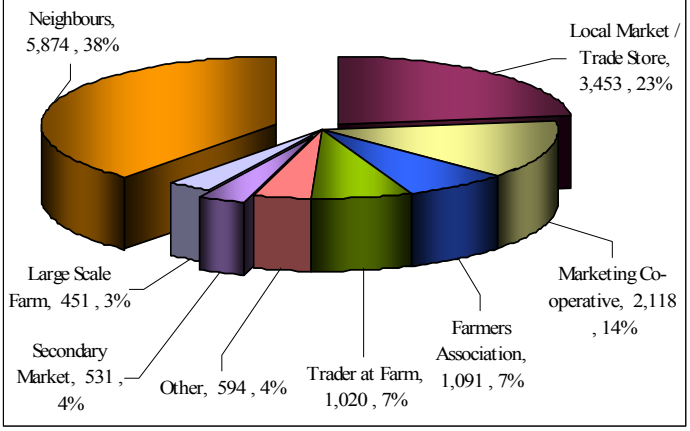
Out of 15,132 households that sold processed products, 5,424 (36% of the total number of households selling processed products in the region) were from Kahama followed by Meatu (2,606 households, 17%), Bukombe (2,106 households, 14%), Maswa (1,826 Households, 12%), Shinyanga Rural (1,105 households, 7%), Bariadi districts (1,058 households, 7%), Kishapu (722 households, 5%) and Shinyanga Urban (403 households, 2%) (Chart 3.96).

Compared to other districts in Shinyanga region, Meatu district had the highest proportion of households that sold processed products (10%). This is followed by Kahama, 7%, Shninyanga Urban, 7% and Maswa (6%). Other districts had lower that 5% of the number of agricultural households selling processed products..

3.7.2.4 Outlets for Sale of Processed Products

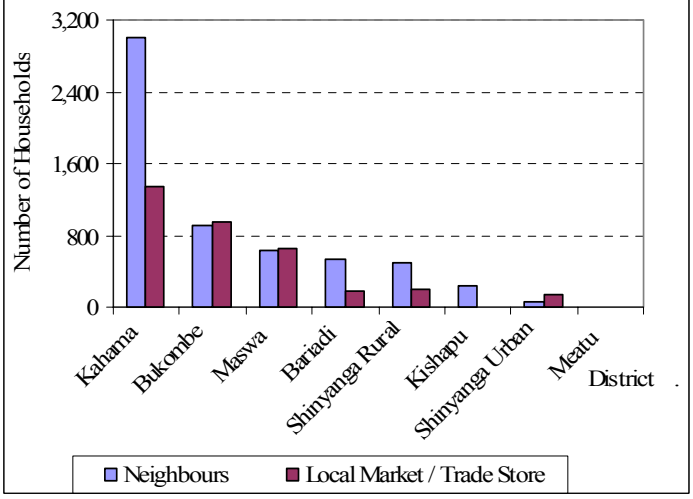
Most households that sold processed products sold to neighbours (5,874 households, 38% of households that sold processed crops). This was followed by selling to Local Markets/ Trade Store (3,453 households, 23%), Marketing Cooperatives (2,118 households, 14), Famers Association (1,091 households, 7%), Trade at Farm (1,020 households, 7%), Other unspecified Markets (594 households, 4%), Secondary Markets (531 households, 4%) and large scale farms (451 households, 3%) (Chart 3.97).

Chart 3.97 Location of Sale of Processed Products



There were large differences between districts in t he proportion of households selling processed products with Kahama district having the largest percent of households in the region selling to neighbours (51%) as well as selling to local markets or trade stores. Maswa district had a higher percent of households relying on secondary markets. (Chart 3.98).

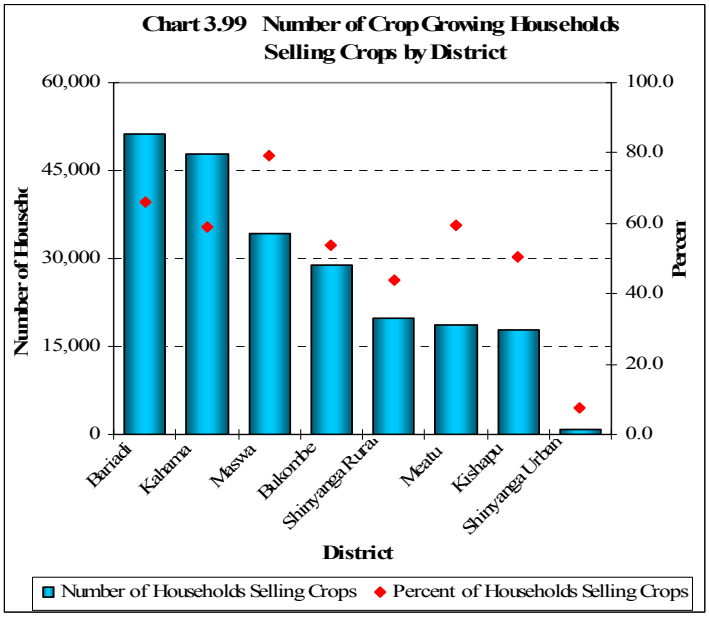
Chart 3.98 Number of households Selling Processed Products by Main outlet sale and District



3.7.3 Crop Marketing

The number of households that reported selling crops was 219,317 which represents 58 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Maswa (79%) followed by Bariadi (66%), Meatu (59%), Kahama (59%), Bukombe (54%), Kishapu (59%), Shinyanga Rural (44%) and Shinyanga Urban (8%) (Chart 3.99 and Map 3.40).

Chart 3.99 Number of Crop Growing Households Selling Crops by District

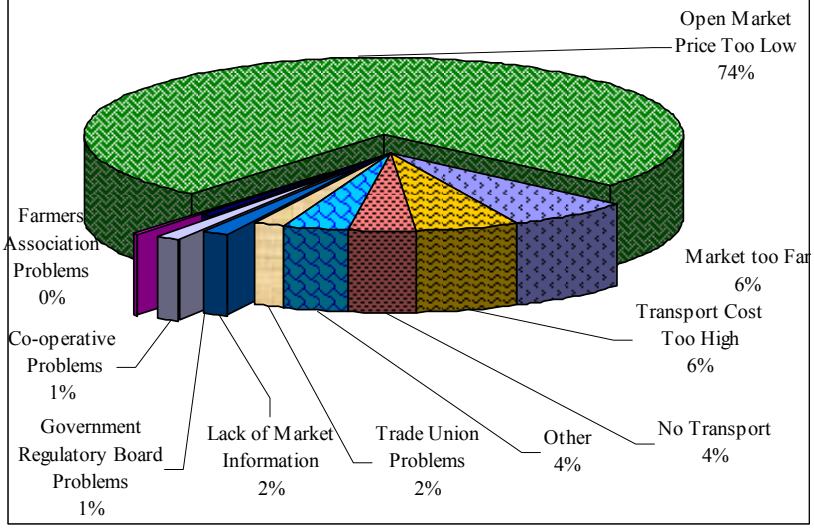


3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main marketin g problem reported by households (75% of crop growing households that reported main marketing problems).

Apart from low market prices, other problems were long distances to the markets (7%), high transport costs (6%), lack of transport (4%), lack of market information (2%), Trade union Problems (2%) and the government regulatory Boards problems (1%). Other marketing problems are minor, representing less than 1 percent of the total reported problems (Chart 3.100).

Chart 3.100 Percentage Distribution of Households that Reported Marketing Problems by Type of Problem



3.7.3.2 Reasons for Not Selling Crops

The main reason for not selling crops was reported as "insufficient production to sell", representing 87 percent of the smallholders. The proportion of households reporting other reasons for not selling were extremely low (Table 3.11).

Table 3.11 Reasons for Not Selling Crop Produce

Main Reason	Household Number	%
Production Insufficient to Sell	160,445	87
Other	12,481	7
Price Too Low	7,925	4
Trade Union Problems	1,503	1
Co-operative Problems	1,427	1
Government Regulatory Board Problems	905	0
Market Too Far	442	0
Total	**149,005**	**100.0**

3.8 Access to Crop Production Services

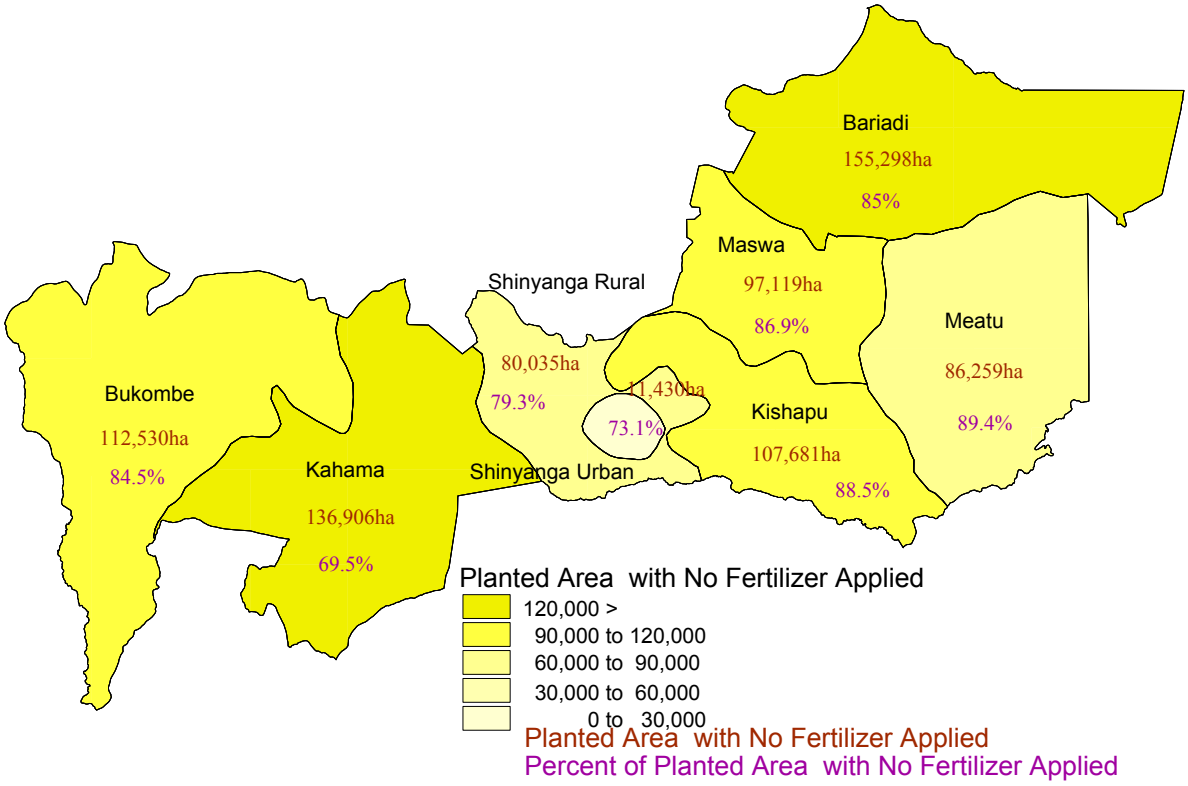
3.8.1 Access to Agricultural Credits

The census results shows that very few agricultural households (7,054, 2%) in Shinyanga region accessed credit, of which 5,402 (77%) were male-headed households and 1,651 (24%) were female headed households. The number of those who accessed credits was higher in Bariadi (31%) followed by Kahama (31%), Bukombe (12%) and Maswa (12%). Other Districts have less than 10% of those who accessed credits, (Table 3.12).

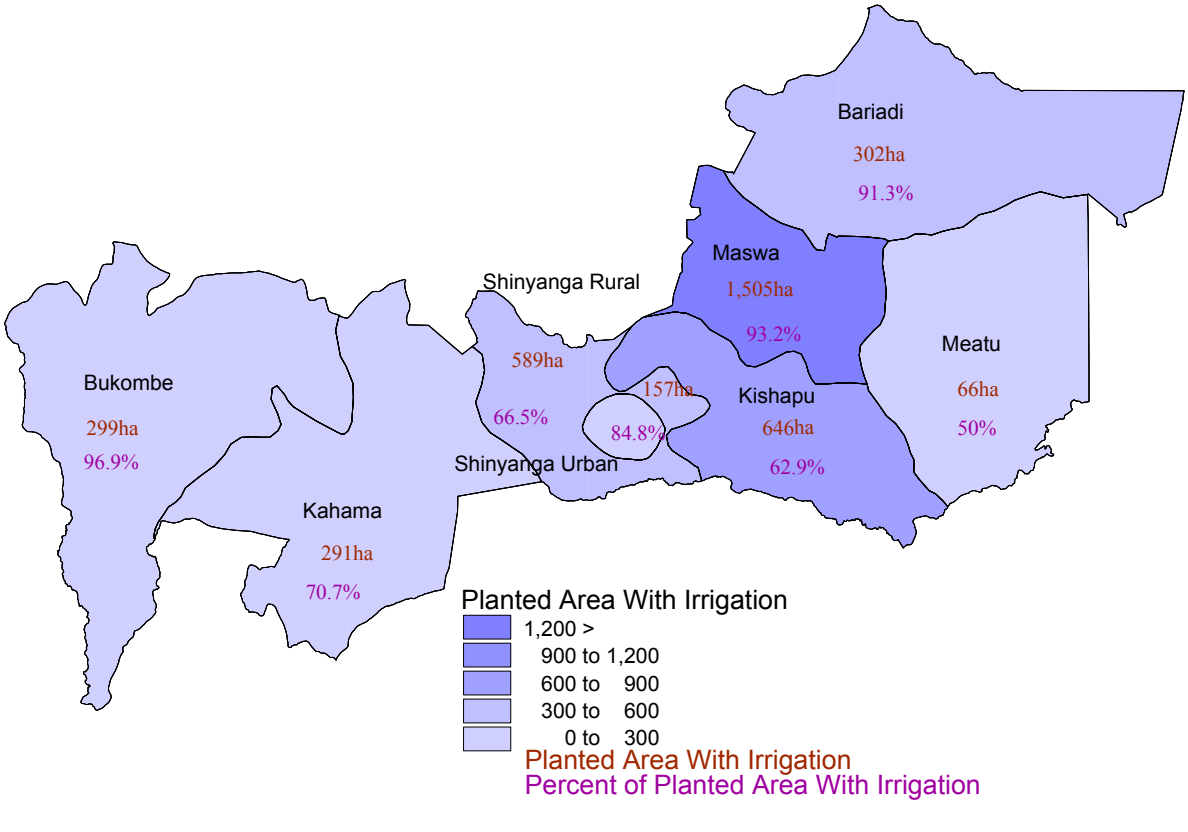
Table 3.12 Number of Agricultural Households that Received Credit by Sex of Household Head and District

District	Male		Female		Total
	Number	%	Number	%	
Bariadi	1,733	77	525	23	2,258
Maswa	650	75	217	25	867
Shinyanga Rural	100	25	302	75	401
Kahama	2,040	94	137	6	2,177
Bukombe	716	86	119	14	836
Meatu	81	33	165	67	246
Shinyanga Urban	0	0	23	100	23
Kishapu	82	33	164	67	245
Total	5,402	77	1,651	23	7,054

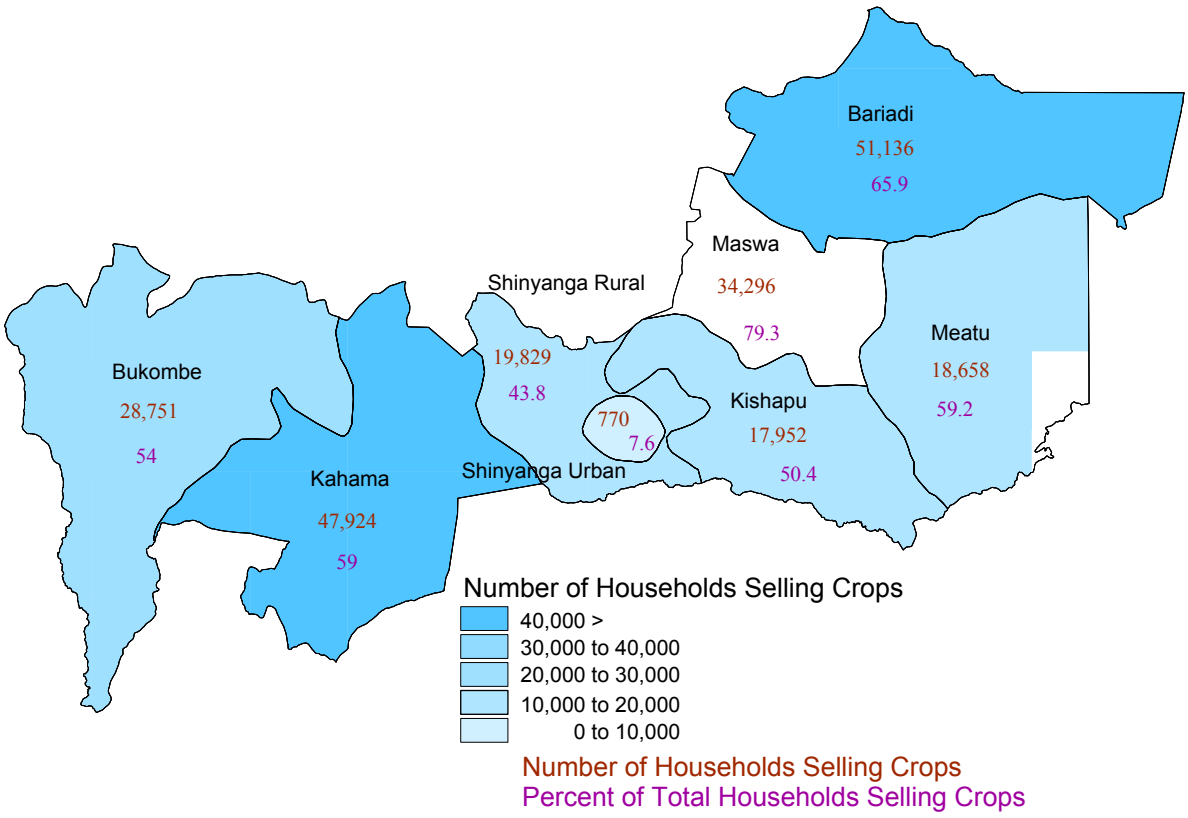
Map 3.23 SHINYANGA
Planted Area and Percent of Planted Area with No Application of Fertilizer by District



Map 3.24 SHINYANGA
Area Planted and Percent of Total Planted Area with Irrigation by District



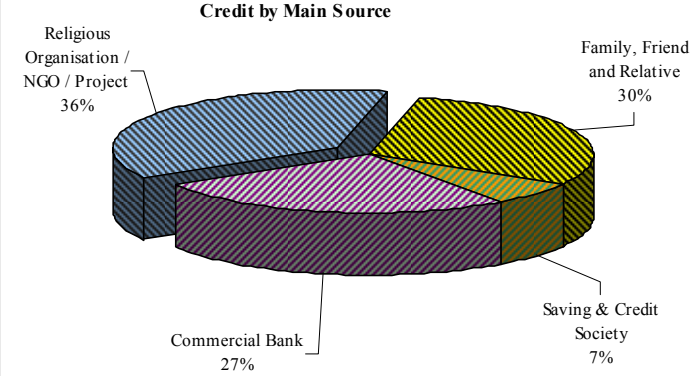
Map 3.25 SHINYANGA
Number of Households and Percent of Total Households Selling Crops by District



3.8.1.1 Source of Agricultural Credit

The major agricultural credit provider in Shinyanga region were Family, Friends and relatives Religious which collectively provided credit to 2,233 agricultural households (32% of the total number of households that accessed credit), followed by Savings and Credit Society (21%), Religious Organisations (20%), Traders/ Trade Store (15%) and Commercial Banks (1%). (Chart 3.101). (Chart 3.102).

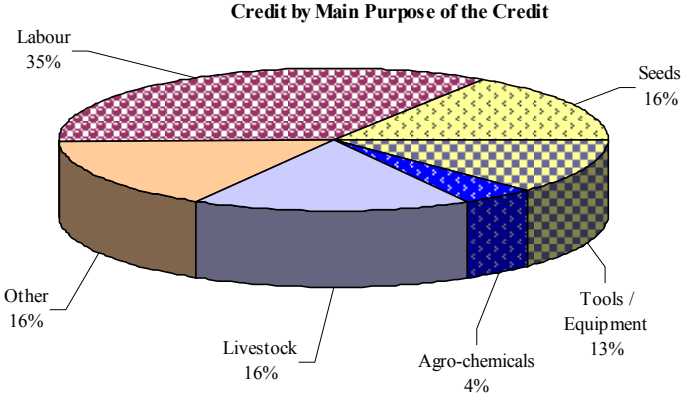
Chart 3.101 Percentage Distribution of Households Receiving Credit by Main Source



3.8.1.2 Use of Agricultural Credits

A large proportion of the agricultural credit provided to agricultural households in the region was used on purchase of Agrochemicals (28%), followed by purchasing Seeds (21%), hiring labour (16%), Purchasing tools and Equipment (12%), and on purchasing fertilizers (12%) (Chart 3.103).

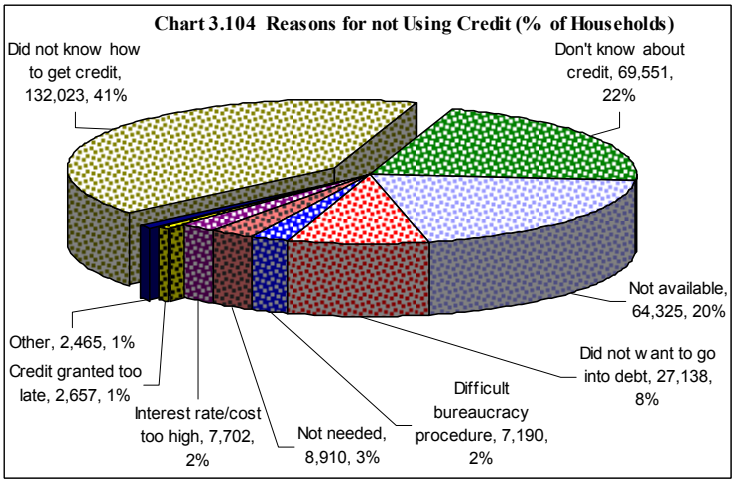
Chart 3.103 Proportion of Households Receiving Credit by Main Purpose of the Credit



3.8.1.3 Reasons for Not Using Agricultural Credits

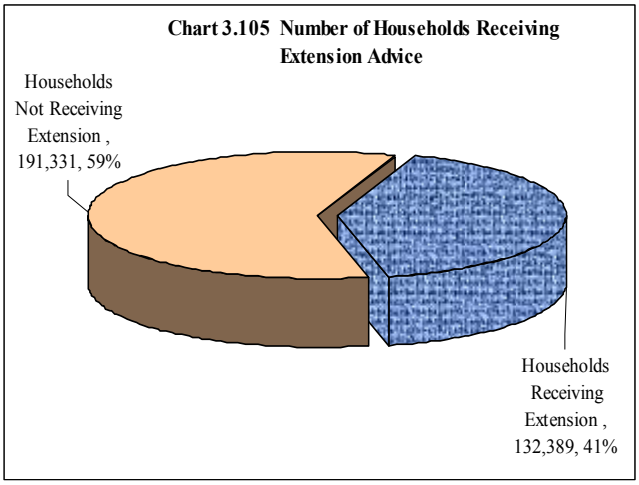
The main reason for not using agricultural credit as a source of finance was little credit awareness accounting for 57 percent of the agricultural households ("did not know how to get credit" and "don't know about credit"). This was followed by "non-availability of credit" reported by 20 percent of households and "not wanting to go into debt" (11%), Credit not wanted (6%). The rest of the reasons collectively accounted for less than 10 percent of the agricultural households (chart 3.104).

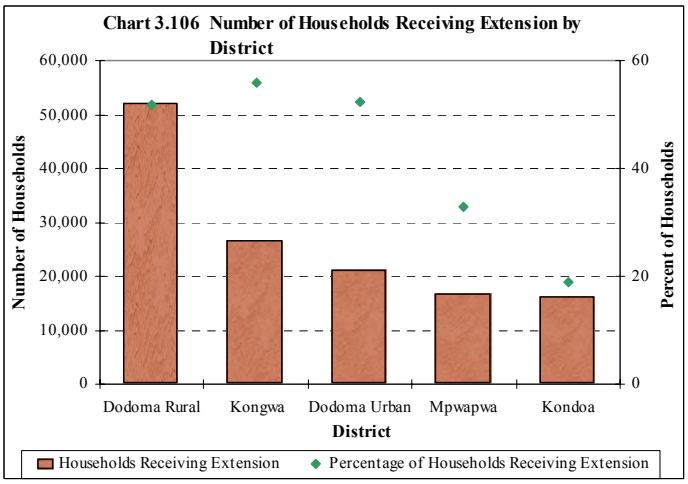
Chart 3.104 Reasons for not Using Credit (% of Households)



3.8.2 Crop Extension

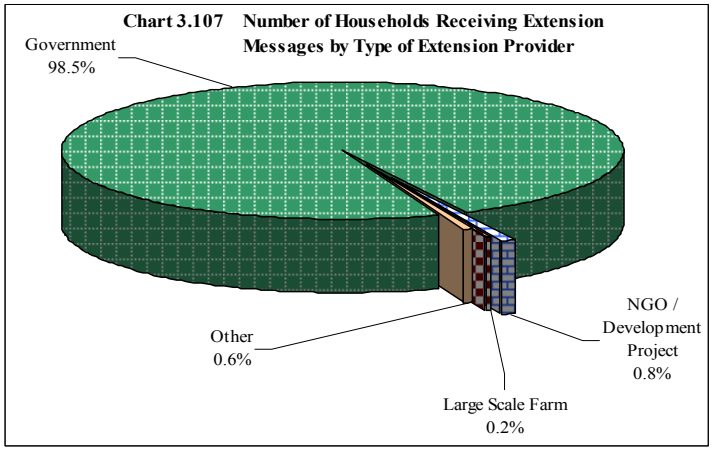
The number of agricultural households that received crop extension was 104,252 (28% of total crop growing households in the region) (Chart 3.105). Some districts have more access to extension services than others, with Kishapu having a relatively high proportion of households that received crop extension messages (51%) followed by Meatu (47%), Kahama (36%), Shinyanga Urban (33%), Shinyanga Rural (27%), Bariadi (21%), and Bukombe (14%), (Chart 3.106 and Map 3.41).





3.8.2.1 Sources of Crop Extension Messages

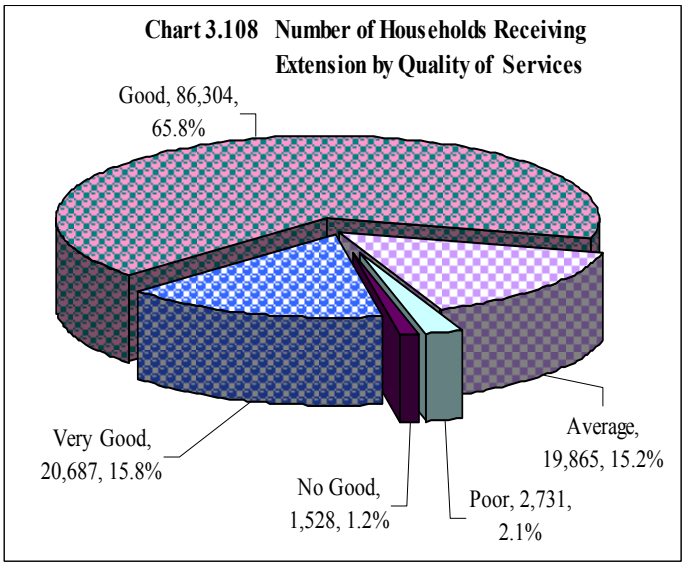
Of the households receiving extension advice the Government provided the greatest proportion (97%). NGOs provided 2.43 percent, large scale farms 0.33 percent and the remaining providers less than 0.24 percent (Chart 3.107), however district differences exist with the proportion of the households receiving advice from government services ranging from 98 percent in Shinyanga Urban, Kahama and Bukombe districts to 87 percent in Maswa district.



3.8.2.2 Quality of Extension29/01/2007

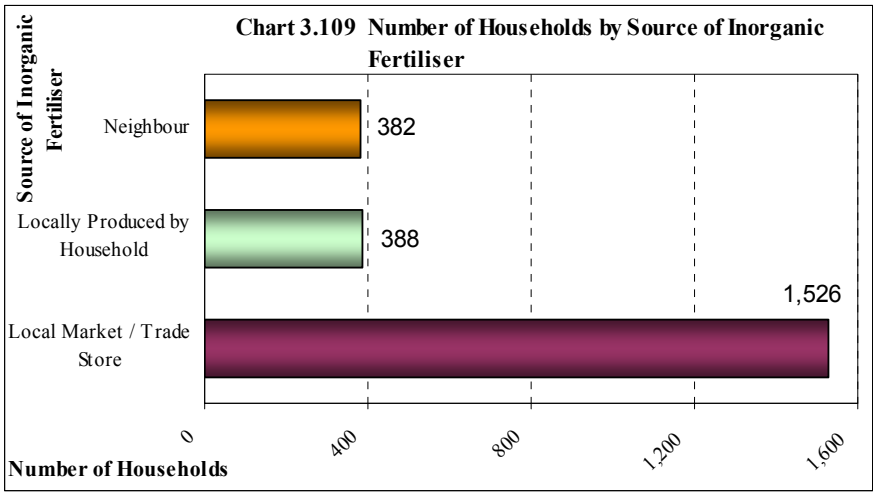
An assessment of the quality of extension indicates that 64 percent of the households receiving extension ranked the service as being "good" followed by "Average" (20%) and "very good (13%). Very few households reported the services to be "poor" (2.7%) and "no good" (0.3%) (Chart 3.108).

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



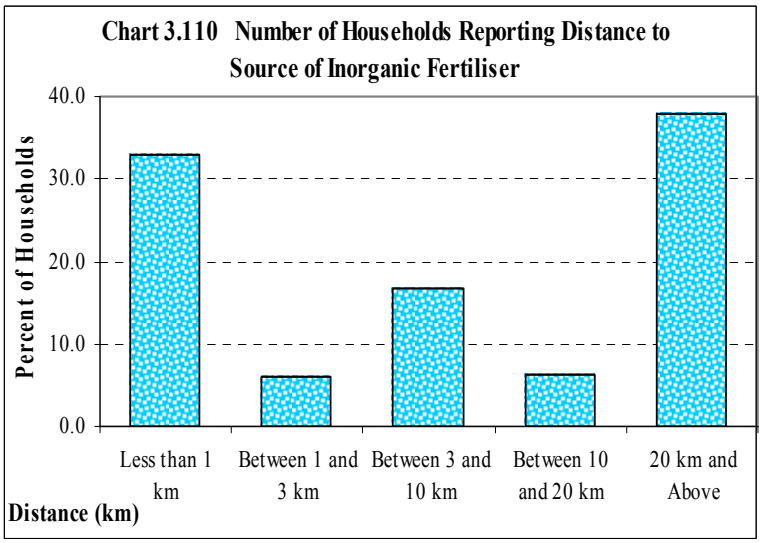
A small number of households use inputs and this is particularly true of inputs that are not produced on farm i.e., improved seeds, fungicides, inorganic fertiliser and herbicides. In Shinyanga region, improved seeds is used by 118,404 households which represents 31 percent of the total number of crop growing households. This is followed by households using farm yard manure (23%), pesticide/fungicide (21%), compost (4%) and inorganic fertiliser (3%). The number of Households with access to herbicides was very small which is 3 for every 1000 agricultural households (Table 3.13).

Table 3.13 Access to Inputs

Type of Input	Households With Access to Input		Households Without Access to Inputs	
	Number	%	Number	%
Farm Yard Manure	88,413	23	289,758	77
Improved Seeds	118,404	31	259,372	69
Pestcides/Fungicide	81,034	21	296,824	79
Compost	14,316	4	363,429	96
Inorganic Fertiliser	10,730	3	367,127	97
Herbicide	1,188	0	376,549	100

3.9.2 Inorganic Fertilisers

Smallholders that use inorganic fertiliser in Shinyanga region mostly purchase it from Cooperative Unions (59%) and local markets/trade stores (38% of the total number of households using inorganic fertiliser). The remaining sources of inorganic fertilisers are minor (Chart 3.109).



Most households access inorganic fertilizers from a distance of less than 1 kilometres (39%), followed by between 1 and 3 km (21%), between 3 and 10 km (18%), between 10 and 20 km (11%) and those who reside at distance of more than 20 km were 1,121 (10%), (Chart 3.110).

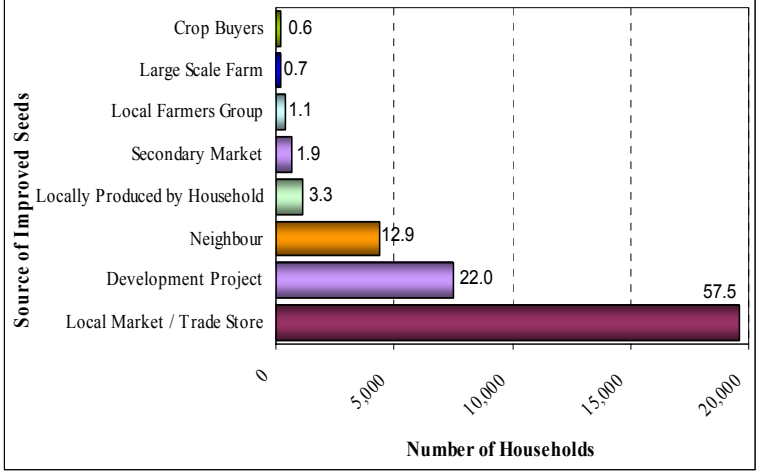
Due to the very small number of households using inorganic fertilisers coupled with the small number of households responding to "non available" (31%) as the reason for not using, it may be assumed that access to inorganic fertiliser is not the main reason for not using. Other reasons such as costs are more important with 60 percent of households responding to cost factors as the main reason for not using. In other words, it is assumed that if the cost was affordable, the demand would be higher and fertiliser would become more accessible.

More smallholders use inorganic fertilisers in Kahama than in other districts in Shinyanga region possibly because of the predominance of tobacco farming in the district, (79% of households using inorganic fertilisers).

3.9.3 Improved Seeds

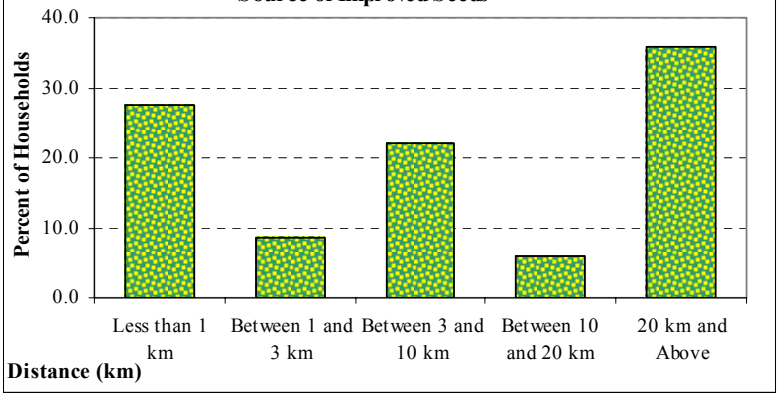
The percent of households that used improved seeds was 31 percent of the total number of crop growing households. Most of the improved seeds are from Cooperatives (41%). Other less important sources of improved seed are Local Market/ Store (27%) and Crop Buyers (22%). Other Sources of Improved Seeds are not significant (Chart 3.111).

Chart 3.111 Number of Households by Source of Improved Seeds



Access to improved seeds is equally same situation as access to chemical inputs with 35 percent of households obtaining the input within 1 km of the homestead (Chart 3.112) compared to 39 percent for chemical inputs. The higher use of improved seeds (31%) compared to other inputs is an indication that the availability is not the main prohibiting factor for the use of inputs but rather other factors such as cost.

Chart 3.112 Number of Households Reporting Distance to Source of Improved Seeds



The district that mostly uses improved seeds is Bariadi with 29 percent of the total number of households using improved seeds in Shinyanga region, followed by Maswa (18%), Kahama (16%), and Kishapu (14%). Percents of the crop growing households in Bukombe, Meatu, Shinyanga Rural and Shinyanga Urban districts that used improved seeds were 9,4 and 1 percent respectively (Map 3.42).

3.9.4 Insecticides and Fungicides

The percent of households that used Insecticides/Fungicides was 21 percent of the total number of crop growing households.

Most smallholder households using insecticides and fungicides mainly purchase them from local markets/trade stores (60% of the total number of households using insecticides/fungicides), followed by Cooperatives (29%). Other sources of insecticides/Fungicides were not significant (Chart 3.113).

Chart 3.113 Number of Households by Source of Insecticide/fungicide

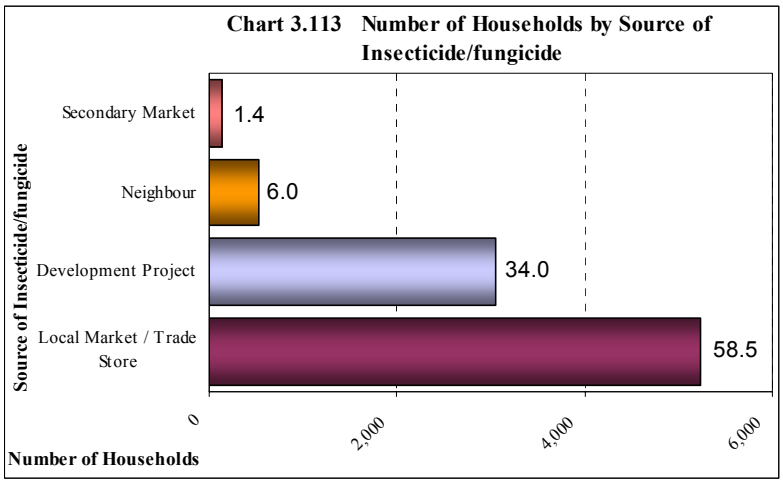
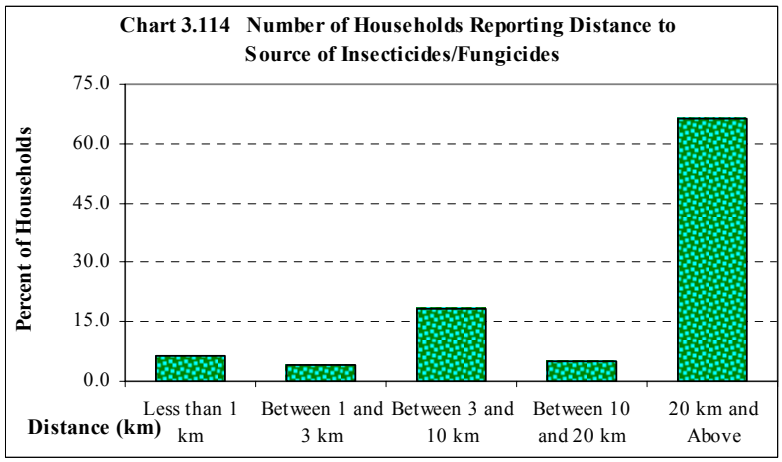


Chart 3.114 shows that the number of agricultural households (31% of the crop growing households which used insecticides and fungicides) obtained the inputs from the distance of 3 to 20 kilometres.

Chart 3.114 Number of Households Reporting Distance to Source of Insecticides/Fungicides



The small number of households using insecticides/fungicides coupled with the 8 percent of households responding to "non availability" as the reason for not using fungicides, may lead to the assumption that access is not the main reason for not using. Other reasons such as costs are more important with 76 percent of households responding to cost factors as the main reason for not using. In other words, it is assumed that if the cost was affordable, the demand would be higher and access to insecticides/fungicides would be improved. Fungicide is mostly used in Bariadi district with 36 percent of the total number of households using fungicide, followed by Kahama (22%), Bukombe (15%), Meatu (11%), Maswa (6%) and Kishapu (6%). Shinyanga Rural and Urban Districts had the smallest number of households using Insecticides/ Fungicides which was 3 and 1 Percent Respectively.

3.10 Tree Planting

The number of households involved in tree farming was 13,645 representing 4 percent of the total number of agriculture households (Chart 3.115).

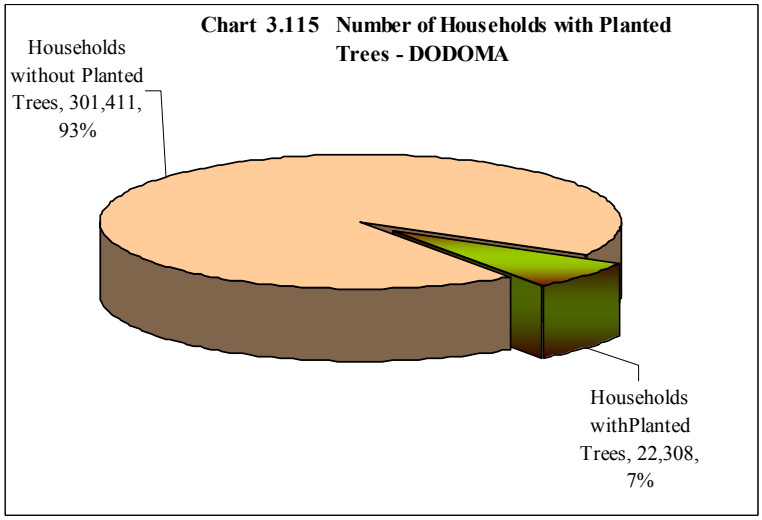


Chart 3.115 Number of Households with Planted Trees - DODOMA

The Common tree species planted by smallholders on their allotted land were Leucena Sp (51%), Gravelli (21%), Acacia (12%) and Azadritachta Spp.

In Shinyanga Region Smallholders plant trees mostly scattered on Field. The proportion of trees that are planted Scattered on field is 53 percent, followed by trees planted on field boundaries 38% and tress in Plantation accounted for 9% of all planted trees in the region.

3.11 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 in Shinyanga region was 15,199 which represent 4 percent of the total number of agricultural households in the region (Chart 3.120).

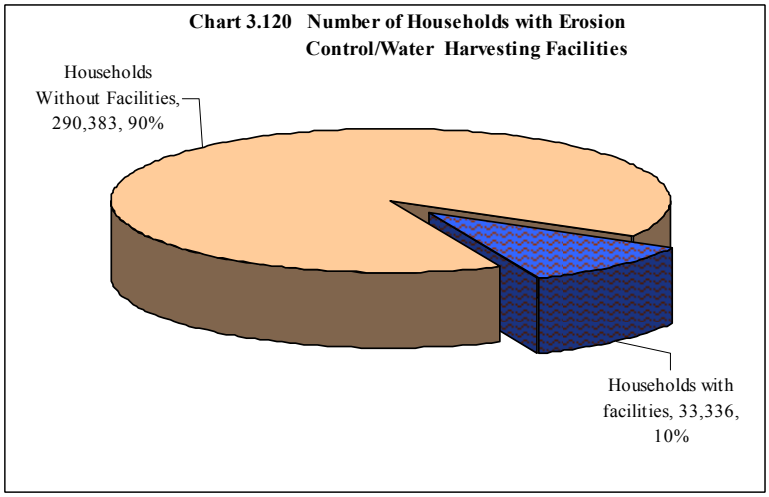


Chart 3.120 Number of Households with Erosion Control/Water Harvesting Facilities

The proportion of households with soil erosion control and water harvesting facilities was highest in Shinyanga Rural (7%) followed by Shyinyanga Urban (7%), Bariadi (5%), Kahama (4%), Kishapu (3%), Maswa (3%), Meatu (2%) and Bukombe (1%) (Chart 3.121 and Map 3.44).

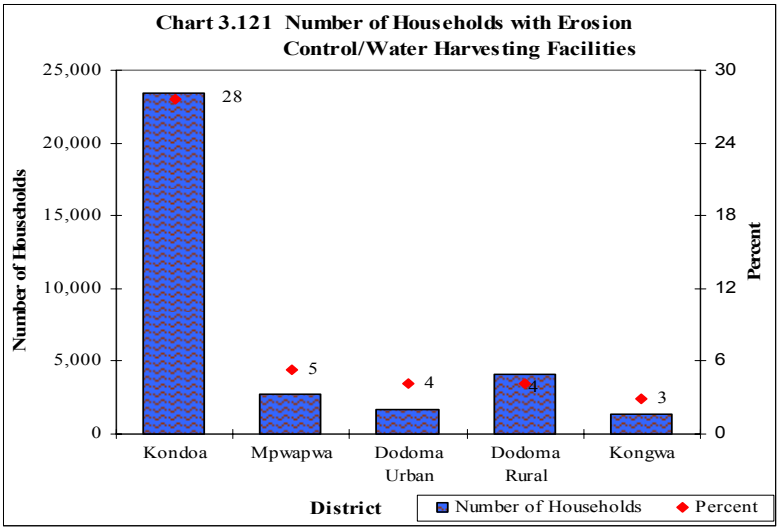
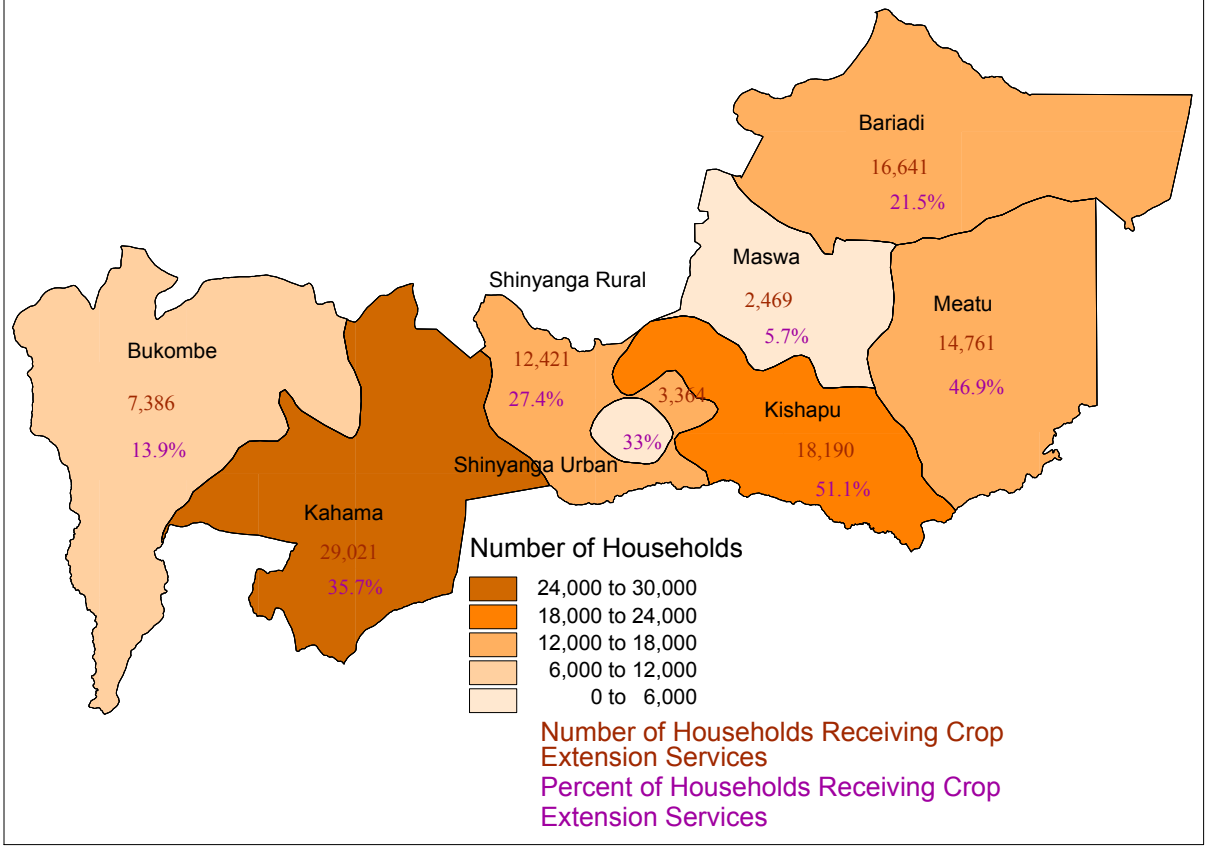
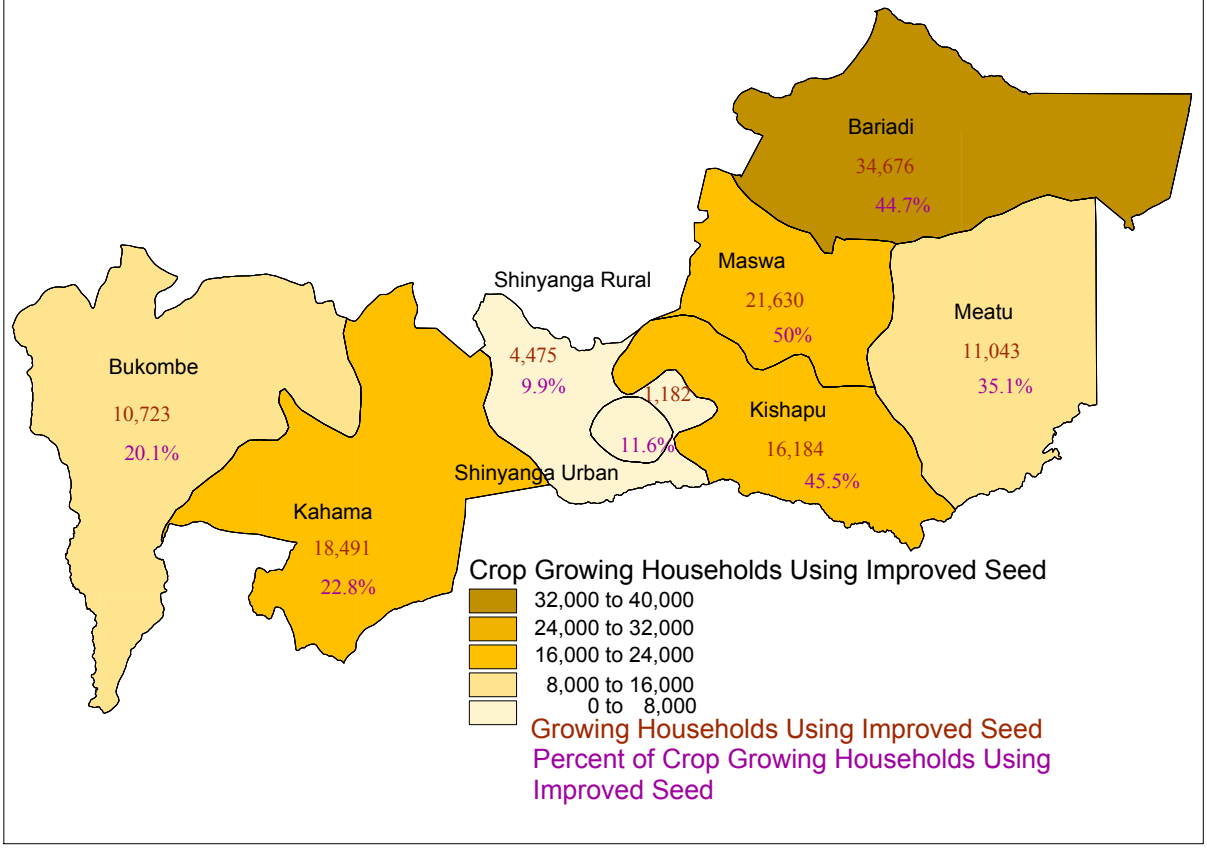


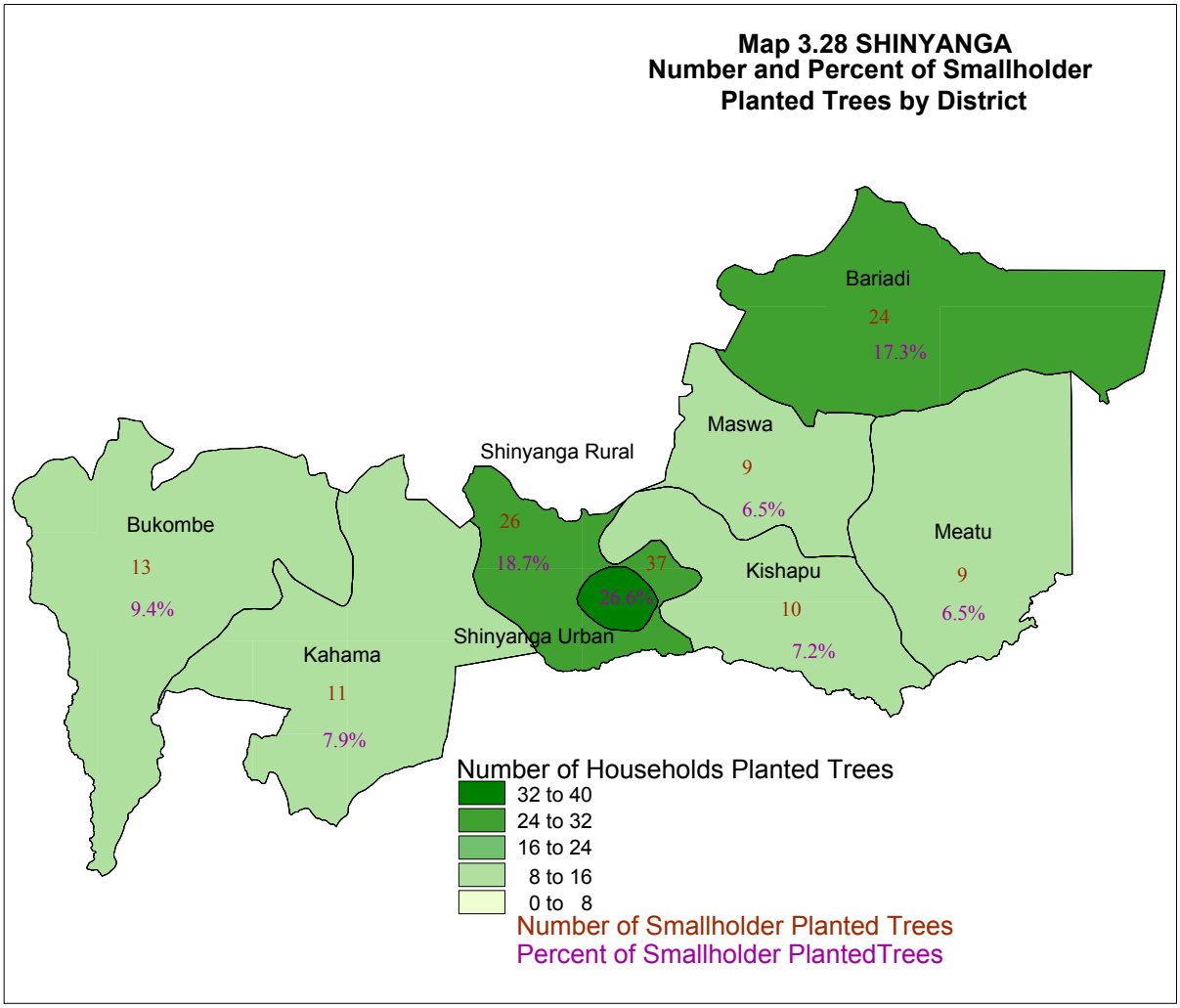
Chart 3.121 Number of Households with Erosion Control/Water Harvesting Facilities

Map 3.26 SHINYANGA
Number of Households and Percent of Total Households Receiving Crop Extension Services by District



Map 3.27 SHINYANGA
Number and Percent of Crop Growing Households using Improved Seed by District




Map 3.28 SHINYANGA
Number and Percent of Smallholder
Planted Trees by District
Bariadi
24
17.3%
Maswa
9
6.5%
Meatu
9
6.5%
Shinyanga Rural
26
18.7%
37
26.6%
Shinyanga Urban
Kishapu
10
7.2%
Bukombe
13
9.4%
Kahama
11
7.9%
Number of Households Planted Trees
32 to 40
24 to 32
16 to 24
8 to 16
0 to 8
Number of Smallholder Planted Trees
Percent of Smallholder PlantedTrees

3.12 LIVESTOCK RESULTS

3.12.1 Cattle Production

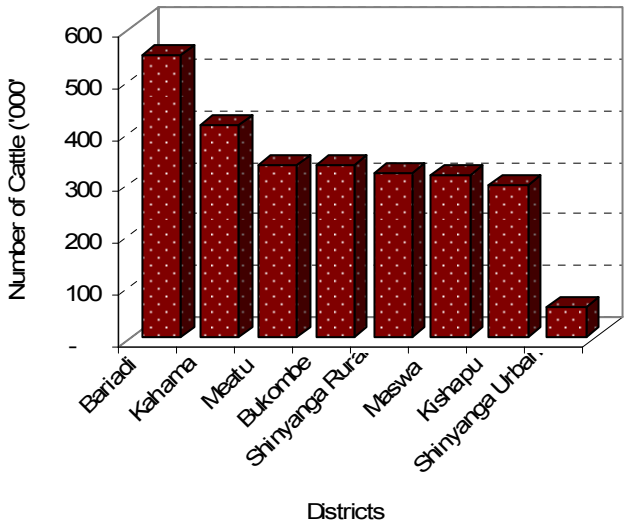
The total number of cattle in the region was 2,604,105 which has the largest cattle population in the Country regional wise. Cattle were the dominant livestock type in the region followed by goats, sheep and pigs. The region ranked 1st out of 21 Mainland regions and had 15.5 percent of all cattle population on Tanzania Mainland.

3.12.1.1 Cattle Population

The number of indigenous cattle in Shinyanga region was 2,591,532 (99.5 % of the total number of cattle in the region), 1,375 cattle (0.1%) were Beef breeds and 11,198 cattle (0.4%) were Diary breeds.

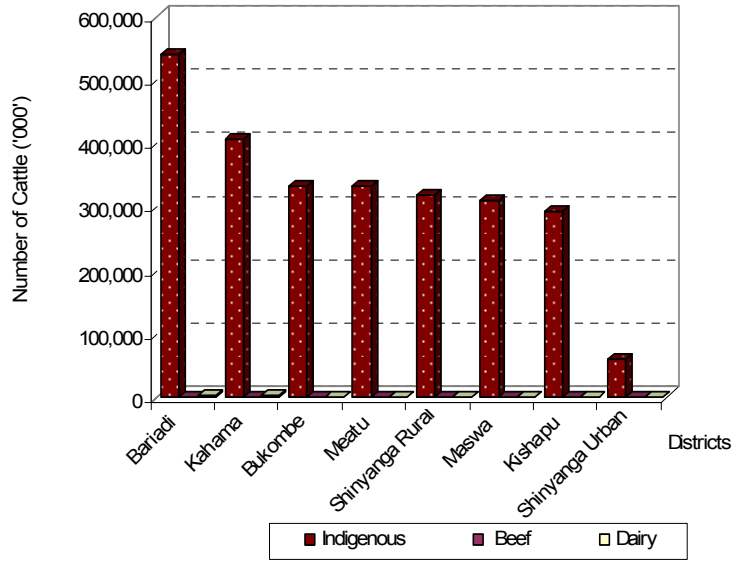
The census results show that 148,216 agricultural households in the region (39% of total agricultural households) kept 2.6 million cattle. This was equivalent to an average of 17.6 heads of cattle per cattle-keeping-household. The district with the largest number of cattle was Bariadi which had about 544, 496 heads of cattle (21% of the total cattle in the region). This was followed by Kahama (409,991 cattle, 16%), Meatu (334,099 cattle, 13%), Bukombe (332,685 cattle, 13%), Shinyanga Rural (317,785 cattle, 12%), Maswa (312,274, 12%) and Kishapu (292,978 11%). Shinyanga Urban district with 59,788 cattle, 2% had the least number of cattle in the Region. However Shinyanga Urban district had the highest density (1,467 head per km^2) (Chart 3.123, Map 3.48).

Chart 3.123 Total Number of Cattle ('000') by District



The Region was mostly dominated by indigenous breeds and had a small number of improved cattle which was 12,573 (0.48%) or 5 in every 1,000 heads of cattle. A small number of improved dairy (3,039) and beef (537) cattle was found in Bariadi district. The number of dairy and beef cattle was insignificant in other Districts. (Chart 3.124).

Chart 3.124 Total Number of Cattle ('000') by District



3.12.1.2 Herd Size

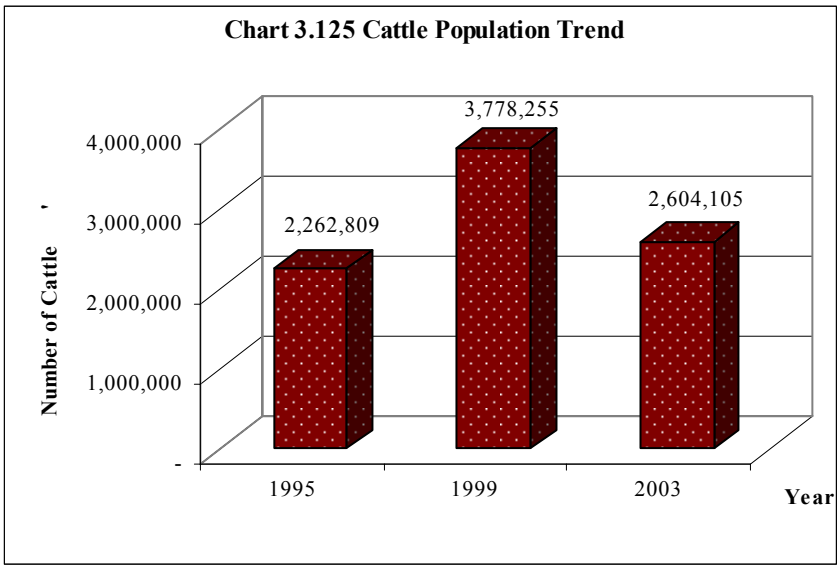
Twenty three percent of the cattle-rearing households had herds of size 1-5 cattle with an average of three cattle per household. Herd sizes of 6-30 accounted for about 27 percent of all cattle in the region. Only 13 percent of the cattle rearing households had herd sizes of 31- 100 cattle. About 87 percent of total cattle rearing households had herds of size 1-30 cattle and owns 63 percent of total cattle in the region, resulting in an average of 11 cattle per cattle rearing household. There were about 610 households with a herd size of more than 151 cattle each (200,121 cattle in total) resulting in an average of 328 cattle per household.

3.12.1.3 Cattle Population Trend

Cattle population in Shinyanga increased during the eight years period from 2,262,809 in 1995 to 2,604,105 cattle in 2003. This trend depicts an overall annual positive growth rate of 1.77 percent (Chart 3.125).

There was a very sharp increase in number of cattle for the period of four years from 1995 to 1999 at the rate of 13.67 percent whereby the number increased from 2,262,809 to 3,778,255. However, the number of cattle decreased from 3,778,255 in 1999 to 2,604,105 in 2003 at the negative decrease rate of - 8.88

Chart 3.125 Cattle Population Trend



3.12.1.4 Improved Cattle Breeds

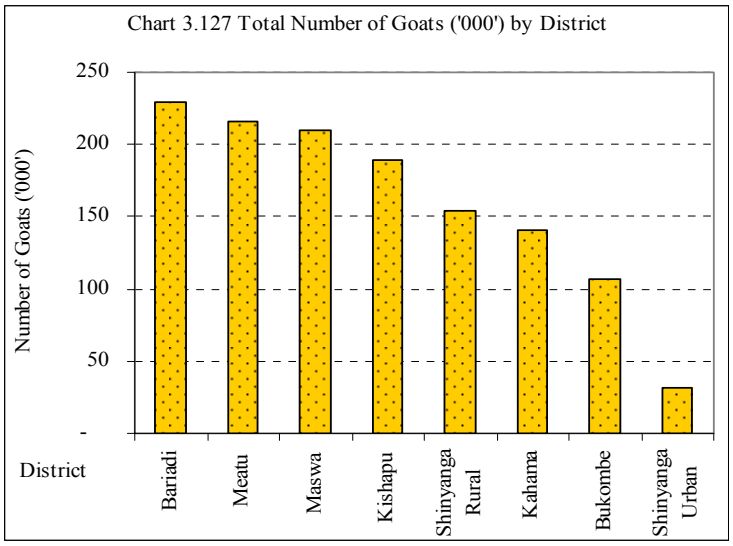
The total number of improved cattle in Shinyanga region was 12,573 (11,198 dairy and 1,375 improved beef). The diary cattle constituted 0.43 percent of the total cattle and 90 percent of improved cattle in the region. The number of beef cattle in the region was insignificant constituting only 10 percent of the total number of improved cattle and 0.05 percent of the total cattle. The time series information to facilitate time series analysis for this category of cattle is not available.

3.12.2. Goat Production

Goat rearing was the second most important livestock keeping activity in the region followed by sheep and pig rearing. In terms of total number of goats on the Mainland, the region ranked 2 out of 21 Mainland regions and had 11 percent of all Goat on Tanzania Mainland.

3.12.2.1 Goat Population

The number of goat-rearing-households in Shinyanga region was 124,019 (33% of all agricultural households in the region) with a total of 1,277,929 goats giving an average of 10 head of goats per goat-rearing-household. Bariadi had the largest number of goats (229,817 goats, 18% of all goats in the region), followed by Meatu (215,670 goats, 17%), Maswa (209,359 goats, 16%), Kishapu (189,543 goats, 15%), Shinyanga Rural (154,348 goats, 12%), Kahama (140,846 goats, 11%) and Bukombe (106,926, 8%). Shinyanga Urban district had the least number of goats (31,434 goats, 2%) (Chart 3.127 and Map 3.49). However Shinyanga Urban district had the highest density (471 head per km^2) (Map 3.50).



3.12.2.2 Goat Herd Size

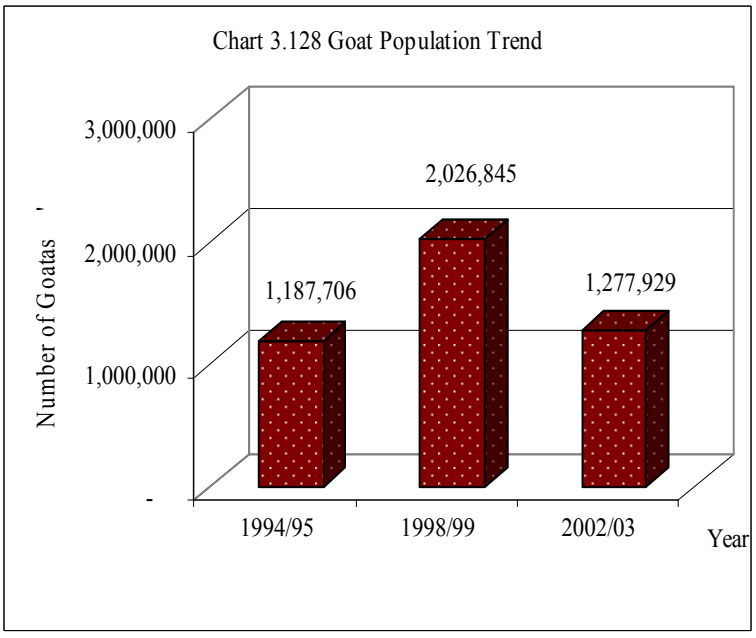
Twenty nine percent of the goat-rearing households had herd size of 1-4 goats with an average of 3 goats per goat rearing household. Seventy eight percent of total goat-rearing households had herd size of 1-14 goats and owned 46 percent of the total goats in the region resulting in an average of 6 goats per goat-rearing households. The region had 2,914 households (2.4%) with herd sizes of 40 goats or more each (183,695 goats in total), resulting in an average of 63 goats per household.

3.12.2.3 Goat Breeds

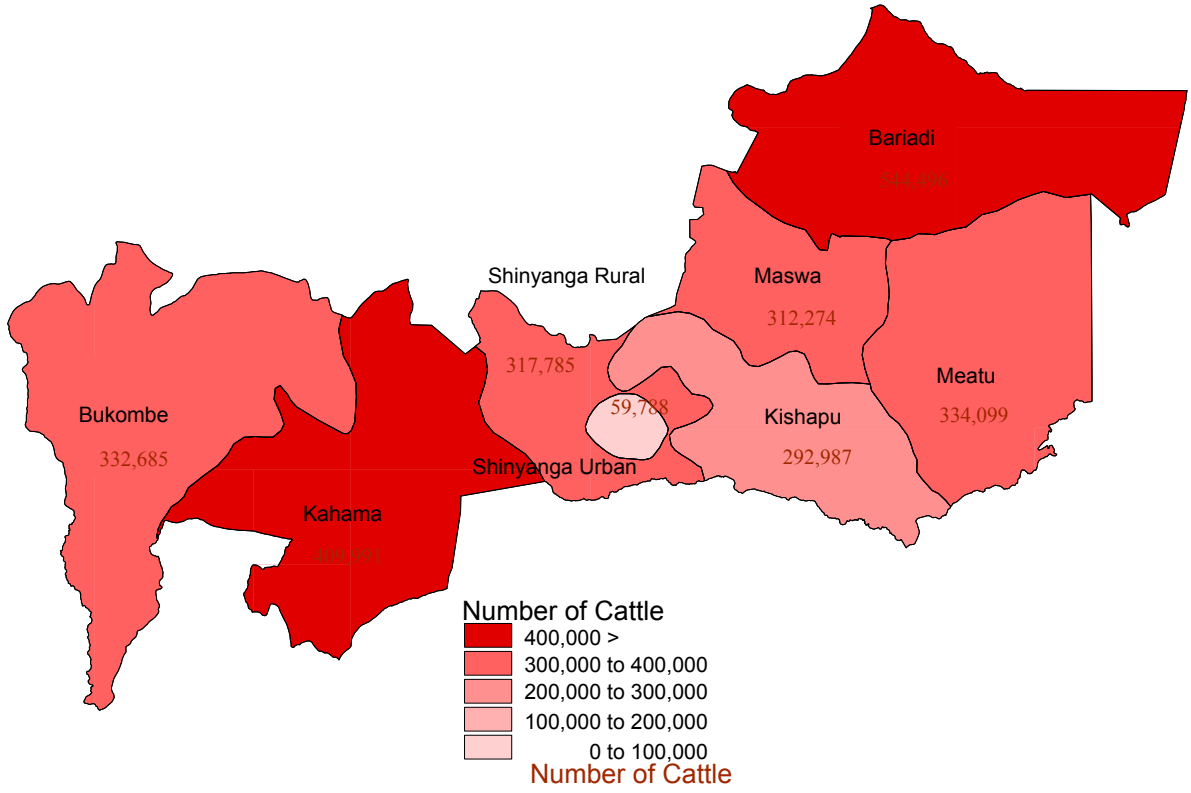
Goat husbandry in the region was dominated by the indigenous breeds that constituted 99.4 percent of the total goats in Shinyanga region. Improved goats for meat and diary goats constituted 0.5 and 0.1 percent of total goats respectively.

3.12.2.4 Goat Population Trend

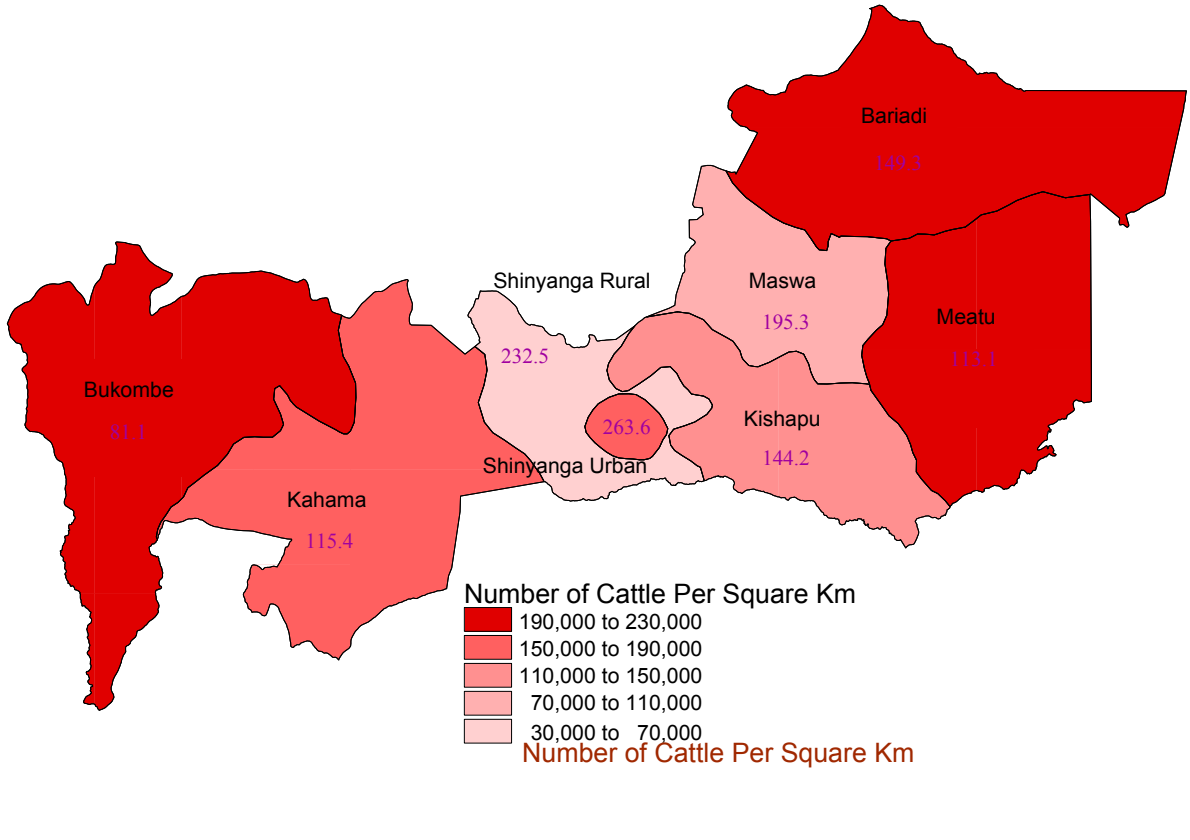
The overall annual growth rate of goat population from 1995 to 2003 was 0.92 percent. The positive rate of increase indicates goat population increase from 1,187,706 in 1995 to 1,277,929 in 2003. The number of goats increased from 1,187,706 in 1995 at an estimated annual rate of 14.30 percent to 2,026,929 in 1999. From 1999 to 2003, the goat population decreased at an annual rate of -10.89 percent (Chart 128).



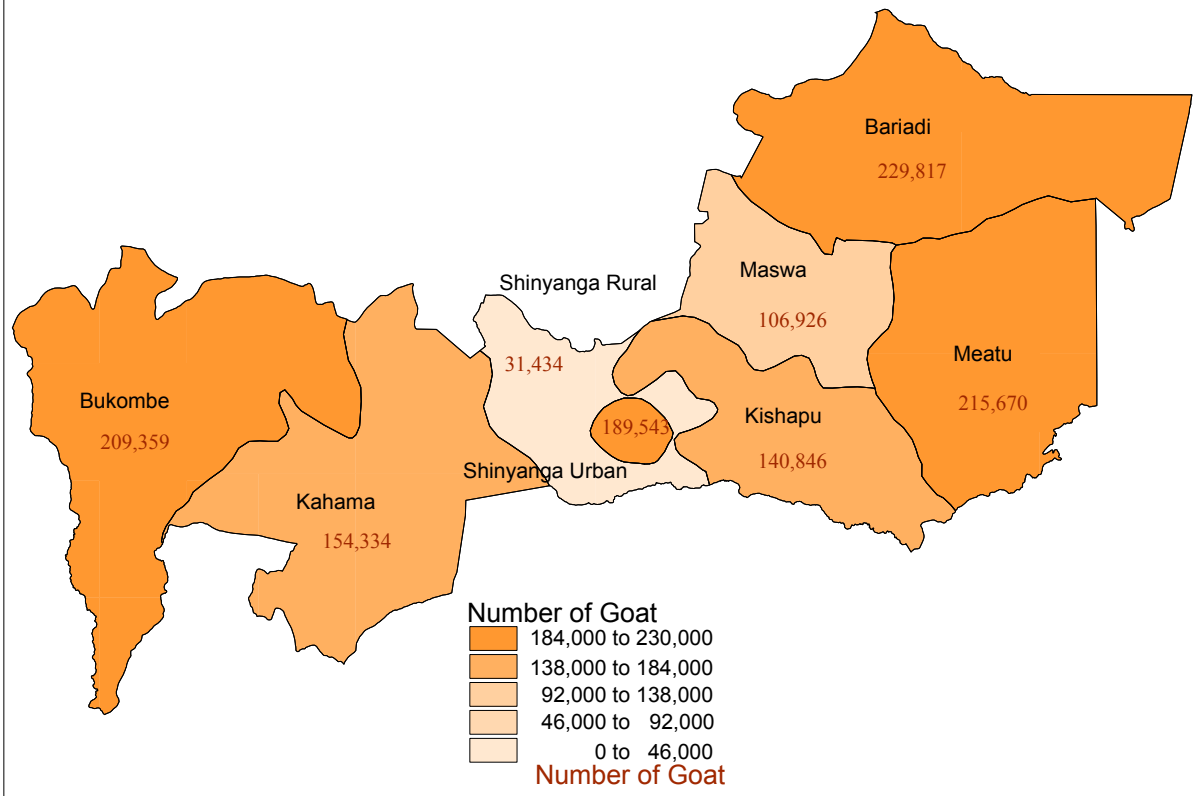
Map 3.29 SHINYANGA
Cattle population by District as of 1st Octobers 2003



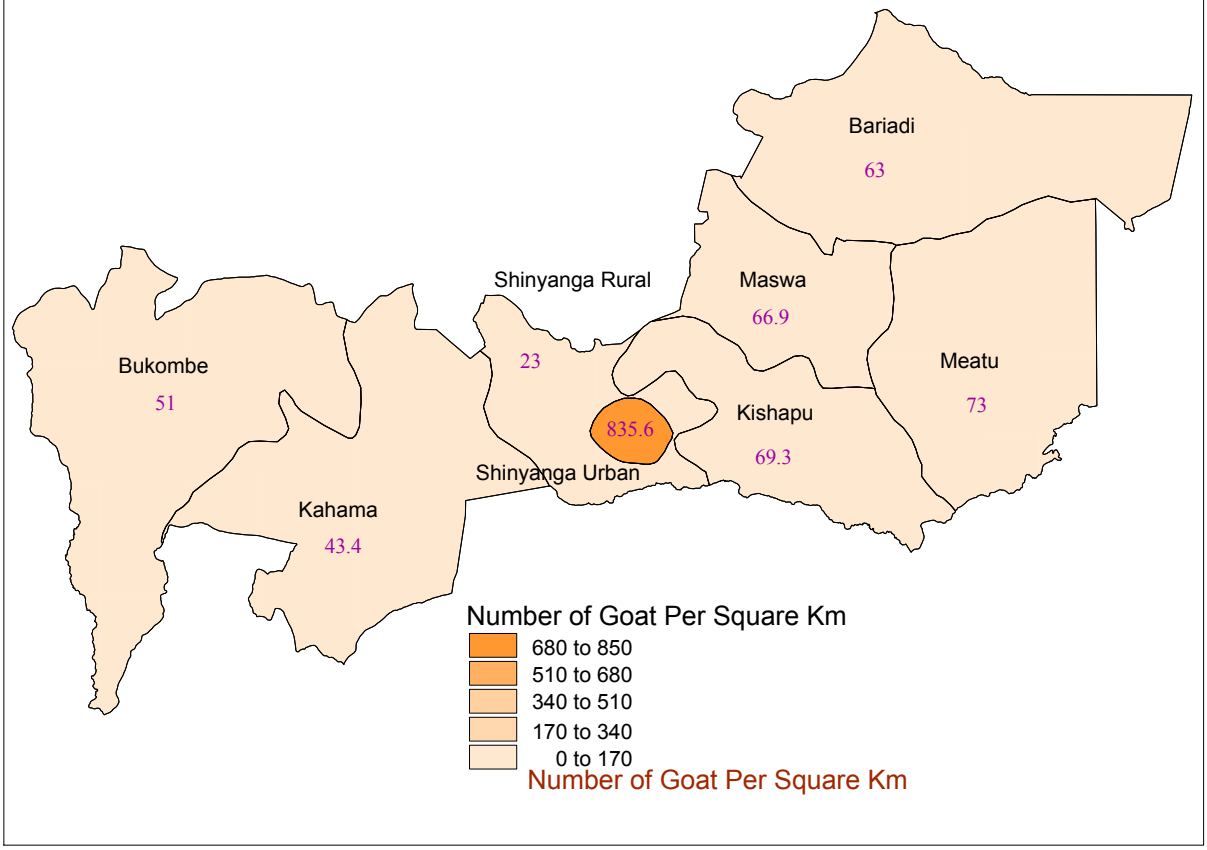
Map 3.30 SHINYANGA
Cattle Density by District as of 1st October 2003



Map 3.31 SHINYANGA
Goat population by District as of 1st Octobers 2003



Map 3.32 SHINYANGA
Goat Density by District as of 1st October 2003



3.12.3. Sheep Production

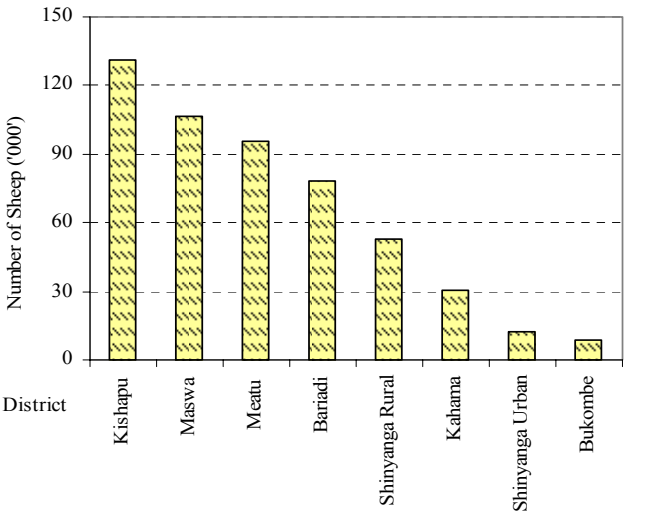
Sheep rearing was the third most important livestock keeping activity in Shinyanga region after cattle and goats. The region ranked 2 out of 21 Mainland regions and had 13 percent of all sheep on Tanzania Mainland.

3.12.3.1 Sheep Population

The number of sheep-rearing households was 58,545 (15% of all agricultural households in Shinyanga region) rearing 517,144 sheep, giving an average of 9 heads of sheep per sheep-rearing household. The district with the largest number of sheep was Kishapu with 131,296 sheep (25% of total sheep in Shinyanga region) followed by Maswa (106,969 sheep, 21%), Meatu (95,895 sheep, 19%), Bariadi (78,539 sheep, 15%), Shinyanga Rural (53,163 sheep, 10%), Kahama (30,133 sheep, 6%). Shinyanga Urban and Bukombe Districts had the least number of sheep in the region which was 12,403, 2% and 8,745, 2% sheep respectively (Chart 3.129 and Map 3.51). Maswa district also had the highest density (67 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.

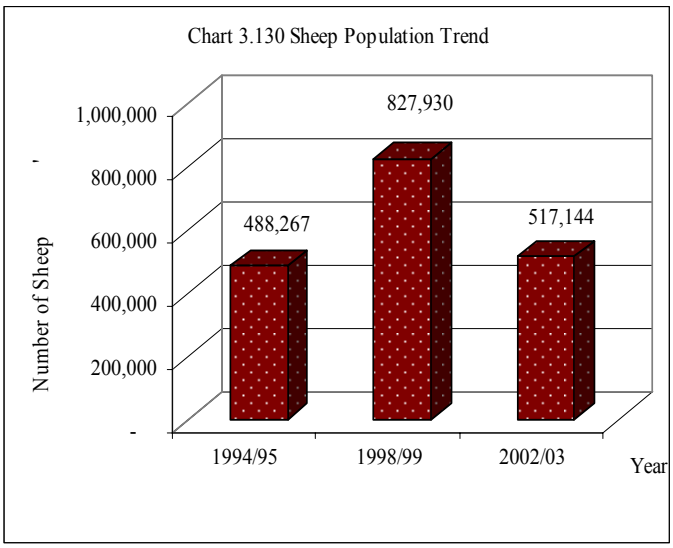
Chart 3.129 Total Number of Sheep ('000') by District



3.12.3.2 Sheep Population Trend

The overall annual growth rate of the shee p population for the eight year period from 1995 to 2003 is estimated at 0.72 percent. The population increased at an annual rate of 14.11 percent from 488,267 in 1995 to 517,144 in 1999. From 1999 to 2003, sheep population decreased at an annual rate of -11.10 percent (Chart 3.130).

Chart 3.130 Sheep Population Trend

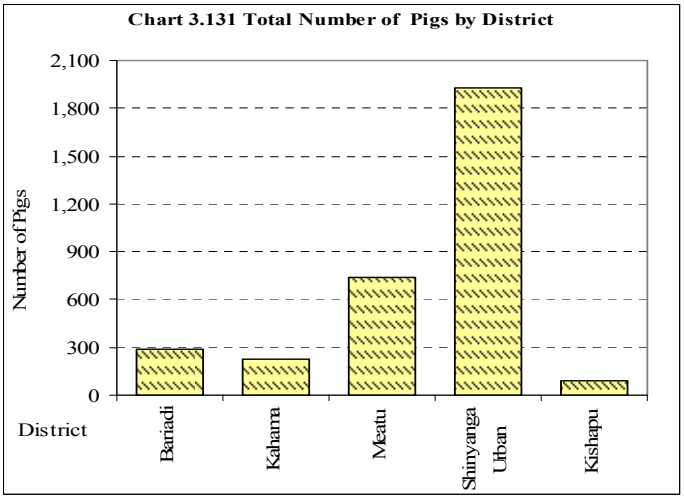


3.12.4. Pig Production

Piggery is the least important livestock keeping activity in the region after cattle, goats and sheep. The region ranks 19 out of 21 Mainland regions and is 0.3 percent of the Mainland total pigs.

The number of pig-rearing agricultural households in Shinyanga region was 656 (1% of the total agricultural households in the region) rearing 3,266 pigs. This gives

Chart 3.131 Total Number of Pigs by District



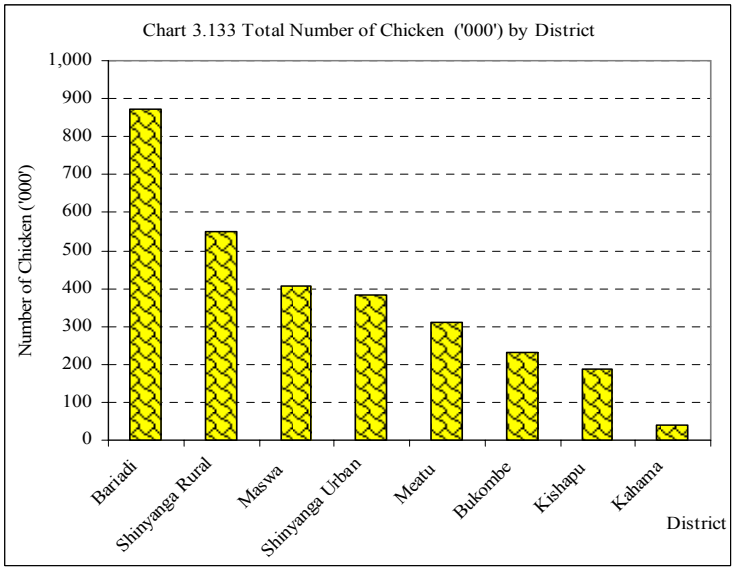
an average of 5 pigs per pig-rearing household. The district with the largest number of pigs was Shinyanga Urban with 1,931 pigs (59% of the total pig population in the region) followed by Meatu (736 pigs, 23%). Other District (Bariadi, Kahama and Kishapu) had insignificant number of Pigs. However, Shinyanga Urban district had the highest density (9 head per km^2) (Map 3.54). The Sample Census could not enumerate any pigs from Maswa, Bukombe and Shinyanga Rural Districts, (chart 3.131).

3.12.5 Chicken Production

The poultry sector in Shinyanga region was dominated by chicken. The region contributed 9 percent to the total chicken population on Tanzania Mainland.

3.12.5.1 Chicken Population

The number of households keeping chicken was 257 ,044 raising about 2,979,590 chickens. This gives an average of 12 chickens per chicken-rearing household. In terms of total number of chickens in the country, Shinyanga region was ranked first for having the largest number of chicken out of the 21 Mainland regions.

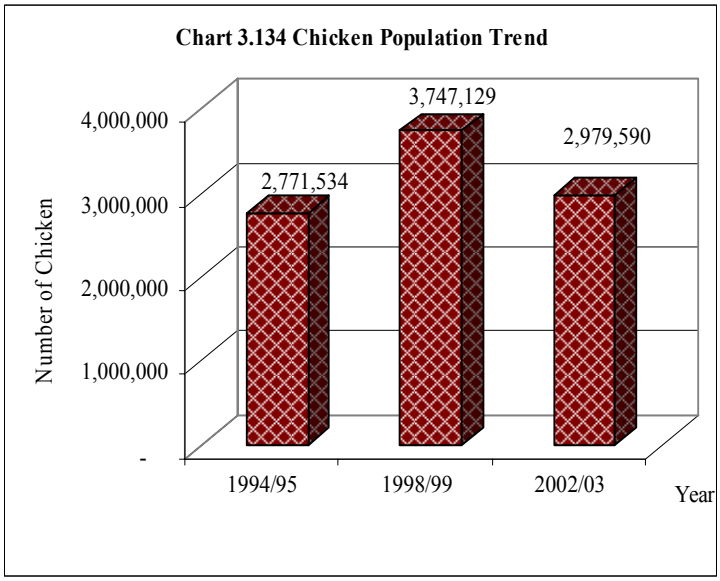


The District with largest number of chickens was Bariadi (872,294 chickens, 29% of the total number of chickens in the region) followed by Shinyanga Rural (551,354, 19%), Maswa (405,569, 14%), Shinyanga Urban (383,126 13%), Meatu, (309,349, 10%), Bukombe, (229,146, 8%) and Kishapu, (187,361, 6%). Kahama district had the smallest number of chickens (40,890, 1%) (Chart 3.133 and Map 3.55). However Shinyanga Urban district had the highest density (1,689 head per $km^{2)}$ (Map 3.56).

3.12.5.2 Chicken Population Trend

The overall annual chicken population growth rate during the eight-year period from 1995 to 2003 was 0.91 percent. The population increased at a rate of 7.83 percent from 1995 to 1999 after which it decreased to -5.57 percent for the four year period from 1999 to 2003 (Chart 3.134).

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



3.12.5.3 Chicken Flock Size

The results indicate that about 83 percent of all chicken-rearing households were keeping 1-19 chickens with an average of 7 chickens per holder. About 16.8 percent of holders were reported to be keeping the flock size of 20 to 99 chickens with an average of 39 chickens per holder.

Only 0.2 percent of holders kept the flock sizes of more than 100 chickens at an average of 117 chickens per holder (Table 3.14).

Table 3.14 Number of Households and Chickens Raised by Flock Size

Flock Size	Number of Households	%	Number of Chicken	Average Chicken by Households
1-4	54,834	21	156,753	3
5-9	82,532	32	546,340	7
10-19	77,801	30	999,425	13
20-29	25,519	10	564,268	22
30-39	9,060	4	285,517	32
40-49	2,448	1	105,425	43
50-99	4,350	2	263,212	61
100+	501	0.19	58,649	117
Total	257,044	100	2,979,590	12

3.12.5.4 Improved Chickens (layers and broilers)

The number of Layers and Broiler chicken population in Shinyanga Region was 11,276 and 32,934 respectively. In comparison to the total human population of the region the number of improved chicken is not significant.

3.12.6. Other Livestock

There were 94,783 ducks, 708 turkeys, 5,263 rabbits and 4,421 donkeys raised by rural agricultural households in Shinyanga region. Table 3-16 indicates the number of livestock kept in each district. The biggest number of ducks in the region was found in Bariadi District (56% of all ducks in the region), followed by Shinyanga Rural (14%), Maswa (10%), Kishapu (5%) and Kahama (5%). Meatu and Shinyanga Urban Districts district had the least number of ducks estimated at 2 percent of total ducks in the region. Turkeys were reported in Meatu , Bariadi and Shinyanga Urban districts only. Rabbits were only reported in Bariadi District and the number was 5,263. Donkeys were mostly reported in Bariadi 49%, Kahama 22%, Shinyanga Rural 14% and the least number donkeys was found in Kishapu and Shinyanga Urban (Table 3.15).

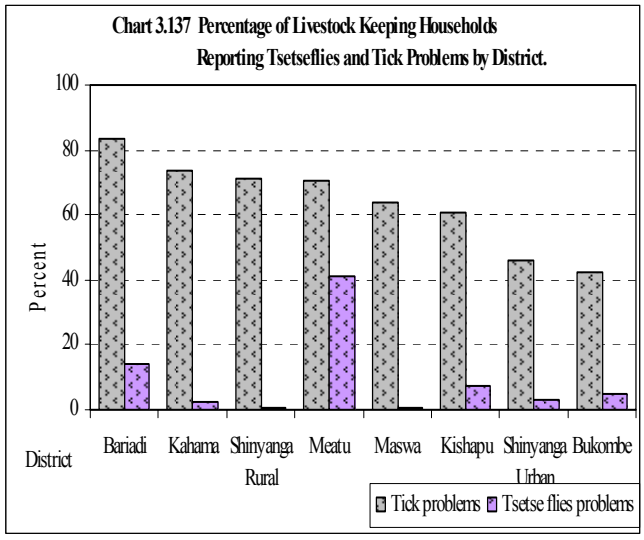
Table 3.15 Number of Other Livestock by Type of Livestock and District

District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Bariadi	53,587	179	5,263	2,170	.
Maswa	9,193	.	.	.	1,734
Shinyanga Rural	13,516	.	.	612	1,487
Kahama	5,165	.	.	981	1,715
Bukombe	4,063	.	.	.	3,734
Meatu	2,249	497	.	.	2,637
Shinyanga Urban	1,851	32	.	415	.
Kishapu	5,160	.	.	244	632
Total	94,783	708	5,263	4,421	11,938

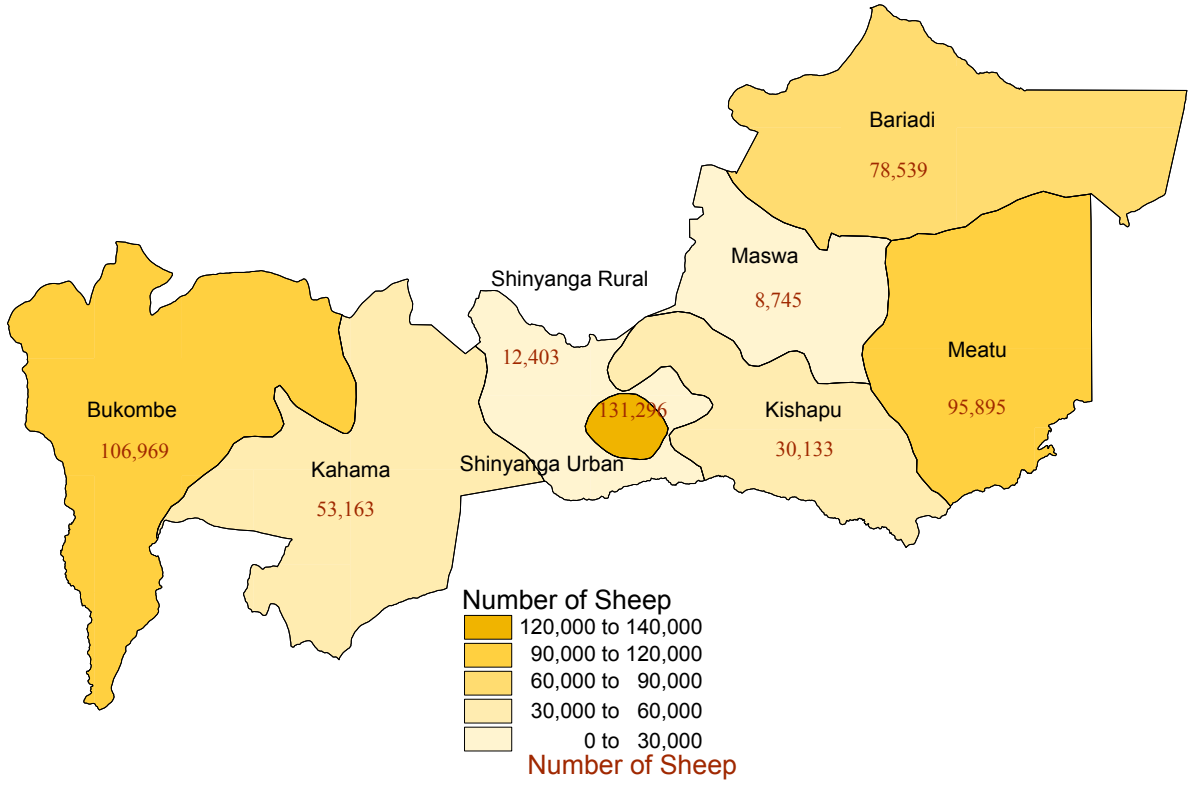
3.12.7 Pest and Parasite Incidence and Control

The results indicate that 68 percent and 9 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. Chart 3.137 shows that there is a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Meatu district. (Map 3.57).

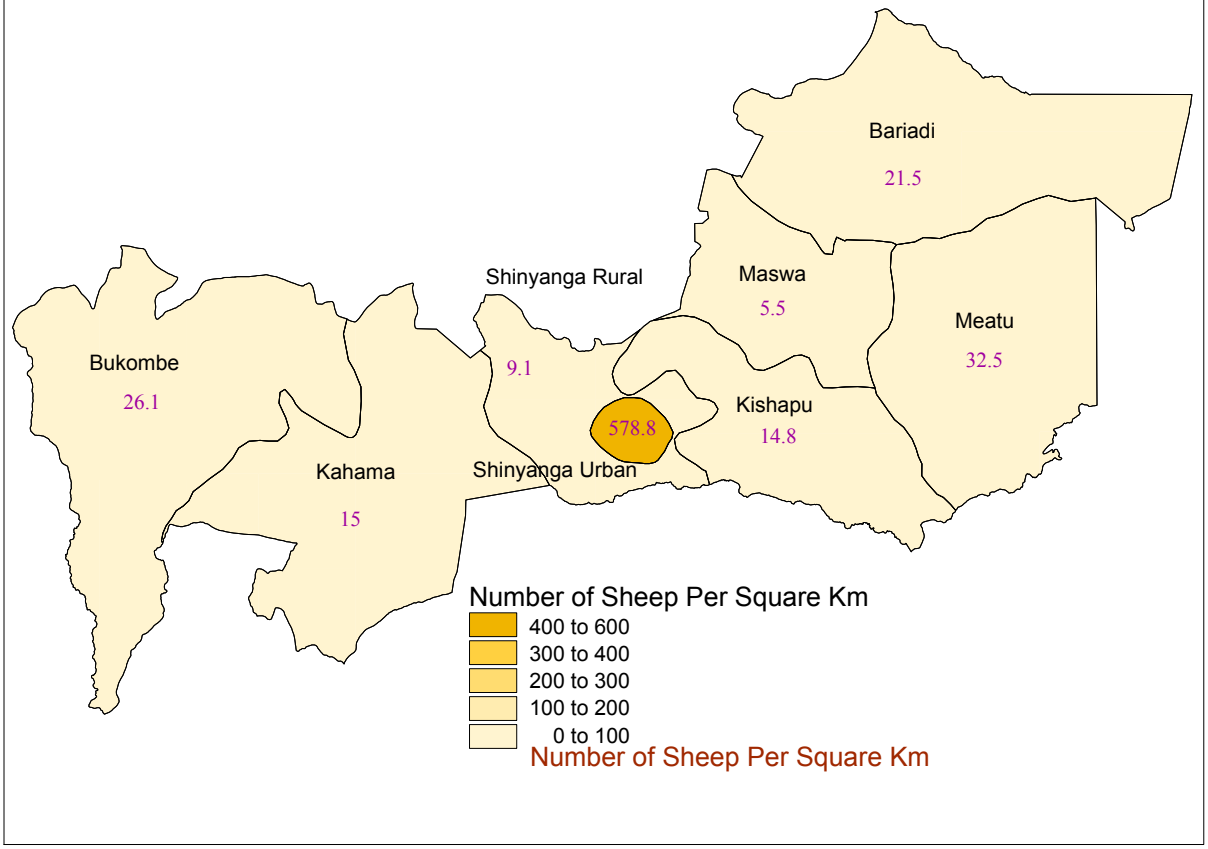
The most practiced method of tick controlling was spraying with 77 percent of all livestock-rearing households in the region using the method. Other methods used were dipping (2%), smearing (1%) and other traditional methods like hand picking (8%). However, 13 percent of livestock-keeping households did not use any method.



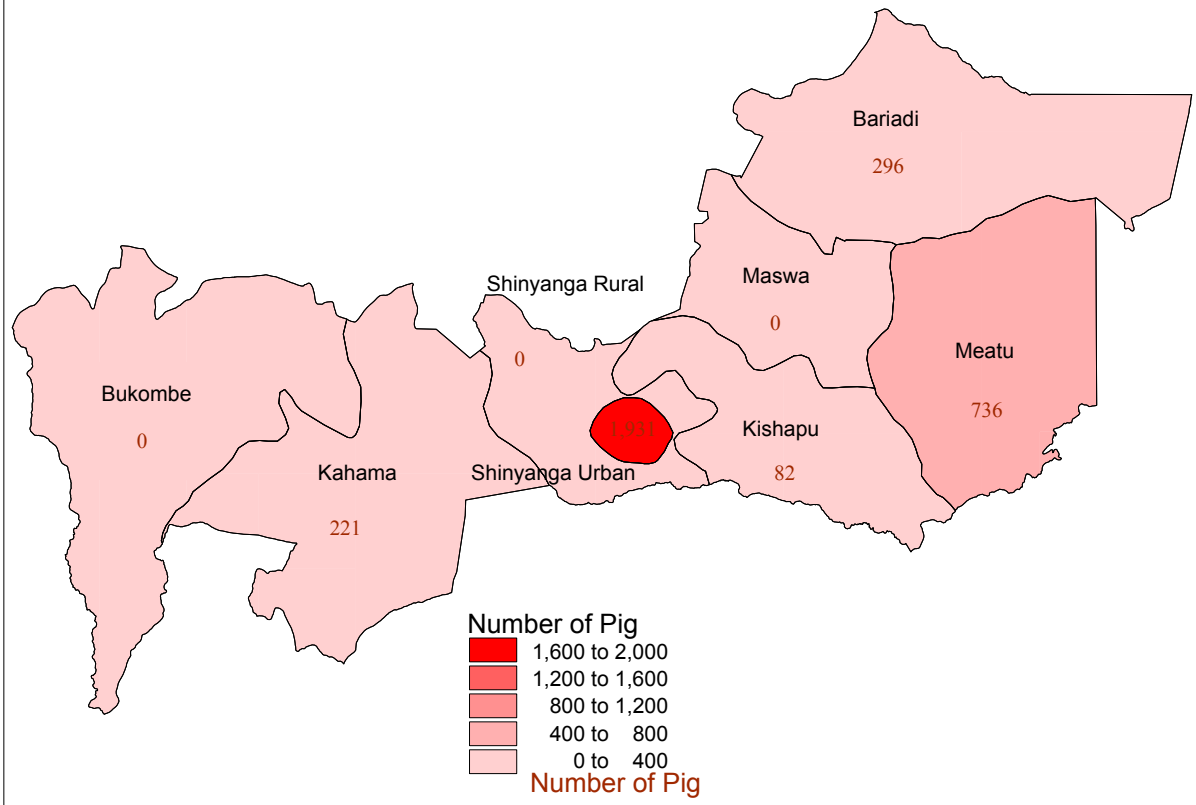
Map 3.33 SHINYANGA
Sheep Population by District as of 1st Octobers 2003



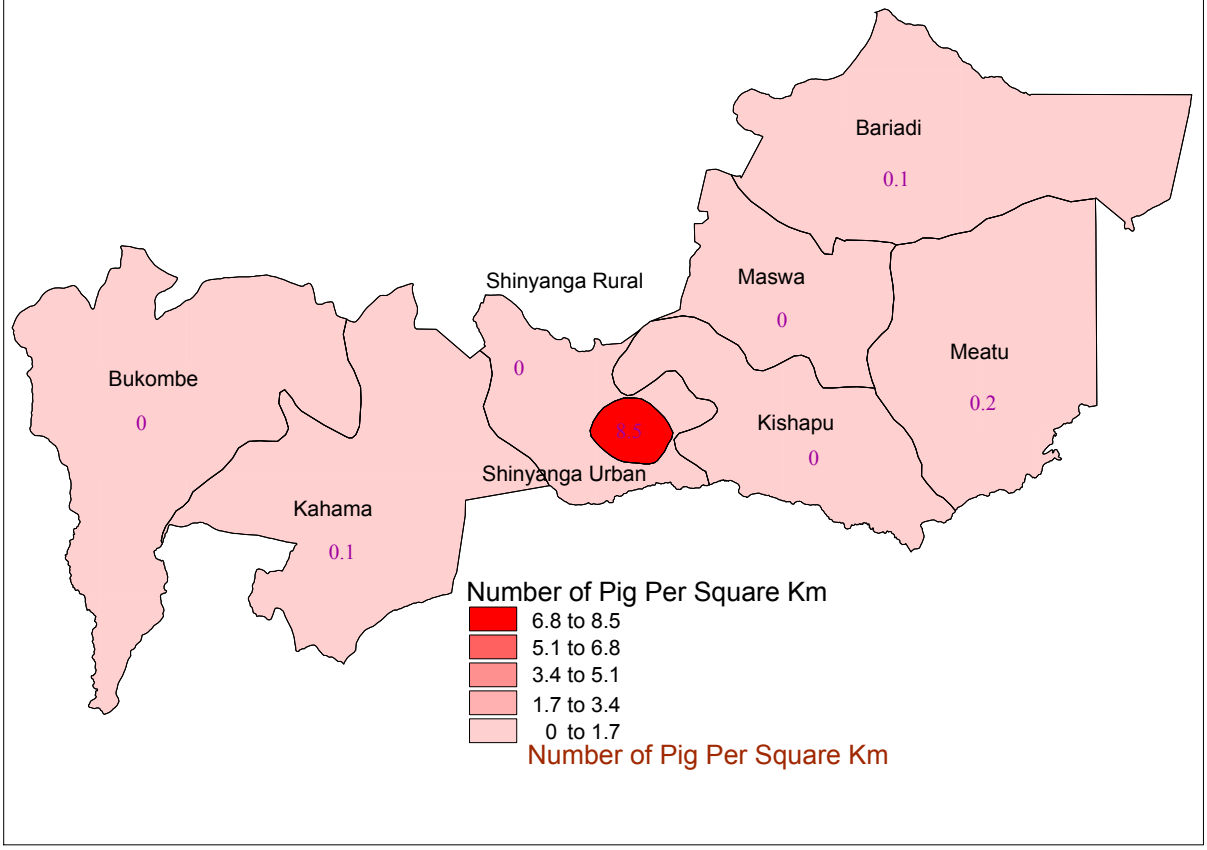
Map 3.34 SHINYANGA
Sheep Density by District as of 1st October 2003



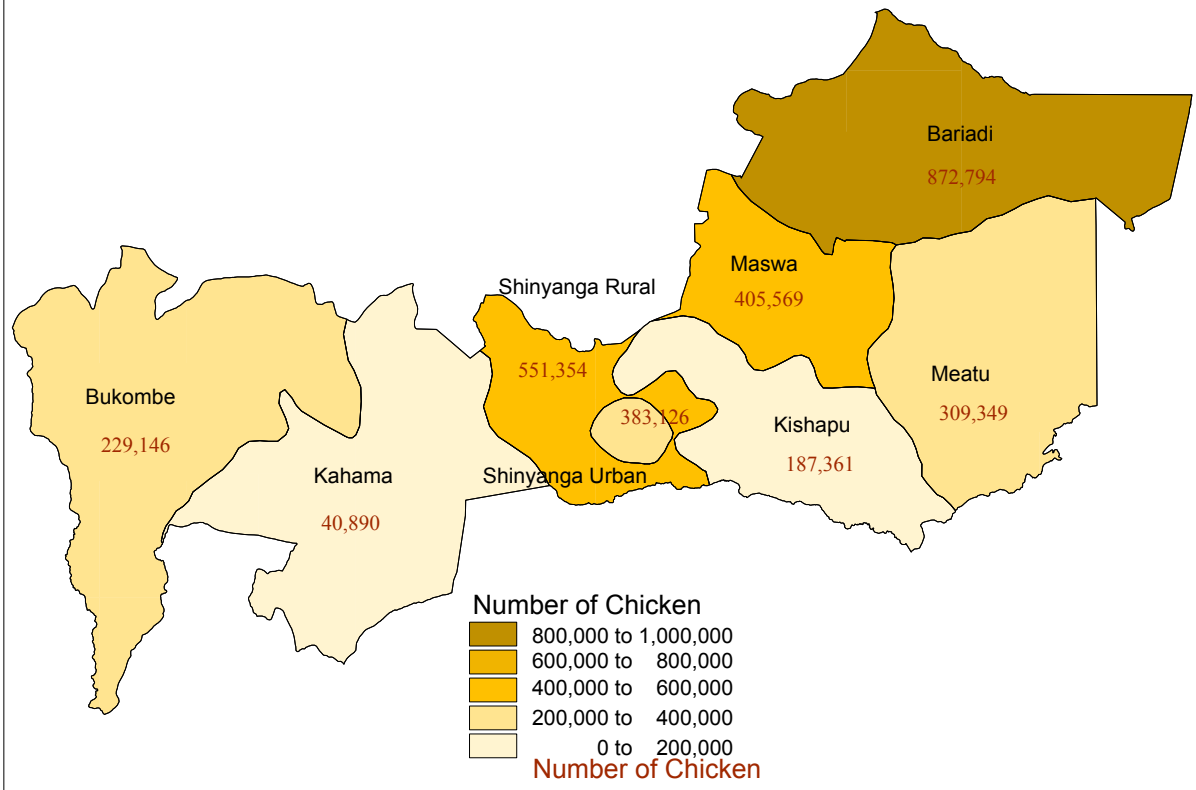
Map 3.35 SHINYANGA
Pig Population by District as of 1st Octobers 2003



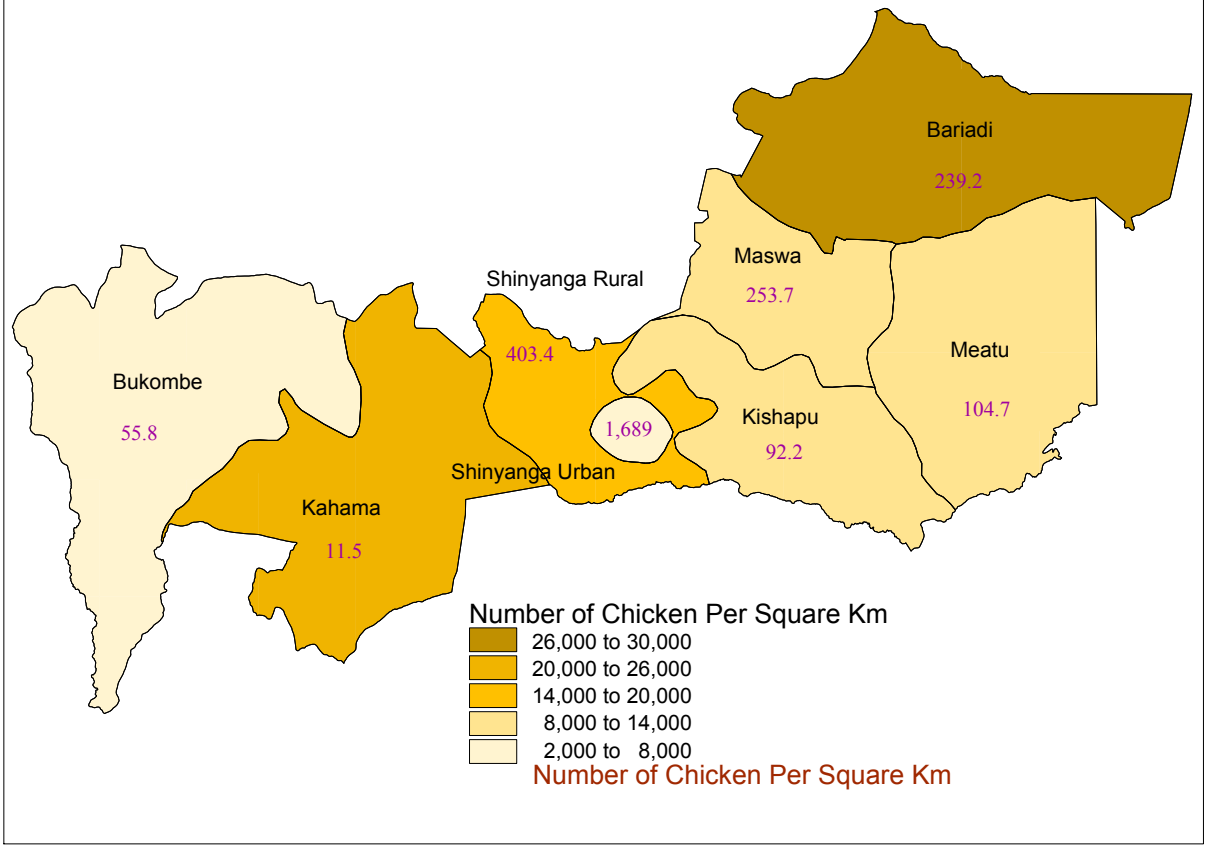
Map 3.36 SHINYANGA
Pig Density by District as of 1st October 2003



Map 3.37 SHINYANGA
Chicken Population by District as of 1st Octobers 2003



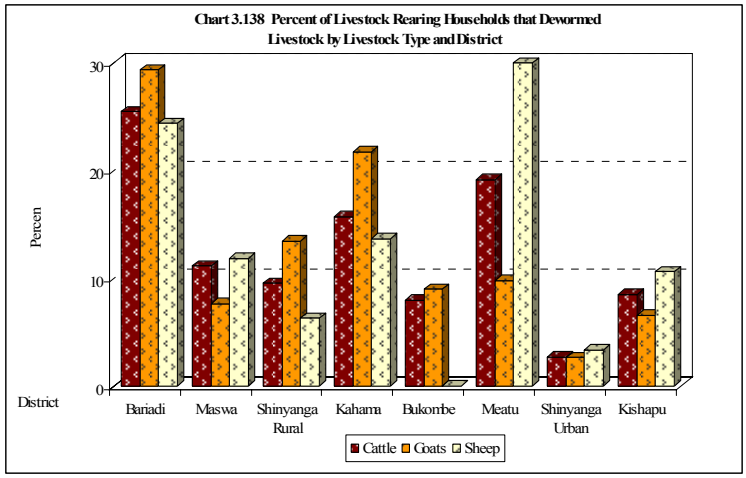
Map 3.38 SHINYANGA
Chicken Density by District as of 1st October 2003



The most common method used to control tsetse flies was spraying which was practiced by 42 percent of livestock-rearing households This was followed by dipping (9%) and trapping (3%). However, 36 percent of the livestock rearing households did not use any of the three aforementioned methods.

3.12.7.1 Deworming

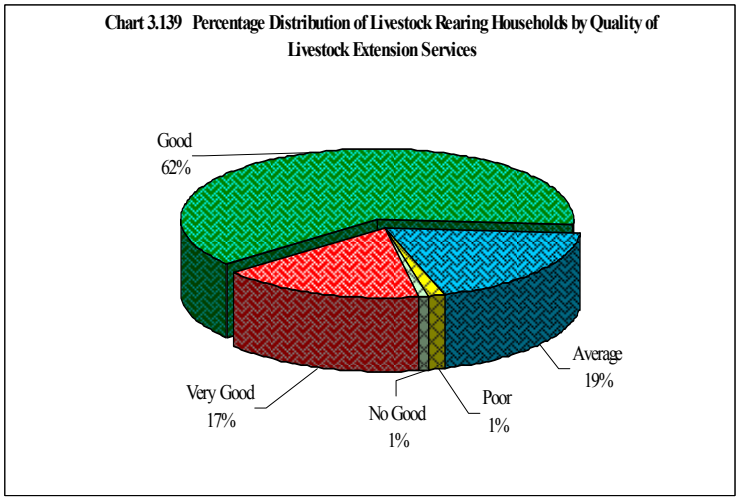
Livestock rearing households that dewormed their animals were 72,356 (43% of the total livestock rearing households in the region). The percentage of the households that dewormed cattle was 13 percent, goats (37%) and sheep (5%), (chart 3.138).



3.12.8. Access to Livestock Services

3.12.8.1 Access to Livestock Extension Services

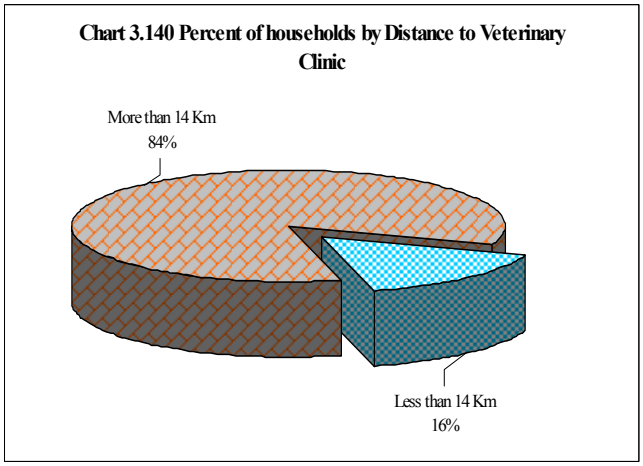
The toal number of households that received livestock advice was 49,733 representing 28 percent of the total livestock-rearing households and 13 percent of the agricultural households in the region. The main livestock extension agent was the government which provided service to about 94 percent of all households receiving livestock extension services. The rest of the households got services from NGOs/development projects (4%), Cooperatives (2%) and large-scale farmers (2%),.

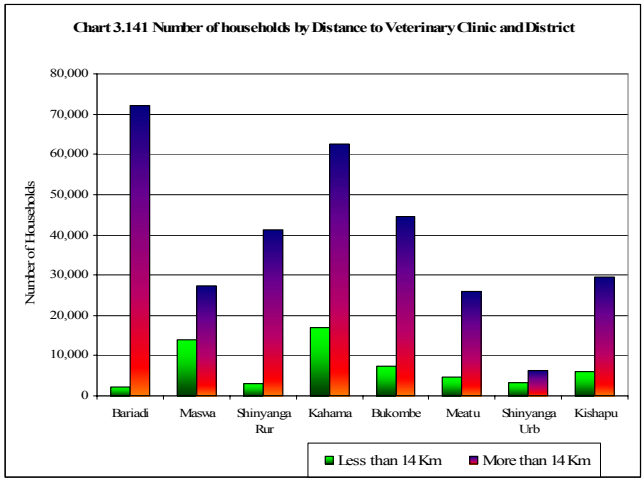


About 62 percent of livestock rearing households described the general quality of livestock extension services as being good, 19 percent said they were average and 17 percent said they were very good. However, 1 percent of the livestock rearing households said the quality was not good whilst 1 percent described them as poor (Chart 3.139).

3.12.8.2 Access to Veterinary Clinic

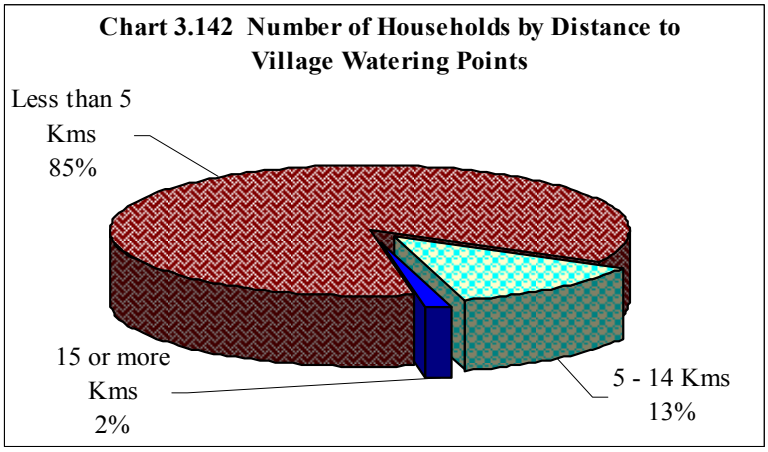
Veterinary clinics were located very far from livestock rearing households. About 84 percent of the livestock rearing households accessed the services, at a distance of more than 14 kms. Only 16 percent of them accessed the services within 14 kms from their dwellings (Chart 3.140). The most affected district was Bariadi district with almost all livestock rearing households accessing the services at a distance of more than 14 kms. Shinyanga District was the least affected because about 53 percent of the households could access the service within a distance of 14 kilometres. (Chart 3.141).



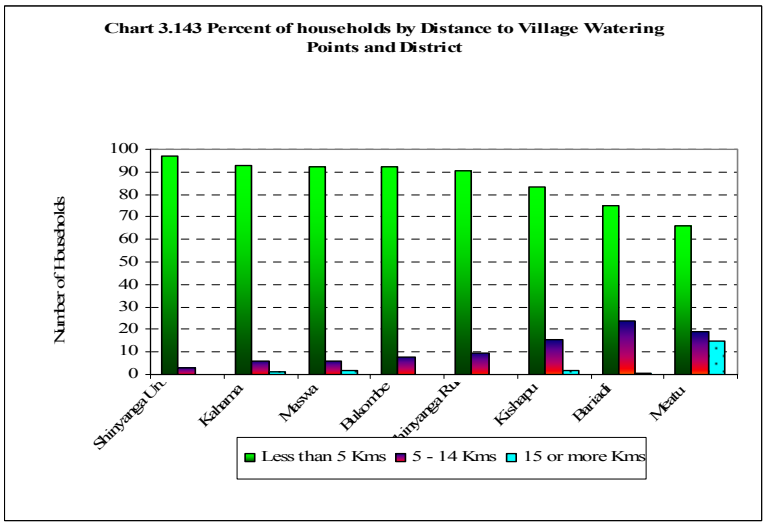


3.12.8.3 Access to Village Watering Points/dam

The number of livestock rearing households residing less than 5 kms from the nearest watering point was 84,182 (85% of livestock rearing households in Shinyanga region) whilst 12,569 households (13%) resided between 5 and 14 kms. However, 1,555 households (2%) had to travel a distance of 15 or more kms to the nearest watering point (Chart 3.142).



Shinyaga Urban district had the best livestock water supply with the majority of livestock rearing households (97%) residing within 5 kms from the nearest watering point. This is followed by Kahama (93%), Maswa (92%), Bukombe (92%), Shinyanga Rural (90%). Kishapu (83%), Bariadi (75%) and Meatu (66%). In Kishapu, Bariadi and Meatu districts there is a considerable number of households accessing water points at a distance of more than five kilometers from their residences, which is about 17, 25 and 34 percent respectively (Chart 3.143).

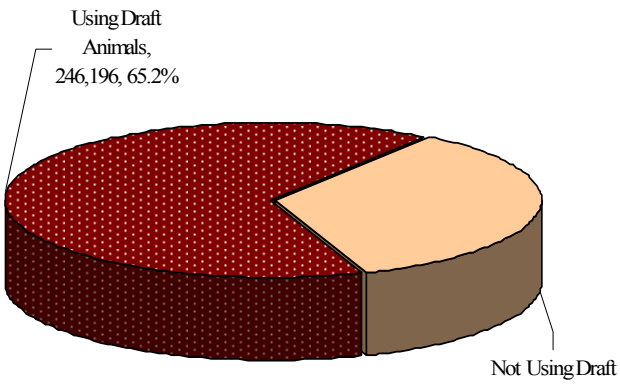


3.12.9. Animal Contribution to Crop Production

3.12.9.1 Use of Draft Power

Use of draft animals to cultivate land in Shinyanga region was highly practiced with a total 246,196 (65%) agricultural households Practicing it (Chart 3.144).

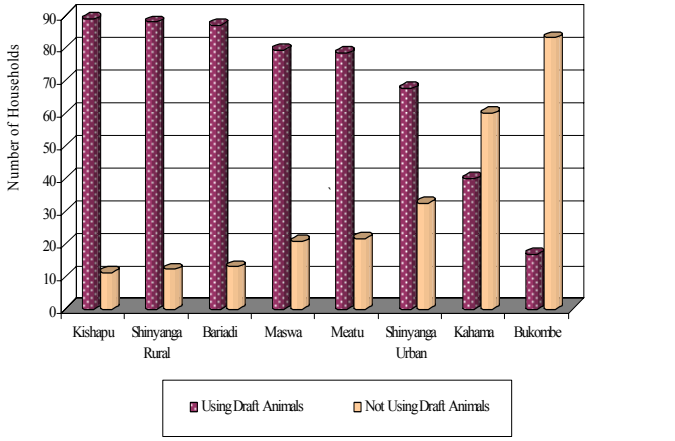
3.144 Number of Households Using Draft Animals



Kishapu, Shinyanga Rural and Bariadi Districts are the best in use of draft animals in farming practices with over 80% of all agricultural households in these districts using the method. The Percent of Agricultural households using this method in Maswa, Meatu and Shinyanga Urban was 79%, 78% and 86% respectively.

The method was scarcely practiced in Kahama and Bukombe Districts (Chart 3.145 and Map 3.58).

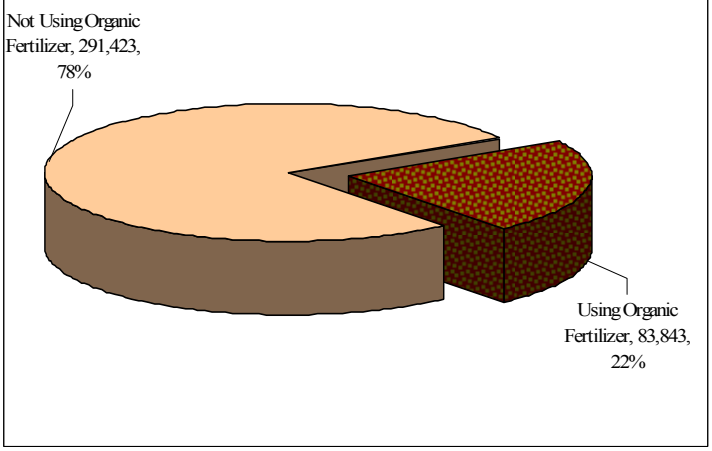
Chart 3.145 Number of Households Using and NOT using Draft Animals by District - SHINYANGA



The region had 1,247,888 oxen (Bariadi 344,077 oxen, Shinyanga Rural 205,171 oxen, Kishapu 164,453 oxen, Maswa 162,943 oxen, Kahama 156,129 oxen, Meatu 137,537 oxen, Bukombe 44,749 oxen, Shinyanga Urban 32,829 oxen). This represents only 27 percent of the total oxen found on the Mainland.

The total Area Cultivated by using oxen was 630,546 hectares of land (Bariadi 157,648 ha, Kishapu 103,484 ha, Maswa 94,038 ha, Shinyanga Rural 80,035 ha, Meatu 77,393 ha, Kahama 69,368 ha, Bukombe 36,302 ha, Shinyanga Urban 12,277 ha). The largest area cultivated using oxen was found in Bariadi district (157,648 ha, 25% of the total area cultivated using oxen in the region).

Chart 3.146 Number of Households Using Organic Fertiliser



3.12.9.2 Use of Farm Yard Manure

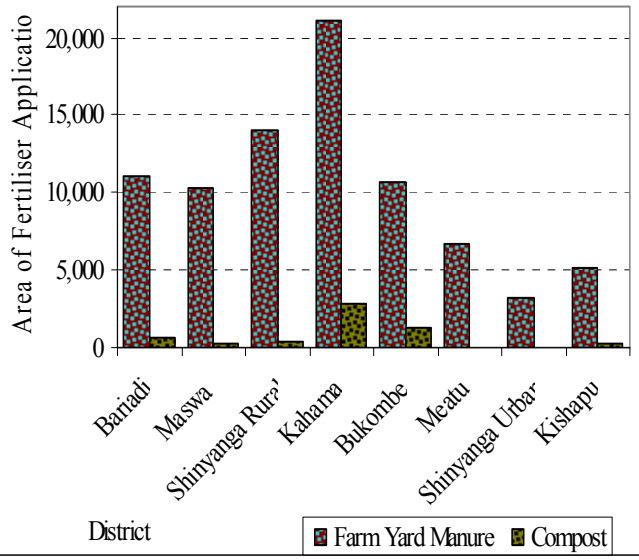
The number of Households using organic fertilizer in Shinyanga region was 83,843 (22% of total crop growing households in the region) (Chart 3.146).

The total area applied with organic fertiliser was 87,950 ha of which 82,243 hectares (94% of the total area applied with organic fertiliser) was applied with farm yard manure (Map 3.59). Farm Yard Manure was mostly applied in Kahama, Shinyanga Rural, Bariadi, Maswa and Bukombe Districts.

3.12.9.3 Use of Compost

Only 5,707 ha (6% of the area of organic fertilizer application) was applied with compost. The largest area applied with Composit manure was found in Kahama district with 2,875 hectares followed by Bukombe (1,301 ha, 11%), (Chart 3.147 and Map 3.60).

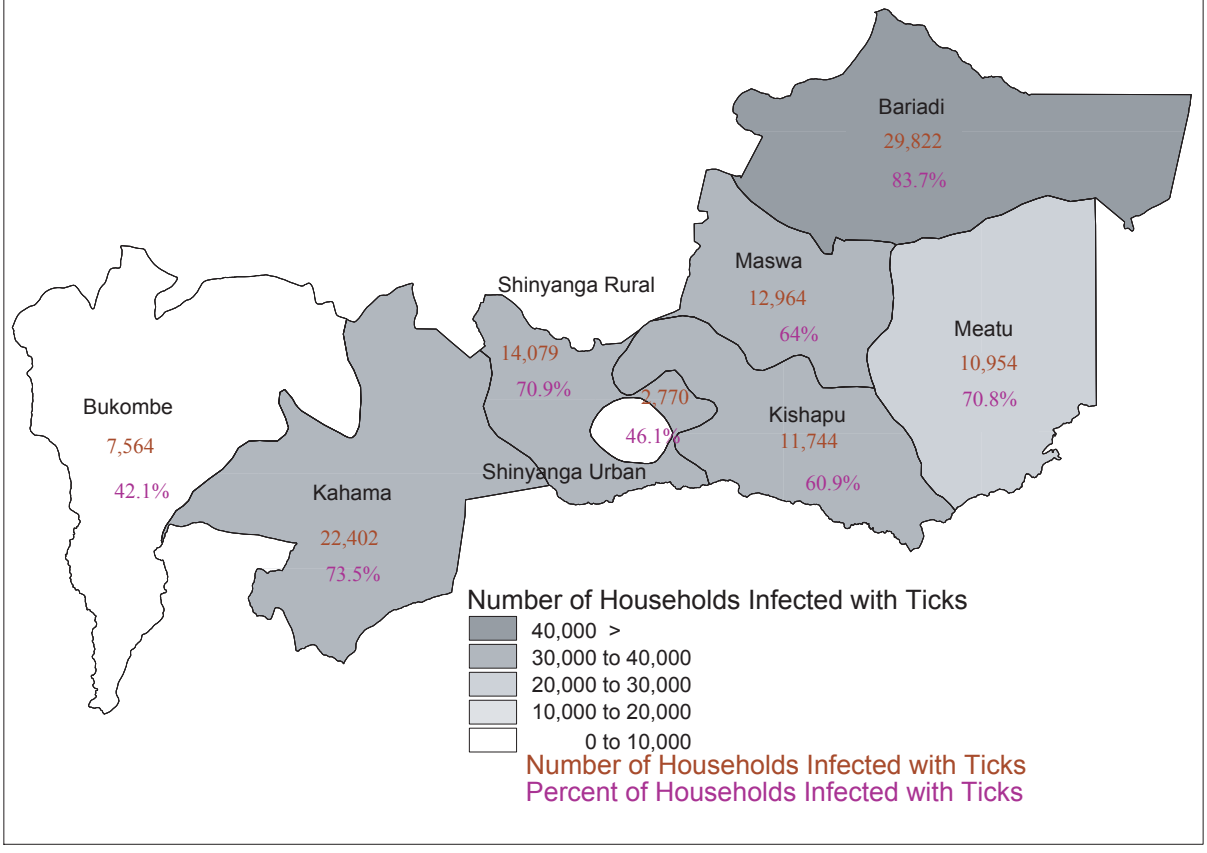
Chart 3.147 Area of Application of Organic Fertiliser by District - SHINYANGA



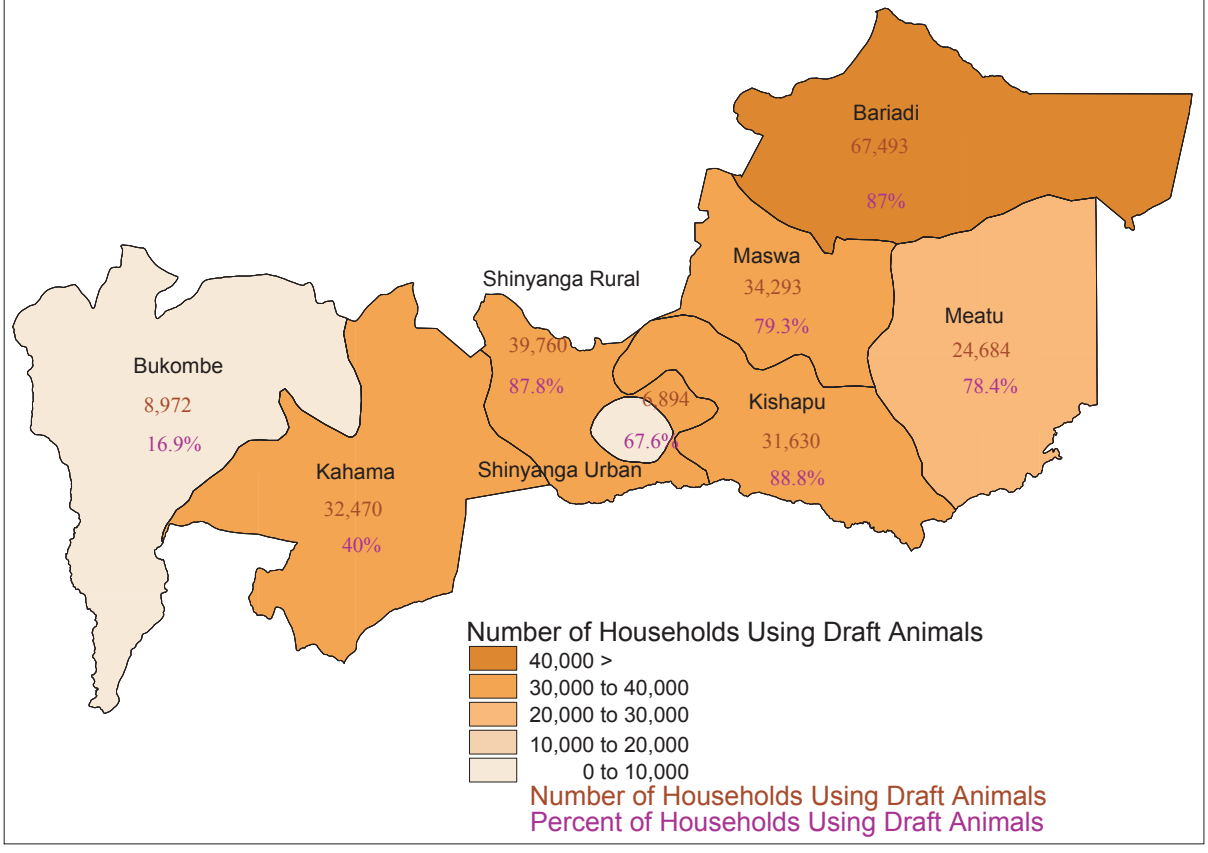
3.12.10 Fish Farming

The number of households involved in fish farming in Shinyanga region was very small (insignificant) which was 430, representing 0.1 percent of the total agricultural households in the region and fish farming was only reported in Kahama District.

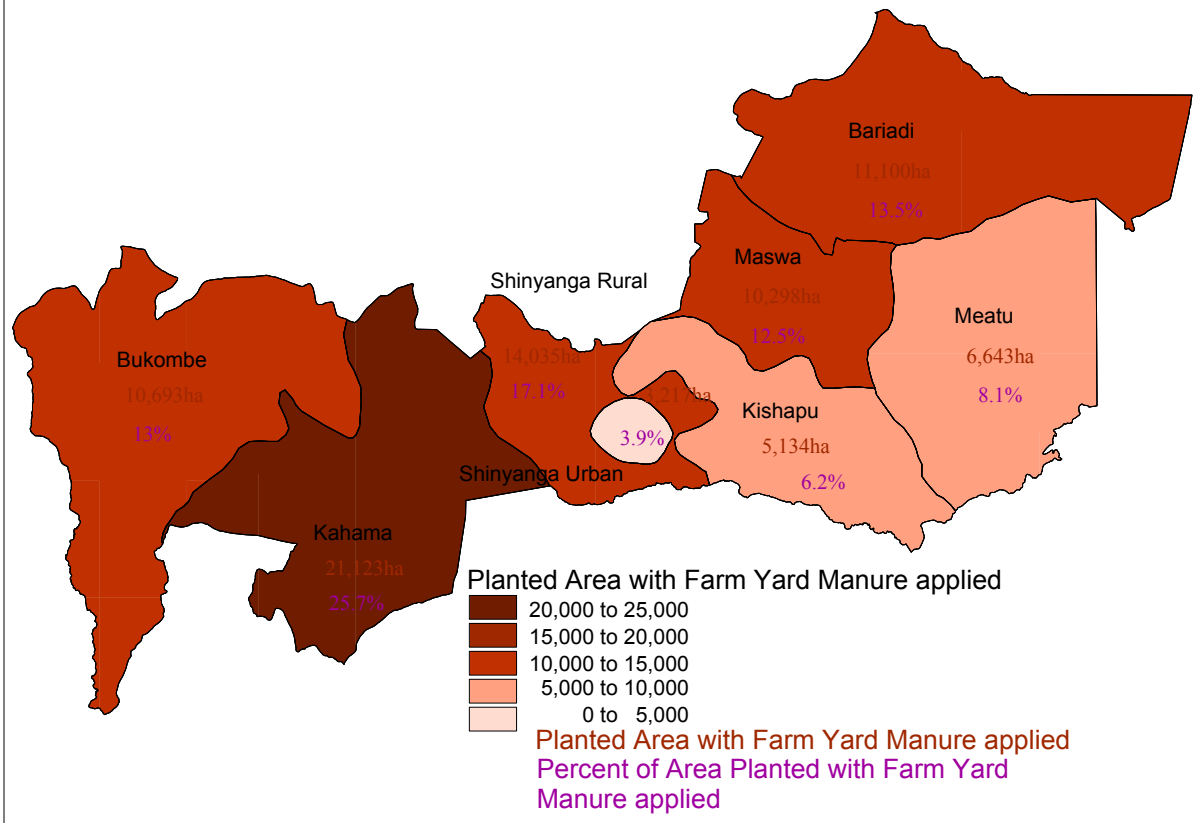
Map 3.39 SHINYANGA
Number and Percent of Households Infected with Ticks by District



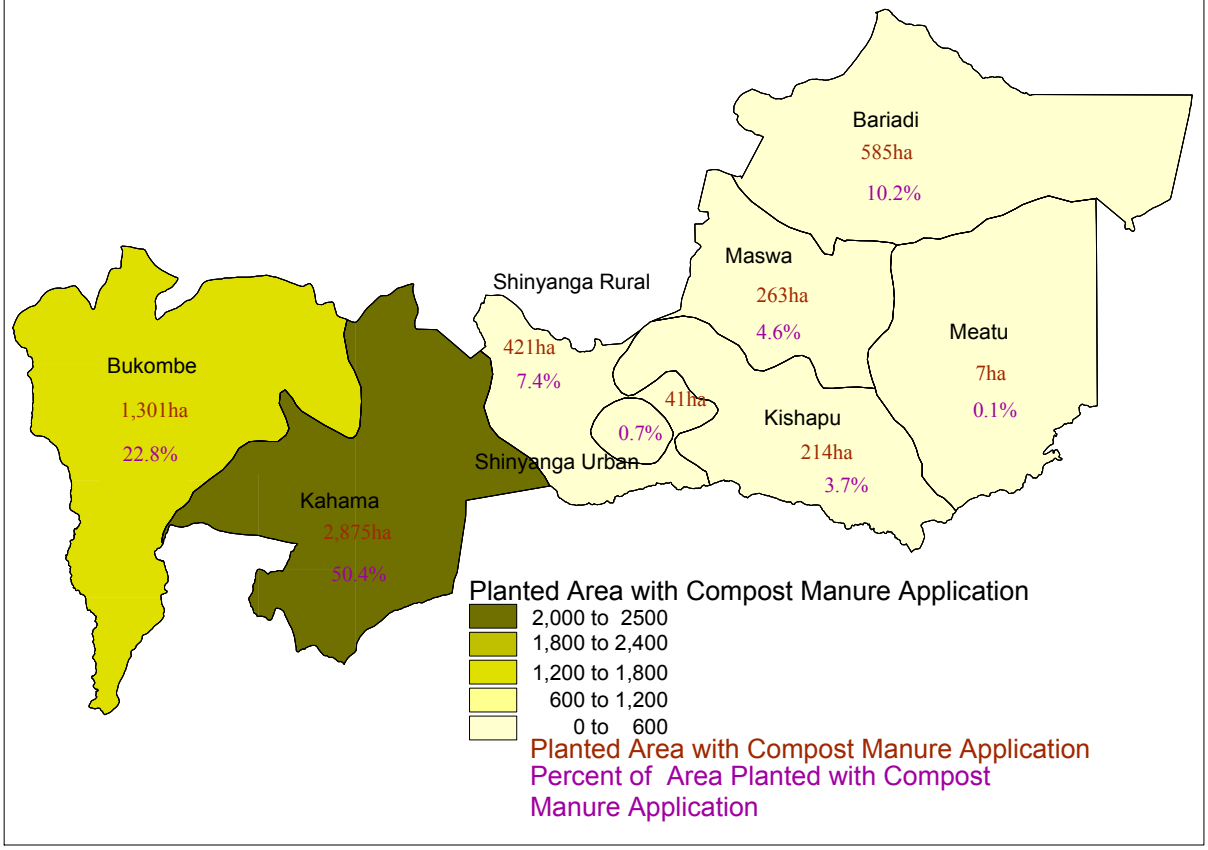
Map 3.40 SHINYANGA
Number and Percent of Households Using Draft Animals by District



Map 3.41 SHINYANGA
Planted Area and Percent of Total Planted Area with Farm Yard Manure Application by District



Map 3.42 SHINYANGA
Planted Area and Percent of Total Planted Area with Compost Manure Application by District



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 very far from most of the household's dwellings than any other service. It was located at an average distance of 131 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were Tarmac Road (68), Hospital (41), District Capital (39, Tertiary Market (34) Secondary School (19) Secondary Market (17), Primary Market (8), Health Clinic / Dispensary (8), All weather Road (7), Primary School (2), Feeder Road (2)

Table 3.17: Mean distance from household dwelings to Infrastructures and services by District

District	Primary School	Secondary School	Health Clinic / Dispensary	Hospital	District Capital	Regional Capital	Feeder Road	All weather Road	Tarmac Road	Primary Market	Secondary Market	Tertiary Market
Bariadi	3.1	14.9	5.2	31.7	34.0	163.9	2.4	13.9	114.0	8.5	20.7	27.9
Maswa	2.4	16.3	6.1	32.5	32.0	102.4	3.3	3.5	98.8	6.5	14.1	22.6
Shinyanga Rur	1.8	19.5	4.4	46.7	47.1	49.1	1.4	5.8	43.0	7.5	12.4	43.5
Kahama	2.1	21.0	11.2	44.7	44.6	147.7	1.7	8.0	35.9	6.4	15.7	40.4
Bukombe	2.4	18.7	10.7	52.2	40.3	196.3	2.0	3.9	14.8	7.2	13.5	23.3
Meatu	2.9	22.1	8.3	42.7	46.1	174.7	2.3	5.6	169.4	9.1	13.7	54.1
Shinyanga Urb	1.7	7.6	5.1	10.0	11.1	14.9	1.3	2.7	13.1	6.2	9.0	9.4
Kishapu	2.1	23.2	7.4	45.2	38.3	52.8	2.8	3.6	43.9	12.6	26.1	41.3
Total	2.4	18.6	7.7	40.9	39.3	130.6	2.2	7.1	68.3	7.9	16.5	34.2

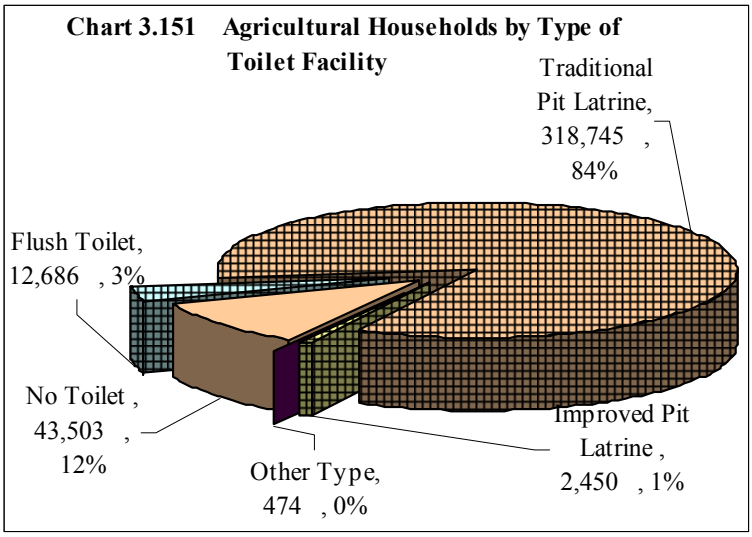
Only 3 percent of the agricultural households reported the available infrastructures and services as 'very good' whereas 20 percent reported them to be average. Thirty percent of the agricultural households said the infrastructure and services were poor , and 25 percent said they were 'no good'.

3.13.2 Type of Toilets

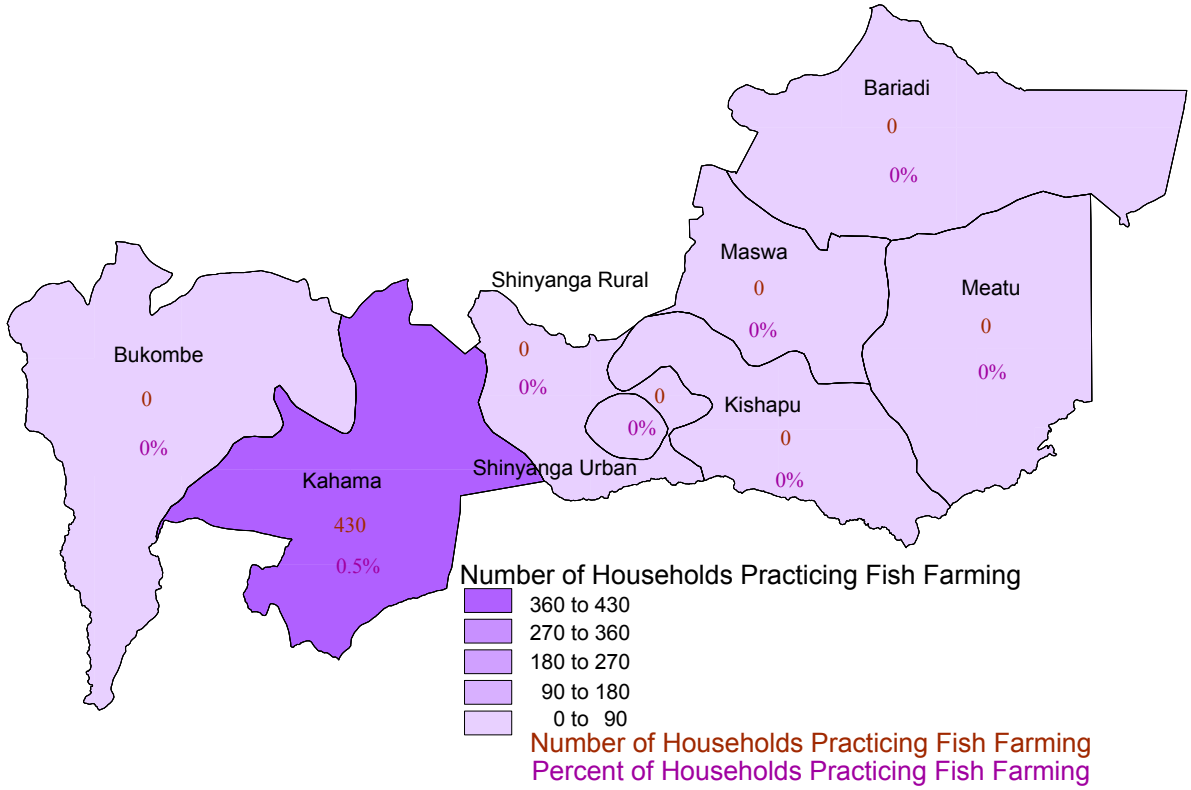
A large number of rural agricultural households use traditional pit latrines (318,745 households, 84% of all rural agricultural households) 12,686 households (3%) use Flush Toilets and 2,450 households (1%) use Improved Pit Latrine. The remaining 474 household (0.13%) use other toilets facilities. However, 12,686 households (12%) in the region had no toilet facilities (Chart 3.151).

The distribution of the households without toilets within the region indicates that 37 percent of them were found in Kahama District and 1 percent were from Shinyanga Urban District. The percentages of households without toilets in other districts were as follows Bariadi (21%), Maswa (12%), Shinyanga Rural and Bukombe Districts (10%), Kishapu (6%), and Bukombe (2%).

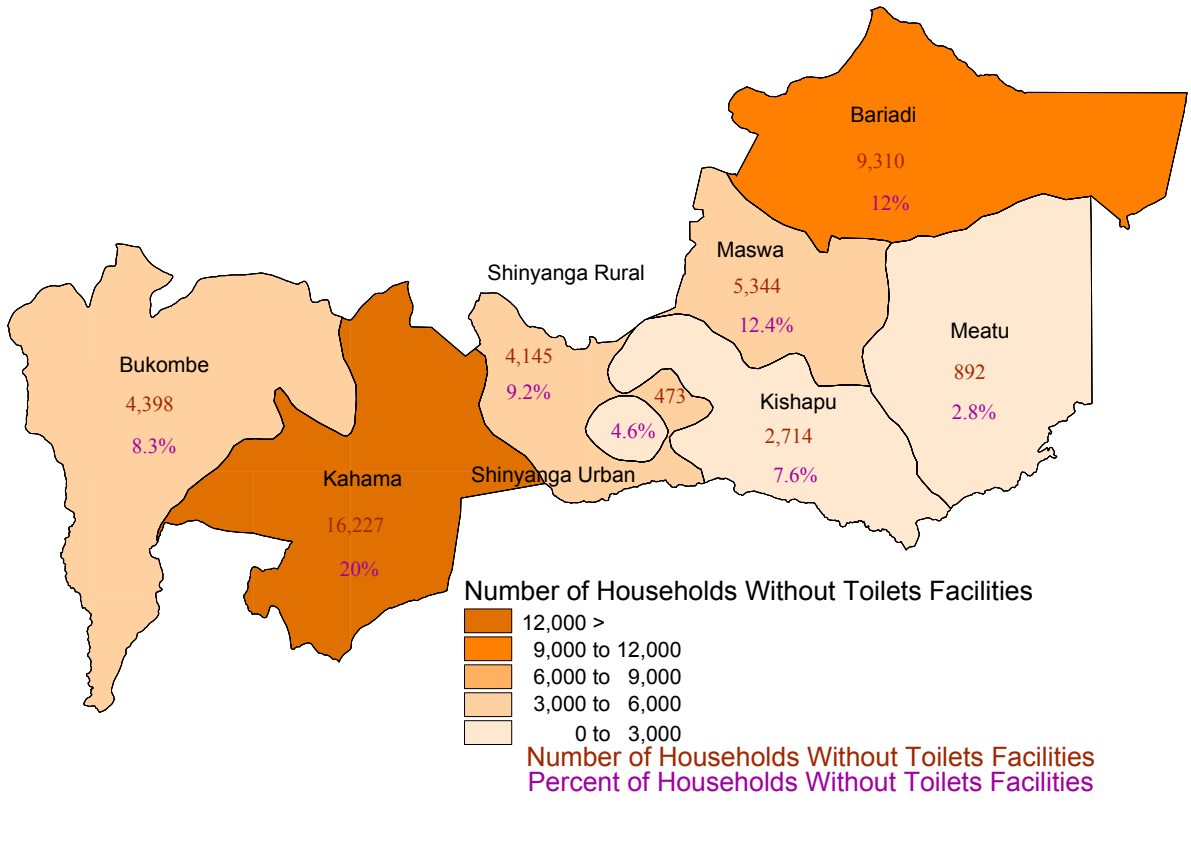
Chart 3.151 Agricultural Households by Type of Toilet Facility



Map 3.43 SHINYANGA
Number and Percent of Households
Practicing Fish Farming
by District

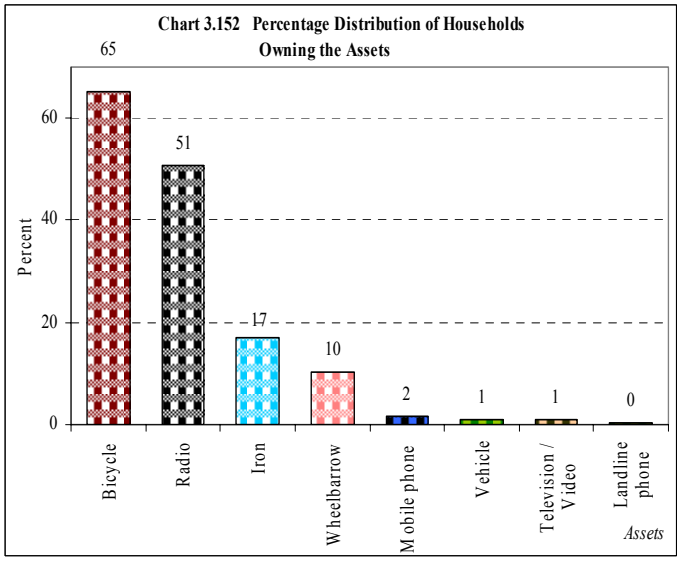


Map 3.44 SHINYANGA
Number and Percent of Households
Without Toilets Facilities
by District



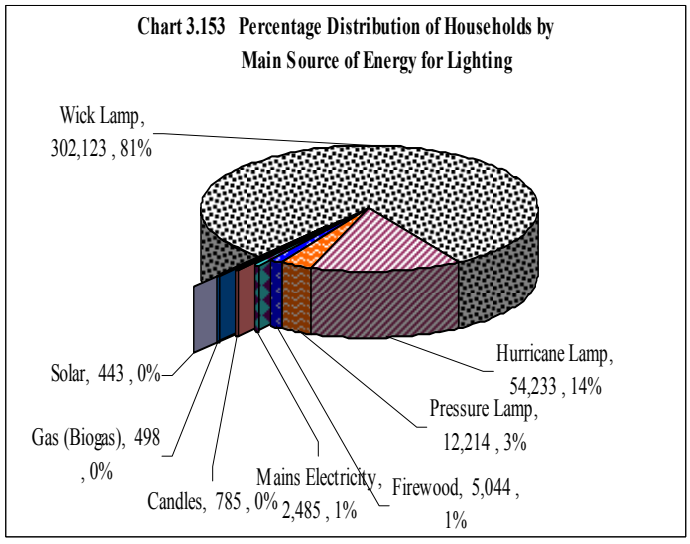
3.13.3 Household's Assets

Bicycles were owned by most rural agricultural households in Shinyanga region with 246,531 households (65% of the agriculture households in the region) owning the asset. followed by Radios (192,251 households, 51%), iron (64,449 households, 17%), wheelbarrow (39,393 households, 10%), mobile phone (5,725 households, 2%), television/video (3,692 households, 0.96), vehicle (4,236 households, 1.1%) and landline phone (858 households, 0.23%), (Chart 3.152).



3.13.4 Sources of Lighting Energy

Wick lamp was the most common source of lighting en ergy in the region. with 81 percent of the total rural households using this source of energy followed by hurricane lamp (14%), Pressure lamp (3%), Firewood and Electricity (1%). Other Means of lighting using Candles and Biogas are scarcely used in the region (Chart 3.153).

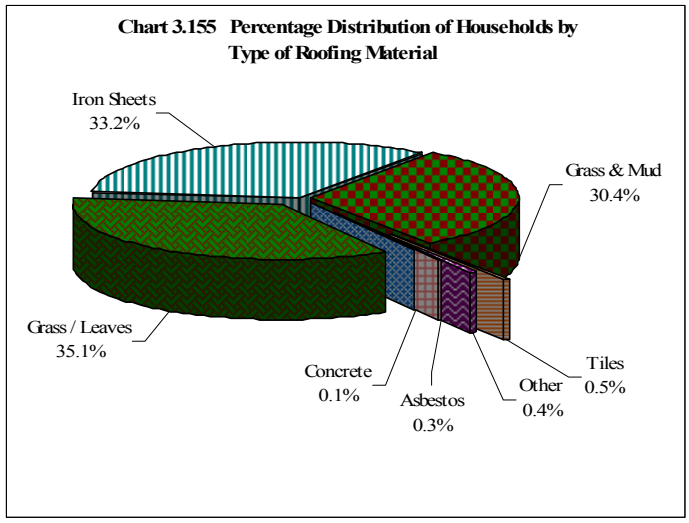


3.13.5 Sources of Energy for Cooking

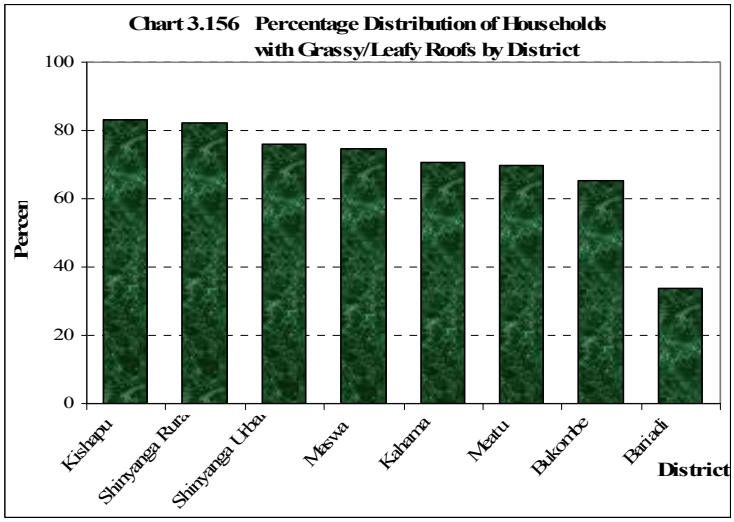
The most prevalent source of energy for cooking was firewood, which was used by 95 percent of all rural agricultural households in Shinyanga region. This is followed by charcoal (4%). The rest of energy sources accounted for 1 percent. These were bottled gas (0.05%), crop residues (0.64%), mains electricity (0.15%), livestock dung (0.26%), parrafin/kerosene (0.1%) and gas/biogas (0.05%), (Chart 3.154).

3.13.6 Roofing Materials

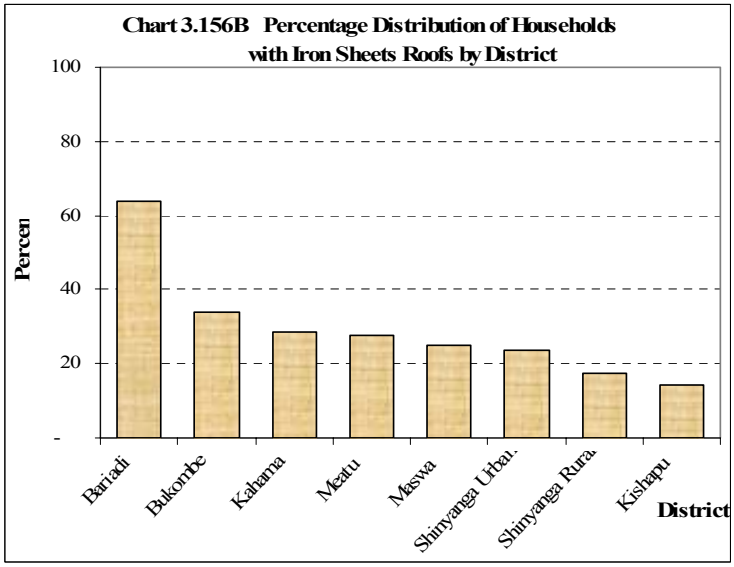
The most common material used for roofing of the main dwelling was grass and/or leaves and it was used by 35 percent of the rural agricultural households. This was closely followed by iron sheets (33%) and grass/mud (30%), (Chart 3.155).



Tiles (0.54%), os (0.28%) and Concrete (0.06%) roofing style were scarcely used in the region (Chart 3.155). Kishapu district had the highest percentage of households with grass/leaves roofing (83%) followed by Shinyanga Rural district (82%), Shinyanga Urban (76%), Maswa (75%), Kahama (71%), Meatu (70%), Bukombe (65%) and Bariadi (34%) (Chart 3.156 and Map 3.63).

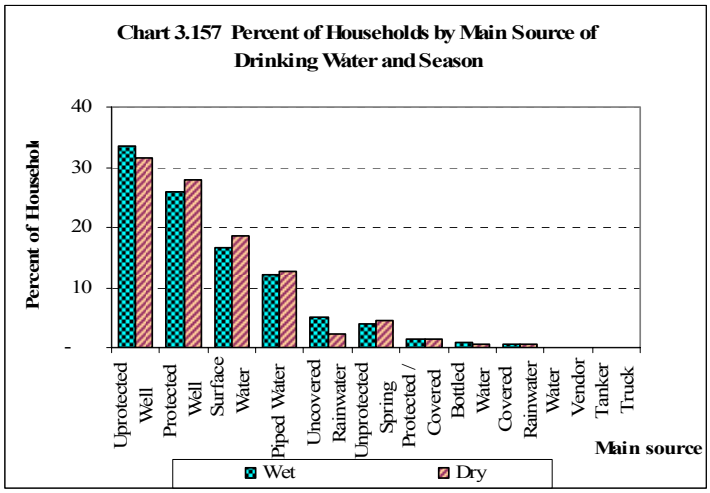


Bariadi district had the highest percentage of households with Iron Sheets roofing (64%) followed by Bukombe district (34%), Kahama District (28%), Meatu (28%), Maswa (25%), Shinyanga Urban (24%), Shimyanga Rural (17%) and Kishapu (14%) (Chart 3.156B and Map 3.63)



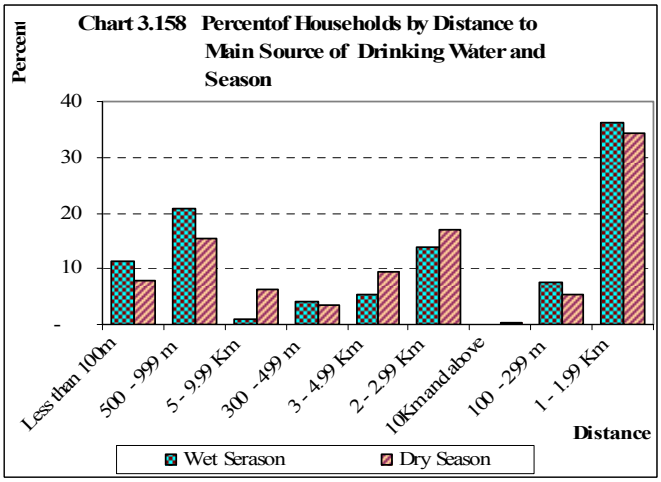
3.13.7 Access to Drinking Water

The main source of drinking water for rural agricultural households in Shinyanga region was unprotected Wells (33 percent of households use unprotected wells during the wet season and 31 percent of the households during the dry seasons). This is followed by protected wells (26% and 28% of households for wet and dry seasons respectively), Surface water (16% of households during the wet season and 19% in the dry season), Piped water (12% of households in the wet season and 13% during dry season). Other sources of drinking water like uncovered rain water catchments, Unprotected/protected Spring, Bottled Water, Water vendor and Tank truck are scarcely used in the region Chart 3.157)



Bukombe District had the highest percent of Agricultural Households whose main source of drinking water was **Unprotected wells** (61% of households during the wet season and same number during dry season), followed by Kahama District 47% of households during the wet season and 48% in the dry season).

About 44 percent of the rural agricultural households in Shinyanga region obtained drinking water within a distance of less than one kilometer during wet season compared to 32 percent of the households during the dry season. However, 56 percent of the agricultural households obtained drinking water from a distance of one or more kilometers during wet compared to 68 percent of households in the dry season. The most common distance from the source of drinking water was between 1 and 2 km (Chart 3.158).



3.13.8 Food Consumption Pattern

3.13.8.1 Number of Meals per Day

The majority of households in Shinyanga region normally have 3 meals per day (54 percent of the households in the region). This is followed by 2 meals per day (44 percent) and 1 meal per day (2 percent). A small number of Agricultural Households 0.27 percent normally have 4 meals per day (Chart 3.159).

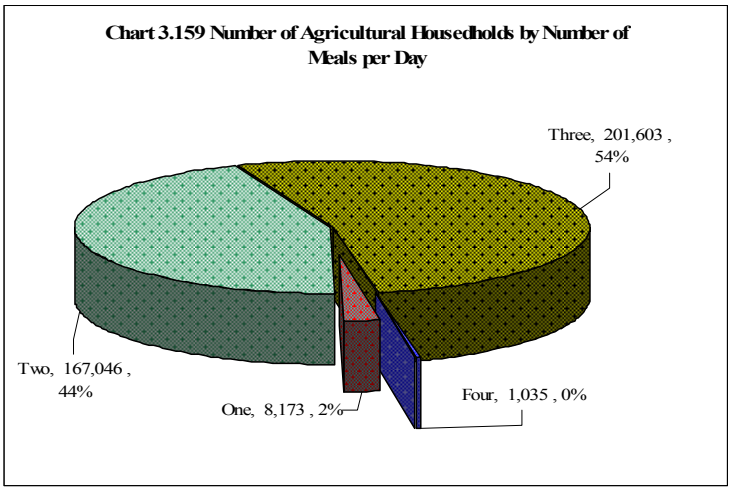


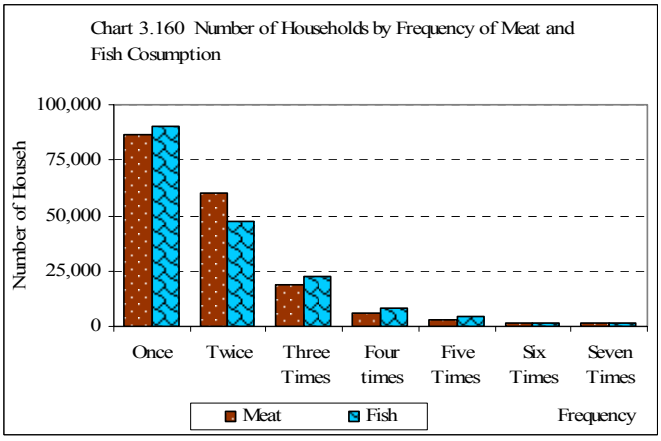
Chart 3.18: Number of Households by Number of Meals the Household Normally Takes per Day and District

District	Number of Meals per day								
	One	%	Two	%	Three	%	Four	%	Total
Bariadi	714	9	48,466	29	28,038	14	353	34	77,572
Maswa	1,607	20	13,758	8	27,886	14	-	-	43,252
Shinyanga Rural	1,715	21	14,494	9	28,952	14	102	10	45,263
Kahama	561	7	34,903	21	45,609	23	144	14	81,217
Bukombe	956	12	38,793	23	13,492	7	-	-	53,240
Meatu	2,310	28	9,744	6	19,229	10	209	20	31,492
Shinyanga Urban	71	1	2,537	2	7,527	4	64	6	10,198
Kishapu	239	3	4,352	3	30,870	15	163	16	35,624
Total	8,173	100	167,046	100	201,603	100	1,035	100	377,857

Meatu district had the largest percent of households eating one meal per day whilst Kahama had the highest percent of households eating 3 meals per day. (Table 3.18 and Map 3.64).

3.13.8.2 Meat Consumption Frequency

The number of agricultural households that consumed meat during the week preceding the census was 214,120 (57% of the agricultural households in Shinyanga region) with 86,741 households (57% 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 43 percent of the agricultural households in Shinyanga region did not eat meat during the week preceding the census (Chart 3.160 and Map 3.65).



3.13.8.3 Fish Consumption Frequencies

The number of agricultural households that consumed fish during the week preceding the census was 175,529 (46% of the total agricultural households in Shinyanga region) with 90,113 households (51 % of those who consumed fish) consuming fish only once during the respective week. This was followed by those who had fish twice (27%). In general, the percentage of households that consumed fish three times or more during the week in Shinyanga region was 38,375 (23% of the agricultural households that ate fish in the region during the respective period). About 54 percent of the agricultural households in Shinyanga region did not eat fish during the week preceding the census (Chart 3.160 and Map 3.66)

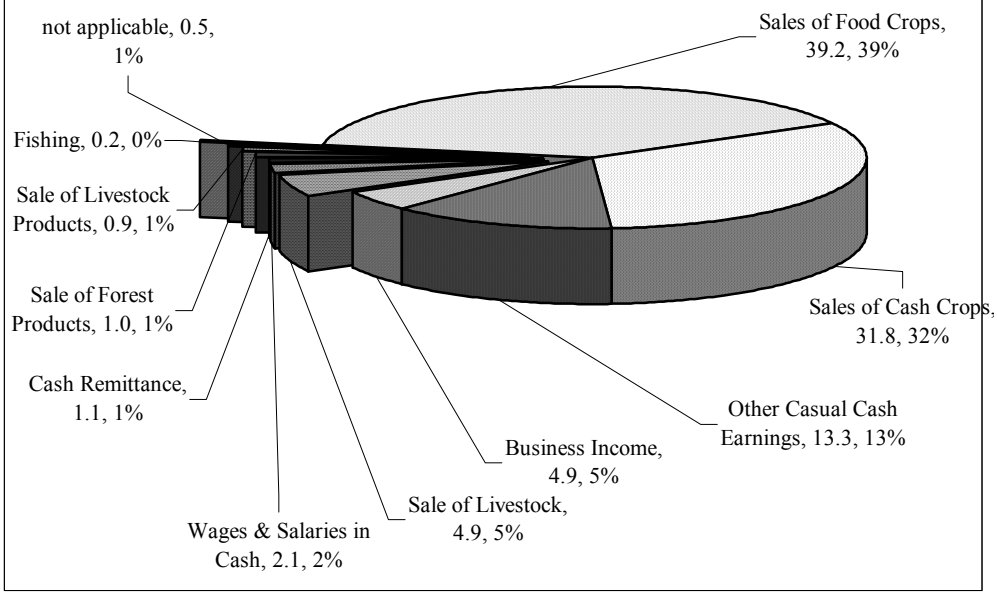
3.13.9 Food Security

In Shinyanga region, 134,001 households (35% of the total agricultural households in the region) said they seldom experienced problems in satisfying the household food requirement. However 55,062 (14%) said they often experience problems, 38,789 always experienced problems and 6.4 percent sometimes had problems in satisfying the household food requirement. About 33 percent of the agricultural households said they did not experience any food sufficiency problems (Map 3.67).

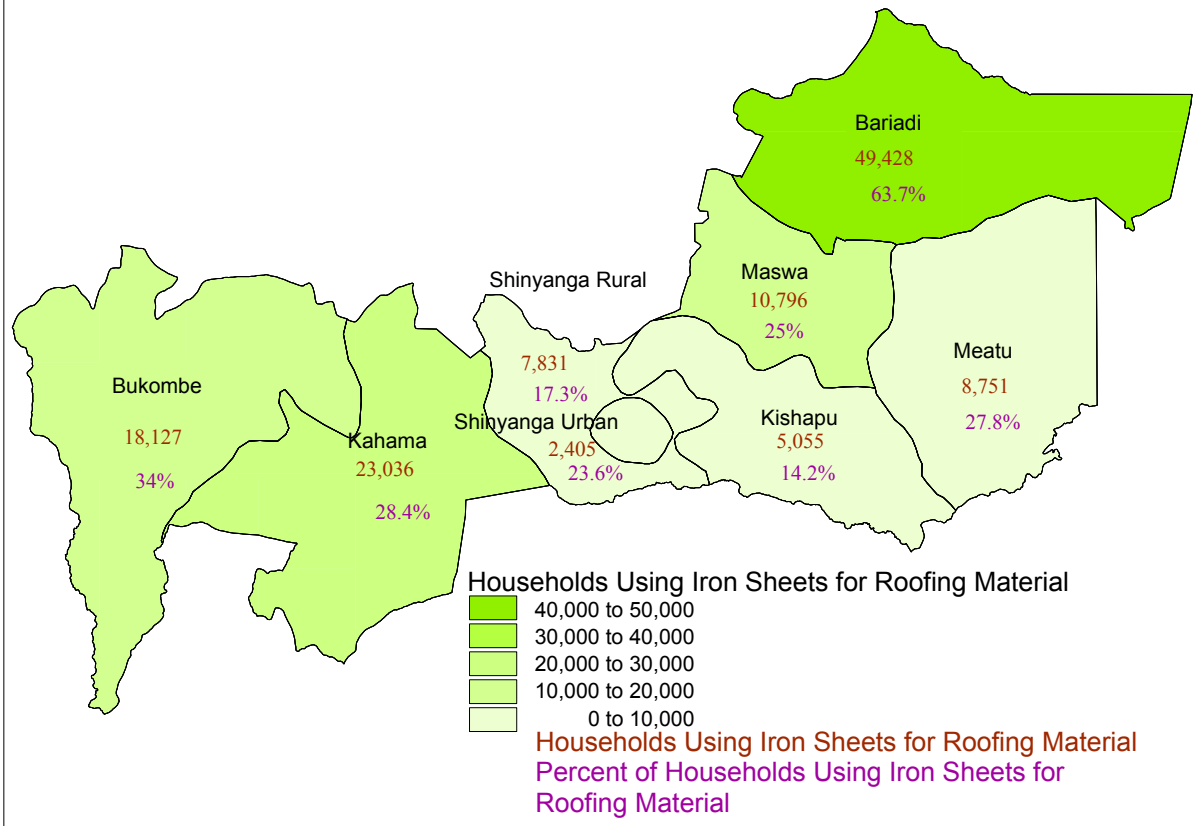
3.13.10 Main Sources of Cash Income

The main cash income of the households in Shinyanga region was from selling food crops (39.2 percent of smallholder households), followed by Sales of Cash Crops (31.8), Casual Cash earnings 13%), businesses income and Sales of Livestock each 4.9%. Other Means of income were Wages and Salaries (2.1%), Cash Remittances (1.1%), Sales of Forestry Products (1%), Sales of Livestock Products (1%) a and cash remittances (1%) and Fishing (1%)., (Chart 3.161)

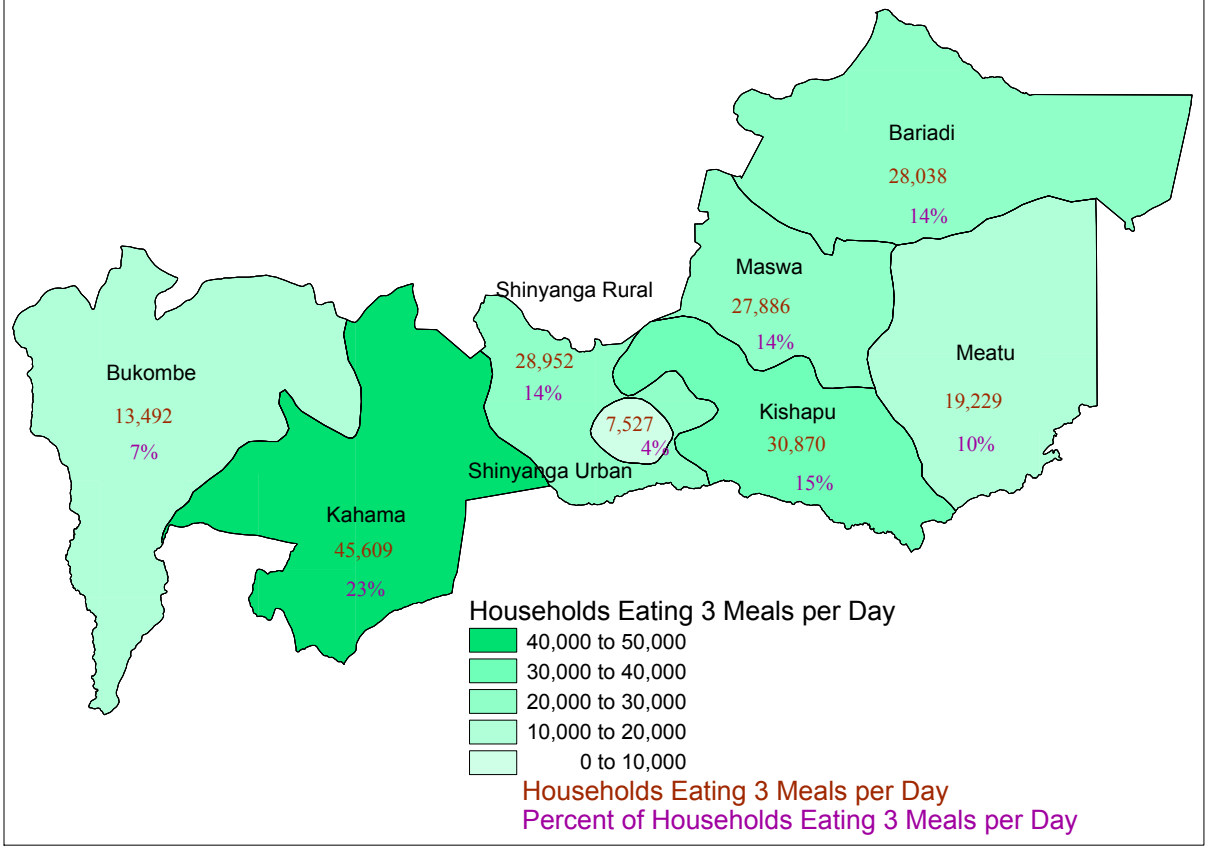
Chart 3.161: Percentage Distribution of the Number of Households by Main Source of Income



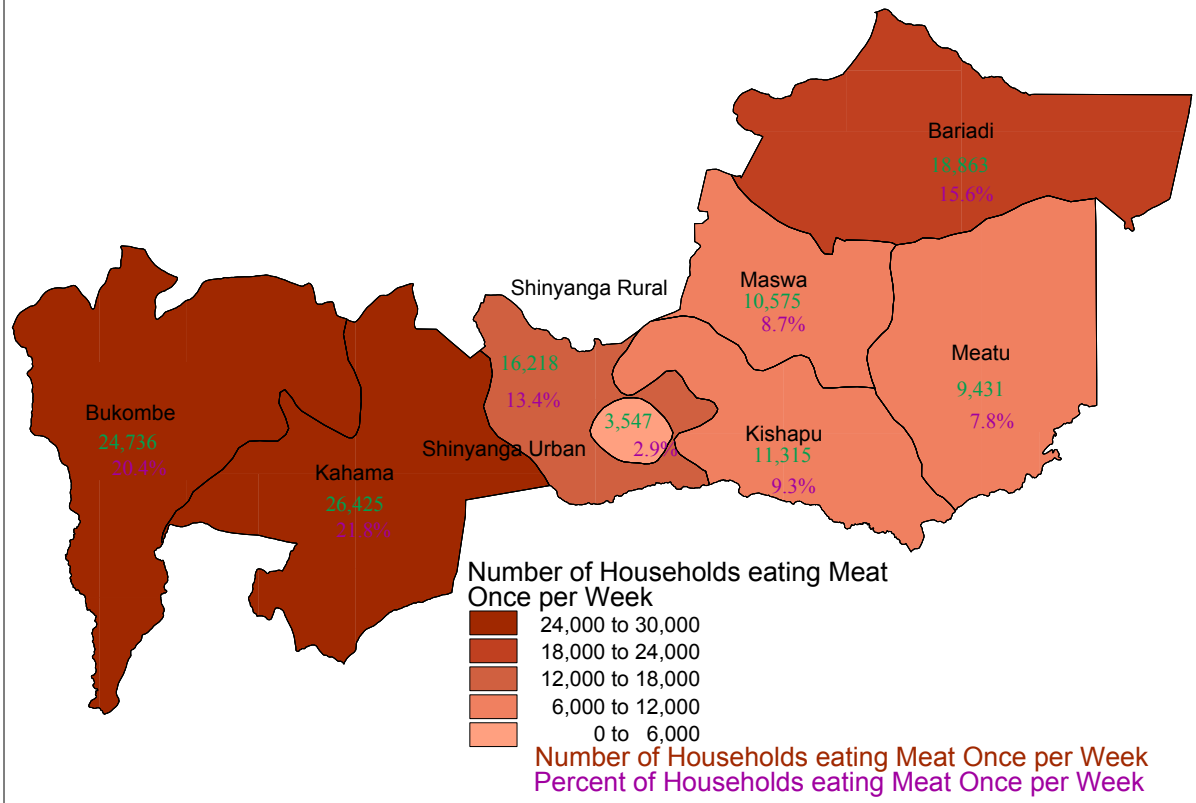
Map 3.45 SHINYANGA
Number and Percent of Households Using Grass/Leaves for Roofing Material by District



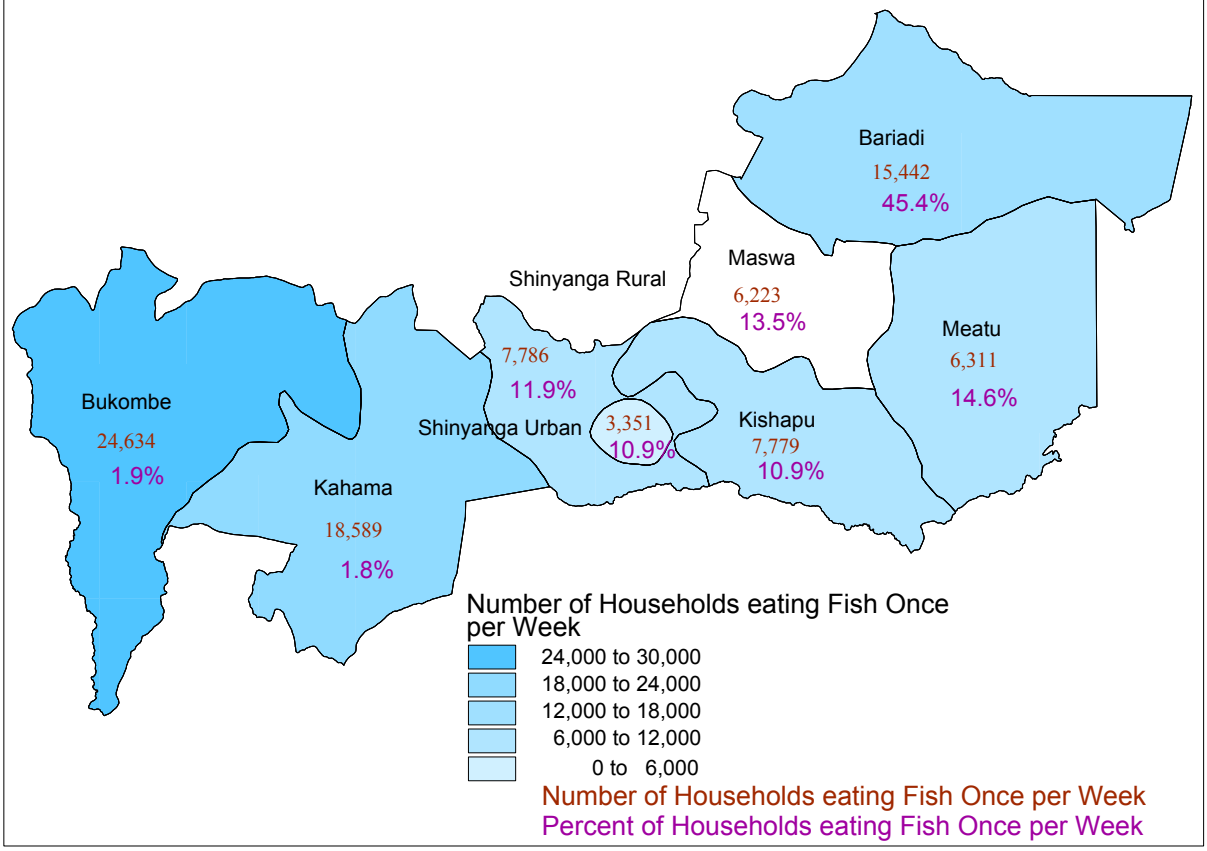
Map 3.46 SHINYANGA
Number and Percent of Households Eating 3 Meals per Day by District

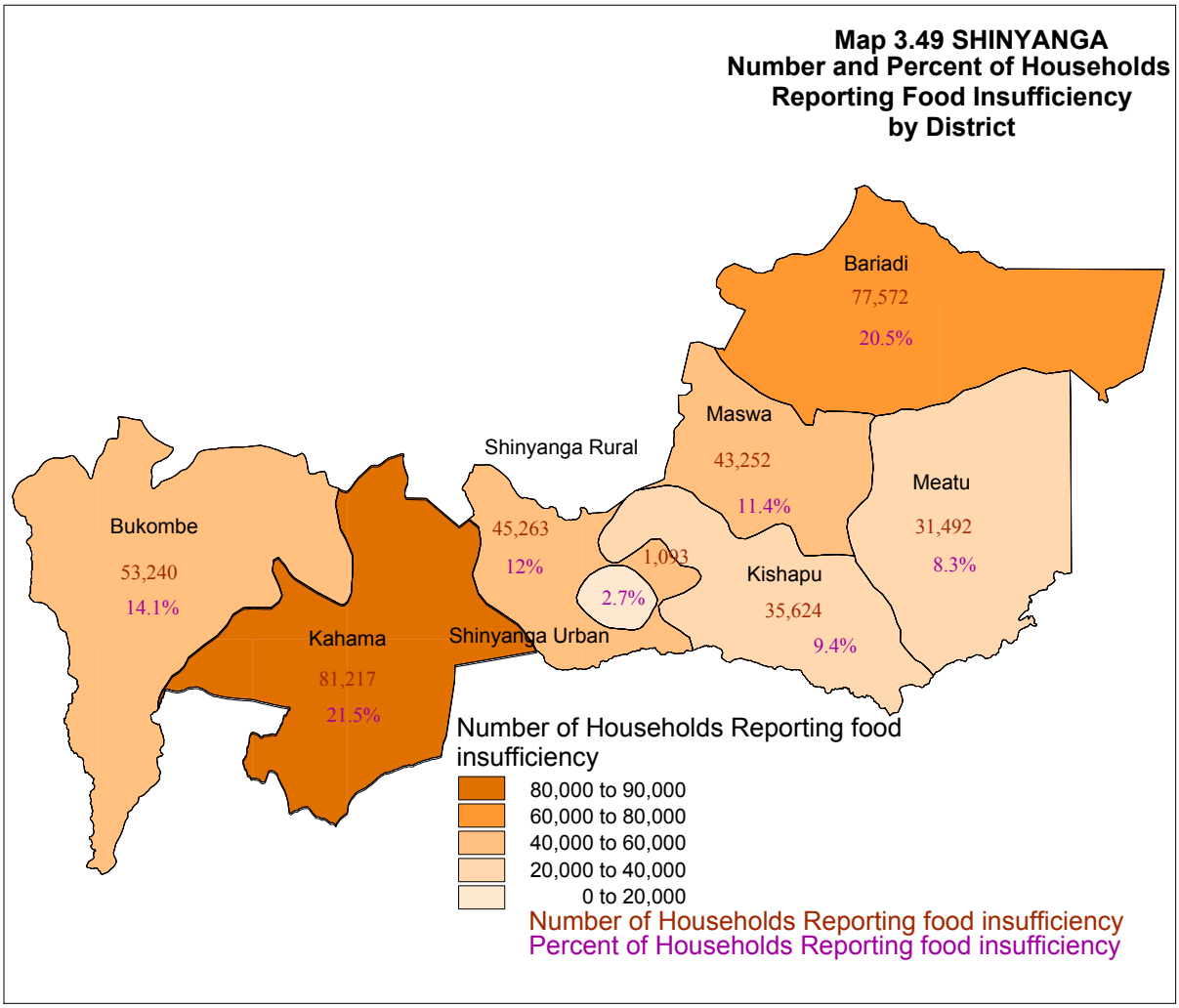


Map 3.47 SHINYANGA
Number and Percent of Households Eating Meat Once per Week by District



Map 3.48 SHINYANGA
Number and Percent of Households Eating Fish Once Per Week by District




Map 3.49 SHINYANGA
Number and Percent of Households
Reporting Food Insufficiency
by District
Bariadi
77,572
20.5%
Maswa
43,252
11.4%
Meatu
31,492
8.3%
Shinyanga Rural
45,263
12%
1,093
2.7%
Kishapu
35,624
9.4%
Bukombe
53,240
14.1%
Kahama
81,217
21.5%
Shinyanga Urban
Number of Households Reporting food insufficiency
80,000 to 90,000
60,000 to 80,000
40,000 to 60,000
20,000 to 40,000
0 to 20,000
Number of Households Reporting food insufficiency
Percent of Households Reporting food insufficiency

4 SHINYANGA 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 Shinyanga Region Profile

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

Shinyanga has the largest rural agriculture population in Tanzania (2,426,406 persons of which 1,240,181 are male and 1,186,224 female). It also has the highest number of rural agriculture households (377,857) which represents 96.4 percent of the number of rural households and 84.9 percent of the total number of households in the region (includes urban households). The region has the highest number of persons per household (6.4 per household) and one of the lowest percent of female headed households (14%). The crop farming only and mixed crop and livestock farming are equally important. The region has no pastoralists, however it has a moderate number of households involved in livestock herding only.

Shinyanga region has similar number of males and females (51% males and 49% females). The region has a normal population pyramid with a wider base compared to other regions.

The region has an active agriculture population of 1,209,803 of which 608,972 are males and 600,832 are females resulting in a moderate difference between the percent of total male and female active population in the region 50.3% and 49.7% respectively). The region has the highest number of households in the country compared to other regions (377,857 out of which 323,921 are male headed and 53,936 are female headed) and it has the 3rd lowest percent of female headed households compared to other regions in the country. The average household size is larger than the National average (6.7 members per household for male headed households and 4.8 for female headed households), resulting in a difference in the household size of 1.9 more members in male headed households compared to female headed households.

There is no difference in the dependency ratio between male and female headed households (111 dependants for every 100 active members in male headed households and 112 dependants for every 100 active members in female headed households). The region has a small difference in sex ratio of the active agriculture population between male and female headed households compared to most other regions (109:100 in male headed households compared to 57:100 in female headed households).

Shinyanga has the 18th largest difference in illiteracy rate between male and female household heads with an illiteracy rate of 31 percent of male household heads and 70 percent of female household heads. Taking the overall population of male and female members in the region there are 13 percentage points more illiterate females than males and this is the 4th largest difference in the country.

Shinyanga has a moderate percent of orphans in the country compared to other regions and it has a higher percent of orphans in male headed households compared to female headed households. No orphan headed households were detected in Shinyanga.

Shinyanga has around 4 percent of children with off farm income and there is no difference between male and female headed households.

Shinyanga has the largest area of land under cultivation (over 1,250,000 ha) and has the highest land utilisation per household (over 2.6 hectares for annual crops). Virtually no permanent crops are grown and it has the largest area of pasture to supports the high population of cattle in the region. A large proportion of smallholder households in the region felt that they did not have sufficient land. The region has the largest planted area of maize and second largest for paddy and sorghum than other regions in Tanzania, however it had one of the lowest yields for maize during the census year. During the Census year planting was largely during the Wet season.

The region is not important for cassava, beans and fruit and vegetable production but, it has the third largest planted area of groundnuts in the Tanzania. In terms of cash crops, Shinyanga is the most important region for cotton production.

Considering Shinyanga has the largest planted area of crops, it has one of the smallest areas of irrigation. It also has the largest planted area cleared by hand but most soil preparation is done by oxen. Most of the planted area is without fertiliser and the small area that has, it is with farm yard manure. Low fertiliser use and lack of irrigation facilities may have contributed to the low yields for this region. Although small, it has the largest planted area with insecticide and fungicide application. Over half of the crops stored are in sacks or open drums with the remainder in locally made traditional structures. Crop processing is predominantly done by neighbours' machines and the processed production is for home consumption.

Considering Shinyanga is one of the most important crop growing regions, it only has moderate contact with extension services. The region relies more on animal draft than most other regions. The region has one of the smallest areas of planted trees per household and lowest percent of erosion control facilities in Tanzania.

Shinyanga has the largest population of livestock in the country. It has the highest number of cattle and second highest head of goats with small sheep numbers and virtually no pigs (very small number compared to actual number of agricultural households). The region has the second highest density of cattle and the density of goats is moderate compared to Mwanza, Arusha, Kilimanjaro and Mara. It is the second largest milk producing region in the country and it has one of the lowest farm gate prices for milk. Very low numbers of improved livestock are found in the region.
Shinyanga region has the 6th highest percent of households keeping livestock and also the largest difference between male and female headed households, with 19 percentage point more male headed households keeping livestock compared to female headed households.

It has the highest chicken population with the highest density in the country. Most of the chickens are indigenous with very few improved types and the number of layers is very low compared to many other regions. A small number of eggs are produced indicating that most of the chickens are used for meat.

The area cultivated by draft animals in Shinyanga is much higher than in any other region which supports the predominance of mixed farming in the region. The region has one of the highest areas of organic fertiliser application and the area applied per household is comparatively high.

Considering the high livestock population, the region had moderate to low rates of disease infection. In general the access to livestock infrastructure and services is poor to moderate. Practically all extension was provided by the government. A small amount of fish farming is practiced in the region.

As with all regions, Shinyanga has more land per household in male headed households than in female headed households. It has a large difference between male and female headed households with 1.7ha more in male headed households compared to female headed households. Shinyanga region has a high percent of households reporting insufficiency of land (56%) and a slightly higher percent of female headed households have insufficient land compared to male headed households. Female headed households in the region have around 19 percentage points more female land holders compared to male headed households and this difference is one of the largest compared to other regions. In Shinyanga, 42 percent of female headed households have female land holders. Assuming that male household members of female headed households do not have rights to land, this would imply that 58 percent of female headed households have insecure access to land. Shinyanga has a higher percent of female headed households using land under customary law and bought compared to male headed households, whilst a higher percent of male headed households have bought land than female headed households.

Shinyanga has a high percent of households keeping cattle (42%) and 19 percentage points more male headed households keep cattle than female headed households. Male headed households keep around 5 more cattle per household than female headed households. Goats are moderately important in the region with 34 percent of households keeping them and 11 percentage points more households keep goats compared to female headed households. Male headed households keep slightly more goats per household that female headed households. Shinyanga has the 3rd highest number of households with sheep and slightly more sheep are kept per household in male headed households than in female headed households.

Compared to other regions, Shinyanga has a moderate to high percent of households using improved seeds (3rd highest) and there is little difference between male and female headed households. Compared to other regions Shinyanga, has a moderate to high percent of households using insecticides (15%) and 7 percentage points more male headed households use it compared to female headed households. The region has a moderate to high percent of households not using fertilisers (76%). It has a moderate to high percent of households using farm yard manure (17% of households in the region) with 7 percentage point more male headed households using farm yard manure than female headed households. Inorganic fertiliser is used by a small percent of households in the region and there is no difference between male and female headed households. The region has a very small area of land under irrigation (0.5%) and male headed households have a slightly higher percent of households with irrigation compared to female headed households.

Shinyanga region has a low percent of households receiving extension advice and there is little difference between male headed households and female headed households.

The region has a Wety season only. In the region, 99.2 percent of male headed households and 99.1 percent of female headed households plant crops.

Shinyanga has the 7th lowest percent of its planted area with maize and a higher percent of female headed households planted area is with maize compared to male headed households. The yield of maize in the region is low (0.5t/ha) and male headed households have 0.15t/ha more than female headed households. A moderate to high percent of households grow paddy in the region (12%) and there is no difference between male and female headed households.

Shinyanga has a moderate to high percent of households utilising secondary products (35 percent of households) and there is little difference in utilisation between male and female headed households.

Shinyanga region has the highest percent of active agriculture household members working full time on farm (90% of active members) and there is no difference between male and female headed households. Of the most active agriculture population (18 to 44 years of age) 94 percent of males and 96 percent of females are mainly involved in agriculture. In male headed households, 94 percent of the male members and 96 percent of female members are mainly involved in agriculture, whilst in female headed households 90 percent of males and 95 percent of females are mainly involved in agriculture. Shinyanga region has one of the highest percent of boys and girls involved in agriculture (26% of boys and 21% of girls). A higher percent of boys are involved in female headed households compared to male headed households, however there is no difference in the percent of girls involved in agriculture between male and female headed households. Around 38 percent more elderly males are involved in agriculture compared to elderly females.

Shinyanga region has one of the highest percent of households storing crops (85% of households) compared to other regions with more male headed households storing crops than female headed households. There is no difference between male and female headed households in the percent of households storing for consumption. The region has slightly more male headed households facing storage losses compared to female headed households. A higher percent of male headed households store crops in locally made traditional cribs, whilst more female headed households store crops in sacks/open drum.

Shinyanga has a small percent of the households in the region receiving credit (2%) and more there is no difference between male and female headed households. The main reason for not using credit is that they do not know how to access it, followed by don't know about credit and not available and there is no difference between male and female headed households.

The region has a moderate percent of households with modern roofing material in the country (35% of households in the region) and there is little difference between male and female headed households. It has one of the lowest percent of households using hurricane/pressure lamps for lighting and there is little difference between male and female headed households.

Compared to other regions, Shinyanga has a low percent of households using piped drinking water (11%) and there is no difference between male and female headed households. The region has a moderate percent of households without toilets compared to other regions and more female headed households have no toilets than male headed households.

The difference in the ownership of assets (radio, iron and bicycle) between male and female households is high, in favour of male headed households, for all regions. Shinyanga has a moderate to low percent of households with radios, a moderate percent of households with irons, and one of the highest percent of households with bicycles in the country. Male headed households have 26 percentage points more radios, 9 percentage points more irons and 33 percentage points more bicycles than female headed households.

Household members in Shinyanga region have a moderate to high number of meals per day in the country. And there is no difference between male and female headed households. The region has the fifth lowest number of time the household members eat meat in a week and this is lower in female headed households than in male headed households, with male headed households eating meat around 0.9 times per week, whilst female headed households eat meat 0.4 times per week. Shinyanga has a large difference in the percentage of male and female headed households facing food shortages. Eleven percentage points more female headed households often or always face food shortages compared to male headed households.

Right to land is mostly by customary law (60% of total land area under agriculture), however a moderate to high proportion is bought land. It has one of the lowest percent of households with official certificates of ownership. Access to fields is moderate compared to other regions with 50% of the households having their nearest field less than 100m from the Homestead. However the distance from the field to the nearest road is one of the farthest in the country.

Shinyanga has the fourth lowest percent of literate rural agriculture population in the country and the difference between the literacy rate of males and females is amongst the highest. It has a comparatively low percent of the rural agriculture population that have completed school and the third highest percent of household heads with no education.

The most important livelihood activity is crop farming followed by remittances. The percent of the rural agriculture population working full time in farming is fifth lowest in the country, however it has one of the highest percent working part time in agriculture. The main source of cash is from the sale of food crops, the second most important source of cash income is from the sale of cash crops. Other sources are of minor importance. Very small amount of credit is available in the region.

Around 30 percent of households have the roof of the main dwelling made of modern material (mainly iron sheets) and the rest is mainly with grass/leaves/mud and only 11 percent of the households have no toilet facility. Energy for lighting is mainly from wick lamps and a very small proportion from hurricane lamps. Shinyanga has one of the lowest percent of piped drinking water supply and most is from unprotected or protected wells

Most rural agriculture smallholders are living a subsistence existence with only 5 percent of households using their livelihood activities for non subsistence purposes. The region has the highest percent of households that do not eat animal

protein in a week and the smallest number that eat animal protein every day. It has a low percent of households that never face food shortage and a high proportion that often or always face shortages. In general access to services is worse than most other regions. About 55.4 percent of the households in the region reported insufficiency of land which is relatively high when compared to some of the regions in the country.

4.2 District Profile

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 Kahama

Kahama district has the largest number of households in the region and it has one of the highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There are no agricultural households with livestock only in the district and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Kahama district is Annual Crop Farming, followed by Livestock Keeping/ Herding. However, the district has the second highest percent of households with no off-farm activities and the lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Kahama has a relatively low levels of female headed households (14%) and it has one of the lowest average age of the household head. With an average household size of 6.1 members per household it is average for the region. Kahama 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 moderate utilized land area per household (3.2 ha) and the allocated area is 87% utilized. The District has low area planted per household which is 2.2 compared to other districts. Paddy production is much higher than other districts with a planted area of 53,283 hectares and the area planted per household is 0.66 ha. The district is moderately important for maize production in the region with a planted area of 79,905ha and the planted area per household is 0.98ha. The Production of sorghum is very small. Cassava production is moderate accounting for 24 percent of the quantity harvested in the region. The district has a large planted area of Sweet Potatoes (2,471 ha) accounting for 9 percent of the area planted with the crop in the region.

As with other districts in the region, most land clearing and preparation is done by hand, however there is also a moderate practice of using tractor and oxen in the district.

The use of inputs in the region is very small, however district differences exist. Kahama has the moderate planted area with improved seed in Shinyanga region. The district has the largest planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser), however most of this is farm yard manure. The district has also the largest area planted with inorganic fertilizers (90%) probably because of tobacco which widely grown in the district.

Compared to other districts in the region, Kahama district has the highest level of insecticide use, which records 7.1% of the total planted area in the district. Herbicides was also used in the district though not widely, recoding 1.4% of the total planted area in the district. Kahama district has larger area with irrigation compared to other districts with 6,309ha of irrigated land. Flood and bucket are the most common means of irrigation water application and a very small amount of sprinkler irrigation is used.

The most common method of crop storage is in sacks or open drums, however the proportion of households not storing crops in the district is lower than other districts in the region. The district has the moderate number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. The highest percent of households processing crops in Shinyanga region is found in Kahama district and is is mostly all done by neighboring machine. Although very small, access to credit in the district is mainly to male headed households, which is 77% and the main sources of credits are Savings and Credit Society and family friends and relatives.

Although a very small number of households receive extension service in the region (28%), Kahama district had a moderate proportion of households receiving the service (36%) and the main service provider was from the government. The quality of extension services was rated between Very good and average by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 2% of all agricultural households reporting to have planted trees.

The district has 12.8% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is moderate compared to other districts; however it has the smaller number of pigs and chicken in the region. The smallest number of households reporting Tsetse and tick problems was in Kahama district and it had the large number of households de-worming livestock. The Incidence of Tick problem is almost commonly spread in all districts in the region with Kahama recording 74%. The use of draft animals in the district is moderate to lower having only 40% of households, second from lowest, A small number of households practice fish farming (0.5%), which is only found in the district.

The District has amongst the worst access to secondary schools, health clinics, Hospitals, District and regional capitals, tarmac road and terially markets. However the district has amongst the beast access to and primary schools, feeder roads, all wealther roads and secondary markets.
Saturday

Kahama district has the highest proportion of households with no toilet facilities (20%) and it has the highest percent of households owning bicycles, radio and Iron. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 0.17% or 17 out 0f 1000 households. Practically a large number of households use firewood for cooking (96%) and very few use charcoal (6%) The district has the highest percent of households with grass roofs (65%) in the region, with 28 percent of households having iron sheets roofing. The most common source of drinking water is from unprotected well and most of the households access source of

drinking water within a distance of less than one kilometer. It has the moderate proportion of households having two or one meal per day compared to other districts. The district had higher percent of households that did not eat meat or fish during the week prior to enumeration, second from top; however about one third of households seldom had problems with food satisfaction.

4.2.2 Bariadi

Bariadi district has the larger number of households in the region, second from the top and it has one of the highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There are no agricultural households with livestock only in the district and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Bariadi district is Annual Crop Farming, followed by off-farm income. Compared to other districts in the region, Bariadi has a relatively low levels of female headed households (14%) and it has one of the lowest average age of the household head. With an average household size of 6.7 members per household it is highest for the region. Bariadi has a comparatively moderate literacy rate (75.3%) for agricultural household members and the number of heads of agricultural households who have never attended school was moderate (40%), equal to the regional proportion. The literacy rate for the heads of household is also moderate, about the same as the regional proportion (41%).

Compared to other district in the region, Bariadi has lower utilized land area per household (2.7 ha) and the average usable land per household is 2.9 ha, which indicate an impeding land pressure. Allocated area is also 91% utilized in the district and the District has low area planted per household which is 2.4 marking a third position from bottom when compared to other districts.

The district is important for maize production in the region with a planted area of 101,952ha and the planted area per household is 1.35ha. Paddy production is not very significant in the district when compared to other districts with a planted area of 6,914hectares and the area planted per household is 0.40 ha. Sorghum production is also important in the district with a planted area of 4,175 hectares and the district ranks third from top in the region in terms of area planted. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas and Chick Peas. The district has a large planted area of Cotton (53,882ha), and ranks first in the region in terms of area and production and the average planted are per cotton growing household is 1.1 hectare.

About 90% of the total planted area was cleared and soil prepared by oxen, there is also a practice of using tractor in land and soil prepararion (3%) which is about the same as regional average. The use of inputs in the region is very small, however district differences exist. Bariadi has the higher planted area with improved seed in Shinyanga region. The district has larger planted area with fertilizers (Farm yard manure, compost and inorganic fertiliser) and it ranks second from top when compared to other districts. Most of the fertilizer under use is farm yard manure. The district has smallest area, almost none planted with inorganic fertilizers.

Compared to other districts in the region, Bariadi district has the highest level of insecticide use, which records 31% of the total planted area in the district. However looking at the propotions of area under insecticide use in the region Bariadi ranks first (56.55%). Herbicides was also used in the district though not widely, recoding 18% of the total planted area with herbicides in the district. Bariadi district has larger area with irrigation compared to other districts with 4,966 ha of irrigated land.

The most common method of crop storage is in locally made traditional cribs; however the proportion of households not storing crops in the district is 16% same as the regional proportion. The district has the higher number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (86%) of households processing crops is found in Bariadi district and is mostly all done by neighbouring machine. Although very small, access to credit in the district is mainly to male headed households, which is 77% and the main sources of credits are Religious Organisation / NGO / Project and family friends/ relatives.

Although a very small number of households receive extension service in the region, Bariadi district had a lower proportion of households receiving the service (21%) and the main service provider was from the government. The quality of extension services was rated between Very good and Good by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 6% of all agricultural households reporting to have planted trees.

The district has 12.2% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is highest compared to other districts; however a very small number of pigs was kept in rural agricultural households in Bariadi District. It has the highest number of chicken in the region. Higher number of households report Tsetse and tick problems in Bariadi district and it had the largest number of households de-worming livestock. The Incidence of Tick problem is almost commonly spread in all districts in the region with Bariadi recording 84%. The proportion of draft animals usage is higher in the district recoding 87% of households. No rural agricultural households practice fish farming in the district.
The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, All Weather Road, tarmac road, Secondary Market and tertiary markets. However the district has amongst the beast access to primary schools, Health Clinic, feeder roads, and Primary markets.
Saturday

Bariadi district has higher proportion of households with no toilet facilities (12%), which is second from highest when compared to other districts and it has higher percent of households owning bicycles, radio and Iron. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 0.10% or 10 out of 1000 households. Practically a large number of households use firewood for cooking (97%) and very few use charcoal (1%) The district has lower percent of households with grass roofs (23%) in the region, with 64 percent of households having iron sheets roofing. The most common source of drinking water is from Protected Well and most of the households access source of drinking water within a distance of less than two kilometer. It has very low (1%) proportion of households having one meal per day compared to other districts. The district had the

highest percent of households that did not eat meat or fish during the week prior to enumeration (62%); however about one third of households always and often had problems with food satisfaction.

4.2.3 Maswa

Maswa district has larger number of households in the region, fifth from the top and it has one of the highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. It has a very small number of livestock only, 1% (or 10 households in every 1000 households) households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Maswa district is Annual Crop Farming, followed by Livestock keeping and off-farm income. Compared to other districts in the region, Maswa has the highest levels of female headed households (20%) and it has one of the highest average age of the household head (48). With an average household size of 6.3 members per household it is moderate for the region, a bit lower than the regional average which is 6.4. Maswa has a comparatively moderate literacy rate (71.3%) for agricultural household members and the number of heads of agricultural households who have never attended school was moderate (45%), above the regional proportion. The literacy rate for the heads of household was 45, above the regional proportion (41%).

Compared to other district in the region, Maswa has moderate utilized land area per household (3.7 ha) higher than the regional average which is 3.4. The total usable land per household is 4.0 ha, which indicate an impeding land pressure. Allocated area is also 93% utilized in the district and the District has higher area planted per household which is 3.0 marking a second position from top when compared to other districts.

Production of maize is moderately to lower compared to other districts in the region with a planted area of 35,159ha and the planted area per household is 0.92ha. Paddy production is also not higher enough when compared to other districts with a total planted area of 9,975hectares and the area planted per household is 0.40 ha. Sorghum production is also lower in the district with a planted area of 3,098hectares and the district ranks fourth from top in the region in terms of area planted. Sorghum is also grown in the district with an area of 7,950 hectares and area planted per sorghum growing household being 0.8 hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas, Ground nuts and Chick Peas. The district has a large planted area with Cotton (44,650ha), and ranks second in the region in terms of area and production and the average planted are per cotton growing household is 1.35 hectare a little higher than the regional average which is 1.31 ha.

About 80% of the total planted area was cleared and soil prepared by oxen, there is also a practice of using tractor in land and soil preparation (8%) which is considerably higher than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Maswa has the higher planted area with improved seed in Shinyanga region. The district has larger planted area with fertilizers (Farm yard manure, compost) and it ranks second from top when compared to other districts. Most of the fertilizer under use is farm yard manure. The district has smaller area planted with inorganic fertilizers.

Compared to other districts in the region, Maswa district has lower level of insecticide use, which is 23% of the total planted area in the district , lower than the regional average which is 34.5%. Fungicides was used in the district though not widely, recoding 7.8% of the total planted area with Fungicides in the district. Herbicides was also used in the district though not widely, recoding 0.94% of the total planted area with herbicides in the district. Irrigation was also pracriced in the district though not widely applied on 1,580ha of irrigated land or 1.4% of total planted area.

The most common method of crop storage is in locally made traditional cribs; however the proportion of households not storing crops in the district is higher than other districts in the region. The district has the highest number of households selling crops (79%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (75%) of households processing crops is found in Maswa district and is mostly all done by neighboring machine. Although very small, access to credit in the district is mainly to male headed households, which is 75% and the main sources of credits is Family, Friend and Relative.

Although a very small number of households receive extension service in the region, Maswa district had a lowest proportion of households receiving the service (6%) and the main service provider was from the government. The quality of extension services was rated to Good by the majority of the households (665) that received extension service. Tree farming was scarcely practiced in the district with only 2% of all agricultural households reporting to have planted trees.

The district has 12.0% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is moderate compared to other districts; however no pigs were kept in rural agricultural households in Maswa District. The District had moderate number of chicken (14%) in the region. Lower number of households (1%) report Tsetse and tick problems in Maswa district and it had lower proportion of households de-worming livestock. The Incidence of Tick problem is almost commonly spread in all districts in the region with Maswa recording 64% which is a little bit lower than the regional average (68%). The proportion of draft animals usage is higher in the district recoding 87% of households. No rural agricultural households practice fish farming in the district.
The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, tarmac road, Secondary Market and terially markets. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, feeder roads, and Primary markets.

Maswa district has higher proportion of households with no toilet facilities (12%), which is second from highest when compared to other districts and it has higher percent of households owning bicycles, radio and Iron. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 1% or 10 out of 100 households. Practically a large number of households use firewood for cooking (93%) and very few use charcoal (6%) The district has lower percent of households with grass roofs (15%) and higher percent of households with Mud Roofs (59%) in the region, low percent (25%) of households having iron sheets roofing. The most common source of drinking water is from Protected Well and most households access source of drinking water within a distance of less than two kilometer. It has low (4%) proportion of households having one meal per day compared to other districts. The district had higher percent of households that did not eat meat or fish during the week prior to enumeration (57%); however about one third of households always and often had problems with food satisfaction.

4.2.4 Meatu

Meatu district has smaller number of households in the region, second from the lowest and the proportion of households involved in smallholder agriculture is 92%, lower than the regional proportion which is 96%. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There are no agricultural households with livestock only in the district and no pastoralists were found in the district.

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The most important livelihood activity for smallholder households in Meatu district is Annual Crop Farming, followed by Livestock keeping and off-farm income. Compared to other districts in the region, Meatu has relatively lower levels of female headed households (13%), compared to the regional average, 14%, it has the moderate average age of the household head (46). With an average household size of 7.4 members per household, higher than the regional average which is 6.4. Meatu has a comparatively lower literacy rate (63.9%) for agricultural household members as compared to the regional number which is 70.1%. The number of heads of agricultural households who have never attended school was higher (46%), above the regional proportion, 40%. The literacy rate for the heads of household was 54, lower than the regional proportion (59%).

Compared to other district in the region, Meatu has higher rate of utilized land area per household (5.1 ha) higher than the regional average which is 3.4. The total usable land per household is 5.6 ha, which indicate a scorching land pressure. Allocated area is also 92% utilized in the district and the District has moderate area planted per household which is 2.5 same as the regional average.

Production of maize is lower compared to other districts in the region with a planted area of 31,193ha and the planted area per household is 0.29ha. Paddy production is also lowest when compared to other districts with a total planted area of 349hectares and the area planted per household is 0.27 ha. Sorghum production is highest in the district with a planted area of 24,395hectares and the district ranks First in the region in terms of area planted. The area planted per sorghum growing household is 1.57 hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas, Ground nuts and Chick Peas. The district has a large planted area with Cotton (34,028ha), and ranks third in the region in terms of area and production and the average planted are per cotton growing household is 1.35 hectare a little higher than the regional average which is 1.31 ha.

About 87% of the total planted area was cleared and soil prepared by oxen, there is also a practice of using tractor in land and soil prepararion (5%) which is considerably higher than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Meatu has the low planted area with improved seed in Shinyanga region which is only 7% of the total Planted Area. The district has smaller planted area with fertilizers (Farm yard manure, compost) and it ranks second from bottom when compared to other districts. Most of the fertilizer under use is farm yard manure. The district has minimal or no area planted with inorganic fertilizers.

Compared to other districts in the region, Meatu district has moderate level of insecticide use, which is 36% of the total planted area in the district, about the same as the regional average which is 34.5%. Fungicides were scarcely used in the

district, recoding 0.8% of the total planted area with Fungicides in the district. Herbicides were also scarcely used in the district, recoding 0.92% of the total planted area with herbicides in the district. Irrigation was also practiced in the district though not widely applied on 641ha of irrigated land or 0.7% of total planted area.

The most common method of crop storage is in locally made traditional cribs, however the proportion of households not storing crops in the district is moderate. The district has the moderate number of households selling crops (59%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (84%) of households processing crops is found in Meatu district and is mostly all done by neighboring machine and by hand. Although very small, access to credit in the district is mainly to male headed households, which is 33% and the main sources of credits is Family, Friend and Relative, Commercial Bank and Trade store.

Although a very small number of households receive extension service in the region, Meatu district had higher proportion of households receiving the service (47%), second from top and above from the regional average which is 28% and the main service provider was from the government. The quality of extension services was rated to Good and averge by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 2% of all agricultural households reporting to have planted trees.

The district has 12.8% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is higher compared to other districts; Very few pigs were reported in rural agricultural households (736) in Meatu District with an average of 4 pigs per pig rearing household. The District had moderate number of chicken (10%) in the region. Higher number of households (41%) report Tsetse fly problems in Meatu district. The Incidence of Tick problem is almost commonly spread in all districts in the region with Meatu recording 71% which is a little bit lower than the regional average (68%). The District had moderate proportion of households (47%) de-worming livestock. The proportion of draft animals usage is higher in the district recoding 87% of households. No rural agricultural households practice fish farming in the district.

The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, tarmac road, Secondary Market and tertiary markets. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, feeder roads, and Primary markets.

Meatu district has the lowest proportion of households with no toilet facilities (3%), and it has moderate percent of households owning bicycles and radio and higher percent of households owning Iron. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 1% or 10 out of 100 households. Practically a large number of households use firewood for cooking (92%) and very few use charcoal (6%) and Crop Residues. The district has lower percent of households with grass roofs (12%) and higher percent of households with Mud Roofs (57%) and, low percent (28%) of households having iron sheets roofing. The most common source of drinking water is from surface water (Lake/Dam/River/Stream) and most households access source of drinking water within a distance of less than three kilometer. It has the highest (7%) proportion of households having one meal per day compared to other districts. The district had Moderate percent of households that did not eat meat

or fish during the week prior to enumeration (42%); however about one third of households always and often had problems with food satisfaction.

4.2.5 Bukombe

Bukombe district has moderate number of households in the region, and the proportion of households involved in smallholder agriculture is 99%, higher than the regional proportion which is 96%. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There are no agricultural households with livestock only in the district and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Bukombe district is Annual Crop Farming, followed by Livestock keeping and off-farm income. Compared to other districts in the region, Bukombe has relatively the lowest levels of female headed households 9%, lower than the regional average, 14%, it has the moderate average age of the household head 42, lower than the regional average 46. the District has an average household size of 6.4 members per household, same as the regional average which is also 6.4. Bukombe has a comparatively higher literacy rate (76.5%) for agricultural household members as compared to the regional number which is 70.1%. The number of heads of agricultural households who have never attended school was higher (30%), below the regional proportion, 40%. The literacy rate for the heads of household was 68, higher than the regional proportion (59%).

Compared to other district in the region, Bukombe has lower rate of utilized land area per household (3.2 ha) lower than the regional average which is 3.4. The total usable land per household is 3.6 ha, which indicate a scorching land pressure. Allocated area is also 90% utilized in the district and the District has moderate area planted per household which is 2.6 a little higher than the regional average which is 2.5.

Production of maize is moderate compared to other districts in the region with a planted area of 64,833ha and the planted area per household is 1.25ha. Paddy production is also moderate when compared to other districts with a total planted area of 21,371hectares and the area planted per household is 1.19ha. Sorghum production is lowest in the district with a planted area of 227hectares and the district ranks last but one in the region in terms of area planted with sorghum. The area planted per sorghum growing household is 0.38hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas, Ground nuts and Chick Peas. The district has a moderate area planted area with Cotton (14,798ha), and ranks sixth in the region in terms of area and production and the average planted are per cotton growing household is 1.15 hectare lower than the regional average which is 1.31ha.

About 74% of the total planted area was cleared and soil prepared by hand, There is also a practice of using tractor in land and soil preparation (1%) which is considerably lower than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Bukombe has the higher planted area with improved seed in Shinyanga region which is 25% of the total Planted Area. The district has smaller planted area with fertilizers (Farm yard manure, compost) and it ranks second from bottom when compared to other districts. Most of the fertilizer under use is farm yard manure. The district has minimal area planted with inorganic fertilizers.

Compared to other districts in the region, Bukombe district has moderate level of insecticide use, which is 35% of the total planted area in the district, about the same as the regional average which is 34.5%. Fungicides were scarcely used in the district, recoding 4.6% of the total planted area with Fungicides in the district. Herbicides were also scarcely used in the district, recoding 1.23% of the total planted area with herbicides in the Region. Irrigation was also practiced in the district though not widely applied on 641ha of irrigated land or 1% of total planted area.

The most common method of crop storage is in Sacks or open drum and locally made traditional cribs. The district has the moderate number of households selling crops (59%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (93%) of households processing crops is found in Bukombe district and is mostly all done by neighboring machine and by trader. Although very small, access to credit in the district is mainly to male headed households, which is 86% and the main sources of credits is Family, Friend and Relative, Trade store.

Although a very small number of households receive extension service in the region, Bukombe district had low proportion of households receiving the service (14%), second from bottom and lower than the regional average which is 28% and the main service provider was from the government. The quality of extension services was rated to Good by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 3% of all agricultural households reporting to have planted trees.

The district has 12.8% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is lowest compared to other districts; among enumerated rural agricultural households for Bukombe District no pigs were reported. The District had lower number of chicken (8%) in the region. Low number of households (5%) report Tsetse fly problems in Bukombe district. The Incidence of Tick problem is almost commonly spread in all districts in the region with Bukombe recording 42% which is a little bit lower than the regional average (68%). The District had lower proportion of households (34%) de-worming livestock. The proportion of draft animals usage is lowest for the region recoding 17% of households. No rural agricultural households practice fish farming in the district.

The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, tarmac road, Secondary Market and terially markets. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, feeder roads, and Primary markets.

Bukombe district has lower proportion of households with no toilet facilities (8%) as compared to the regional average which is 11%, and it has the highest percent of households owning bicycles and radio and lowest percent of households owning Iron. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 1% or 10 out of 1000 households. Practically a large number of households use firewood for cooking (96%) and very few use charcoal (3%) and Crop Residues. The district has moderate percent of households with grass roofs (44%) and lower percent of households with Mud Roofs (22%) and, moderate percent (34%) of households having iron sheets roofing. The most common source of drinking water is from unprotected well and most households access source of drinking water within a distance of half a kilometer to less than three kilometer. It has lower (2%) proportion of households having one meal per day compared to other districts. The district had lower

percent of households that did not eat meat or fish during the week prior to enumeration (24%); however about less than a quarter agricultural households always and often had problems with food satisfaction.

4.2.6 Shinyanga Rural

Shinyanga Rural district has moderate number of households in the region, and the proportion of households involved in smallholder agriculture is 99%, higher than the regional proportion which is 96%. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There are no agricultural households with livestock only in the district and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Shinyanga Rural district is Annual Crop Farming, followed by Off farms income and Livestock keeping. Compared to other districts in the region, Shinyanga Rural has the moderate level of female headed households 14%, equal to the regional average, it has the moderate average age of the household head 47, a little bit above the regional average 46. The District has an average household size of 6.2 members per household, lower than the regional average which is also 6.4. Shinyanga Rural has a comparatively higher literacy rate (73.5%) for agricultural household members as compared to the regional number which is 70.1%. The number of heads of agricultural households who have never attended school was 39%, below the regional proportion, 40%. The literacy rate for the heads of household was 59, same as the regional proportion.

Compared to other district in the region, Shinyanga Rural has lower rate of utilized land area per household (2.5 ha) lower than the regional average which is 3.4. The total usable land per household is 2.8 ha, which indicate an approaching land pressure. Allocated area is also 90% utilized and the District has moderate area planted per household which is 2.4 a little lower than the regional average which is 2.5.

Production of maize is moderate compared to other districts in the region with a planted area of 44,228ha and the planted area per household is 1.00ha. Paddy production is also moderate when compared to other districts with a total planted area of 20,937hectares and the area planted per household is 0.73ha. Sorghum production is lower with a planted area of 1,329hectares and the district ranks fifth in the region in terms of area planted with sorghum. The area planted per sorghum growing household is 0.53hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas, Chick peas, Ground nuts and Chick Peas. The district has a lower cotton production with a total of 2,105hectares planted with cotton.

About 86% of the total planted area was cleared and soil prepared by oxen ploughing, There is also a practice of using tractor in land and soil preparation (1%) which is considerably lower than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Shinyanga Rural has the lower planted area with improved seed in Shinyanga region which is 11% of the total Planted Area. The district has smaller planted area with fertilizers (Farm yard manure, compost) . Most of the fertilizer under use is farm yard manure. The district has minimal or no area planted with inorganic fertilizers.

Compared to other districts in the region, Shinyanga Rural district has lower level of insecticide use, which is 10% of the total planted area in the district, lower than the regional average which is 34.5%. Fungicides were scarcely used in the district, recoding 3.5% of the total planted area with Fungicides in the district. Herbicides were also scarcely used in the district, recoding 2.71% of the total planted area with herbicides in the Region. Irrigation was also practiced in the district though not widely applied on 3,152ha of irrigated land or 3.1% of total planted area.

The most common method of crop storage is in Sacks or open drum and locally made traditional cribs. The district has the moderate number of households selling crops (43.8%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (94%) of households processing crops is found in Shinyanga Rural district and is mostly all done by neighboring machine and by trader. Although very small, access to credit in the district is mainly to female headed households, which is 75% and the main sources of credits are others or unspecified sources apart from family fried and relative, Commercial banks, Savings and credits, trade and religious organisations.

Although a very small number of households receive extension service in the region, Shinyanga Rural district had a moderate proportion of households receiving the service (27%), a bit lower than the regional average which is 28% and the main service provider was from the government. The quality of extension services was rated to very Good and Good by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 6% of all agricultural households reporting to have planted trees.

The district has 12.2% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is moderate compared to other districts; Among enumerated households in rural agricultural households for Shinyanga Rural District no pigs were reported. The District had higher number of chicken (19%) in the region, second from top. No incidences of Tsetse fly problems were reported among the enumerated agricultural households.. The Incidence of Tick problem is almost commonly spread in all districts in the region with Shinyanga Rural recording 71% which is higher than the regional average (68%). The District had a moderate proportion of households (45%) de-worming livestock. The proportion of draft animals usage is lowest for the region recoding 17% of households. No rural agricultural households practice fish farming in the district.

The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, tarmac road, Secondary Market and tertiary markets. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, feeder roads, and Primary markets.

Shinyanga Rural district has lower proportion of households with no toilet facilities (9%) as compared to the regional average which is 11%, and it has the highest percent of households owning bicycles, radio and wheelbarrow. The main source of energy for lighting in the district is Wick Lamp and very few households reported their main source of lighting being electricity which was 1% or 10 out of 1000 households. Practically a large number of households use firewood for cooking (98%) and very few use charcoal (2%). The district has moderate percent of households with grass roofs (55%) and lower percent of households with Mud Roofs (28%) and, lower percent (17%) of households having iron sheets roofing. The most common source of drinking water is from unprotected well and most households access source of

drinking water within a distance of half a kilometer to less than three kilometer. It has the highest (4%) proportion of households having one meal per day. The district had moderate number of households that did not eat meat or fish during the week prior to enumeration (44%); however about less than a quarter agricultural households always and often had problems with food satisfaction.

4.2.7 Shinyanga Urban

Shinyanga Urban district has the smallest number of households in the region, and the proportion of households involved in smallholder agriculture is 92%, lower than the regional proportion which is 96%. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There is a small number of agricultural households with livestock only in the district (8%) and no pastoralists were recorded in the district.

The most important livelihood activity for smallholder households in Shinyanga Urban district is Annual Crop Farming, followed by Livestock keeping and off farms income. Compared to other districts in the region, Shinyanga Urban has higher level of female headed households 19%, above the regional average which is 14%, it has the moderate average age of the household head 47, a little bit above the regional average 46. The District has an average household size of 5.4 members per household, lower than the regional average which is also 6.4. Shinyanga Urban has a comparatively lower literacy rate (52.2%) for agricultural household members as compared to the regional number which is 70.1%. The number of heads of agricultural households who have never attended school was 45%, above regional proportion, 40%. The literacy rate for the heads of household was 56%, lower than the regional proportion which is 59%.

Compared to other district in the region, Shinyanga Urban has lower rate of utilized land area per household (2.2 ha) lower than the regional average which is 3.4. The total usable land per household is 2.4 ha, which indicate an approaching land pressure. Allocated area is also 90% utilized and the District has moderate area planted per household which is 1.5 lower than the regional average which is 2.5.

Production of maize is lower compared to other districts in the region with a planted area of 7,505ha and the planted area per household is 0.90ha. Paddy production is also lower when compared to other districts with a total planted area of 1,628hectares and the area planted per household is 0.48ha. Sorghum production is lower with a planted area of 917hectares and the district ranks fifth in the region in terms of area planted with sorghum. The area planted per sorghum growing household is 0.72hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Cow peas, Chick peas, Ground nuts and Chick Peas. The district has the lowest cotton production in the region with a total of 385hectares planted with cotton.

About 77% of the total planted area was cleared and soil prepared by hand, There is also a practice of using tractor in land and soil preparation (1%) which is considerably lower than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Shinyanga Urban has the lower planted area with improved seed in Shinyanga region which is 14% of the total Planted Area. The district has smaller planted area with fertilizers (Farm yard manure, compost). Most of the fertilizer under use is farm yard manure. The district has smaller area planted with inorganic fertilizers.

Compared to other districts in the region, Shinyanga Urban district has moderate level of insecticide use, which is 10% of the total planted area in the district, lower than the regional average which is 34.5%. Fungicides were scarcely used in the district, recoding 4.3% of the total planted area with Fungicides in the district. Herbicides were also scarcely used in the district, recoding 1.64% of the total planted area with herbicides in the Region. Irrigation was also practiced in the district though not widely applied on 863ha of irrigated land or 5.5% of total planted area, higher number than that recorded on other districts.

The most common method of crop storage is in Sacks or open drum and locally made traditional cribs. The district has the lowest number of households selling crops (7.6%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. The lowest proportion (42%) of households processing crops is found in Shinyanga Urban district and is mostly all done by neighboring machine. Although very small, access to credit in the district is mainly to female headed households, which is 100% and the main sources of credits is Trade store.

Although a very small number of households receive extension service in the region, Shinyanga Urban district had a moderate proportion of households receiving the service (33%), higher than the regional average which is 28% and the main service provider was from the government. The quality of extension services was rated between Good and average by the majority of the households that received extension service. Tree farming was practiced in the district with 11% of all agricultural households reporting to have planted trees during the agricultural year this number is higher that that recorded for other districts.

The district has 2.3% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is lowest compared to other districts. Very few pigs were reported in rural agricultural households (1,931) in Shinyanga Urban District with an average of 10 pigs per pig rearing household. The District had lower number of chicken (13%) in the region. Low number of households (3%) report Tsetse fly problems in Shinyanga Urban district. The Incidence of Tick problem is almost commonly spread in all districts in the region with Shinyanga Urban recording 46% which is a lower than the regional average (68%). The District had lower proportion of households (33%) de-worming livestock. The proportion of draft animals usage is moderate for the region recoding 68% of households. No rural agricultural households practice fish farming in the district.

The District has amongst the worst access to tarmac road. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, feeder roads, Primary markets, secondary schools, Hospitals, District and regional capitals, Secondary Market and tertiary markets.

Shinyanga Urban district has lower proportion of households with no toilet facilities (5%) as compared to the regional average which is 12%, and it has higher number of households owning bicycles, radio, and Iron. The main source of energy for lighting in the district is Wick Lamp and hurricane lamp, very few households reported their main source of lighting being electricity which was 2% or 20 out of 1000 households. Practically a large number of households use firewood for cooking (88%) and very few use charcoal (10%) ,Crop Residues (1%) and bottled gas (1%). The district has a small number of households with grass roofs (15%) and higher percent of households with Mud Roofs (61%) and a small

percent (24%) of households having iron sheets roofing. The most common source of drinking water is from protected well and most households access source of drinking water within a distance of half a kilometer to less than two kilometer. It has lower (1%) proportion of households having one meal per day compared to other districts. The district had a moderate percent of households that did not eat meat or fish during the week prior to enumeration (44%); however about one quarter of agricultural households always and often had problems with food satisfaction in the district.

4.2.8 Kishapu

Kishapu district has smaller number of agricultural households compared to other districts in the in the region. The proportion of households involved in smallholder agriculture is 97%, above the regional proportion which is 96%. Most smallholders are involved in crop farming only, followed by crop and livestock farming. There is a small number of agricultural households with livestock only in the district (1%) and no pastoralists were recorded in the district.

The most important livelihood activity for smallholder households in Kishapu district is Annual Crop Farming, followed by Livestock keeping. Compared to other districts in the region, Kishapu has moderate level of female headed households 15%, above the regional average which is 14%, it has the moderate average age of the household head 47, a little bit above the regional average 46. The District has an average household size of 6.4 members per household, same as the regional average which is also 6.4. Kishapu has a comparatively lower literacy rate (65%) for agricultural household members as compared to the regional number which is 70.1%. The number of heads of agricultural households who have never attended school was 41%, above the regional proportion which is 40%. The literacy rate for the heads of household was 60%, a bit above the regional proportion which is 59%.

Compared to other district in the region, Kishapu has the highest rate of utilized land per household (5.6 ha) above the regional average which is 3.4. The total usable land per household is 6.3 ha, which indicate an approaching land pressure. Allocated area is also 90% utilized and the District has moderate area planted per household which is 3.4 higher than the regional average which is 2.5 and is the highest average planted area for the region.

Production of maize is moderate compared to other districts in the region with a planted area of 35,494ha and the planted area per household is 1.17ha. Paddy production is lower when compared to other districts with a total planted area of 4,459hectares and the area planted per household is 0.63ha. Sorghum production is higher with a planted area of 21,030hectares and the district ranks second from top in the region in terms of area planted with sorghum. The area planted per sorghum growing household is 1.49hectares. Other food crops which are significantly produced in the district include Cassava, Sweet potatoes, Beans, Cow peas, Ground nuts and Chick Peas. The district has a moderate area planted area with Cotton 32,748hectares, and ranks fourth in the region in terms of area and production and the average planted are per cotton growing household is 1.70 hectare higher than the regional average which is 1.31ha.

About 92% of the total planted area was cleared and soil prepared by oxen, there is also a practice of using tractor in land and soil preparation (3%) which is considerably a bit lower than the regional average which is 3%. The use of inputs in the region is very small, however district differences exist. Kishapu has the higher planted area with improved seed in Shinyanga region which is 48% of the total Planted Area. The district has smaller planted area with fertilizers (Farm yard

manure, compost) when compared to other districts. Most of the fertilizer under use is farm yard manure. The district has minimal area planted with inorganic fertilizers.

Compared to other districts in the region, Kishapu district has moderate level of insecticide use, which is 33% of the total planted area in the district, about the same as the regional average which is 34.5%. Fungicides were scarcely used in the district, recoding 2.8% of the total planted area with Fungicides in the district. Herbicides were also scarcely used in the district, recoding 4.15% of the total planted area with herbicides in the district. Irrigation was also practiced in the district though not widely applied on 2,597ha of irrigated land or 2.1% of total planted area.

The most common method of crop storage is in locally made traditional cribs and in sacks or open drums; The district has the moderate number of households selling crops (50.4%), however for those who did not sell, the main reason for not selling is insufficient production. The district also has a higher percent of households reporting Open Market Price Too Low as the major marketing problem. Higher proportion (97%) of households processing crops is found in Kishapu district and is mostly all done by neighboring machine. Although very small, access to credit in the district is mainly to male headed households, which is 33% and the main sources of credits is Family, Friend and Relative.

Although a very small number of households receive extension service in the region, Kishapu district had higher proportion of households receiving the service (51%), ranking first from top and above the regional average which is 28% and the main service provider was from the government. The quality of extension services was rated to Good and average by the majority of the households that received extension service. Tree farming was scarcely practiced in the district with only 2% of all agricultural households reporting to have planted trees.

The district has 11.3% of all cattle kept in the region and is mostly dominated by indigenous breeds. Goat and sheep production is higher compared to other districts; Very few pigs were reported in rural agricultural households (82) in Kishapu District with an average of 1 pigs per pig rearing household. The District had moderate number of chicken (6%) in the region. Low number of households (7%) report Tsetse fly problems in Kishapu district. The Incidence of Tick problem is almost commonly spread in all districts in the region with Kishapu recording 61% which is a little bit lower than the regional average (68%). The District had the lowest proportion of households (26%) de-worming livestock. The proportion of draft animals usage is higher in the district recoding 89% of households. No rural agricultural households reported to practice fish farming.

The District has amongst the worst access to secondary schools, Hospitals, District and regional capitals, tarmac road, Primary Market, Secondary Market and tertiary markets. However the district has amongst the beast access to primary schools, Health Clinic, All Weather Road, and feeder roads.

Kishapu district has the lower proportion of households with no toilet facilities (8%), and it is one of the districts with highest percent of households owning bicycles and radio. The main source of energy for lighting in the district is Wick Lamp and no households reported their main source of lighting being electricity. Practically a large number of households use firewood for cooking (96%) and very few use charcoal (3%) and Crop Residues (1%). The district has lower percent of households with grass roofs (5%) and higher percent of households with Mud Roofs (79%) and, low percent (14%) of

households having iron sheets roofing. The most common source of drinking water is from surface water (Lake/Dam/River/Stream) and most households access source of drinking water within a distance of half a kilometer to less than three kilometer. It has lower (1%) proportion of households having one meal per day. The district had Moderate percent of households that did not eat meat or fish during the week prior to enumeration (35%); however about one third of households always and often had problems with food satisfaction.

4. APPENDICES

Appendix I Tabulation List 109

Appendix II Tables 128

Appendix III Questionnaires 254

APPENDIX I: CROP TABULATION

TYPE OF AGRICULTURE HOUSEHOLD……...……...128

2.1 Number of Agricultural Households by type of household and District during 2002/03 Agriculture Year 129

2.2 Number of Agriculture Households by type of Holding by District during 2002/03 Agriculture year..... 129

NUMBER OF AGRICULTURE HOUSEHOLDS 130

3.0 Number of Agricultural Households and Average Household Size by Sex of the Head of Household and District, 2002/03 Agricultural Year..... 131

3.1 The Livelihood Activities/Source of Income of the Households Raked in Order of Importance by District..... 131

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES..... 132

3.1a First Most Importance..... 133

3.1b Second Most Importance..... 133

3.1c Third Most Importance 133

3.1d Fourth Most Importance..... 133

HOUSEHOLDS DEMOGRAPHS..... 134

3.2 Number of Agricultural Household Members By Sex and Age Group for the 2002/03 Agricultural Year (row %) 135

3.3 Number of Agricultural Household Members By Sex and Age Group for the 2002/03 Agricultural Year (column %) 135

3.4 Number of Agricultural Household Members by Sex and District for the 2002/03 Agricultural Year..... 136

3.5A 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 136

3.5B 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..... 136

3.6 Number of Agricultural Household Members 5 years and above By School Attendance and District, 2002/03 Agricultural Year 136

3.7 Number of Agricultural Household Members by Main Activity and District, 2002/03 Agricultural Year. 137

cont… Number of Agricultural Household Members By Main Activity and District..... 137

3.8 Number of Agricultural Household Members By Level of involvement in Farming Activity and District, 2002/03 Agricultural Year 138

3.9 Number of Agricultural Household Members by Level of Formal Education Completion and District, 2002/03 Agricultural Year 138

cont… Number of Agricultural Household Members by Level of Formal Education Completion and District, 2002/03 Agricultural Year 139

3.10 Number of Agricultural Households and Average Household Size By Sex of the Head of Household and District, 2002/03 Agricultural Year 140

3.11 Number of Heads of Agricultural Households By Maximum Education Level Attained and District, 2002/03 Agricultural Year 141

3.12 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year 141

3.13 Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03 Agricultural Year 141

3.14 Number of Agricultural Households Involved in Off Farm Income Generating Activity By Number of Off Farm Income Activities and District, 2002/03 Agricultural Year 142

3.15A Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year 142

3.15B Percent of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year 142

3.16 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year 143

3.17 Time Series of Male and Female Headed Households: Shinyanga 144

3.18 Literacy Rate of Heads of Households by Sex and District 144

LAND ACCESS/OWNERSHIP 146

4.1 Number of Farming Households by Type of Land Ownership/Tenure and District for the 2002/03 Agricultural Year 147

4.2 Area of Land (ha) by Ownership/Tenure (Hectare) and District for the 2002/03 Agricultural Year 147

LAND USE 148

5.1 Number of Agricultural Households By Type of Land Use and District for the 2002/03 Agricultural Year 149

5.2 Area of Land (Ha) by type of Land Use and District for the 2002/03 Agricultural Year 149

5.3 Number of Households by type of household and District during 2002/03 Agricultural Year 150

5.4 Number of Agricultural Households by Whether they Consider themselves to have Sufficient Land for the Household and District during 2002/03 Agricultural Year 150

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 150

TOTAL ANNUAL CROP & VEGETABLES PRODUCTION LONG & SHORT SEASONS 152

7.1 & 7.2a Number of Crop Growing Households and Area Planted (ha) by Season and District. 153

7.1 & 7.2b Number of Crop Growing Households Planting Crops by Season and District. 153

7.1 & 7.2c Area planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 agriculture year, Kahama District 154

7.2.1 Number of Agricultural Households, Area Planted (ha) and Quantity of Maize Harvested (tons) by Season and District;2002/03 Agricultural Year 155

7.2.2 Number of Agricultural Households, Area Planted (ha) and Quantity of Paddy Harvested (tons) by Season and District;2002/03 Agricultural Year 155

7.2.3 Number of Agricultural Households, Area Planted (ha) and Quantity of Sorghum Harvested (tons) by Season and District;2002/03 Agricultural Year 155

7.2.4 Number of Agricultural Households, Area Planted (ha) and Quantity of Fingermillet Harvested (tons) by Season and District;2002/03 Agricultural Year 155

7.2.5 Number of Agricultural Households, Area Planted (ha) and Quantity of Wheat Harvested (tons) by Season and District;2002/03 Agricultural Year 156

7.2.6 Number of Agricultural Households, Area Planted (ha) and Quantity of Cassava Harvested (tons) by Season and District;2002/03 Agricultural Year 156

7.2.7 Number of Agricultural Households, Area Planted (ha) and Quantity of Sweet potatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 156

7.2.8 Number of Agricultural Households, Area Planted (ha) and Quantity of Irish potatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 156

7.2.9 Number of Agricultural Households, Area Planted (ha) and Quantity of Yams Harvested (tons) by Season and District;2002/03 Agricultural Year 157

7.210 Number of Agricultural Households, Area Planted (ha) and Quantity of Cocoyams Harvested (tons) by Season and District;2002/03 Agricultural Year 157

7.2.12 Number of Agricultural Households, Area Planted (ha) and Quantity of Beans Harvested (tons) by Season and District;2002/03 Agricultural Year 157

7.2.13 Number of Agricultural Households, Area Planted (ha) and Quantity of Cowpeas Harvested (tons) by Season and District;2002/03 Agricultural Year 158

7.2.14 Number of Agricultural Households, Area Planted (ha) and Quantity of Green grams Harvested (tons) by Season and District;2002/03 Agricultural Year 158

7.2.15 Number of Agricultural Households, Area Planted (ha) and Quantity of Chick peas Harvested (tons) by Season and District;2002/03 Agricultural Year 158

7.2.16 Number of Agricultural Households, Area Planted (ha) and Quantity of Bambaranuts Harvested (tons) by Season and District;2002/03 Agricultural Year 158

7.2.18 Number of Agricultural Households, Area Planted (ha) and Quantity of Sunflower Harvested (tons) by Season and District;2002/03 Agricultural Year 159

7.2.19 Number of Agricultural Households, Area Planted (ha) and Quantity of Simsim Harvested (tons) by Season and District;2002/03 Agricultural Year 159

7.2.20 Number of Agricultural Households, Area Planted (ha) and Quantity of Groundnuts Harvested (tons) by Season and District;2002/03 Agricultural Year 159

7.2.22 Number of Agricultural Households, Area Planted (ha) and Quantity of Okra Harvested (tons) by Season and District;2002/03 Agricultural Year 160

7.2.24 Number of Agricultural Households, Area Planted (ha) and Quantity of Bitter Aubergine Harvested (tons) by Season and District;2002/03 Agricultural Year 160

7.2.25 Number of Agricultural Households, Area Planted (ha) and Quantity of Onions Harvested (tons) by Season and District;2002/03 Agricultural Year 161

7.2.27 Number of Agricultural Households, Area Planted (ha) and Quantity of Cabbage Harvested (tons) by Season and District;2002/03 Agricultural Year 161

7.2.28 Number of Agricultural Households, Area Planted (ha) and Quantity of Tomatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 161

7.2.29 Number of Agricultural Households, Area Planted (ha) and Quantity of Pumpkins Harvested (tons) by Season and District;2002/03 Agricultural Year 162

7.2.30 Number of Agricultural Households, Area Planted (ha) and Quantity of Cucumber Harvested (tons) by Season and District;2002/03 Agricultural Year 162

7.2.31 Number of Agricultural Households, Area Planted (ha) and Quantity of Eggplant Harvested (tons) by Season and District;2002/03 Agricultural Year 162

7.2.32 Number of Agricultural Households, Area Planted (ha) and Quantity of Water Mellon Harvested (tons) by Season and District;2002/03 Agricultural Year 162

7.2.34 Number of Agricultural Households, Area Planted (ha) and Quantity of Cotton Harvested (tons) by Season and District;2002/03 Agricultural Year 163

7.2.35 Number of Agricultural Households, Area Planted (ha) and Quantity of Tobacco Harvested (tons) by Season and District;2002/03 Agricultural Year 163

7.1 & 7.2e Total Number of Agriculture Households and Planted Area by Means of Soil Preparation and District LONG & SHORT SEASON, Shinyanya Region 164

7.1 & 7.2e Number of Crop Growing Households and Planted Area (ha) By Means of Soil Preparation and District Long & Short Season, Kagera 164

7.1 & 7.2f Total Number of Agriculture Households and Planted Area by Fertiliser Use and District for the 2002/03 agriculture year - LONG & SHORT RAINY SEASON, Shinyanga 164

7.1 & 7.2g Total Number of Agriculture Households and Planted Area by Irrigation Use and District for the 2002/03 agriculture year - LONG & SHORT RAINY SEASON, Shinyanga Region 164

7.1 & 7.2h Total Number of Agriculture Households and Planted Area by Insecticide Use and District for the 2002/03 agriculture year - Long & Short Rainy Season. 165

7.1 & 7.2i Total Number of Agriculture Households and Planted Area by Herbicide Use and District for the 2002/03 agriculture year - Long & Short Rainy Season, Kahama. 165

7.1 & 7.2j Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year SHORT & LONG RAINYSEASON, Shinyanga Region 166

7.1 &7.2k Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - LONG & SHORT RAINY SEASON, Shinyanga Region 166

ANNUAL CROP & VEGETABLES PRODUCTION LONG SEASON 168

7.2a Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-LONG RAINY SEASON, Kahama District 169

7.2b ````Number of Crop Growing Households and Planted Area By Fertilizer Use and District During the Long Rainy Season 169

7.2c Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year LONG RAINY SEASON, Kahama District 169

7.2d Number of Crop Growing Households & Planted Area By Insecticide Use and District - LONG RAINY SEASON 170

7.2e Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year LONG RAINY SEASON, Kahama Region 170

7.2f Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year LONG RAINY SEASON, Kahama Region 170

7.2g Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - LONG RAINY SEASON, Kahama Region 171

7.2.1 Number of Agricultural Households, Area Planted (ha) and Quantity of Maize Harvested (tons) by Season and District;2002/03 Agricultural Year 172

7.2.2 Number of Agricultural Households, Area Planted (ha) and Quantity of Paddy Harvested (tons) by Season and District;2002/03 Agricultural Year 172

7.2.3 Number of Agricultural Households, Area Planted (ha) and Quantity of Sorghum Harvested (tons) by Season and District;2002/03 Agricultural Year 172

7.2.4 Number of Agricultural Households, Area Planted (ha) and Quantity of Fingermillet Harvested (tons) by Season and District;2002/03 Agricultural Year 173

7.2.5 Number of Agricultural Households, Area Planted (ha) and Quantity of Wheat Harvested (tons) by Season and District;2002/03 Agricultural Year 173

7.2.6 Number of Agricultural Households, Area Planted (ha) and Quantity of Cassava Harvested (tons) by Season and District;2002/03 Agricultural Year 174

7.2.7 Number of Agricultural Households, Area Planted (ha) and Quantity of Sweet potatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 174

7.2.8 Number of Agricultural Households, Area Planted (ha) and Quantity of Irish potatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 174

7.2.9 Number of Agricultural Households, Area Planted (ha) and Quantity of Yams Harvested (tons) by Season and District;2002/03 Agricultural Year 175

7.210 Number of Agricultural Households, Area Planted (ha) and Quantity of Cocoyams Harvested (tons) by Season and District;2002/03 Agricultural Year 175

7.2.12 Number of Agricultural Households, Area Planted (ha) and Quantity of Beans Harvested (tons) by Season and District;2002/03 Agricultural Year 175

7.2.13 Number of Agricultural Households, Area Planted (ha) and Quantity of Cowpeas Harvested (tons) by Season and District;2002/03 Agricultural Year 176

7.2.14 Number of Agricultural Households, Area Planted (ha) and Quantity of Green grams Harvested (tons) by Season and District;2002/03 Agricultural Year 176

7.2.15 Number of Agricultural Households, Area Planted (ha) and Quantity of Chick peas Harvested (tons) by Season and District;2002/03 Agricultural Year 176

7.2.16 Number of Agricultural Households, Area Planted (ha) and Quantity of Bambaranuts Harvested (tons) by Season and District;2002/03 Agricultural Year 177

7.2.18 Number of Agricultural Households, Area Planted (ha) and Quantity of Sunflower Harvested (tons) by Season and District;2002/03 Agricultural Year 177

7.2.19 Number of Agricultural Households, Area Planted (ha) and Quantity of Simsim Harvested (tons) by Season and District;2002/03 Agricultural Year 177

7.2.20 Number of Agricultural Households, Area Planted (ha) and Quantity of Groundnuts Harvested (tons) by Season and District;2002/03 Agricultural Year 178

7.2.22 Number of Agricultural Households, Area Planted (ha) and Quantity of Okra Harvested (tons) by Season and District;2002/03 Agricultural Year 178

7.2.24 Number of Agricultural Households, Area Planted (ha) and Quantity of Bitter Aubergine Harvested (tons) by Season and District;2002/03 Agricultural Year 178

7.2.25 Number of Agricultural Households, Area Planted (ha) and Quantity of Onions Harvested (tons) by Season and District;2002/03 Agricultural Year 179

7.2.27 Number of Agricultural Households, Area Planted (ha) and Quantity of Cabbage Harvested (tons) by Season and District;2002/03 Agricultural Year 179

7.2.28 Number of Agricultural Households, Area Planted (ha) and Quantity of Tomatoes Harvested (tons) by Season and District;2002/03 Agricultural Year 179

7.2.29 Number of Agricultural Households, Area Planted (ha) and Quantity of Pumpkins Harvested (tons) by Season and District;2002/03 Agricultural Year 180

7.2.30 Number of Agricultural Households, Area Planted (ha) and Quantity of Cucumber Harvested (tons) by Season and District;2002/03 Agricultural Year 180

7.2.31 Number of Agricultural Households, Area Planted (ha) and Quantity of Eggplant Harvested (tons) by Season and District;2002/03 Agricultural Year 180

7.2.32 Number of Agricultural Households, Area Planted (ha) and Quantity of Water Mellon Harvested (tons) by Season and District;2002/03 Agricultural Year 181

7.2.34 Number of Agricultural Households, Area Planted (ha) and Quantity of Cotton Harvested (tons) by Season and District;2002/03 Agricultural Year 181

7.2.35 Number of Agricultural Households, Area Planted (ha) and Quantity of Tobacco Harvested (tons) by Season and District;2002/03 Agricultural Year 181

PERMANENT CROPS 182

7.4 Total Area Planted with Coconut by District - Shinyanga Region 183

7.5 Total Area Planted with Oranges by District - Shinyanga Region 183

7.6 Total Area Planted with Banana by District - Shinyanga Region 183

AGROPROCESSING 184

8.0a: Number of Crops Growing Households reported to have Processed Farm Products by District; 2002/03 Agricultural Year 185

8.0b: Number of Crops Growing Households by Method of Processing and District; 2002/03 Agricultural Year District 185

8.1.1a Number of Crop Growing Households Processing Crops During 2002/03 Agricultural Year By Location and Crop, Kahama District 186

8.1.1b Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural Year By Use of Product and Crop, Kahama District 187

8.1.1c Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural Year By Location of Sale of Product and Crop, Kahama District 188

8.1.1d Number of Crop Growing Households By Main Product and District During 2002/03 Agriculture Year, Kahama District 188

8.1.1e Number of Crop Growing Households By Use of Primary Processed Product and District during 2002/03 Agriculture Year, Kahama District 189

8.1.1f Number of Crop Growing Households By Where Product Sold and District During 2002/03 Agriculture Year, Kahama District 189

8.1.1g Number of Crop Growing Households By type of By-Product and District During 2002/03 Agriculture Year, Kahama District 189

MARKETING 190

10.1 Number of Crop Growing Households Reported to have Sold Agricultural Produce by District during 2002/03 District, Kahama District 191

10.2 Number of Households who Reported Marketing Problems by District during 2002/03 Agricultural Year 191

10.3 Proportion of Households who reported Main Reason for Not Selling Their Crops by District during 2002/03 Agricultural Year 191

IRRIGATION/EROSION CONTROL 192

11.1 Number and Percent of Households Reporting use of irrigation during 2002/03 Agricultural year by District..... 193

11.2 Area (ha) of Irrigatable and NON irrigated land by district during 2002/03 agriculture year 193

11.3 Number of Agriculture Households using irrigation by Source of Irrigation Water by districts during the 2002/03 agricultural Year 193

11.4 Number of Agriculture Households by method of used to obtain water and district during 2002/03 agriculture year 194

11.5 Number of Agriculture Households by Method of Field Application of Irrigation Water and District for the 2002/03 Agricultural Year 194

11.6 Number of Households with Erosion Control/Water Harvesting Facilities on their Land By District 195

11.7 Number of Erosion Control/Water Harvesting Structures by Type and District as of 2002/03 agriculture year..... 195

ACCESS TO FARM INPUTS AND IMPLEMENTS 196

12.1.1 Number of Agricultural Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year District, 2002/03 Agricultural Year 197

12.1.2 Number of Agricultural Households Using Farm Yard Manure by District, 2002/03 Agricultural Year 197

12.1.3 Number of Agricultural Households Using COMPOST Manure by District, 2002/03 Agricultural Year 198

12.1.4 Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year 198

12.1.5 Number of Agricultural Households Using Herbicides by District, 2002/03 Agricultural Year..... 199

12.1.6 Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year 199

12.1.7 Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year 200

12.1.8 Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year, ... 200

12.1.9 Number of Agricultural Households and Source of COMPOST Manure by District, 2002/03 Agricultural Year 201

12.1.10 Number of Agricultural Households and Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year 201

12.1.11 Number of Agricultural Households and Source of Herbicides by District, 2002/03 Agricultural Year..... 202

12.1.12 Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year 203

12.1.13 Number of Agricultural Households and Distance to Source of Chemical Fertilizer by District, 2002/03 Agricultural Year 203

12.1.14 Number of Agricultural Households and Distance to Source of Farm Yard Manure by District, 2002/03 Agricultural Year Year 204

12.1.15 Number of Agricultural Households and Distance to Source of COMPOST Manure by District, 2002/03 Agricultural Year 204

12.1.16 Number of Agricultural Households and Distance to Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year 204

12.1.17 Number of Agricultural Households and Distance to Source of Herbicides by District, 2002/03 Agricultural Year 205

12.1.18 Number of Agricultural Households and Distance to Source of Improved Seeds by District, 2002/03 Agricultural Year 205

12.1.19 Number of Agricultural Households and Source of Finance for buying Chemical Fertilizer by District, 2002/03 Agricultural Year 205

12.1.20 Number of Agricultural Households and Source of Finance for buying Farm Yard Manure by District, 2002/03 Agricultural Year 206

12.1.21 Number of Agricultural Households and Source of Finance for buying COMPOST Manure by District, 2002/03 Agricultural Year 206

12.1.22 Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year 207

12.1.23 Number of Agricultural Households and Source of Finance for buying Herbicides by District, 2002/03 Agricultural Year 207

12.1.24 Number of Agricultural households and Source of Finance for buying Improved Seeds by District, 2002/03 Agricultural Year 208

12.1.25 Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year 208

12.1.26 Number of Agricultural Households and Reason for NOT using Farm Yard Manure By district 2002/03 Agricultural Year 209

12.1.27 Number of Agricultural Households and Reason for NOT using COMPOST Manure by District 2002/03 Agricultural Year 210

12.1.28 Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District 2002/03 Agricultural Year 210

12.1.29 Number of Agricultural Households and Reason for NOT using Herbicides by District 2002/03 Agricultural Year 211

12.1.30 Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year 212

12.1.31 Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year 212

12.1.32 Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year 213

12.1.33 Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year 213

12.1.34 Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year 213

12.1.35 Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year 214

12.1.36 Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year 214

12.1.37 Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year 214

12.1.38 Number of Agricultural Households With Plan to use Next Year Farm Yard Manure by District, 2002/03 Agricultural Year 215

12.1.39 Number of Agricultural Households With Plan to use Next Year COMPOST Manure by District, 2002/03 Agricultural Year 215

12.1.40 Number of Agricultural Households With Plan to use Next Year Pesticides/Fungicides by District, 2002/03 Agricultural Year 216

12.1.41 Number of Agricultural Households With Plan to use Next Year Herbicides by District, 2002/03 Agricultural Year 216

12.1.42 Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year 216

12.2.1 Number of Equipment/Assets Owned/ Rented by the Household During 2002/03 217

12.2.2 Number of Agricultural Households that used Farm Implements/Assets in 2002/03 by District, 2002/03 Agricultural Year 218

12.2.3 Number of Agricultural Households NOT using Hand Hoe by Main Reason for NOT using and District 218

12.2.4 Number of Agricultural Households NOT using Hand Powered Sprayer by Main Reason for NOT using and District 218

12.2.5 Number of Agricultural Households NOT using OXEN by Main Reason for NOT using and District 219

12.2.6 Number of Agricultural Households NOT using OX Plough by Main Reason for NOT using and District 219

12.2.7 Number of Agricultural Households NOT using OX SEED PLANTER by Main Reason for NOT using and District 219

12.2.8 Number of Agricultural Households NOT using OX CART by Main Reason for NOT using and District 220

12.2.9 Number of Agricultural Households NOT using TRACTOR by Main Reason for NOT using and District 220

12.2.10 Number of Agricultural Households NOT using TRACTOR PLOUGH by Main Reason for NOT using and District 220

12.2.11 Number of Agricultural Households NOT using TRACTOR HARROW by Main Reason for NOT using and District 221

12.2.12 Number of Agricultural Households NOT using THRESHERS/SHELLERS by Main Reason for NOT using and District 221

12.2.13 Number of Agricultural Households Owning Hand Hoes by Source of Finance and District 221

12.2.14 Number of Agricultural Households Owning Hand Powered Sprayer by Source of Finance and District 222

12.2.15 Number of Agricultural Households Owning OXEN by Source of Finance and District 222

12.2.16 Number of Agricultural Households Owning OX Plough by Source of Finance and District..... 222

12.2.17 Number of Agricultural Households Owning OX SEED PLANTER by Source of Finance and District..... 223

12.2.18 Number of Agricultural Households Owning OX CART by Source of Finance and District 223

12.2.19 Number of Agricultural Households Owning TRACTOR by Source of Finance and District 223

12.2.20 Number of Agricultural Households Owning TRACTOR PLOUGH by Source of Finance and District..... 208

12.2.21 Number of Agricultural Households Owning TRACTOR HARROW by Source of Finance and District ... 223

AGRICULTURE CREDIT..... 224

13.1a Number of Households Reporting the Main reasons for Not Using Credit by District During the 2002/03 Agriculture Year..... 225

13.1b Number of Credits Received by Main Purpose of Credit and District During the 2002/03 Agriculture Year..... 225

13.2a Number of Agriculture Households receiving Credit by sex of household head and District During the 2002/03 Agriculture Year..... 209

13.2c Number of Households receiving Credits by Main Source of credit and region District the 2002/03 Agriculture Year 209

TREE FARMING AND AGROFORESTRY..... 212

14.1 Number of Households Having Planted Trees By District..... 213

contNumber of Planted Trees by Species and District During the 2002/03 Agriculture Year, Shinyanga Region..... 213

14.1 Number of Households with planted trees on their land and Number of Trees by Planting Location and District During the 2002/03 Agriculture Year, Kagera Region……....214

14.2 Number of Households with planted trees on their land and Number of Trees by Planting Location and District During the 2002/03 Agriculture Year, Shinyanga Region 214

14.3 Number of responses by main use of planted trees and District for the 2002/03 agriculture yea, Shinyanga Region 214

14.3 Number of Households By Whether Village Have a Community Tree Planting Scheme By District 215

14.4 Number of Agriculture Households Classified by Distance to Community Planted Forest (Km) By District During the 2002/03 Agriculture Year, Shinyanga Region 215

14 Number of responses by main use of planted trees and District for the 2002/03 agriculture year, Shinyanga Region 215

14.5 Number of responses by Second use of planted trees and District for the 2002/03 agriculture yea, Shinyanga Region 215

CROP EXTENSION..... 216

15.1 Number of Agriculture Households Receiving Extension Messages by District

During the 2002/03 Agriculture Year, Shinyanga Region 217

15.2 Number of Households By Quality of Extension Services and District During the 2002/03 Agricultural Year, Shinyanga Region 217

15.3 Number of Agriculture Households By Source of Crop Extension Messages and District During the 2002/03 Agriculture Year, Shinyanga Region 217

15.4 Number of Agriculture Households Receiving Advice on Plant Spacing by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 218

15.5 Number of Agriculture Households Receiving Advice on Agrochemicals by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 218

15.6 Number of Agriculture Households Receiving Advice on Erosion Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 218

15.7 Number of Agriculture Households Receiving Advice on Organic Fertiliser Use by Source and District During the 2002/03 Agriculture Year 219

15.8 Number of Agriculture Households Receiving Advice on Inorganic Fertilizer Use by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 219

15.9 Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source and District During the 2002/03 Agriculture Year 219

15.10 Number of Agriculture Households Receiving Advice on Mechanisation/LST by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 220

15.11 Number of Agriculture Households Receiving Advice on Irrigation Technology by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 220

15.12 Number of Agriculture Households Receiving Advice on Crop Storage by Source and District During the 2002/03 Agriculture Year, Shinyanga Region. 220

15.13 Number of Agriculture Households Receiving Advice on Vermin Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 221

15.14 Number of Agriculture Households Receiving Advice on Agro-Processing by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 221

15.15 Number of Agriculture Households Receiving Advice on Agro-Forestry by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 221

15.16 Number of Agriculture Households Receiving Advice on Bee Keeping by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 222

15.17 Number of Agriculture Households Receiving Advice on Fish Farming by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 222

15.18 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 1) During the 2002/03 Agriculture Year, Shinyanga Region..... 222

15.19 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 2) During the 2002/03 Agriculture Year, Shinyanga Region..... 223

15.20 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 3) During the 2002/03 Agriculture Year, Shinyanga Region..... 223

15.21 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 4) During the 2002/03 Agriculture Year, Shinyanga Region..... 223

15.22 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 5) During the 2002/03 Agriculture Year, Shinyanga Region 224

EXTENSION 226

15.1 Number of Agriculture Households Receiving Extension Messages by District During the 2002/03 AgricultureYear, Shinyanga Region 224

15.2 Number of Households By Quality of Extension Services and District During the 2002/03 Agricultural Year, Shinyanga Region 224

15.3 Number of Agriculture Households By Source of Crop Extension Messages and District During the 2002/03 Agriculture Year, Shinyanga Region 224

15.4 Number of Agriculture Households Receiving Advice on Plant Spacing by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 224

15.5 Number of Agriculture Households Receiving Advice on Agrochemicals by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 218

15.6 Number of Agriculture Households Receiving Advice on Erosion Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 218

15.7 Number of Agriculture Households Receiving Advice on Organic Fertiliser Use by Source and District During the 2002/03 Agriculture Year 219

15.8 Number of Agriculture Households Receiving Advice on Inorganic Fertilizer Use by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 219

15.9 Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source and District During the 2002/03 Agriculture Year 219

15.10 Number of Agriculture Households Receiving Advice on Mechanisation/LST by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 220

15.11 Number of Agriculture Households Receiving Advice on Irrigation Technology by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 220

15.12 Number of Agriculture Households Receiving Advice on Crop Storage by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 220

15.13 Number of Agriculture Households Receiving Advice on Vermin Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 21

15.14 Number of Agriculture Households Receiving Advice on Agro-Processing by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 21

15.15 Number of Agriculture Households Receiving Advice on Agro-Forestry by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 221

15.16 Number of Agriculture Households Receiving Advice on Bee Keeping by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 222

15.17 Number of Agriculture Households Receiving Advice on Fish Farming by Source and District During the 2002/03 Agriculture Year, Shinyanga Region 222

15.18 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 1) During the 2002/03 Agriculture Year, Shinyanga Region 222

15.19 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message

and District (Part 2) During the 2002/03 Agriculture Year, Shinyanga Region..... 223

15.20 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 3) During the 2002/03 Agriculture Year, Shinyanga Region..... 223

15.21 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 4) During the 2002/03 Agriculture Year, Shinyanga Region 223

15.22 Number of Agriculture Households Receiving and Adopting Extension Messages by Type of Message and District (Part 5) During the 2002/03 Agriculture Year, Shinyanga Region 244

ANIMAL CONTRIBUTION TO CROP PRODUCTION..... 226

17.1 Number of Households Using Draft Animal to Cultivate Land By District..... 227

17.2 Type of Draft By Number Owened, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year..... 227

17.3 Number of Crop Growing Households Using Organic Fertilizer By Region During 2002/03 Agriculture Year 227

17.4 Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year 228

CATTLE PRODUCTION..... 229

18.1 Total Number Households rearing Cattle by District during 2002/03 agriculture year, Shinyanga Region..... 231

18.2 Number of Households Rearing Cattle, Heads of Cattle and Average Heads per Household by Herd Size; on 1st October 2003 231

18.3 Total Number of Cattle by Category and Type of Cattle; on 1st October 2003..... 231

18.4 Total Number of Cattle by Type and District As of 1st October 2003 232

18.5 Total Number of indigenous Cattle by Category of Cattle and District as on 1st October 2003..... 232

18.6 Total Number of Dairy Cattle by Category of cattle and District as on 1st October 2003 232

18.7 Total Number of Beef Cattle by Category of Cattle and District as on 1st October 2003 233

18.8 Total Number of Cattle by Category and District as on 1st October 2003..... 233

GOATS PRODUCTION 234

19.1 Total Number of Goats by goat type and District as on 1st October 2003..... 235

19.2 Number of Households Rearing Goats and Heads of Goats by Herd Size on 1st October 2003..... 235

19.3 Total Number of Goats by Category and Type of Goat on 1st October 2003 236

19.4 Total Number of Indigenous Goat by Category and District on 1st October 2003..... 236

19.5 Total Number of Improved Goat for Meat by Category and District on 1st October 2003 236

19.6 Total Number of Improved Dairy Goats by Category and District on 1st October 2003 237

19.7 Total Number of Goats by Category and District on 1st October 2003 237

SHEEP PRODUCTION 238

20.1 Total Number of Sheep by Breed Type on 1st October 2003 239

20.2 Number of Households Raising or Managing Sheep by District on 1st October 2003 239

20.3 Number of Sheep by Type of Sheep and District on 1st October 2003. 239

20.4 Number of Sheep per Household by Category and Region as of 1st October 2003 239

20.5 Number of Households and Heads of Sheep by Herd Size on 1st October 2003 240

20.6 Total Number of Indigenous Sheep by Sheep Type and District on 1st October 2003 240

20.7 Total Number of Improved Mutton Sheep by Type and District on 1st October 2003 244

20.8 Total Number of Sheep by Sheep Type and District on 1st October 2003 240

PIGS PRODUCTION 242

21.1 Number of Households Raising or Managing Pigs by District on 1st October 2003 243

21.2 Number of Households and Pigs by Herd Size on 1st October 2003 243

21.3 Number of Households and Pigs by District on 1st October 2003 243

LIVESTOCK PESTS AND PARASITE CONTROL 244

22.1 Number of Livestock Rearing households deworming Livestock by District during the 2002/03 Agricultural Year 245

22.2 Number of Livestock Rearing Households that dewormed Livestock by type of Livestock and District during the 2002/03 Agricultural Year 245

22.3 Number and Percent of agricultural households reporting to have encountered tick problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year. 245

22.4 Number and Percent of agricultural households by Method of Tick Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year 245

22.5 Number and Percent of agricultural households reporting to have encountered tsetse flies problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year 246

22.6 Number of Livestock Rearing Households by methods of tsetse flies control use and district during the 2002/03 Agricultural Year. 246

OTHER LIVESTOCK 248

23a Total Number of Other Livestock by Type as of 1st October 2003 249

23b Number of Chicken by Category of chicken and District as of 1st October 2003 249

23d Total Number of households and chickens raised by flock size as of 1st October 2005 249

23e Head Number of Other Livestock by Type of Livestock and District 249

23f LIVESTOCK/POULTRY POPULATION TREND: SHINYANGA REGION 249

LIVESTOCK PRODUCTS: 249

25 Number of Eggs, Hides and Skins Sold/Consumed/Utlilized by the household By District, during 2002/03 Agricultural Year 249

ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: 250

27.1 Number of households by Distance to Nearest Cattle Dip and District..... 249

27.2 Number of households by Distance to Nearest Spray Raced and District..... 249

27.3 Number of households by Distance to Nearest Hand Powered Sprayer and District..... 249

27.4 Number of households by Distance to Nearest Cattle Crush and District..... 249

27.5 Number of households by Distance to Nearest Primary Market and District 249

27.6 Number of households by Distance to Nearest Secondary Market and District 249

27.7 Number of households by Distance to Nearest Abattoir and District..... 249

27.8 Number of households by Distance to Nearest Slaughter Slab and District..... 249

27.9 Number of households by Distance to Nearest Hide/ Skin Shade and District..... 249

27.10 Number of households by Distance to Nearest Input Supply and District 249

27.11 Number of households by Distance to Nearest Veterinary Clinic and District 249

27.12 Number of households by Distance to Nearest Village Holding Ground and District..... 249

27.13 Number of households by Distance to Nearest Village Watering Point/ Dam and District..... 249

27.14 Number of households by Distance to Nearest Drencher and District 249

FISH FARMING..... 250

28.1 Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year .. 251

LIVESTOCK EXTENSION..... 252

29.1a Number of Agricultural Households Receiving Advice By Type of Service Provider and District, 2002/03 Agricultural Year 253

29.1b Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding By Source and District during the 2002/03 Agricultural Year..... 253

29.1c Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year..... 254

29.1d Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year 254

29.1e Number of Agricultural Households Receiving Extension Advice on Milk Hygene By Source and District, 2002/03 Agricultural Year 254

29.1f Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year 254

29.1g Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year 255

29.1h Number of Agricultural Households Receiving Extension Advice Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year 255

29.1i Number of Agricultural Households Receiving Extension Advice on Group Formation

and Strengtherning By Source and District, 2002/03 Agricultural Year 256

29.1j Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year 256

29.1k Number of Agricultural Households Receiving Extension Advice on Use of Improved Bulls By Source and District, 2002/03 Agricultural Year 257

29.1l Number of Agricultural Households By Quality of Extension Services and District, 2002/03 Agricultural Year 257

29.1m Number of Agricultural Households By Source of Extension Services and District, 2002/03 Agricultural Year 258

29.13 Number of Agricultural Households with/ without Contact farmers/ Group Member and District, 2002/03 Agricultural Year 258

GOVERNMENT REGULATORY PROBLEMS: 258

30.1 Number of Agricultural Households by Whether Face Problems with Government Regulation During 2003/04 by District, 2002/03 Agricultural Year 258

ACCESS TO INFRASRUCTURE AND OTHER SERVICES 260

30.1 Number of Agricultural Households by Distance to Services by District, 2002/03 Agricultural Year 261

30.2 Number of Agricultural Households by Distance to Primary School and District, 2002/03 Agricultural Year..... 262

33.3 Number of Agricultural Households by Distance to Health Clinic School and District, 2002/03 Agricultural year 262

33.4 Number of Agricultural Households by Distance to Hospital School and District, 2002/03 Agricultural Year 262

33.5 Number of Agricultural Households by Distance to District Capital and District, 2002/03 Agricultural Year 263

33.6 Number of Agricultural Households by Distance to District Capital and District, 2002/03 Agricultural Year 263

33.7 Number of Agricultural Households by Distance to Feeder Road and District, 2002/03 Agricultural Year263

33.8 Number of Agricultural Households by Distance to All Weather Road and District, 2002/03 Agricultural Year 264

33.9 Number of Agricultural Households by Distance to Tarmac Road and District, 2002/03 Agricultural Year 264

33.10 Number of Agricultural Households by Distance to Primary Market and District, 2002/03 Agricultural Year 264

33.11 Number of Agricultural Households by Distance to Secondary Market and District, 2002/03 Agricultural Year 265

33.12 Number of Agricultural Households by Distance to Tertiary Market and District, ... 265

33.13 Number of Agricultural Households by Distance to Veterinary Clinic and District, 2002/03 Agricultural Year 265

33.14 Number of Agricultural Households by Distance to Extension Center 266

33.15 Number of Agricultural Households by Distance to Research Station and District, 2002/03 Agricultural Year 266

33.16 Number of Agricultural Households by Distance to Plant Protection Lab and District, 2002/03 Agricultural Year 266

33.17 Number of Agricultural Households by Distance to Land Registration Office and District, 2002/03 Agricultural Year 267

33.18 Number of Agricultural Households by Distance to Livestock Development Center 267

33.19a Number of Agricultural Households by Satisfaction of Using Veterinary Clinic and District, 2002/03 Agricultural Year 267

33.19b Number of Agricultural Households by Satisfaction of Extension Centre and District, 2002/03 Agricultural Year 267

33.19c Number of Agricultural Households by Satisfaction of Using Research Station and District, 2002/03 Agricultural Year 267

33.19d Number of Agricultural Households by Satisfaction of Using Plant Protection Lab. and District, 2002/03 Agricultural Year 267

33.19e Number of Agricultural Households by Satisfaction of Using Land Registration Office and District, 2002/03 Agricultural Year 267

33.19f Number of Agricultural Households by Satisfaction of Using Livestock development Centre and District, 2002/03 Agricultural Year 267

33.19g Number of Agricultural Households by Level of Satisfaction of the Service and District, 2002/03 Agricultural Year 267

HOUSEHOLD FACILITIES 268

34.1 Number of Agricultural Households by Type of Toilet and District during the 2002/03 Agriculture Year 269

34.2A Number of Households Reporting Average Number of Rooms and Type of Roofing Materials by District, 2002/03 Agricultural Year 269

34.2B Percent of Households Reporting Average Number of Rooms and Type of Roofing Materials by District; 2002/03 Agricultural Year 269

34.3 Number of Agricultural Households by Type of Owned Assets and District during 2002/03 Agricultural Year 269

34.4a Number of Agriculture Households by Main Source of Energy Used for Lighting and during 2002/03 Agricultural Year 270

34.4b Proportion of Agriculture Households by Main Source of Energy Used for Lighting and District during 2002/03 Agricultural Year 270

34.5a Number of Households by Main Source of Energy for Cooking and District during 2002/03 Agricultural Year 270

34.5b Proportion of Agriculture Households by Main Source of Energy Used for Cooking and District during 2002/03 Agricultural Year 270

34.6: Number of Agricultural Households by Main Source of Drinking Water by (wet and dry) and District during 2002/03 Agricultural Year 271

34.7 Proportion of Agricultural Households by Main Source of Drinking Water by Season (wet and dry) and District during 2002/03 Agricultural Year 272

34.8 Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agriculture Year 272

34.9: Proportion of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agriculture Year 273

34.10: Number of Agricultural Households by Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agricultural Year..... 273

34.11: Proportion of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agricultural Year..... 273

34.12A Number of Households by Number of Meals the Household Normally Took per Day by District Normally Took per Day by District 274

34.12B Number of Households by Number of Meals the Household Normally Took per Day by District..... 274

34.13A Number of Households by Number of Days the Household Consumed Meat during the Preceding Week by District 274

34.13B Number of Households by Number of Days the Household Consumed Meat during the Preceding Week by District 274

34.14: Number of Households by Number of Days the Household Consumed Fish during the Preceding Week by District 275

34.15A: Number of Agricultural Households Reporting the Status of Food Satisfaction of the Household during the Preceding Year by District..... 275

34.15B Number of Agricultural Households Reporting the Status of Food Satisfaction of the Household during the Preceding Year by District..... 275

34.16: Number of Households by Main Source of Cash Income and District during 2002/03 Agricultural Year 275

34.17: Number of Agricultural Households by Type of Roofing Material and District during the 2002/03 Agricultural Year 275

APPENDIX II: CROP TABLES

Type of Agriculture Household 128
Number of Agriculture Households 130
Rank of Importance of Livelihood Activities 132
Households Demography 134
Land Access/Ownership 146
Land Use 148
Total Annual Crop and Vegetable Production Long and short Seasons 152
Annual Crop and Vegetable Production Long Rainy Seasons 168
Permanent Crop Production 182
Agro-processing 184
Marketing 190
Irrigation/Erosion Control 192
Access to Farm Inputs 196
Agriculture Credit 208
Tree Farming and Agro-forestry 212
Crop Extension 216
Animal Contribution to Crop Production 226
Cattle Production 230
Goat Production 234
Sheep Production 238
Pig Production 242
Livestock Pests and Parasite Control 244
Other Livestock 248
Fishing Farming 250
Livestock Extension 252
Access to Infrastructure and other services 260
Household Facilities 268

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

Agriculture, Non Agriculture and Urban Households									
District	Rural households involved in Agriculture	% of Total rural house holds	Rural households NOT involved in Agriculture	% of Total Rural house - holds	Total Rural Household	% of Total house - holds	Urban Households	% of Total house - holds	Total Number of Households (from 2002 Pop. Census)
	Number	%	Number	%	Number	%	Number	%	Number
Kahama	81,217	94	4,979	6	86,196	85	14,657	15	100,853
Bariadi	77,572	96	2,955	4	80,527	94	5,032	6	85,559
Bukombe	53,240	99	528	1	53,768	88	7,503	12	61,271
Shinyanga Rural	45,263	100	126	0	45,389	100	128	0	45,517
Maswa	43,252	99	641	1	43,893	90	5,028	10	48,921
Kishapu	35,624	97	1,246	3	36,870	93	2,574	7	39,444
Meatu	31,492	93	2,261	7	33,753	96	1,485	4	35,238
Shinyanga Urban	10,198	92	939	8	11,137	39	17,080	61	28,217
Total	377,857	97	13,676	3	391,533	88	53,487	12	445,020

2. 2 TYPE OF AGRICULTURE HH: Number of Agriculture Households by type of Holding by District during 2002/03 Agriculture year

District	Crops Only		Livestock Only		Crops & Livestock		Total Number of Agriculture Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number of households	%	Number of households	%	Number of households	%			
Bariadi	39,487	51	179	0	37,905	49	77,572	77,393	38,084
Maswa	22,774	53	317	1	20,160	47	43,252	42,935	20,478
Shinyanga Rural	21,182	47	102	0	23,979	53	45,263	45,161	24,081
Kahama	49,208	61	143	0	31,866	39	81,217	81,074	32,009
Bukombe	34,546	65	239	0	18,456	35	53,240	53,001	18,695
Meatu	13,820	44	47	0	17,625	56	31,492	31,445	17,672
Shinyanga Urban	4,190	41	783	8	5,226	51	10,198	9,415	6,009
Kishapu	16,108		500	1	19,015	53	35,624	35,124	19,515
Total	201,316	53	2,310	1	174,232	46	377,857	375,547	176,542

NUMBER OF AGRICULTURE HOUSEHOLDS

3.0: 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	%	
Bariadi	66,387	86	7	11,185	14	5	77,572	100	7
Maswa	34,626	80	7	8,625	20	5	43,252	100	6
Shinyanga Rural	38,841	86	6	6,422	14	5	45,263	100	6
Kahama	70,196	86	6	11,021	14	4	81,217	100	6
Bukombe	48,282	91	7	4,958	9	5	53,240	100	6
Meatu	27,272	87	8	4,220	13	5	31,492	100	7
Shinyanga Urban	8,214	81	6	1,984	19	5	10,198	100	5
Kishapu	30,103	85	7	5,520	15	5	35,624	100	6
Total	323,921	86	7	53,936	14	5	377,857	100	6

3.1 The Livelihood Activities/Source of Income of the Households Raked 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
Bariadi	1	6	3	2	4	7	5
Maswa	1	4	2	3	6	7	5
Shinyanga Rural	1	4	3	2	5	7	6
Kahama	1	5	2	3	6	7	4
Bukombe	1	4	2	3	5	7	6
Meatu	1	6	2	3	5	7	4
Shinyanga Urban	1	4	2	3	5	7	6
Kishapu	1	6	2	4	5	7	3
Total	**1**	**5**	**2**	**3**	**6**	**7**	**4**

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Bariadi	65,962	0	370	10,875	0	0	696
Maswa	41,348	0	325	1,161	0	0	0
Shinyanga Rural	44,576	0	99	584	0	0	102
Kahama	77,801	135	972	1,982	428	282	141
Bukombe	52,762	0	0	358	0	0	119
Meatu	28,953	83	802	1,521	0	47	83
Shinyanga Urban	9,161	54	103	698	47	0	0
Kishapu	31,690	0	772	2,801	203	0	402
Total	352,253	272	3,444	19,980	678	329	1,544

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Bariadi	9,512	1,549	30,753	21,952	2,144	0	1,753
Maswa	1,492	2,875	17,036	9,607	938	108	2,342
Shinyanga Rural	485	1,118	21,443	18,001	1,303	102	396
Kahama	2,843	4,993	25,587	21,139	1,522	133	7,248
Bukombe	478	2,507	18,911	10,340	2,142	119	1,075
Meatu	2,015	537	15,369	6,153	461	0	3,609
Shinyanga Urban	626	742	4,226	2,864	559	0	218
Kishapu	2,389	405	15,954	5,586	1,696	81	5,361
Total	19,840	14,726	149,279	95,643	10,764	544	22,003

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

Shinyanga Rural	99	2,016	2,727	12,253	1,315	0	1,105
Kahama	0	4,691	5,623	9,663	1,910	0	4,670
Bukombe	0	1,189	4,052	4,179	1,550	0	358
Meatu	193	869	2,392	4,437	1,043	83	4,250
Shinyanga Urban	116	1,094	1,085	1,611	563	0	776
Kishapu	639	406	1,662	4,428	724	0	10,617
Total	2,097	16,836	26,635	55,960	14,759	192	28,021

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

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Bariadi	170	3,921	714	1,055	1,439	0	1,952
Maswa	0	1,273	527	623	751	0	853
Shinyanga Rural	0	1,501	204	811	610	98	0
Kahama	0	1,729	1,089	556	907	0	2,348
Bukombe	0	478	597	239	239	0	0
Meatu	81	650	211	657	769	333	332
Shinyanga Urban	0	561	152	518	60	0	217
Kishapu	79	638	1,295	1,368	325	0	3,774
Total	330	10,751	4,790	5,826	5,099	431	9,477

HOUSEHOLDS DEMOGRAPHS

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

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	195,350	51	190,510	49	385,861	100
05 - 09	206,278	52	188,729	48	395,007	100
10 - 14	180,439	52	165,889	48	346,329	100
15 - 19	132,500	53	117,885	47	250,386	100
20 - 24	95,986	48	102,328	52	198,314	100
25 - 29	77,454	44	98,379	56	175,833	100
30 - 34	76,149	49	80,446	51	156,595	100
35 - 39	62,237	52	57,548	48	119,785	100
40 - 44	51,436	55	42,797	45	94,234	100
45 - 49	34,431	50	34,401	50	68,832	100
50 - 54	32,785	52	30,283	48	63,069	100
55 - 59	23,534	58	17,330	42	40,863	100
60 - 64	22,459	54	19,434	46	41,893	100
65 - 69	15,236	53	13,377	47	28,613	100
70 - 74	14,598	56	11,592	44	26,190	100
75 - 79	9,473	66	4,889	34	14,362	100
80 - 84	5,046	46	5,902	54	10,948	100
Above 85	4,790	52	4,503	48	9,293	100
Total	1,240,182	49	1,186,224	51	2,426,406	100

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

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	82,018	13	88,990	13	171,007	13
05 - 09	104,818	17	102,672	16	207,490	16
10 - 14	101,601	16	92,510	14	194,111	15
15 - 19	68,064	11	61,926	9	129,989	10
20 - 24	40,272	6	61,291	9	101,563	8
25 - 29	43,942	7	51,603	8	95,544	7
30 - 34	35,049	6	38,261	6	73,310	6
35 - 39	28,872	5	37,812	6	66,684	5
40 - 44	25,932	4	30,220	5	56,152	4
45 - 49	23,468	4	23,258	4	46,726	4
50 - 54	19,919	3	19,937	3	39,856	3
55 - 59	13,381	2	10,934	2	24,315	2
60 - 64	13,033	2	12,749	2	25,782	2
65 - 69	11,024	2	9,540	1	20,565	2
70 - 74	10,535	2	10,146	2	20,681	2
75 - 79	4,869	1	3,763	1	8,632	1
80 - 84	4,058	1	3,400	1	7,458	1
Above 85	3,113	0	3,052	0	6,165	0
Total	633,967	100	662,064	100	1,296,031	100

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

District	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Bariadi	196,570	48	209,752	52	406,322	100
Maswa	112,681	49	115,135	51	227,816	100
Shinyanga Rural	113,667	49	116,950	51	230,617	100
Kahama	19,546	48	21,375	52	40,922	100
Bukombe	15,310	52	14,143	48	29,453	100
Meatu	123,622	48	132,669	52	256,291	100
Shinyanga Urban	52,570	50	52,040	50	104,610	100
Total	633,967	49	662,064	51	1,296,031	100

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

	Read & Write								
	Swahili		Swahili & English		Any Other Languag		Don't Read / Write		
District	Number	%	Number	%	Number	%	Number	%	%
Bariadi	258,554	73.2	7,315	2.1	0	0.0	87,278	24.7	100
Maswa	140,665	68.9	5,004	2.5	0	0.0	58,514	28.7	100
Shinyanga Rural	143,330	71.2	4,205	2.1	283	0.1	53,363	26.5	100
Kahama	25,756	69.8	1,922	5.2	131	0.4	9,073	24.6	100
Bukombe	19,921	74.4	519	1.9	39	0.1	6,280	23.5	100
Meatu	128,671	59.7	6,330	2.9	750	0.3	79,943	37.1	100
Shinyanga Urban	44,615	51.2	668	0.8	243	0.3	41,651	47.8	100
Total	761,512	68	25,964	2	1,446	0.1	336,102	30	100

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

	Cannot Read and Write		Can Read and Write		Total	
District	Number	%	Number	%	Number	%
Bariadi	87,278	24.7	265,869	75.3	353,147	100.0
Maswa	58,514	28.7	145,669	71.3	204,183	100.0
Shinyanga Rural	53,363	26.5	147,819	73.5	201,182	100.0
Kahama	9,073	24.6	27,809	75.4	36,882	100.0
Bukombe	6,280	23.5	20,479	76.5	26,758	100.0
Meatu	79,943	37.1	135,751	62.9	215,693	100.0
Shinyanga Urban	41,651	47.8	45,527	52.2	87,178	100.0
Total	336,102	29.9	788,922	70.1	1,125,024	100.0

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

	School Attendancy							
	Attending School		Completed		Never Attended to S		Total	
District	Number	%	Number	%	Number	%	Number	%
Bariadi	132,142	37.4	162,461	46.0	58,544	16.6	353,147	100
Maswa	69,632	34.1	87,548	42.9	47,003	23.0	204,183	100
Shinyanga Rural	65,362	32.5	90,049	44.8	45,771	22.8	201,182	100
Kahama	11,636	31.5	17,439	47.3	7,807	21.2	36,882	100
Bukombe	9,276	34.7	13,161	49.2	4,322	16.2	26,758	100
Meatu	63,567	29.5	83,470	38.7	68,656	31.8	215,693	100
Shinyanga Urban	25,390	29.1	27,199	31.2	34,588	39.7	87,178	100
Total	377,006	33.5	481,327	42.8	266,691	23.7	1,125,024	100

3.7 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District

	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping / Herding		Livestock Pastoralist		Fishing			
District	Number	%	Number	%	Number	%	Number	%	%	%
Bariadi	152,752	43	1,866	1	144	0	143	0	1	8
Maswa	76,219	37	3,934	2	103	0	107	0	2	8
Shinyanga Rural	77,409	38	1,565	1	1,299	1	1,529	1	1	5
Kahama	9,867	27	898	2	23	0	987	3	2	4
Bukombe	8,770	33	45	0	0	0	942	4	1	5
Meatu	92,233	43	2,552	1	107	0	630	0	1	5
Shinyanga Urban	33,682	39	2,921	3	1,164	1	48	0	0	2
Total	450,932	40	13,782	1	2,839	0	4,387	0	1	6

cont… HOUSEHOLD DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District

	Self Employed (Non Farmimg) without Employees		Unpaid Family Helper (Non Agriculture)		Not Working & Available		Not Working & Unavailable		Housemaker / Housewife	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	16,606	5	1,439	0	576	0	0	0	570	0
Maswa	7,418	4	919	0	200	0	103	0	1,556	1
Shinyanga Rural	18,315	9	1,566	1	708	0	736	0	2,515	1
Kahama	5,170	14	504	1	985	3	103	0	1,250	3
Bukombe	3,665	14	247	1	148	1	41	0	638	2
Meatu	17,355	8	2,481	1	615	0	216	0	837	0
Shinyanga Urban	14,306	16	98	0	0	0	192	0	582	1
Total	82,834	7	7,254	1	3,231	0	1,391	0	7,948	1

cont… HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Main Activity and District

	Student		Unable to Work / Too Old / Retired / Sick / Disabled		Other		Total	
District	Number	%	Number	%	Number	%	Number	%
Bariadi	116,122	33	29,186	8	280	0	353,147	100
Maswa	63,908	31	23,480	11	809	0	204,183	100
Shinyanga Rural	63,082	31	16,832	8	1,957	1	201,182	100
Kahama	11,348	31	2,635	7	485	1	36,882	100
Bukombe	8,838	33	1,269	5	261	1	26,758	100
Meatu	55,470	26	21,768	10	7,226	3	215,693	100
Shinyanga Urban	24,417	28	7,202	8	716	1	87,178	100
Total	343,184	31	102,373	9	11,735	1	1,125,024	100

3.8 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Household Members By Level of involvement in Farming Activity 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		
District	Number	%	Number	%	Number	%	Number	%	%
Bariadi	153,483	43	11,754	3	143,275	41	44,635	13	100
Maswa	66,982	33	26,928	13	68,254	33	42,019	21	100
Shinyanga Rural	74,537	37	30,593	15	63,190	31	32,863	16	100
Kahama	8,995	24	5,515	15	9,496	26	12,877	35	100
Bukombe	8,093	30	1,458	5	12,725	48	4,483	17	100
Meatu	85,034	39	24,270	11	67,099	31	39,290	18	100
Shinyanga Urban	36,026	41	12,288	14	24,623	28	14,240	16	100
Total	433,150	39	112,805	10	388,661	35	190,408	17	100

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

	Education Level									
	Under Standard One		Standard One		Standard Two		Standard Three			
District	Number	%	Number	%	Number	%	Number	%	%	%
Bariadi	146	0	288	0	2,314	1	2,450	2	10	2
Maswa	-	-	1,137	1	2,417	3	3,800	4	14	4
Shinyanga Rural	-	-	492	1	1,904	2	3,308	4	16	5
Kahama	111	1	167	1	448	3	681	4	12	3
Bukombe	-	-	23	0	301	2	518	4	14	4
Meatu	540	1	108	0	2,558	3	5,094	6	13	4
Shinyanga Urban	97	0	-	-	731	3	925	3	13	1
Total	893	0	2,215	0	10,672	2	16,776	3	13	3

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

	Standard Seven		Standard Eight		ng After Primary Edu		Pre Form One		Form One	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	128,131	79	1,166	1	145	0	-	-	146	0
Maswa	55,775	64	1,731	2	376	0	300	0	-	-
Shinyanga Rural	55,523	62	1,874	2	338	0	55	0	167	0
Kahama	10,589	61	360	2	30	0	23	0	91	1
Bukombe	8,465	64	250	2	35	0	19	0	67	1
Meatu	53,352	64	1,247	1	-	-	-	-	217	0
Shinyanga Urban	20,391	75	98	0	-	-	-	-	-	-
Total	332,227	69	6,726	1	925	0	397	0	688	0

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

	Form Two		Form Three		Form Four		Form Six		Training After Secondary	
District	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	582	0	144	0	2,588	2	-	-	708	0
Maswa	596	1	191	0	2,305	3	-	-	107	0
Shinyanga Rural	1,048	1	124	0	1,379	2	-	-	84	0
Kahama	73	0	81	0	775	4	10	0	212	1
Bukombe	76	1	22	0	230	2	24	0	22	0
Meatu	520	1	217	0	944	1	-	-	212	0
Shinyanga Urban	47	0	-	-	433	2	-	-	49	0
Total	2,942	1	779	0	8,654	2	34	0	1,393	0

Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

	University & Other Tertiary Education		Adult Education		Total	
District	Number	%	Number	%	Number	%
Bariadi	-	-	1,010	1	162,461	100
Maswa	-	-	725	1	87,548	100
Shinyanga Rural	-	-	1,532	2	90,049	100
Kahama	45	0	579	3	17,439	100
Bukombe	-	-	379	3	13,161	100
Meatu	-	-	1,253	2	83,470	100
Shinyanga Urban	47	0	386	1	27,199	100
Total	92	0	5,865	1	481,327	100

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

	Male			Female			Total		
District	Number of Household Members	Number of Households	Average Household Size	Number of Household Members	Number of Households	Average Household Size	Number of Household Members	Number of Households	Average Household Size
Bariadi	468,284	66,387	7	54,815	11,185	5	523,099	77,572	7
Maswa	227,390	34,626	7	43,540	8,625	5	270,930	43,252	6
Shinyanga Rural	248,001	38,841	6	31,458	6,422	5	279,459	45,263	6
Kahama	444,770	70,196	6	47,659	11,021	4	492,428	81,217	6
Bukombe	318,090	48,282	7	24,458	4,958	5	342,548	53,240	6
Meatu	210,253	27,272	8	21,603	4,220	5	231,856	31,492	7
Shinyanga Urban	46,129	8,214	6	9,099	1,984	5	55,228	10,198	5
Kishapu	204,861	30,103	7	25,997	5,520	5	230,858	35,624	6
Total	2,167,778	323,921	7	258,628	53,936	5	2,426,406	377,857	6

3.9 HOUSEHOLDS DEMOGRAPHS: Number of Agricultural Households by Sex of the Head of Household and District, 2002/03 Agricultural Year

	Male		Female		Total	
District	Number of Household Members	%	Number of Household Members	%	Number of Household Members	%
Bariadi	468,284	86	54,815	14	523,099	100
Maswa	227,390	80	43,540	20	270,930	100
Shinyanga Rural	248,001	86	31,458	14	279,459	100
Kahama	444,770	86	47,659	14	492,428	100
Bukombe	318,090	91	24,458	9	342,548	100
Meatu	210,253	87	21,603	13	231,856	100
Shinyanga Urban	46,129	81	9,099	19	55,228	100
Kishapu	204,861	85	25,997	15	230,858	100
Total	2,167,778	86	258,628	14	2,426,406	100

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

	Male			Female			Total		
District	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Bariadi	46	42	40	52	53	60	46	42	40
Maswa	47	43	35	53	54	62	48	45	35
Shinyanga Rural	46	43	42	51	49	50	47	44	42
Kahama	45	42	30	50	50	55	46	44	30
Bukombe	42	38	38	48	50	45	42	39	38
Meatu	45	43	30	49	43	39	46	43	42
Shinyanga Urban	45	42	38	54	55	58	47	43	38
Kishapu	46	45	45	49	45	60	47	45	45
Total	45	42	30	51	50	60	46	43	30

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

District	Maximum Education Level Attained						
	No Education	Primary Education	Post Primary Education	Secondary Education	Post Secondary Education	Adult Education	Total
Bariadi	30,843	44,270	0	1,751	351	356	77,572
Maswa	19,779	22,228	0	1,031	0	214	43,252
Shinyanga Rural	17,623	24,537	303	683	303	1,814	45,263
Kahama	34,612	43,129	397	1,702	559	818	81,217
Bukombe	15,855	36,072	119	716	119	358	53,240
Meatu	14,773	15,403	0	830	156	331	31,492
Shinyanga Urban	4,662	5,083	30	156	46	222	10,198
Kishapu	14,680	19,453	0	1,028	243	219	35,624
Total	152,826	210,174	849	7,898	1,778	4,332	377,857

3.12 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year

Education Status	Maximum Education Level Attained						
	No Education	Primary Education	Post Primary Education	Secondary Education	Post Secondary Education	Adult Education	Total
Attending School	0	1,708	0	15	0	313	2,036
Completed	1,080	208,466	849	7,883	1,778	4,019	224,076
Never Attended to School	151,746	0	0	0	0	0	151,746
Total	152,826	210,174	849	7,898	1,778	4,332	377,857

3.13 Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03 Agricultural Year

District	Male					
	Cannot Read and Write		Can Read and Write		Total	
Bariadi	22,815	34	43,572	66	66,387	100
Maswa	13,174	38	21,452	62	34,626	100
Shinyanga Rural	14,114	36	24,726	64	38,841	100
Kahama	25,482	36	44,714	64	70,196	100
Bukombe	13,265	27	35,017	73	48,282	100
Meatu	11,332	42	15,939	58	27,272	100
Shinyanga Urban	2,957	36	5,257	64	8,214	100
Kishapu	10,635	35	19,468	65	30,103	100
Total	113,776	35	210,146	65	323,921	100

Continued …. 3.13 Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03 Agricultural Year

District	Female					
	Cannot Read and Write		Can Read and Write		Total	
Bariadi	8,906	80	2,279	20	11,185	100
Maswa	6,489	75	2,137	25	8,625	100
Shinyanga Rural	4,625	72	1,797	28	6,422	100
Kahama	8,147	74	2,875	26	11,021	100
Bukombe	3,658	74	1,300	26	4,958	100
Meatu	3,089	73	1,131	27	4,220	100
Shinyanga Urban	1,501	76	483	24	1,984	100
Kishapu	3,673	67	1,847	33	5,520	100
Total	40,088	74	13,848	26	53,936	100

Continued …. 3.13 Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03 Agricultural Year

District	Total					
	Cannot Read and Write		Can Read and Write		Total	
Bariadi	31,721	41	45,851	59	77,572	100
Maswa	19,663	45	23,589	55	43,252	100
Shinyanga Rural	18,740	41	26,523	59	45,263	100
Kahama	33,629	41	47,588	59	81,217	100
Bukombe	16,923	32	36,317	68	53,240	100
Meatu	14,422	46	17,070	54	31,492	100
Shinyanga Urban	4,458	44	5,740	56	10,198	100
Kishapu	14,309	40	21,315	60	35,624	100
Total	153,864	41	223,994	59	377,857	100

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

	Off farm income							
	One Off Farm Income		Two Off Farm Income		More than Two Off Farm Income		Total	
District	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Bariadi	27,319	59	12,360	27	6,560	14	46,239	100
Maswa	7,958	48	3,942	24	4,580	28	16,481	100
Shinyanga Rural	23,408	73	6,947	22	1,686	5	32,041	100
Kahama	24,544	51	15,981	33	8,003	16	48,528	100
Bukombe	9,994	60	4,157	25	2,506	15	16,657	100
Meatu	5,036	48	2,483	24	2,864	28	10,383	100
Shinyanga	3,725	63	1,646	28	538	9	5,908	100
Kishapu	11,545	70	3,352	20	1,573	10	16,470	100
Total	113,528	59	50,868	26	28,310	15	192,706	100

3.15A Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year

	Male				Female			Total			
District	Attending School	Completed	Never Attended to School	Total	Completed	Never Attended to School	Total	Attending School	Completed	Never Attended School	Total
Bariadi	356	43,745	22,286	66,387	2,627	8,557	11,185	356	46,372	30,843	77,572
Maswa	433	20,702	13,492	34,626	2,447	6,179	8,625	433	23,148	19,671	43,252
Shinyanga Rural	201	25,540	13,099	38,841	1,899	4,523	6,422	201	27,439	17,623	45,263
Kahama	828	43,188	26,179	70,196	3,018	8,003	11,021	828	46,206	34,182	81,217
Bukombe	119	35,964	12,198	48,282	1,420	3,538	4,958	119	37,384	15,737	53,240
Meatu	83	15,829	11,359	27,272	1,131	3,089	4,220	83	16,961	14,448	31,492
Shinyanga Urban	15	5,154	3,045	8,214	468	1,516	1,984	15	5,621	4,562	10,198
Kishapu	0	19,178	10,926	30,103	1,766	3,755	5,520	0	20,943	14,680	35,624
Total	2,036	209,301	112,585	323,921	14,775	39,161	53,936	2,036	224,076	151,746	377,857

3.15B Percent of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year

	Male				Female			Total			
District	Attending School	Completed	Never Attended to School	Total	Completed	Never Attended to School	Total	Attending School	Completed	Never Attended School	Total
Bariadi	1	66	34	100	23	77	100	0	60	40	100
Maswa	1	60	39	100	28	72	100	1	54	45	100
Shinyanga Rural	1	66	34	100	30	70	100	0	61	39	100
Kahama	1	62	37	100	27	73	100	1	57	42	100
Bukombe	0	74	25	100	29	71	100	0	70	30	100
Meatu	0	58	42	100	27	73	100	0	54	46	100
Shinyanga Urban	0	63	37	100	24	76	100	0	55	45	100
Kishapu	0	64	36	100	32	68	100	0	59	41	100
Total	1	65	35	100	27	73	100	1	59	40	100

3.16 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Ag

	Male									
District	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Total	
Bariadi	37,733	57	5,661	9	178	0	22,815	34	66,387	100
Maswa	19,797	57	1,438	4	217	1	13,174	38	34,626	100
Shinyanga Rural	23,243	60	1,483	4	0	0	14,114	36	38,841	100
Kahama	41,915	60	2,799	4	0	0	25,482	36	70,196	100
Bukombe	32,748	68	2,149	4	119	0	13,265	27	48,282	100
Meatu	14,562	53	1,294	5	83	0	11,332	42	27,272	100
Shinyanga Urban	4,806	59	451	5	0	0	2,957	36	8,214	100
Kishapu	17,322	58	2,146	7	0	0	10,635	35	30,103	100
Total	192,127	59	17,421	5	598	0	113,776	35	323,921	100

Cont….3.16 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year

	Female							
District	Swahili		Swahili & English		Don't Read / Write		Total	
Bariadi	1,929	17	349	3	8,906	80	11,185	100
Maswa	1,921	22	216	3	6,489	75	8,625	100
Shinyanga Rural	1,797	28	0	0	4,625	72	6,422	100
Kahama	2,627	24	247	2	8,147	74	11,021	100
Bukombe	1,300	26	0	0	3,658	74	4,958	100
Meatu	993	24	138	3	3,089	73	4,220	100
Shinyanga Urban	391	20	92	5	1,501	76	1,984	100
Kishapu	1,766	32	81	1	3,673	67	5,520	100
Total	12,723	24	1,125	2	40,088	74	53,936	100

Cont….3.16 Number of Heads of Agricultural Households reporting Maximum level of education attained by Education Status, 2002/03 Agricultural Year

	Total									
District	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Total	
Bariadi	39,662	51	6,010	8	178	0	31,721	41	77,572	100
Maswa	21,718	50	1,655	4	217	1	19,663	45	43,252	100
Shinyanga Rural	25,040	55	1,483	3	0	0	18,740	41	45,263	100
Kahama	44,542	55	3,046	4	0	0	33,629	41	81,217	100
Bukombe	34,048	64	2,149	4	119	0	16,923	32	53,240	100
Meatu	15,555	49	1,432	5	83	0	14,422	46	31,492	100
Shinyanga Urban	5,197	51	543	5	0	0	4,458	44	10,198	100
Kishapu	19,088	54	2,227	6	0	0	14,309	40	35,624	100
Total	204,850	54	18,546	5	598	0	153,864	41	377,857	100

3.17 Time Series of Male and Female Headed Households: Shinyanga

Type of Holding (000')	NSCA 1994/95	EAS 1995/96	EAS 1996/97	IAS 1997/98	DIAS 1998/99	NSCA 2002/03
Male Headed	175	179	192	204	205	200
Female Headed	38	51	63	64	56	64
Total	**213**	**230**	**255**	**268**	**261**	**264**
Male Headed (%)	82	78	75	76	78	76
Female Headed (%)	18	22	25	24	22	24
Total	**100**	**100**	**100**	**100**	**100**	**100**

3.18 Literacy Rate of Heads of Households by Sex and District

	Literacy								
	Know			Don;t know			Total		
District	Male	Female	Total	Male	Female	Total	Male	Female	Total
Bariadi	43,572	2,279	45,851	22,815	8,906	31,721	66,387	11,185	77,572
Maswa	21,452	2,137	23,589	13,174	6,489	19,663	34,626	8,625	43,252
Shinyanga Rural	24,726	1,797	26,523	14,114	4,625	18,740	38,841	6,422	45,263
Kahama	44,714	2,875	47,588	25,482	8,147	33,629	70,196	11,021	81,217
Bukombe	35,017	1,300	36,317	13,265	3,658	16,923	48,282	4,958	53,240
Meatu	15,939	1,131	17,070	11,332	3,089	14,422	27,272	4,220	31,492
Shinyanga Urban	5,257	483	5,740	2,957	1,501	4,458	8,214	1,984	10,198
Kishapu	19,468	1,847	21,315	10,635	3,673	14,309	30,103	5,520	35,624
Total	210,146	13,848	223,994	113,776	40,088	153,864	323,921	53,936	377,857

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														Total Number of Households
	Leased/Certificate of Ownwership		Owned under Customary Law		Bought		Rented		Borrowed		Households with Area Shared Cropped		Households with Area under Other Forms of Tenure		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	3,028	4	58,544	75	14,987	19	19,782	26	3,867	5	1,317	2	2,567	3	77,572
Maswa	1,326	3	32,629	75	8,430	19	9,352	22	3,306	8	749	2	1,257	3	43,252
Shinyanga R	1,116	2	34,482	76	13,113	29	6,218	14	2,731	6	203	0	1,600	4	45,263
Kahama	1,208	1	54,984	68	32,559	40	11,152	14	6,411	8	699	1	2,852	4	81,217
Bukombe	1,314	2	26,297	49	22,658	43	8,444	16	2,963	6	239	0	1,314	2	53,240
Meatu	1,365	4	19,782	63	8,520	27	9,290	29	4,275	14	954	3	1,786	6	31,492
Shinyanga U	1,478	14	7,983	78	1,604	16	1,076	11	672	7	47	0	158	2	10,198
Kishapu	471	1	24,479	69	9,550	27	6,674	19	5,521	15	641	2	882	2	35,624
Total	11,307	3	259,181	69	111,422	29	71,989	19	29,748	8	4,800	1	12,417	3	377,857

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
Lushoto	3,414	156,403	40,942	23,467	2,095	1,170	3,837	231,328
Korogwe	4,449	121,175	30,595	11,944	3,910	1,869	807	174,749
Muheza	3,621	79,761	32,608	6,484	2,340	91	2,603	127,507
Tanga	1,767	176,703	103,481	12,537	5,841	458	3,129	303,915
Pangani	1,983	95,910	76,239	13,340	2,735	218	2,902	193,327
Handeni	4,225	98,128	47,843	16,285	8,402	1,787	4,185	180,855
Kilindi	2,172	17,236	4,109	1,298	493	7	56	25,371
Kishapu	690	165,863	40,800	13,683	10,261	1,439	1,123	233,859
Total	22,321	911,178	376,618	99,038	36,075	7,038	18,642	1,470,910
%	2	62	26	7	2	0	1	100

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 Renting to Others	Households with Unusable Land	Households with Uncultivated Usable Land	Total Number of Households
Bariadi	74,809	9,122	2,220	1,387	2,055	6,776	2,043	1,704	3,134	2,046	2,688	14,305	77,572
Maswa	38,868	16,151	521	906	4,620	7,605	4,032	837	325	1,484	1,799	6,217	43,252
Shinyanga Rural	41,156	22,882	1,632	711	1,890	2,226	2,423	908	702	805	1,918	11,403	45,263
Kahama	68,120	50,663	2,454	2,925	7,003	3,778	21,587	5,798	852	2,004	2,742	15,649	81,217
Bukombe	42,068	29,455	239	1,074	2,146	2,739	8,521	1,429	478	2,135	1,293	7,490	53,240
Meatu	30,566	11,904	324	1,384	1,593	8,028	4,250	2,005	1,030	1,512	3,084	4,952	31,492
Shinyanga Urban	8,755	5,737	158	244	414	633	769	381	515	96	177	1,070	10,198
Kishapu	33,193	8,061	322	163	558	7,554	7,438	798	473	1,344	2,491	6,131	35,624
Total	150,120	86,312	57,423	42,241	76,275	2,509	35,758	1,542	16,954	4,726	7,899	41,911	377,857

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

Districts	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
Bariadi	168,804	16,893	1,108	1,787	3,927	9,027	1,991	1,899	1,143	3,659	2,751	18,339	231,328
Maswa	94,664	21,124	1,394	1,777	10,626	19,459	7,843	1,028	153	2,344	2,744	11,593	174,749
Shinyanga Rural	69,269	32,008	516	390	2,091	4,329	3,862	1,245	135	598	1,822	11,242	127,507
Kahama	123,882	69,243	1,877	1,811	15,477	6,789	37,778	16,341	362	3,839	3,557	22,960	303,915
Bukombe	88,015	48,751	242	399	3,797	8,631	18,578	3,825	121	3,970	1,986	15,012	193,327
Meatu	88,390	19,067	544	5,602	5,442	27,527	10,120	2,594	1,029	4,454	4,731	11,358	180,855
Shinyanga Urban	11,542	7,122	55	102	525	1,343	1,418	921	89	246	160	1,459	24,981
Kishapu	109,050	19,139	311	132	713	44,277	23,708	6,266	422	2,174	8,679	16,610	231,481
Total	753,616	233,347	6,046	11,999	42,598	121,381	105,297	34,118	3,454	21,284	26,429	108,572	1,468,142
%	51	16	0	1	3	8	7	2	0	1	2	7	100

Table 5.3: Number of Households by type of household and District during 2002/03 Agricultural Year

District	Was all Land Available to the Hh Used during 2002/03?				
	Yes		No		
	Number	%	Number	%	Total
Bariadi	75,031	87	11,404	13	86,435
Maswa	29,280	64	16,420	36	45,700
Shinyanga Rural	32,598	67	16,218	33	48,815
Kahama	3,596	42	4,960	58	8,555
Bukombe	4,147	59	2,930	41	7,076
Meatu	20,561	43	27,070	57	47,631
Shinyanga Urban	10,561	55	8,753	45	19,314
Total	175,773	67	87,754	33	263,528

Table 5.4: Number of Agricultural Households by Whether they Consider themselves to have Sufficient Land for the Household and District during 2002/03 Agricultural Year

District	Do you Consider that you have sufficient land for the Hh?				
	Yes		No		
	Number	%	Number	%	Total
Bariadi	35,993	42	50,442	58	86,435
Maswa	26,375	58	19,325	42	45,700
Shinyanga Rural	28,327	58	20,488	42	48,815
Kahama	5,945	69	2,611	31	8,555
Bukombe	4,694	66	2,382	34	7,076
Meatu	31,637	66	15,994	34	47,631
Shinyanga Urban	13,381	69	5,933	31	19,314
Total	146,353	56	117,175	44	263,528

Table 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 Household own or have customary right to Land				
	Yes		No		
	Number	%	Number	%	Total
Bariadi	12,284	14	74,151	86	86,435
Maswa	11,206	25	34,494	75	45,700
Rural	14,802	30	34,013	70	48,815
Kahama	3,459	40	5,097	60	8,555
Bukombe	1,739	25	5,337	75	7,076
Meatu	16,758	35	30,873	65	47,631
Urban	2,326	12	16,988	88	19,314
Total	62,574	24	200,954	76	263,528

**TOTAL ANNUAL CROP & VEGETABLE PRODUCTION –
LONG & SHORT RAINY SEASON**

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

District	Short Rainy Season		Long Rainy Season		Total area planted (hectare)	% Area planted in short rainy season
	Number of Household	Planted Area (hectare)	Number of Household	Planted Area (hectare)		
Bariadi	0	0	77,393	182,648	182,648	0.00
Bukombe	108	580	42,935	111,811	112,392	0.52
Kahama	0	291	45,161	100,937	101,227	0.29
Shinyanga Rural	144	0	81,074	197,060	197,060	0.00
Meatu	239	1,651	52,643	132,870	134,521	1.23
Maswa	915	109	31,111	94,843	94,952	0.12
Shinyanga Urban	156	195	9,260	15,564	15,759	1.24
Kishapu	0	0	35,124	121,691	121,691	0.00
Total	1,561	2,826	374,699	957,423	960,250	0.29

7.1 & 7.2b TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of crop growing Households Planting Crops by Season and Region

District	Short Rainy Season		Long Rainy 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	
Bariadi	-	77,572	77,393	179	77,572
Maswa	108	43,144	42,935	317	43,252
Shinyanga Rural	-	45,263	45,161	102	45,263
Kahama	144	81,073	81,074	143	81,217
Bukombe	239	53,001	52,643	597	53,240
Meatu	915	30,577	31,111	380	31,492
Shinyanga Urban	156	10,042	9,260	939	10,198
Kishapu	-	35,624	35,124	500	35,624
Total	**1,561**	**376,296**	**374,699**	**3,158**	**377,857**

7.1 & 7.2c TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 agriculture year, Kahama Region

	Short Rainy Season			Long Rainy Season			Total		
Crop	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)
CEREALS	**1,873**	**1,139**		**589,543**	**315,047**		**591,416**	**316,187**	
Maize	1,541	647	420	398,729	190,755	478	400,270	191,402	478
Paddy	244	439	1,802	118,673	104,408	880	118,916	104,847	882
Sorghum	63	14	228	65,854	17,255	262	65,917	17,269	262
Bulrush Millet	26	38	1,482	5,998	2,491	415	6,024	2,530	420
Finger Millet	0	0	0	289	139	481	289	139	481
ROOTS & TUBERS	**45**	**317**		**48,036**	**40,253**		**48,081**	**40,570**	
Cassava	0	0		19,235	14,599	759	19,235	14,599	759
Sweet Potatoes	45	317	7,116	27,556	25,059	909	27,601	25,376	919
Irish Potatoes				562	89	158	562	89	158
Yams				641	424	662	641	424	662
Cocoyam				41	82	1,976	41	82	1976
PULSES	**104**	**27**		**67,704**	**34,323**		**67,809**	**34,350**	
Mung Beans	0	0	0	64	145	2,274	64	145	2274
Beans	101	25	247	38,843	16,295	420	38,944	16,320	419
Cowpeas	0	0	0	2,731	3,376	1,236	2,731	3,376	1236
Green Gram	0	0	0	755	2,898	3,836	755	2,898	3836
Chich Peas	0	0	0	23,933	10,315	431	23,933	10,315	431
Bambaranuts	3	2	494	1,379	1,295	939	1,382	1,296	938
OIL SEEDS & OIL NUTS	**167**	**32**		**65,985**	**31,568**	**478**	**66,153**	**31,601**	478
Sunflower	0	0	0	1,434	455	317	1,434	455	317
Simsim	0	0	0	364	194	534	364	194	534
Groundnuts	167	32	194	64,188	30,919	482	64,355	30,951	481
FRUIT & VEGETABLES	**0**	**0**		**1,421**	**3,381**		**1,421**	**3,381**	2380
Tomatoes	0	0	0	524	1,977	3,773	524	1,977	3773
Onions	0	0	0	257	503	1,956	257	503	1956
Egg Plant	0	0	0	203	83	408	203	83	408
Radish	0	0	0	199	121	609	199	121	609
Cabbage	0	0	0	104	461	4,443	104	461	4443
Amaranths	0	0	0	74	140	1,880	74	140	1880
Pumpkins	0	0	0	26	1	55	26	1	55
Cucumber	0	0	0	23	43	1,878	23	43	1878
Chillies	0	0	0	10	51	5,039	10	51	5039
CASH CROPS	**637**	**172**		**204,383**	**106,815**		**205,020**	**106,987**	522
Cotton	637	172	270	198,753	101,423	510	199,390	101,595	510
Tobacco	0	0	0	5,630	5,392	958	5,630	5,392	958
Total	**2,826**			**977,072**			**979,898**		

* The total area planted includes the sum of the planted area for both Long and Short Season and is an overestimation of the actual area due to crops

bein produced on the same land during the 2 seasons. Previous surveys have used the Long season to estimate physical land area under production to different crops

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											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	75,299	101,952	42,799	0.42	101,952	42,799	0.42	1.35
Maswa	108	44	9	0.20	38,409	35,115	14,371	0.41	35,159	14,380	0.41	0.92
Shinyanga Rural				-	44,046	44,228	19,359	0.44	44,228	19,359	0.44	1.00
Kahama	144	174	72	0.41	78,402	79,731	58,011	0.73	79,905	58,083	0.73	1.02
Bukombe	239	314	244	0.78	51,714	64,519	37,758	0.59	64,833	38,002	0.59	1.25
Meatu	665	909	273	0.30	24,634	30,284	8,922	0.29	31,193	9,195	0.29	1.27
Shinyanga Urban	124	99	50	0.50	8,372	7,405	2,356	0.32	7,505	2,406	0.32	0.90
Kishapu	-	-	-	-	30,359	35,494	7,179	0.20	35,494	7,179	0.20	1.17
Total	1,279	1,541	647	0.42	351,234	398,729	190,755	3.39	400,270	191,402	0.48	1.14

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

	Paddy											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	17,093	6,914	5,769	0.83	6,914	5,769	0.83	0.40
Maswa	0	.	.	-	14,438	9,975	11,033	1.11	9,975	11,033	1.11	0.69
Shinyanga Rural				-	28,678	20,937	18,119	0.87	20,937	18,119	0.87	0.73
Kahama	144	116	194	1.67	46,180	53,166	46,923	0.88	53,283	47,117	0.88	1.15
Bukombe	239	121	239	1.98	17,924	21,250	18,738	0.88	21,371	18,977	0.89	1.19
Meatu	0	.	.	-	1,314	349	161	0.46	349	161	0.46	0.27
Shinyanga Urban	32	6	6	0.99	3,396	1,621	1,382	0.85	1,628	1,389	0.85	0.48
Kishapu					7,024	4,459	2,282	0.51	4,459	2,282	0.00	0.63
Total	415	244	439	1.80	136,046	118,673	104,408	6.40	118,916	104,847	0.88	0.87

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

	Sorghum											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	15,252	9,971	4,175	-	9,971	4,175	0.42	0.65
Maswa	0	.	.	-	9,906	7,950	3,098	-	7,950	3,098	0.00	0.80
Shinyanga Rural				-	2,511	1,326	492	-	1,326	492	0.00	0.53
Kahama	0	.	.	-	427	101	62	0.61	101	62	0.61	0.24
Bukombe	0	.	.	-	597	227	78	0.34	227	78	0.34	0.38
Meatu	167	51	8	0.16	15,563	24,344	4,244	-	24,395	4,252	0.17	1.57
Shinyanga Urban	30	12	6	0.49	1,273	905	332	-	917	338	0.00	0.72
Kishapu					14,090	21,030	4,775	-	21,030	4,775	0.00	1.49
Total	196	63	14	0.23	59,619	65,854	17,255	0.95	65,917	17,269	0.26	1.11

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

	Bulrushmillet											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama	0	.	.	-	0	.	.	-	0	0	0.00	-
Bukombe	0	.	.	-	119	97	6	-	97	6	0.00	0.81
Meatu	0	.	.	-	0	.	.	-	0	0	-	-
Shinyanga Urban	32	26	38	1.48	1,271	1,645	1,384	-	1,671	1,422	0.00	1.32
Kishapu					2,473	4,256	1,102	0.26	4,256	1,102	0.00	1.72
Total	32	26	38	1.48	3,864	5,998	2,491	0.26	6,024	2,530	0.42	1.56

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

	Finger Millet											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	353	180	92	0.51	180	92	0.51	0.51
Maswa	0	.	.	-	108	22	7	-	22	7	0.00	0.20
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama	0	.	.	-	0	.	.	-	0	0	0.00	-
Bukombe	0	.	.	-	358	53	32	-	53	32	0.00	0.15
Meatu	0	.	.	-	83	34	8	-	34	8	0.00	0.40
Shinyanga Urban	0	.	.	-	0	.	.	-	0	0	0.00	-
Kishapu					-	.	.					-
Total	0	0	0	-	902	289	139	0.51	289	139	0.48	0.32

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

	Cassava											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)*	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)*	
Bariadi				-	1,159	523	1,513	1.58	523	1,513	1.57	0.45
Maswa				-	1,080	335	148	3.44	335	148	3.05	0.31
Shinyanga Rural				-	7,173	3,755	5,395	2.37	3,755	5,395	2.36	0.52
Kahama				-	16,910	7,752	3,560	2.65	7,752	3,560	2.65	0.46
Bukombe				-	7,448	6,697	3,943	1.85	6,697	3,943	1.83	0.90
Meatu				-	0	.	.	3.52	0	0	2.85	-
Shinyanga Urban				-	551	174	39	3.07	174	39	3.06	0.32
Kishapu					-	.	.					-
Total	0	0	0	-	34,321	19,235	14,599	18.48	19,235	14,599	0.76	0.56

*The yield is based on physical area harvested and not the physical area planted on the above table

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

	Sweet potatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	9,695	2,384	2,075	0.87	2,384	2,075	0.87	0.25
Maswa				-	20,195	5,729	5,383	0.94	5,729	5,383	0.94	0.28
Shinyanga Rural				-	22,326	6,310	7,634	1.21	6,310	7,634	1.21	0.28
Kahama				-	8,261	2,471	2,216	0.90	2,471	2,216	0.90	0.30
Bukombe				-	2,852	989	1,351	1.37	989	1,351	1.37	0.35
Meatu				-	8,466	2,378	1,136	0.48	2,378	1,136	0.48	0.28
Shinyanga Urban				-	4,694	1,324	1,479	1.12	1,324	1,479	1.12	0.28
Kishapu					18,853	5,971	3,785	0.63	5,971	3,785	0.00	0.32
Total	0	0	0	-	95,342	27,556	25,059	7.51	27,556	25,059	0.91	0.29

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

	Irish potatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	356	144	18	0.12	144	18	0.12	0.40
Maswa				-	108	22	26	1.19	22	26	1.19	0.20
Shinyanga Rural				-	302	75	31	-	75	31	0.00	0.25
Kahama				-	273	299	9	-	299	9	0.00	1.09
Bukombe				-	0	.	.	-	0	0	-	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	87	22	5	-	22	5	0.00	0.25
Kishapu					-	.	.					-
Total	0	0	0	-	1,127	562	89	1.31	562	89	0.16	0.50

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

District	Yams											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	178	36	14	-	36	14	0.00	0.20
Maswa				-	2,107	451	333	0.74	451	333	0.74	0.21
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	142	57	34	-	57	34	0.00	0.40
Bukombe				-	119	24	12	-	24	12	0.00	0.20
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	32	7	2	-	7	2	0.00	0.20
Kishapu					81	65	29	0.44	65	29	0.00	0.81
Total	0	0	0	-	2,659	641	424	1.18	641	424	0.66	0.24

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

District	Cocoyams											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	-	-
Maswa				-	0	.	.	-	0	0	-	-
Shinyanga Rural				-	102	41	82	1.98	41	82	1.98	0.40
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu					-	.	.					-
Total	0	0	0	-	102	41	82	1.98	41	82	1.98	0.40

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

District	Beans											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	1,739	372	81	0.22	372	81	0.22	0.21
Maswa	0	.	.	-	217	22	26	1.20	22	26	1.20	0.10
Shinyanga Rural				-	500	100	14	0.14	100	14	0.14	0.20
Kahama	0	.	.	-	21,864	6,714	2,381	0.35	6,714	2,381	0.35	0.31
Bukombe	0	.	.	-	21,050	8,718	2,772	-	8,718	2,772	0.32	0.41
Meatu	167	101	25	0.25	869	238	92	0.39	339	117	0.35	0.39
Shinyanga Urban	0	.	.	-	54	17	9	0.54	17	9	0.54	0.32
Kishapu					70	114	7	0.06	114	7	0.00	1.62
Total	167	101	25	0.25	46,363	16,295	5,383	2.89	16,397	5,408	0.33	0.35

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

	Cowpeas											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					1,916	538	144	-	0	0	0.00	0.00
Maswa					2,276	285	85	0.08	295	24	0.08	0.13
Shinyanga Rural					3,622	700	205	0.21	2,016	482	0.24	0.56
Kahama					2,013	414	88	0.13	383	77	0.20	0.19
Bukombe					1,075	249	100	0.14	998	167	0.17	0.93
Meatu					1,635	392	111	0.20	7,982	1,798	0.23	4.88
Shinyanga Urban					112	45	15	0.18	333	76	0.23	2.98
Kishapu					1,118	752	102	0.14	752	102	0.00	0.67
Total	0	0	0	-	13,767	3,376	851	1.08	12,759	2,726	0.21	0.93

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

	Green gram											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	350	84	7	0.08	84	7	0.08	0.24
Maswa				-	0	.	.		0	0	#DIV/0!	-
Shinyanga Rural				-	4,549	1,503	340	0.23	1,503	340	0.23	0.33
Kahama				-	286	90	11	0.13	90	11	0.13	0.32
Bukombe				-	358	135	55	0.41	135	55	0.41	0.38
Meatu				-	393	135	17	0.12	135	17	0.12	0.34
Shinyanga Urban				-	62	25	10	0.40	25	10	0.40	0.40
Kishapu					1,585	925	191	0.21	925	191	0.21	0.58
Total	0	0	0	-	7,584	2,898	630	1.57	2,898	630	0.22	0.38

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

	Chick peas											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	2,423	2,503	904	-	2,503	904	0.00	1.03
Maswa				-	633	363	193	-	363	193	0.00	0.57
Shinyanga Rural				-	5,438	8,927	4,379	-	8,927	4,379	0.00	1.64
Kahama				-	987	3,154	1,552	-	3,154	1,552	0.00	3.20
Bukombe				-	949	2,922	858	-	2,922	858	0.29	3.08
Meatu				-	162	174	90	-	174	90	0.00	1.08
Shinyanga Urban				-	220	134	53	-	134	53	0.00	0.61
Kishapu					4,521	5,755	2,286	0.40	5,755	2,286	0.40	1.27
Total	0	0	0	-	15,333	23,933	10,315	0.40	23,933	10,315	0.43	1.56

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

	Bambaranuts											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	1,516	383	666	-	383	666	0.00	0.25
Shinyanga Rural				-	1,203	315	143	-	315	143	0.00	0.26
Kahama	0	.	.	-	2,266	502	395	-	502	395	0.79	0.22
Bukombe	0	.	.	-	119	10	7	-	10	7	0.00	0.08
Meatu	0	.	.	-	0	.	.	-	0	0	0.00	-
Shinyanga Urban	32	3	2	0.49	379	105	50	-	108	51	0.00	0.29
Kishapu					409	64	33	0.51	64	33	0.51	0.16
Total	32	3	2	0.49	5,893	1,379	1,295	0.51	1,382	1,296	0.94	0.23

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

District	Sunflower											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi	0	.	.	-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	101	123	55	-	123	55	0.00	1.21
Shinyanga Rural	0	.	.	-	300	141	45	-	141	45	0.00	0.47
Kahama	0	.	.	-	425	172	68	-	172	68	0.00	0.40
Bukombe	0	.	.	-	1,434	859	228	-	859	228	0.00	0.60
Meatu	0	.	.	-	0	.	.	-	0	0	-	-
Shinyanga Urban	0	.	.	-	31	6	6	-	6	6	0.00	0.20
Kishapu					82	133	54	0.41	133	54	0.41	1.62
Total	0	0	0	-	2,373	1,434	455	0.41	1,434	455	0.32	0.60

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

District	Simsim											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	336	83	66	-	83	66	0.00	0.25
Maswa	0	.	.	-	108	22	0	-	22	0	0.00	0.20
Shinyanga Rural				-	190	138	83	0.60	138	83	0.60	0.73
Kahama	0	.	.	-	0	.	.	-	0	0	-	-
Bukombe	0	.	.	-	0	.	.	-	0	0	-	-
Meatu	0	.	.	-	81	25	7	0.26	25	7	0.26	0.30
Shinyanga Urban	0	.	.	-	0	.	.	-	0	0	-	-
Kishapu					79	96	39	0.41	96	39	0.41	1.21
Total	0	0	0	-	794	364	194	1.27	364	194	0.53	0.46

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

District	Groundnuts											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	8,131	2,845	1,135	-	2,845	1,135	0.00	0.35
Maswa	0	.	.	-	14,132	6,427	2,388	0.37	6,427	2,388	0.37	0.45
Shinyanga Rural				-	26,037	9,766	5,932	0.61	9,766	5,932	0.61	0.38
Kahama	0	.	.	-	44,313	19,995	11,691	0.58	19,995	11,691	0.58	0.45
Bukombe	119	97	30	0.31	19,917	11,202	6,512	0.58	11,299	6,542	0.58	0.57
Meatu	83	67	0	-	7,221	2,968	692	0.23	3,035	692	0.23	0.42
Shinyanga Urban	32	3	3	0.79	3,344	1,544	636	0.41	1,547	639	0.41	0.46
Kishapu					14,710	9,441	1,933	0.20	9,441	1,933	0.20	0.64
Total	235	167	32	0.19	137,805	64,188	30,919	3.00	64,355	30,951	0.48	0.47

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

District	Okra											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	147	20	14	0.68	20	14	0.68	0.14
Bukombe				-	73	6	3	0.46	6	3	0.46	0.09
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0	-	220	26	17	1.14	26	17	0.63	0.12

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

District	Bitter Aubergine											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	270	36	118	3.24	36	118	3.24	0.13
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	59	10	8	0.81	10	8	0.81	0.18
Meatu				-	212	129	170	1.32	129	170	1.32	0.61
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0		541	176	296	5.37	176	296	1.69	0.32

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

District	Onions											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	.	.	0	-	0	0	-	-
Maswa				-	.	.	0	-	0	0	-	-
Shinyanga Rural				-	171	392	0	-	392	0	0.00	2.29
Kahama				-	28	28	0	-	28	0	0.00	0.99
Bukombe				-	.	.	0	-	0	0	-	-
Meatu				-	.	.	0	-	0	0	0.00	-
Shinyanga Urban				-	.	.	31	-	0	31	-	-
Kishapu					58	83	-	-	83	0	0.00	1.43
Total	0	0	0		257	503	31	-	503	31	0.06	1.96

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

District	Cabbage											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	342	53	118	2.24	53	118	2.24	0.15
Maswa				-	0	.	.	-	0	0	-	-
Shinyanga Rural				-	101	10	15	-	10	15	1.48	0.10
Kahama				-	285	22	307	13.98	22	307	13.98	0.08
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	-	-
Shinyanga Urban				-	47	19	21	1.09	19	21	1.09	0.40
Kishapu					-	.	.					-
Total	0	0	0	-	776	104	461	17.31	104	461	4.44	0.13

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

District	Tomatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	357	36	152	4.20	36	152	4.20	0.10
Maswa				-	0	.	.	-	0	0	#DIV/0!	-
Shinyanga Rural				-	805	165	619	3.74	165	619	3.74	0.21
Kahama				-	851	160	398	2.48	160	398	2.48	0.19
Bukombe				-	119	12	211	17.49	12	211	17.49	0.10
Meatu				-	81	16	36	2.22	16	36	2.22	0.20
Shinyanga Urban				-	341	93	373	4.04	93	373	4.04	0.27
Kishapu					163	41	188	4.54	41	188	4.54	0.25
Total	0	0	0	-	2,717	524	1,977	38.71	524	1,977	3.77	0.19

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

District	Pumpkins											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	106	17	0	-	17	0	0.00	0.16
Shinyanga Rural				-	86	5	0	-	5	0	0.00	0.06
Kahama				-	54	2	2	0.87	2	2	0.87	0.04
Bukombe				-	22	9	0	-	9	0	0.00	0.40
Meatu				-	310	31	29	0.92	31	29	0.92	0.10
Shinyanga Urban				-	0	.	.	-	0	0	-	-
Kishapu												-
Total	0	0	0	-	579	65	31	1.79	65	31	0.47	0.11

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

District	Cucumber											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	273	90	668	7.39	90	668	7.39	0.33
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0	-	273	90	668	7.39	90	668	7.39	0.33

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

District	Eggplant											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					0	.	.	-	0	0	0.00	-
Maswa					0	.	.	-	0	0	0.00	-
Shinyanga Rural					79	8	8	1.04	8	8	1.04	0.10
Kahama					66	7	8	1.17	7	8	1.17	0.10
Bukombe					59	8	4	0.42	8	4	0.42	0.14
Meatu					0	.	.	-	0	0	0.00	-
Shinyanga Urban					0	.	.	-	0	0	0.00	-
Kishapu												-
Total					204	23	20	2.63	23	20	0.86	0.11

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

District	Water Mellon											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	193	76	687	9.02	76	687	9.02	0.39
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	21	2	12	5.93	2	12	5.93	0.10
Bukombe				-	0	.	.	-	0	0	-	-
Meatu				-	0	.	.	-	0	0	-	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0		214	78	699	14.95	78	699	8.94	0.37

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

District	Cotton											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	48,808	53,882	32,074	0.60	53,882	32,074	0.60	1.10
Maswa	108	66	15	0.23	32,967	44,575	22,036	0.49	44,640	22,051	0.49	1.35
Shinyanga Rural				-	2,303	2,105	963	0.46	2,105	963	0.46	0.91
Kahama	0	.	.	-	14,316	16,803	12,165	0.72	16,803	12,165	0.72	1.17
Bukombe	119	48	10	0.20	12,882	14,750	12,560	0.85	14,798	12,570	0.85	1.15
Meatu	333	523	147	0.28	20,918	33,505	10,800	0.32	34,028	10,947	0.32	1.63
Shinyanga Urban	0	.	.	-	380	385	264	0.69	385	264	0.69	1.01
Kishapu					19,267	32,748	10,563	0.32	32,748	10,563	0.32	1.70
Total	561	637	172	0.27	151,840	198,753	101,423	4.45	199,390	101,595	0.51	1.31

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

District	Tobacco											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					0	.	.	-	0	0	-	-
Maswa					0	.	.	-	0	0	-	-
Shinyanga Rural					102	41	20	0.49	41	20	0.49	0.40
Kahama					5,406	5,413	5,241	-	5,413	5,241	0.00	1.00
Bukombe					358	109	123	1.13	109	123	1.13	0.30
Meatu					0	.	.	-	0	0	0.00	-
Shinyanga Urban					0	.	.	-	0	0	-	-
Kishapu					82	66	8	0.12	66	8	0.12	0.81
Total	0	0	0		5,948	5,630	5,392	0.96	5,630	5,392	0.96	0.95

7.1 & 7.2e TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Means of Soil Preparation and District LONG & SHORT SEASON, Shinyanya Region

District	Soil Preparation							
	Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Bariadi	1,671	5,315	65,617	164,355	10,104	12,527	77,393	182,196
Maswa	1,720	9,247	31,164	89,584	10,158	13,085	43,042	111,916
Shinyanga Rural	810	1,229	36,243	86,690	8,108	12,605	45,161	100,524
Kahama	1,520	6,167	16,219	49,833	63,478	140,776	81,218	196,776
Bukombe	1,427	2,240	5,727	32,312	45,727	98,898	52,882	133,450
Meatu	950	4,552	25,373	82,614	5,703	9,328	32,026	96,494
Shinyanga Urban	91	99	6,441	12,183	2,883	3,477	9,415	15,759
Kishapu	562	3,135	31,040	112,432	3,521	6,125	35,124	121,691
Total	8,753	31984.2	217,825	630,001	149,683	296,821	376,261	958,806
%	0.9	3.3	22.7	65.7	15.6	31.0	39.2	100.0

7.1 & 7.2f TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Fertiliser Use and District for the 2002/03 agriculture year - LONG & SHORT RAINY SEASON, Shinyanga

District	Fertilizer Use								
	Mostly Farm Yard		Mostly Compost		Mostly Inorganic		No Fertilizer Applied		Total
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	Planted Area
Bariadi	6,857	25,192	1,064	2,158	0	0	69,472	155,298	182,648
Maswa	4,374	13,327	528	1,299	216	175	37,924	97,119	111,920
Shinyanga Rural	8,776	20,436	569	465	0	0	35,816	80,035	100,937
Kahama	15,057	38,570	2,314	3,538	6,722	18,336	57,126	136,906	197,351
Bukombe	4,611	16,482	1,673	3,507	358	931	46,239	112,530	133,450
Meatu	2,418	9,563	83	671	0	0	29,525	86,259	96,494
Shinyanga Urban	2,710	3,393	294	826	32	110	6,380	11,430	15,759
Kishapu	3,266	10,798	567	2,386	79	827	31,212	107,681	121,691
Total	48,069	137,761	7,091	14,850	7,407	20,380	313,694	787,259	960,250

7.1 & 7.2g TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total Number of Agriculture Households and Planted Area by Irrigation Use and District for the 2002/03 agriculture year - LONG & SHORT RAINY SEASON, Shinyanga Region

District	Irrigation Use						% of area planted under irrigation
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	2,921	4,966	74,472	177,682	77,393	182,648	2.7
Maswa	648	1,580	42,395	110,341	43,042	111,920	1.4
Shinyanga Rural	1,824	3,152	43,337	97,784	45,161	100,937	3.1
Kahama	1,830	6,309	79,387	191,042	81,218	197,351	3.2
Bukombe	712	1,338	52,170	132,113	52,882	133,450	1.0
Meatu	167	641	31,859	95,852	32,026	96,494	0.7
Shinyanga Urban	538	863	8,878	14,896	9,415	15,759	5.5
Kishapu	1,283	2,597	33,840	119,094	35,124	121,691	2.1
Total	9,922	21,445	366,339	938,804	376,261	960,250	2.2
%	2.6	2.2	97.4	97.8	100.0	100.0	2.2

Number of households is an over estimate due to the double counting of hopuseholds growing crops in both

long and short seasons. To compare previous surveys use Number of Long Season planters only.

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 - Long & Short Rainy Season.

District	Insecticide Use						% of Planted area using Insecticide
	Households Using Insecticide		Households Not Using Insecticide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	32,717	103,285	44,676	79,362	77,393	182,648	56.55
Maswa	7,974	25,522	35,068	86,398	43,042	111,920	22.80
Shinyanga Rural	3,313	9,686	41,847	91,251	45,161	100,937	9.60
Kahama	22,480	68,787	58,737	128,564	81,218	197,351	34.86
Bukombe	12,997	47,075	39,885	86,376	52,882	133,450	35.28
Meatu	9,424	34,836	22,602	61,658	32,026	96,494	36.10
Shinyanga Urban	612	1,584	8,804	14,174	9,415	15,759	10.05
Kishapu	7,920	40,118	27,204	81,574	35,124	121,691	32.97
Total	97,437	330,893	278,824	629,357	376,261	960,250	34.5

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

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 - Long & Short Rainy Season, Kahama.

District	Herbicide Use						% of Planted area using Herbicide
	Households Using Herbicide		Households Not Using Herbicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	1,599	3,171	75,794	179,477	77,393	182,648	1.74
Maswa	650	1,053	42,392	110,867	43,042	111,920	0.94
Shinyanga Rural	1,406	2,737	43,755	98,199	45,161	100,937	2.71
Kahama	1,264	2,721	79,954	194,629	81,218	197,351	1.38
Bukombe	597	1,645	52,284	131,806	52,882	133,450	1.23
Meatu	315	884	31,711	95,609	32,026	96,494	0.92
Shinyanga Urban	122	259	9,294	15,500	9,415	15,759	1.64
Kishapu	1,157	5,050	33,967	116,641	35,124	121,691	4.15
Total	7,109	17,521	369,151	942,729	376,261	960,250	1.82
%	2	2	98	98	100	100	

7.1 & 7.2j ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year SHORT & LONG RAINYSEASON, Shinyanga Region

District	Fungicide Use						% of Planted area using Fungicide
	Households Using Fungicide		Households Not Using Fungicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	2,446	5,872	74,947	176,775	77,393	182,648	3.2
Maswa	3,566	8,745	39,477	103,175	43,042	111,920	7.8
Shinyanga Rural	1,906	3,494	43,255	97,442	45,161	100,937	3.5
Kahama	4,007	13,910	77,210	183,441	81,218	197,351	7.0
Bukombe	1,668	6,191	51,214	127,259	52,882	133,450	4.6
Meatu	167	742	31,859	95,751	32,026	96,494	0.8
Shinyanga Urban	313	670	9,102	15,089	9,415	15,759	4.3
Kishapu	891	3,384	34,233	118,307	35,124	121,691	2.8
Total	14,963	7,220	423,390	393,090	430,102	400,310	1.8

7.1 &7.2k 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 & SHORT RAINY SEASON, Shinyanga Region

District	Improved Seed Use						% of Planted area using Improved Seeds
	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	
Bariadi	17,809	48,537	59,584	133,659	77,393	182,196	26.64
Maswa	12,159	39,669	30,884	72,247	43,042	111,916	35.45
Shinyanga Rural	3,605	10,983	41,556	89,541	45,161	100,524	10.93
Kahama	13,945	37,903	67,272	158,873	81,218	196,776	19.26
Bukombe	4,293	16,328	48,588	117,122	52,882	133,450	12.24
Meatu	13,388	47,553	18,638	48,941	32,026	96,494	49.28
Shinyanga Urban	1,473	2,197	7,943	13,561	9,415	15,759	13.94
Kishapu	13,285	57,895	21,839	63,796	35,124	121,691	47.58
Total	79,957	261,066	296,304	697,741	376,261	958,806	27.23
%	21	27	79	73	100	100	

ANNUAL CROP & VEGETABLE PRODUCTION – LONG RAINY SEASON

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

District	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	No.of H/holds	Planted Area	No.of H/holds	Planted Area	No.of H/holds	Planted Area	No.of H/holds	Planted Area
Bariadi	1,671	5,315	65,617	164,355	10,104	12,527	77,393	182,196
Maswa	1,720	9,247	31,056	89,475	10,158	13,085	42,935	111,807
Shinyanga Rural	810	1,229	36,243	86,690	8,108	12,605	45,161	100,524
Kahama	1,520	6,167	16,219	49,833	63,335	140,485	81,074	196,485
Bukombe	1,427	2,240	5,727	32,312	45,488	98,318	52,643	132,870
Meatu	867	4,383	25,206	82,344	5,038	8,115	31,111	94,843
Shinyanga Urban	91	99	6,379	12,077	2,789	3,388	9,260	15,564
Kishapu	562	3,135	31,040	112,432	3,521	6,125	35,124	121,691
Total	8,670	31,815	217,488	629,516	148,541	294,648	374,699	955,980
%	2	3	58	66	40	31	100	100

7.2b Number of Crop Growing Households and Planted Area By Fertilizer Use and District During the Long Rainy Season

District	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
	No. of H/hold	Planted Area	No. of H/hold	Planted Area	No. of H/hold	Planted Area	No. of H/hold	Planted Area	No. of H/hold	Planted Area
Bariadi	6,857	25,192	1,064	2,158	0	.	69,472	155,298	77,393	182,648
Maswa	4,374	13,327	420	1,190	216	175	37,924	97,119	42,935	111,811
Shinyanga Rural	8,776	20,436	569	465	0	.	35,816	80,035	45,161	100,937
Kahama	14,913	38,280	2,314	3,538	6,722	18,336	57,126	136,906	81,074	197,060
Bukombe	4,611	16,482	1,553	3,169	358	931	46,120	112,288	52,643	132,870
Meatu	2,335	9,394	83	671	0	.	28,693	84,777	31,111	94,843
Shinyanga Urban	2,584	3,252	294	826	32	110	6,350	11,376	9,260	15,564
Kishapu	3,266	10,798	567	2,386	79	827	31,212	107,681	35,124	121,691
Total	47,716	137,161	6,864	14,402	7,407	20,380	312,714	785,481	374,699	957,423

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

District	Irrigation Use						% of area planted under irrigation in long rainy season
	Households Using Irrigation		Households Not Using Irrigation		Total		
	No.of H/holds	Planted Area	No.of H/holds	Planted Area	No.of H/holds	Planted Area	
Bariadi	2,921	4,966	74,472	177,682	77,393	182,648	2.7
Maswa	648	1,580	42,287	110,231	42,935	111,811	1.4
Shinyanga Rural	1,824	3,152	43,337	97,784	45,161	100,937	3.1
Kahama	1,830	6,309	79,244	190,751	81,074	197,060	3.2
Bukombe	712	1,338	51,931	131,532	52,643	132,870	1.0
Meatu	167	641	30,945	94,202	31,111	94,843	0.7
Shinyanga Urban	538	863	8,722	14,701	9,260	15,564	5.5
Kishapu	1,283	2,597	33,840	119,094	35,124	121,691	2.1
Total	9,922	21,445	364,778	935,978	374,699	957,423	2.2
%	3	2	97	98	100	100	

7.2d ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households & Planted Area By Insecticide Use and District - LONG RAINY SEASON

District	Insecticide Use					
	Households Using		Households Not Using		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Bariadi	32,717	103,285	44,676	79,362	77,393	182,648
Maswa	7,974	25,522	34,960	86,289	42,935	111,811
Shinyanga Rural	3,313	9,686	41,847	91,251	45,161	100,937
Kahama	22,480	68,787	58,594	128,273	81,074	197,060
Bukombe	12,997	47,075	39,646	85,795	52,643	132,870
Meatu	9,424	34,836	21,687	60,007	31,111	94,843
Shinyanga Urban	612	1,584	8,648	13,980	9,260	15,564
Kishapu	7,920	40,118	27,204	81,574	35,124	121,691
Total	97,437	330,893	277,263	626,531	374,699	957,423

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

District	Herbicide Use						% of Planted area using Herbicide
	Households Using Herbicide		Households Not Using Herbicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	1,599	3,171	75,794	179,477	77,393	182,648	1.7
Maswa	650	1,053	42,284	110,758	42,935	111,811	0.9
Shinyanga Rural	1,406	2,737	43,755	98,199	45,161	100,937	2.7
Kahama	1,264	2,721	79,810	194,339	81,074	197,060	1.4
Bukombe	597	1,645	52,045	131,225	52,643	132,870	1.2
Meatu	315	884	30,796	93,958	31,111	94,843	0.9
Shinyanga Urban	122	259	9,138	15,305	9,260	15,564	1.7
Kishapu	1,157	5,050	33,967	116,641	35,124	121,691	4.2
Total	7,109	17,521	367,590	939,903	374,699	957,423	1.8
%	2	2	98	98	100	100	

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

District	Fungicide Use						% of Planted area using Fungicide
	Households Using Fungicide		Households Not Using Fungicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Bariadi	2,446	5,872	74,947	176,775	77,393	182,648	3.2
Maswa	3,566	8,745	39,369	103,066	42,935	111,811	7.8
Shinyanga Rural	1,906	3,494	43,255	97,442	45,161	100,937	3.5
Kahama	4,007	13,910	77,067	183,150	81,074	197,060	7.1
Bukombe	1,668	6,191	50,975	126,679	52,643	132,870	4.7
Meatu	83	169	31,028	94,674	31,111	94,843	0.2
Shinyanga Urban	313	670	8,946	14,894	9,260	15,564	4.3
Kishapu	891	3,384	34,233	118,307	35,124	121,691	2.8
Total	14,880	42,435	359,819	914,988	374,699	957,423	4.4
%	4.0	4.4	96.0	95.6	100.0	100.0	

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

District	Improved Seed Use						% of area planted 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	
Bariadi	17,809	48,537	59,584	133,659	77,393	182,196	27
Maswa	12,159	39,669	30,776	72,138	42,935	111,807	35
Shinyanga Rural	3,605	10,983	41,556	89,541	45,161	100,524	11
Kahama	13,945	37,903	67,129	158,582	81,074	196,485	19
Bukombe	4,174	15,989	48,469	116,880	52,643	132,870	12
Meatu	12,640	46,172	18,471	48,671	31,111	94,843	49
Shinyanga Urban	1,473	2,197	7,787	13,367	9,260	15,564	14
Kishapu	13,285	57,895	21,839	63,796	35,124	121,691	48
Total	79,089	259,346	295,610	696,634	374,699	955,980	27
%	21	27	79	73	100	100	

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											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	75,299	101,952	42,799	0.42	101,952	42,799	0.42	1.35
Maswa	108	44	9	0.20	38,409	35,115	14,371	0.41	35,159	14,380	0.41	0.92
Shinyanga Rural				-	44,046	44,228	19,359	0.44	44,228	19,359	0.44	1.00
Kahama	144	174	72	0.41	78,402	79,731	58,011	0.73	79,905	58,083	0.73	1.02
Bukombe	239	314	244	0.78	51,714	64,519	37,758	0.59	64,833	38,002	0.59	1.25
Meatu	665	909	273	0.30	24,634	30,284	8,922	0.29	31,193	9,195	0.29	1.27
Shinyanga Urban	124	99	50	0.50	8,372	7,405	2,356	0.32	7,505	2,406	0.32	0.90
Kishapu	-	-	-	-	30,359	35,494	7,179	0.20	35,494	7,179	0.20	1.17
Total	1,279	1,541	647	0.42	351,234	398,729	190,755	3.39	400,270	191,402	0.48	1.14

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

	Paddy											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	17,093	6,914	5,769	0.83	6,914	5,769	0.83	0.40
Maswa	0	.	.	-	14,438	9,975	11,033	1.11	9,975	11,033	1.11	0.69
Shinyanga Rural				-	28,678	20,937	18,119	0.87	20,937	18,119	0.87	0.73
Kahama	144	116	194	1.67	46,180	53,166	46,923	0.88	53,283	47,117	0.88	1.15
Bukombe	239	121	239	1.98	17,924	21,250	18,738	0.88	21,371	18,977	0.89	1.19
Meatu	0	.	.	-	1,314	349	161	0.46	349	161	0.46	0.27
Shinyanga Urban	32	6	6	0.99	3,396	1,621	1,382	0.85	1,628	1,389	0.85	0.48
Kishapu					7,024	4,459	2,282	0.51	4,459	2,282	0.00	0.63
Total	415	244	439	1.80	136,046	118,673	104,408	6.40	118,916	104,847	0.88	0.87

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

	Sorghum											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
District	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	15,252	9,971	4,175	-	9,971	4,175	0.42	0.65
Maswa	0	.	.	-	9,906	7,950	3,098	-	7,950	3,098	0.00	0.80
Shinyanga Rural				-	2,511	1,326	492	-	1,326	492	0.00	0.53
Kahama	0	.	.	-	427	101	62	0.61	101	62	0.61	0.24
Bukombe	0	.	.	-	597	227	78	0.34	227	78	0.34	0.38
Meatu	167	51	8	0.16	15,563	24,344	4,244	-	24,395	4,252	0.17	1.57
Shinyanga Urban	30	12	6	0.49	1,273	905	332	-	917	338	0.00	0.72
Kishapu					14,090	21,030	4,775	-	21,030	4,775	0.00	1.49
Total	196	63	14	0.23	59,619	65,854	17,255	0.95	65,917	17,269	0.26	1.11

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

District	Bulrushmillet											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama	0	.	.	-	0	.	.	-	0	0	0.00	-
Bukombe	0	.	.	-	119	97	6	-	97	6	0.00	0.81
Meatu	0	.	.	-	0	.	.	-	0	0	-	-
Shinyanga Urban	32	26	38	1.48	1,271	1,645	1,384	-	1,671	1,422	0.00	1.32
Kishapu					2,473	4,256	1,102	0.26	4,256	1,102	0.00	1.72
Total	32	26	38	1.48	3,864	5,998	2,491	0.26	6,024	2,530	0.42	1.56

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

District	Finger Millet											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	353	180	92	0.51	180	92	0.51	0.51
Maswa	0	.	.	-	108	22	7	-	22	7	0.00	0.20
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama	0	.	.	-	0	.	.	-	0	0	0.00	-
Bukombe	0	.	.	-	358	53	32	-	53	32	0.00	0.15
Meatu	0	.	.	-	83	34	8	-	34	8	0.00	0.40
Shinyanga Urban	0	.	.	-	0	.	.	-	0	0	0.00	-
Kishapu					-	.	.					-
Total	0	0	0	-	902	289	139	0.51	289	139	0.48	0.32

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

District	Cassava											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)*	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)*	
Bariadi				-	1,159	523	1,513	1.58	523	1,513	1.57	0.45
Maswa				-	1,080	335	148	3.44	335	148	3.05	0.31
Shinyanga Rural				-	7,173	3,755	5,395	2.37	3,755	5,395	2.36	0.52
Kahama				-	16,910	7,752	3,560	2.65	7,752	3,560	2.65	0.46
Bukombe				-	7,448	6,697	3,943	1.85	6,697	3,943	1.83	0.90
Meatu				-	0	.	.	3.52	0	0	2.85	-
Shinyanga Urban				-	551	174	39	3.07	174	39	3.06	0.32
Kishapu					-	.	.					-
Total	0	0	0	-	34,321	19,235	14,599	18.48	19,235	14,599	0.76	0.56

*The yield is based on physical area harvested and not the physical area planted on the above table

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

District	Sweet potatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	9,695	2,384	2,075	0.87	2,384	2,075	0.87	0.25
Maswa				-	20,195	5,729	5,383	0.94	5,729	5,383	0.94	0.28
Shinyanga Rural				-	22,326	6,310	7,634	1.21	6,310	7,634	1.21	0.28
Kahama				-	8,261	2,471	2,216	0.90	2,471	2,216	0.90	0.30
Bukombe				-	2,852	989	1,351	1.37	989	1,351	1.37	0.35
Meatu				-	8,466	2,378	1,136	0.48	2,378	1,136	0.48	0.28
Shinyanga Urban				-	4,694	1,324	1,479	1.12	1,324	1,479	1.12	0.28
Kishapu					18,853	5,971	3,785	0.63	5,971	3,785	0.00	0.32
Total	0	0	0	-	95,342	27,556	25,059	7.51	27,556	25,059	0.91	0.29

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

District	Irish potatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	356	144	18	0.12	144	18	0.12	0.40
Maswa				-	108	22	26	1.19	22	26	1.19	0.20
Shinyanga Rural				-	302	75	31	-	75	31	0.00	0.25
Kahama				-	273	299	9	-	299	9	0.00	1.09
Bukombe				-	0	.	.	-	0	0	-	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	87	22	5	-	22	5	0.00	0.25
Kishapu					-	.	.					-
Total	0	0	0	-	1,127	562	89	1.31	562	89	0.16	0.50

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

District	Yams											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	178	36	14	-	36	14	0.00	0.20
Maswa				-	2,107	451	333	0.74	451	333	0.74	0.21
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	142	57	34	-	57	34	0.00	0.40
Bukombe				-	119	24	12	-	24	12	0.00	0.20
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	32	7	2	-	7	2	0.00	0.20
Kishapu					81	65	29	0.44	65	29	0.00	0.81
Total	0	0	0	-	2,659	641	424	1.18	641	424	0.66	0.24

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

District	Cocoyams											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	-	-
Maswa				-	0	.	.	-	0	0	-	-
Shinyanga Rural				-	102	41	82	1.98	41	82	1.98	0.40
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu					-	.	.					-
Total	0	0	0	-	102	41	82	1.98	41	82	1.98	0.40

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

District	Beans											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	1,739	372	81	0.22	372	81	0.22	0.21
Maswa	0	.	.	-	217	22	26	1.20	22	26	1.20	0.10
Shinyanga Rural				-	500	100	14	0.14	100	14	0.14	0.20
Kahama	0	.	.	-	21,864	6,714	2,381	0.35	6,714	2,381	0.35	0.31
Bukombe	0	.	.	-	21,050	8,718	2,772	-	8,718	2,772	0.32	0.41
Meatu	167	101	25	0.25	869	238	92	0.39	339	117	0.35	0.39
Shinyanga Urban	0	.	.	-	54	17	9	0.54	17	9	0.54	0.32
Kishapu					70	114	7	0.06	114	7	0.00	1.62
Total	167	101	25	0.25	46,363	16,295	5,383	2.89	16,397	5,408	0.33	0.35

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

District	Cowpeas											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					1,916	538	144	-	0	0	0.00	0.00
Maswa					2,276	285	85	0.08	295	24	0.08	0.13
Shinyanga Rural					3,622	700	205	0.21	2,016	482	0.24	0.56
Kahama					2,013	414	88	0.13	383	77	0.20	0.19
Bukombe					1,075	249	100	0.14	998	167	0.17	0.93
Meatu					1,635	392	111	0.20	7,982	1,798	0.23	4.88
Shinyanga Urban					112	45	15	0.18	333	76	0.23	2.98
Kishapu					1,118	752	102	0.14	752	102	0.00	0.67
Total	0	0	0	-	13,767	3,376	851	1.08	12,759	2,726	0.21	0.93

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

District	Green gram											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	350	84	7	0.08	84	7	0.08	0.24
Maswa				-	0	.	.		0	0	0	-
Shinyanga Rural				-	4,549	1,503	340	0.23	1,503	340	0.23	0.33
Kahama				-	286	90	11	0.13	90	11	0.13	0.32
Bukombe				-	358	135	55	0.41	135	55	0.41	0.38
Meatu				-	393	135	17	0.12	135	17	0.12	0.34
Shinyanga Urban				-	62	25	10	0.40	25	10	0.40	0.40
Kishapu					1,585	925	191	0.21	925	191	0.21	0.58
Total	0	0	0	-	7,584	2,898	630	1.57	2,898	630	0.22	0.38

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

District	Chick peas											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	2,423	2,503	904	-	2,503	904	0.00	1.03
Maswa				-	633	363	193	-	363	193	0.00	0.57
Shinyanga Rural				-	5,438	8,927	4,379	-	8,927	4,379	0.00	1.64
Kahama				-	987	3,154	1,552	-	3,154	1,552	0.00	3.20
Bukombe				-	949	2,922	858	-	2,922	858	0.29	3.08
Meatu				-	162	174	90	-	174	90	0.00	1.08
Shinyanga Urban				-	220	134	53	-	134	53	0.00	0.61
Kishapu					4,521	5,755	2,286	0.40	5,755	2,286	0.40	1.27
Total	0	0	0	-	15,333	23,933	10,315	0.40	23,933	10,315	0.43	1.56

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

District	Bambaranuts											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	1,516	383	666	-	383	666	0.00	0.25
Shinyanga Rural				-	1,203	315	143	-	315	143	0.00	0.26
Kahama	0	.	.	-	2,266	502	395	-	502	395	0.79	0.22
Bukombe	0	.	.	-	119	10	7	-	10	7	0.00	0.08
Meatu	0	.	.	-	0	.	.	-	0	0	0.00	-
Shinyanga Urban	32	3	2	0.49	379	105	50	-	108	51	0.00	0.29
Kishapu					409	64	33	0.51	64	33	0.51	0.16
Total	32	3	2	0.49	5,893	1,379	1,295	0.51	1,382	1,296	0.94	0.23

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

District	Sunflower											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi	0	.	.	-	0	.	.	-	0	0	0.00	-
Maswa	0	.	.	-	101	123	55	-	123	55	0.00	1.21
Shinyanga Rural	0	.	.	-	300	141	45	-	141	45	0.00	0.47
Kahama	0	.	.	-	425	172	68	-	172	68	0.00	0.40
Bukombe	0	.	.	-	1,434	859	228	-	859	228	0.00	0.60
Meatu	0	.	.	-	0	.	.	-	0	0	-	-
Shinyanga Urban	0	.	.	-	31	6	6	-	6	6	0.00	0.20
Kishapu					82	133	54	0.41	133	54	0.41	1.62
Total	0	0	0	-	2,373	1,434	455	0.41	1,434	455	0.32	0.60

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

District	Simsim											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	336	83	66	-	83	66	0.00	0.25
Maswa	0	.	.	-	108	22	0	-	22	0	0.00	0.20
Shinyanga Rural				-	190	138	83	0.60	138	83	0.60	0.73
Kahama	0	.	.	-	0	.	.	-	0	0	-	-
Bukombe	0	.	.	-	0	.	.	-	0	0	-	-
Meatu	0	.	.	-	81	25	7	0.26	25	7	0.26	0.30
Shinyanga Urban	0	.	.	-	0	.	.	-	0	0	-	-
Kishapu					79	96	39	0.41	96	39	0.41	1.21
Total	0	0	0	-	794	364	194	1.27	364	194	0.53	0.46

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

District	Groundnuts											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	8,131	2,845	1,135	-	2,845	1,135	0.00	0.35
Maswa	0	.	.	-	14,132	6,427	2,388	0.37	6,427	2,388	0.37	0.45
Shinyanga Rural				-	26,037	9,766	5,932	0.61	9,766	5,932	0.61	0.38
Kahama	0	.	.	-	44,313	19,995	11,691	0.58	19,995	11,691	0.58	0.45
Bukombe	119	97	30	0.31	19,917	11,202	6,512	0.58	11,299	6,542	0.58	0.57
Meatu	83	67	0	-	7,221	2,968	692	0.23	3,035	692	0.23	0.42
Shinyanga Urban	32	3	3	0.79	3,344	1,544	636	0.41	1,547	639	0.41	0.46
Kishapu					14,710	9,441	1,933	0.20	9,441	1,933	0.20	0.64
Total	235	167	32	0.19	137,805	64,188	30,919	3.00	64,355	30,951	0.48	0.47

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

District	Okra											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	147	20	14	0.68	20	14	0.68	0.14
Bukombe				-	73	6	3	0.46	6	3	0.46	0.09
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0	-	220	26	17	1.14	26	17	0.63	0.12

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

District	Bitter Aubergine											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	0	.	.	-	0	0	0.00	-
Shinyanga Rural				-	270	36	118	3.24	36	118	3.24	0.13
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	59	10	8	0.81	10	8	0.81	0.18
Meatu				-	212	129	170	1.32	129	170	1.32	0.61
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0		541	176	296	5.37	176	296	1.69	0.32

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

District	Onions											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	.	.	0	-	0	0	-	-
Maswa				-	.	.	0	-	0	0	-	-
Shinyanga Rural				-	171	392	0	-	392	0	0.00	2.29
Kahama				-	28	28	0	-	28	0	0.00	0.99
Bukombe				-	.	.	0	-	0	0	-	-
Meatu				-	.	.	0	-	0	0	0.00	-
Shinyanga Urban				-	.	.	31	-	0	31	-	-
Kishapu					58	83	-	-	83	0	0.00	1.43
Total	0	0	0		257	503	31	-	503	31	0.06	1.96

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

District	Cabbage											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	342	53	118	2.24	53	118	2.24	0.15
Maswa				-	0	.	.	-	0	0	-	-
Shinyanga Rural				-	101	10	15	-	10	15	1.48	0.10
Kahama				-	285	22	307	13.98	22	307	13.98	0.08
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	-	-
Shinyanga Urban				-	47	19	21	1.09	19	21	1.09	0.40
Kishapu					-	.	.					-
Total	0	0	0	-	776	104	461	17.31	104	461	4.44	0.13

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

District	Tomatoes											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	357	36	152	4.20	36	152	4.20	0.10
Maswa				-	0	.	.	-	0	0	0	-
Shinyanga Rural				-	805	165	619	3.74	165	619	3.74	0.21
Kahama				-	851	160	398	2.48	160	398	2.48	0.19
Bukombe				-	119	12	211	17.49	12	211	17.49	0.10
Meatu				-	81	16	36	2.22	16	36	2.22	0.20
Shinyanga Urban				-	341	93	373	4.04	93	373	4.04	0.27
Kishapu					163	41	188	4.54	41	188	4.54	0.25
Total	0	0	0	-	2,717	524	1,977	38.71	524	1,977	3.77	0.19

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

District	Pumpkins											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	106	17	0	-	17	0	0.00	0.16
Shinyanga Rural				-	86	5	0	-	5	0	0.00	0.06
Kahama				-	54	2	2	0.87	2	2	0.87	0.04
Bukombe				-	22	9	0	-	9	0	0.00	0.40
Meatu				-	310	31	29	0.92	31	29	0.92	0.10
Shinyanga Urban				-	0	.	.	-	0	0	-	-
Kishapu												-
Total	0	0	0	-	579	65	31	1.79	65	31	0.47	0.11

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

District	Cucumber											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	273	90	668	7.39	90	668	7.39	0.33
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	0	.	.	-	0	0	0.00	-
Bukombe				-	0	.	.	-	0	0	0.00	-
Meatu				-	0	.	.	-	0	0	0.00	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0	-	273	90	668	7.39	90	668	7.39	0.33

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

District	Eggplant											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					0	.	.	-	0	0	0.00	-
Maswa					0	.	.	-	0	0	0.00	-
Shinyanga Rural					79	8	8	1.04	8	8	1.04	0.10
Kahama					66	7	8	1.17	7	8	1.17	0.10
Bukombe					59	8	4	0.42	8	4	0.42	0.14
Meatu					0	.	.	-	0	0	0.00	-
Shinyanga Urban					0	.	.	-	0	0	0.00	-
Kishapu												-
Total					204	23	20	2.63	23	20	0.86	0.11

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

District	Water Mellon											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	0	.	.	-	0	0	0.00	-
Maswa				-	193	76	687	9.02	76	687	9.02	0.39
Shinyanga Rural				-	0	.	.	-	0	0	0.00	-
Kahama				-	21	2	12	5.93	2	12	5.93	0.10
Bukombe				-	0	.	.	-	0	0	-	-
Meatu				-	0	.	.	-	0	0	-	-
Shinyanga Urban				-	0	.	.	-	0	0	0.00	-
Kishapu												-
Total	0	0	0		214	78	699	14.95	78	699	8.94	0.37

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

District	Cotton											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi				-	48,808	53,882	32,074	0.60	53,882	32,074	0.60	1.10
Maswa	108	66	15	0.23	32,967	44,575	22,036	0.49	44,640	22,051	0.49	1.35
Shinyanga Rural				-	2,303	2,105	963	0.46	2,105	963	0.46	0.91
Kahama	0	.	.	-	14,316	16,803	12,165	0.72	16,803	12,165	0.72	1.17
Bukombe	119	48	10	0.20	12,882	14,750	12,560	0.85	14,798	12,570	0.85	1.15
Meatu	333	523	147	0.28	20,918	33,505	10,800	0.32	34,028	10,947	0.32	1.63
Shinyanga Urban	0	.	.	-	380	385	264	0.69	385	264	0.69	1.01
Kishapu					19,267	32,748	10,563	0.32	32,748	10,563	0.32	1.70
Total	561	637	172	0.27	151,840	198,753	101,423	4.45	199,390	101,595	0.51	1.31

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

District	Tobacco											Average Planted Area Per household
	Short Rainy Season				Long Rainy Season				Total			
	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No. of H/Holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	
Bariadi					0	.	.	-	0	0	-	-
Maswa					0	.	.	-	0	0	-	-
Shinyanga Rural					102	41	20	0.49	41	20	0.49	0.40
Kahama					5,406	5,413	5,241	-	5,413	5,241	0.00	1.00
Bukombe					358	109	123	1.13	109	123	1.13	0.30
Meatu					0	.	.	-	0	0	0.00	-
Shinyanga Urban					0	.	.	-	0	0	-	-
Kishapu					82	66	8	0.12	66	8	0.12	0.81
Total	0	0	0		5,948	5,630	5,392	0.96	5,630	5,392	0.96	0.95

PERMANENT CROPS

7.4 Total Area Planted with Coconut by District - Kahama District

MANGO					
District	Area planted with Mango	Total Area planted (ha)	% of Total Area Planted	hh with Mango	Average Planted Area per Household
Shinyanga Rural	979	101,952	1.0	1,114	0.88
Bukombe	5,335	35,159	15.2	3,699	1.44
Maswa	318	44,228	0.7	951	0.33
Kahama	20,919	79,905	26.2	12,307	1.70
Meatu	84	64,833	0.1	47	1.79
Bariadi	0	31,193	0.0	0	0.00
Shinyanga Urban	268	7,505	3.6	464	0.58
Kishapu	164	35,494	0.5	243	0.67
Total	28,067.0	400,270	100.0	18,825	0.45

7.5 Total Area Planted with Oranges by District - Kahama District

BANANA					
District	Area planted with Banana (Ha)	Total Area planted (ha)	% of Total Area Planted	hh with Banana	Average Planted Area per Household
Shinyanga Rural		101,952	0.00	0	0.00
Meatu		35,159	0.00	0	0.00
Maswa		44,228	0.00	0	0.00
Bukombe	526.0	79,905	0.66	1,553	0.34
Shinyanga Urban	19.0	64,833	0.03	124	0.15
Kahama	3,197	31,193	10.25	1,689	1.89
Bariadi		7,505	0.00	0	0.00
Kishapu	21.0	35,494	0.1	70	0.30
Total	3,763.0	364,775	10.94	3,436	1.10

7.6 Total Area Planted with Banana by District - Kahama District

PAWPAW					
District	Area planted with banana(Ha)	Total Area planted (ha)	% of Total Area Planted	hh with bananas	Average Planted Area per Household
Shinyanga Rural		101,952	0.00		0.00
Maswa		35,159	0.00	217	0.00
Bariadi	30.0	44,228	0.07	528	0.06
Meatu	8.0	79,905	0.01	83	0.10
Shinyanga Urban	85.0	64,833	0.13	314	0.27
Bukombe	351.0	31,193	1.13	597	0.59
Kahama	5,635.0	7,505	75.09	2,932	1.92
Kishapu	167.0	35,494	0.47	406	0.41
Total	6,276.0	364,775	1.72	5,077	1.24

AGROPROCESSING

8.0a: Number of Crops Growing Households reported to have Processed Farm Products by District; 2002/03 Agricultural Year

District	Households That Processed Crops		Households that did not Process Crops		Total	
	Number	%	Number	%	Number	%
Bariadi	66,411	86	11,160	14	77,572	100
Maswa	32,508	75	10,744	25	43,252	100
Shinyanga Rural	42,740	94	2,523	6	45,263	100
Kahama	79,018	97	2,199	3	81,217	100
Bukombe	49,297	93	3,943	7	53,240	100
Meatu	26,461	84	5,031	16	31,492	100
Shinyanga Urban	4,251	42	5,947	58	10,198	100
Kishapu	28,145	79	7,479	21	35,624	100
Total	328,832	87	49,026	13	377,857	100

8.0b: Number of Crops Growing Households by Method of Processing and District; 2002/03 Agricultural Year

District	Method of Processing								
	On Farm by Hand	On Farm by Machine	Neighbour Machine	By Farmers Association	operative Union	By Trader	Scale Farm	Other	Total
Bariadi	6,158	4,444	49,488	0	0	6,322	-	0	81,783
Maswa	1,879	758	24,907	-	0	4,856	0	108	36,364
Shinyanga Rural	6,776	705	18,057	-	204	16,596	-	401	43,887
Kahama	22,398	945	55,392	0	139	-	0	144	6,162
Bukombe	3,332	836	31,595	0	0	13,534	0	-	5,133
Meatu	8,901	406	14,421	166	249	83	1988	247	43,919
Shinyanga Urban	936	56	2,744	0	0	485	31	0	18,537
Kishapu	1,209	1,922	24,634	0	0	141	82	157	
Total	51,589	10,071	221,237	166	593	42,017	2,101	1,057	235,784
%	21.88	4.27	93.83	0.07	0.25	17.82	0.89	0.45	139.46

8.1.1a AGROPROCESSING: Number of Crop Growing Households Processing Crops During 2002/03 Agricultural Year By Location and

Crop	Method of Processing								
	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Farmers Association	By Co-operative Union	By Trader	On Large Scale Farm	Other	Total
Bambaranut	1,499	0	0	0	0	0	0	31	1,530
Beans	7,823	0	1,282	0	0	0	0	128	9,234
Bulrush Millet	0	0	2,324	0	0	297	31	0	2,652
Cabbage	15	0	285	0	0	0	0	0	301
Cassava	5,433	0	3,964	0	0	0	0	260	9,657
Chick Peas	3,630	0	950	0	0	404	0	1,587	6,571
Cotton	1,392	0	1,366	2,368	1,882	201	6,799	0	14,008
Cowpeas	5,275	0	133	0	0	0	0	142	5,549
Finger Millet	0	0	83	0	0	0	0	0	83
Green Gram	1,792	0	0	0	0	0	0	0	1,792
Groundnut	73,472	157	2,945	0	82	1,081	83	7,675	85,495
Irish Potatoes	242	0	0	0	0	0	0	0	242
Maize	42,439	9,558	206,256	83	343	41,995	82	227	300,983
Mango	139	0	0	0	0	0	0	0	139
Paddy	28,780	2,592	69,238	119	102	14,671	0	174	115,678
Pigeon Peas	812	0	178	0	0	0	0	179	1,169
Pyrethrum	0	0	142	0	0	0	0	0	142
Simsim	81	0	0	0	0	99	0	0	180
Sorghum	7,636	1,149	33,510	0	179	2,211	0	0	44,686
Sunflower	141	0	0	0	0	200	99	0	441
Sweet Potatoes	15,592	0	83	83	0	0	0	2,509	18,267
Tobacco	0	0	1,631	0	0	0	0	0	1,631
Tomatoes	81	0	0	0	0	0	0	0	81
Yams	32	0	0	0	0	0	0	0	32

8.1.1b AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm

	Product Use					
Crop	Human Consumption	Fuel for Cooking	Sale Only	Animal Consumption	Did Not Use	Total
Maize	298,104	790	635	690	764	300,983
Paddy	111,647	295	2,458	857	420	115,678
Sorghum	44,428	0	0	83	175	44,686
Bulrush Millet	2,623	0	0	29	0	2,652
Finger Millet	83	0	0	0	0	83
Cassava	9,445	0	212	0	0	9,657
Sweet Potatoes	17,915	0	238	114	0	18,267
Irish Potatoes	242	0	0	0	0	242
Yams	32	0	0	0	0	32
Beans	8,971	119	143	0	0	9,234
Cowpeas	5,468	0	82	0	0	5,549
Green Gram	1,792	0	0	0	0	1,792
Pigeon Peas	991	0	178	0	0	1,169
Chick Peas	6,431	0	141	0	0	6,571
Bambaranut	1,530	0	0	0	0	1,530
Sunflower	100	0	341	0	0	441
Simsim	81	0	99	0	0	180
Groundnut	83,378	303	1,139	60	614	85,495
Cotton	2,529	83	9,948	287	1,161	14,008
Tobacco	1,520	0	110	0	0	1,631
Pyrethrum	142	0	0	0	0	142
Mango	139	0	0	0	0	139
Cabbage	301	0	0	0	0	301
Tomatoes	81	0	0	0	0	81
Total	597,975	1,590	15,724	2,121	3,135	620,545

8.1.1c AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural

	Where Sold									
Crop	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Maize	4,490	2,534	422	405	98	451	1,019	324	291,240	300,983
Paddy	7,635	7,019	141	282	250	209	1,001	1,391	97,750	115,678
Sorghum	722	0	54	187	95	81	329	0	43,218	44,686
Bulrush Millet	78	0	0	29	0	0	0	0	2,545	2,652
Finger Millet	0	0	0	0	0	0	0	0	83	83
Cassava	883	455	0	0	0	0	119	264	7,935	9,657
Sweet Potatoes	0	0	54	0	0	0	101	0	18,112	18,267
Irish Potatoes	0	0	0	0	0	0	0	0	242	242
Yams	0	0	0	0	0	0	0	0	32	32
Beans	304	119	0	0	0	0	0	0	8,810	9,234
Cowpeas	0	0	0	143	0	0	0	0	5,406	5,549
Green Gram	102	0	0	0	0	0	0	0	1,690	1,792
Pigeon Peas	0	178	0	0	0	0	0	0	991	1,169
Chick Peas	102	811	101	0	0	0	0	0	5,558	6,571
Bambaranut	0	285	0	0	0	0	0	0	1,245	1,530
Sunflower	0	0	0	101	0	0	0	0	340	441
Simsim	0	0	0	0	0	0	0	0	180	180
Groundnut	4,506	1,814	382	217	101	182	849	708	76,736	85,495
Cotton	95	187	0	7,002	4,016	0	0	235	2,473	14,008
Tobacco	110	0	0	0	0	0	0	0	1,520	1,631
Pyrethrum	142	0	0	0	0	0	0	0	0	142
Mango	0	0	0	0	0	0	0	0	139	139
Cabbage	0	0	0	0	0	0	0	0	301	301
Tomatoes	0	0	0	0	0	0	0	0	81	81
Total	19,169	13,403	1,155	8,366	4,558	923	3,418	2,922	566,630	620,545

8.1.1d AGRO PROCESSING: Number of Crop Growing Households By Main Product and District During 2002/03 Agriculture Year, Kahama Region

	Main Product						
District	Flour / Meal	Grain	Oil	Juice	Pulp	Other	Total
Bariadi	63,408	2,118	351	0	0	534	66,411
Maswa	27,055	4,641	500	0	0	311	32,508
Shinyanga Rural	31,990	9,751	505	0	91	402	42,740
Kahama	3,865	74,837	86	0	0	230	79,018
Bukombe	41,670	7,627	0	0	0	0	49,297
Meatu	21,313	1,752	1,181	81	83	2,050	26,461
Shinyanga Urban	3,317	840	63	0	0	32	4,251
Kishapu	25,404	2,338	242	80	0	81	28,145
Total	218,022	103,903	2,929	161	175	3,641	328,832

8.1.1e AGRO PROCESSING: Number of Crop Growing Households By Use of Primary Processed Product and District during 2002/03 Agriculture Year, Kahama Region

	Product Use					
District	Household /Human	Fuel for Cooking	Sale Only	Animal Consumption	Did Not Use	Total
Bariadi	66,232	179	0	0	0	66,411
Maswa	32,090	108	310	0	0	32,508
Shinyanga Rural	41,945	102	298	193	201	42,740
Kahama	77,779	270	284	287	397	79,018
Bukombe	48,700	239	119	0	239	49,297
Meatu	24,101	0	1,309	165	886	26,461
Shinyanga Urban	4,129	0	31	92	0	4,251
Kishapu	27,982	0	0	81	82	28,145
Total	322,958	898	2,352	819	1,806	328,832

8.1.1f AGRO PROCESSING: Number of Crop Growing Households By Where Product Sold and District During 2002/03 Agriculture Year, Kahama Region

	Where Sold									
District	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Bariadi	529	174	176	0	0	179	0	0	65,353	66,411
Maswa	634	650	217	108	0	108	108	0	30,682	32,508
Shinyanga Rural	495	203	0	203	0	0	102	102	41,635	42,740
Kahama	2,999	1,344	0	144	98	0	571	269	73,594	79,018
Bukombe	914	953	0	0	0	0	239	0	47,191	49,297
Meatu	0	0	138	1,474	994	0	0	0	23,855	26,461
Shinyanga Urban	63	129	0	29	0	0	0	64	3,966	4,251
Kishapu	239	0	0	159	0	163	0	160	27,423	28,145
Total	5,874	3,453	531	2,118	1,091	451	1,020	594	313,699	328,832

8.1.1g AGRO PROCESSING: Number of Crop Growing Households By type of By-Product and District During 2002/03 Agriculture Year, Kahama Region

	By Product										
District	Bran	Cake	Husk	Juice	Fiber	Pulp	Oil	Shell	No by-product	Other	Total
Bariadi	2,813	178	10,625	178	179	0	0	4,035	48,403	0	66,411
Maswa	9,549	203	6,795	108	0	0	95	1,483	14,073	202	32,508
Shinyanga Rural	2,615	399	15,973	0	102	202	102	2,001	21,345	0	42,740
Kahama	72,791	141	2,691	0	0	144	0	733	2,408	110	79,018
Bukombe	9,917	119	7,238	0	0	0	0	1,061	30,961	0	49,297
Meatu	712	256	82	0	81	162	82	490	24,595	0	26,461
Shinyanga Urban	2,167	0	841	0	0	0	32	95	1,117	0	4,251
Kishapu	1,178	82	2,653	245	0	81	163	2,275	21,468	0	28,145
Total	101,742	1,379	46,899	531	362	590	473	12,174	164,368	313	328,832

MARKETING

10.1 Number of Crop Growing Households Reported to have Sold Agricultural Produce by District during 2002/03 District, Kahama Region

District	Households that Sold		Households that Did not Sell		Total Number of households
	Number	%	Number	%	
Bariadi	51,136	65.9	26,436	34.1	77,572
Maswa	34,296	79.3	8,956	20.7	43,252
Shinyanga Rural	19,829	43.8	25,434	56.2	45,263
Kahama	47,924	59.0	33,293	41.0	81,217
Bukombe	28,751	54.0	24,489	46.0	53,240
Meatu	18,658	59.2	12,833	40.8	31,492
Shinyanga Urban	770	7.6	9,428	92.4	10,198
Kishapu	17,952	50.4	17,671	49.6	35,624
Total	219,317	58.0	158,540	42.0	377,857

10.2 Number of Households who Reported Marketing Problems by District during 2002/03 Agricultural Year

District	Open Market Price Too Low	No Transport	Transport Cost Too High	Market too Far	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Lack of Market Information	Other	Total
Bariadi	3,795	358	174	537	0	177	0	0	0	-	5,041
Maswa	757	0	0	0	0	0	0	0	0	-	757
Shinyanga Rural	6,143	204	99	504	0	0	0	0	0	-	6,950
Kahama	11,651	826	1,264	1,394	142	98	0	0	286	408	16,068
Bukombe	11,778	239	1,434	597	0	0	113	239	239	352	14,991
Meatu	5,824	164	47	570	0	393	749	0	329	823	8,899
Shinyanga Urban	212	30	0	0	0	0	0	0	0	-	242
Kishapu	244	82	81	0	0	0	0	82	0	321	809
Total	40,404	1,903	3,099	3,602	142	667	862	321	854	1,903	53,757

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

District	Price Too Low	Production Insufficient to Sell	Market Too Far	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Other	Not applicable	Total
Bariadi	884	27,922	169	342	534	-	2,960	43,552	76,363
Maswa	433	8,829	-	-	433	-	2,968	30,371	43,035
Shinyanga Rural	300	23,259	99	303	-	102	1,194	19,200	44,457
Kahama	2,241	34,141	143	416	254	421	573	35,351	73,539
Bukombe	2,183	25,103	-	119	119	238	1,672	22,974	52,409
Meatu	924	13,118	-	-	-	-	945	15,077	30,065
Shinyanga Urban	229	7,726	32	245	-	62	493	1,126	9,914
Kishapu	732	20,347	-	-	163	81	1,675	12,229	35,227
Total	7,925	160,445	442	1,427	1,503	905	12,481	179,880	365,008

IRRIGATION / EROSION CONTROL

11.1 IRRIGATION: 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 households
	Number of Household	%	Number of Household	%	
Bariadi	1,569	2	76,003	98	77,572
Maswa	1,613	4	41,639	96	43,252
Shinyanga Rural	1,522	3	43,741	97	45,263
Kahama	1,559	2	79,658	98	81,217
Bukombe	468	1	52,772	99	53,240
Meatu	81	0	31,411	100	31,492
Shinyanga Urban	489	5	9,709	95	10,198
Kishapu	1,277	4	34,347	96	35,624
Total	8,578	2	369,279	98	377,857

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)	%
Bariadi	331	302	91
Maswa	1,615	1,505	93
Shinyanga Rural	886	589	67
Kahama	411	291	71
Bukombe	308	299	97
Meatu	131	66	50
Shinyanga Urban	186	157	85
Kishapu	1,044	646	
Total	4,912	3,856	78

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	Dam	Well	Borehole	Canal	Pipe water	Total
Bariadi	1,217	0	352	0	0	0	1,569
Maswa	101	108	0	0	1,404	0	1,613
Shinyanga Rural	713	102	401	0	306	0	1,522
Kahama	0	1,135	425	0	0	0	1,559
Bukombe	0	229	119	0	119	0	468
Meatu	81	0	0	0	0	0	81
Shinyanga Urban	193	0	188	23	0	85	489
Kishapu	1,195	82	0	0	0	0	1,277
Total	3,501	1,655	1,485	23	1,829	85	8,578
%	41	19	17	0	21	1	100

11.4 IRRIGATION: Number of Agriculture Households by method of used to obtain water and district during 2002/03 agriculture year

District	Method of Obtaining Water					
	Gravity	Hand Bucket	Hand Pump	Motor Pump	Other	Total
Bariadi	179	1,212	178	0	0	1,569
Maswa	1,404	210	0	0	0	1,613
Shinyanga Rural	510	910	0	0	102	1,522
Kahama	143	1,416	0	0	0	1,559
Bukombe	348	119	0	0	0	468
Meatu	81	0	0	0	0	81
Shinyanga Urban	32	369	32	23	32	489
Kishapu	730	547	0	0	0	1,277
Total	3,427	4,783	211	23	134	8,578
%	39.9	55.8	2.5	0.3	1.6	100

11.5 IRRIGATION: Number of Agriculture Households by Method of Field Application of Irrigation Water and District for the 2002/03 Agricultural Year

District	Method of field Application				
	Flood	Sprinkler	Water Hose	Bucket / Watering Can	Total
Bariadi	0	0	178	1,391	1,569
Maswa	1,404	0	0	210	1,613
Shinyanga Rural	612	0	0	910	1,522
Kahama	428	0	0	1,131	1,559
Bukombe	348	0	0	119	468
Meatu	81	0	0	0	81
Shinyanga Urban	32	63	23	371	489
Kishapu	730	0	0	547	1,277
Total	3,635	63	202	4,678	8,578
%	42	1	2	55	100

11.6 EROSION CONTROL: 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		Total Number of households
	Number	%	Number	%	
Bariadi	3,675	5	73,897	95	77,572
Maswa	1,500	3	41,752	97	43,252
Shinyanga Rural	4,022	9	41,241	91	45,263
Kahama	3,194	4	78,023	96	81,217
Bukombe	358	1	52,882	99	53,240
Meatu	577	2	30,915	98	31,492
Shinyanga Urban	754	7	9,444	93	10,198
Kishapu	1,119	3	34,504	97	35,624
Total	15,199	4	362,658	96	377,857

11.7 EROSION CONTROL: Number of Erosion Control/Water Harvesting Structures by Type and District as of 2002/03 agriculture year

District	Type of Erosion Control								
	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Dam	Total Number of Structures
Bariadi	.	7,159	.	.	18,685	4,871	887	.	31,603
Maswa	.	11,757	325	.	108	759	.	.	12,949
Shinyanga Rural	.	102,581	1,327	.	.	102	705	.	104,714
Kahama	131	3,155	.	4,274	.	14,160	1,815	.	23,535
Bukombe	.	478	.	358	.	.	.	.	836
Meatu	.	8,858	.	83	333	826	.	.	10,100
Shinyanga Urban	.	4,224	.	.	.	152	124	.	4,500
Kishapu	.	1,025	.	.	.	2,693	5,112	79	8,908
Total	131	139,237	1,652	4,716	19,127	23,561	8,643	79	197,146

ACCESS TO FARM INPUTS / IMPLEMENTS

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

District	Number of Agricultural Households Using Chemical Fertilizers		Number of Agricultural Households NOT Using Chemical Fertilizers		Total	
	Number	%	Number	%	Number	%
Bariadi	535	1	77,036	99	77,572	100
Maswa	324	1	42,928	99	43,252	100
Shinyanga Rural	402	1	44,861	99	45,263	100
Kahama	8,437	10	72,779	90	81,217	100
Bukombe	597	1	52,643	99	53,240	100
Meatu	0	0	31,492	100	31,492	100
Shinyanga Urban	119	1	10,080	99	10,198	100
Kishapu	315	1	35,308	99	35,624	100
Total	10,730	3	367,127	97	377,857	100

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

District	Number of Agricultural Households Using Farm Yard Manure		Number of Agricultural Households NOT Using Farm Yard Manure		Total	
	Number	%	Number	%	Number	%
Bariadi	12,383	16	65,188	84	77,572	100
Maswa	9,126	21	34,126	79	43,252	100
Shinyanga Rural	16,679	37	28,584	63	45,263	100
Kahama	27,407	34	53,931	66	81,337	100
Bukombe	9,019	17	44,221	83	53,240	100
Meatu	4,408	14	27,084	86	31,492	100
Shinyanga Urban	4,201	41	6,029	59	10,230	100
Kishapu	5,189	15	30,596	85	35,785	100
Total	88,413	23	289,758	77	378,171	100

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

District	Number of Agricultural Households Using COMPOST Manure		Number of Agricultural Households NOT Using COMPOST Manure		Total	
	Number	%	Number	%	Number	%
Bariadi	1,937	2	75,634	98	77,572	100
Maswa	1,056	2	42,196	98	43,252	100
Shinyanga Rural	862	2	44,401	98	45,263	100
Kahama	6,134	8	75,083	92	81,217	100
Bukombe	2,270	4	50,970	96	53,240	100
Meatu	83	0	31,409	100	31,492	100
Shinyanga Urban	514	5	9,652	95	10,166	100
Kishapu	1,460	4	34,084	96	35,544	100
Total	14,316	4	363,429	96	377,746	100

Table 12.1.4 ACCESS TO INPUTS: Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Number of Agricultural Households Using Pesticides/Fungicides		Number of Agricultural Households NOT Using Pesticides/Fungicides		Total	
	Number	%	Number	%	Number	%
Bariadi	29,297	38	48,274	62	77,572	100
Maswa	5,212	12	38,040	88	43,252	100
Shinyanga Rural	2,216	5	43,047	95	45,263	100
Kahama	17,551	22	63,666	78	81,217	100
Bukombe	12,399	23	40,841	77	53,240	100
Meatu	8,754	28	22,737	72	31,492	100
Shinyanga Urban	408	4	9,791	96	10,198	100
Kishapu	5,196	15	30,427	85	35,624	100
Total	81,034	21	296,824	79	377,857	100

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

District	Number of Agricultural Households Using Herbicides		Number of Agricultural Households NOT Using Herbicides		Total	
	Number	%	Number	%	Number	%
Bariadi	0	0	77,572	100	77,572	100
Maswa	325	1	42,927	99	43,252	100
Shinyanga Rural	0	0	45,263	100	45,263	100
Kahama	286	0	80,810	100	81,097	100
Bukombe	119	0	53,121	100	53,240	100
Meatu	81	0	31,410	100	31,492	100
Shinyanga Urban	0	0	10,198	100	10,198	100
Kishapu	376	1	35,247	99	35,624	100
Total	1,188	0	376,549	100	377,737	100

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

District	Number of Agricultural Households Using Improved Seeds		Number of Agricultural Households NOT Using Improved Seeds		Total	
	Number	%	Number	%	Number	%
Bariadi	34,676	45	42,896	55	77,572	100
Maswa	21,630	50	21,622	50	43,252	100
Shinyanga Rural	4,475	10	40,788	90	45,263	100
Kahama	18,491	23	62,726	77	81,217	100
Bukombe	10,723	20	42,517	80	53,240	100
Meatu	11,043	35	20,449	65	31,492	100
Shinyanga Urban	1,182	12	9,017	88	10,198	100
Kishapu	16,184	46	19,358	54	35,542	100
Total	118,404	31	259,372	69	377,776	100

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

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Neighbour		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	535	1	0	0	77,036	99	77,572	100
Maswa	108	0	0	0	216	1	0	0	42,928	99	43,252	100
Shinyanga Rural	0	0	0	0	302	1	100	0	44,861	99	45,263	100
Kahama	6,222	8	0	0	2,215	3	0	0	72,779	90	81,217	100
Bukombe	0	0	119	0	478	1	0	0	51,264	99	51,862	100
Meatu	0	0	0	0	0	0	0	0	31,077	100	31,077	100
Shinyanga Urban	0	0	0	0	119	1	0	0	10,080	99	10,198	100
Kishapu	0	0	0	0	235	1	80	0	35,308	99	35,624	100
Total	6,330	2	119	0	4,100	1	181	0	365,334	97	376,064	100

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

District	Co-operative		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Large Scale Farm	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	179	0	177	0	0	0	0	0
Maswa	0	0	0	0	0	0	0	0	0	0	0	0
Shinyanga Rural	0	0	0	0	200	0	102	0	0	0	0	0
Kahama	417	1	230	0	0	0	0	0	144	0	0	0
Bukombe	119	0	239	0	0	0	0	0	0	0	0	0
Meatu	0	0	0	0	0	0	0	0	0	0	82	0
Shinyanga Urban	30	0	94	1	62	1	157	2	0	0	0	0
Kishapu	0	0	81	0	0	0	0	0	0	0	0	0
Total	567	0	643	0	441	0	436	0	144	0	82	0

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

District	Locally Produced by Household		Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	7,336	9	4,692	6	0	0	65,188	84	77,572	100
Maswa	5,798	13	3,005	7	323	1	34,126	79	43,252	100
Shinyanga Rural	10,568	23	5,202	11	606	1	28,584	63	45,263	100
Kahama	16,708	21	8,867	11	1,041	1	53,931	66	81,337	100
Bukombe	6,287	12	2,374	5	0	0	42,842	83	51,862	100
Meatu	2,168	7	2,074	7	83	0	26,836	86	31,243	100
Shinyanga Urban	2,455	24	1,247	12	157	2	6,029	59	10,230	100
Kishapu	3,019	8	2,089	6	0	0	30,596	85	35,785	100
Total	54,339	14	29,550	8	2,211	1	288,132	77	376,544	100

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

District	Local Market / Trade Store		Locally Produced by Household		Neighbour		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	1,224	2	714	1	75,634	98	77,572	100
Maswa	0	0	839	2	217	1	42,196	98	43,252	100
Shinyanga Rural	0	0	679	2	183	0	44,401	98	45,263	100
Kahama	0	0	4,789	6	1,345	2	75,083	92	81,217	100
Bukombe	0	0	2,151	4	119	0	49,592	96	51,862	100
Meatu	0	0	83	0	0	0	30,994	100	31,077	100
Shinyanga Urban	0	0	115	1	400	4	9,652	95	10,166	100
Kishapu	81	0	483	1	895	3	34,084	96	35,544	100
Total	81	0	10,363	3	3,872	1	361,636	96	375,953	100

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

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Crop Buyers	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	2,643	3	0	0	25,801	33	0	0	500	1
Maswa	2,340	5	108	0	2,113	5	542	1	108	0
Shinyanga Rural	204	0	595	1	1,112	2	0	0	306	1
Kahama	8,197	10	286	0	7,316	9	144	0	751	1
Bukombe	1,549	3	473	1	9,067	17	358	1	713	1
Meatu	5,827	19	537	2	1,431	5	629	2	330	1
Shinyanga Urban	32	0	0	0	343	3	0	0	0	0
Kishapu	2,368	7	162	0	1,612	5	0	0	973	3
Total	23,160	6	2,161	1	48,795	13	1,673	0	3,682	1

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

District	Locally Produced by Household		Neighbour		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	175	0	179	0	0	0	48,274	62	77,572	100
Maswa	0	0	0	0	0	0	38,040	88	43,252	100
Shinyanga Rural	0	0	0	0	0	0	43,047	95	45,263	100
Kahama	0	0	857	1	0	0	63,666	78	81,217	100
Bukombe	119	0	0	0	119	0	39,463	76	51,862	100
Meatu	0	0	0	0	0	0	22,487	72	31,242	100
Shinyanga Urban	0	0	32	0	0	0	9,791	96	10,198	100
Kishapu	0	0	81	0	0	0	30,427	85	35,624	100
Total	294	0	1,149	0	119	0	295,195	78	376,229	100

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

District	Co-operative		Local Market / Trade Store		Crop Buyers		Locally Produced by Household		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	0	0	0	0	77,572	100	77,572	100
Maswa	216	1	0	0	108	0	0	0	42,927	99	43,252	100
Shinyanga Rural	0	0	0	0	0	0	0	0	45,263	100	45,263	100
Kahama	144	0	143	0	0	0	0	0	80,810	100	81,097	100
Bukombe	0	0	0	0	0	0	119	0	51,742	100	51,862	100
Meatu	81	0	0	0	0	0	0	0	30,995	100	31,077	100
Shinyanga Urban	0	0	0	0	0	0	0	0	10,198	100	10,198	100
Kishapu	215	1	162	0	0	0	0	0	35,247	99	35,624	100
Total	656	0	305	0	108	0	119	0	374,756	100	375,944	100

Table 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	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	4,532	6	0	0	12,022	15	0	0	1,229	2
Maswa	11,643	27	968	2	3,544	8	1,285	3	203	0
Shinyanga Rural	101	0	1,289	3	2,280	5	0	0	703	2
Kahama	10,657	13	0	0	6,379	8	0	0	0	0
Bukombe	4,649	9	1,553	3	2,613	5	0	0	119	0
Meatu	8,069	26	402	1	1,481	5	495	2	0	0
Shinyanga Urban	32	0	0	0	1,094	11	0	0	0	0
Kishapu	8,712	25	568	2	2,730	8	163	0	80	0
Total	48,394	13	4,779	1	32,143	9	1,943	1	2,335	1

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

District	Crop Buyers		Locally Produced by		Neighbour		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	16,383	21	179	0	332	0	42,896	55	77,572	100
Maswa	3,554	8	108	0	325	1	21,622	50	43,252	100
Shinyanga Rural	102	0	0	0	0	0	40,788	90	45,263	100
Kahama	644	1	123	0	688	1	62,726	77	81,217	100
Bukombe	1,191	2	358	1	239	0	41,139	79	51,862	100
Meatu	415	1	81	0	101	0	20,199	65	31,242	100
Shinyanga Urban	0	0	55	1	0	0	9,017	88	10,198	100
Kishapu	3,455	10	237	1	240	1	19,358	54	35,542	100
Total	25,743	7	1,142	0	1,925	1	257,744	69	376,147	100

Table 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	%
Bariadi	0	0	0	0	0	0	178	33	357	67	535	100
Maswa	216	67	0	0	108	33	0	0	0	0	324	100
Shinyanga Rural	0	0	0	0	0	0	201	50	201	50	402	100
Kahama	3,744	44	2,251	27	1,305	15	575	7	563	7	8,437	100
Bukombe	119	20	0	0	358	60	119	20	0	0	597	100
Shinyanga Urban	0	0	23	20	31	26	64	54	0	0	119	100
Kishapu	79	25	0	0	156	50	80	25	0	0	315	100
Total	4,158	39	2,274	21	1,959	18	1,218	11	1,121	10	10,730	100

Table 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	%	Number	%
Bariadi	11,713	95	493	4	177	1	0	0	0	0	12,383	100
Maswa	8,390	92	420	5	317	3	0	0	0	0	9,126	100
Shinyanga Rural	15,177	91	600	4	101	1	702	4	99	1	16,679	100
Kahama	23,571	86	2,618	10	1,217	4	0	0	0	0	27,407	100
Bukombe	7,235	80	1,187	13	478	5	119	1	0	0	9,019	100
Meatu	3,744	85	414	9	250	6	0	0	0	0	4,408	100
Shinyanga Urban	3,773	90	352	8	45	1	31	1	0	0	4,201	100
Kishapu	4,394	85	714	14	81	2	0	0	0	0	5,189	100
Total	77,998	88	6,798	8	2,664	3	853	1	99	0	88,413	100

Table 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	%	Number	%
Bariadi	1,760	91	177	9	1,937	100
Maswa	947	90	108	10	1,056	100
Shinyanga Rural	862	100	0	0	862	100
Kahama	5,326	87	808	13	6,134	100
Bukombe	2,151	95	119	5	2,270	100
Meatu	83	100	0	0	83	100
Shinyanga Urban	514	100	0	0	514	100
Kishapu	1,460	100	0	0	1,460	100
Total	13,104	92	1,212	8	14,316	100

Table 12.1.16 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	5,402	18	4,938	17	7,197	25	3,709	13	8,051	27	29,297	100
Maswa	1,460	28	951	18	2,483	48	216	4	101	2	5,212	100
Shinyanga Rural	498	22	402	18	202	9	303	14	811	37	2,216	100
Kahama	4,978	28	4,088	23	3,535	20	2,198	13	2,752	16	17,551	100
Bukombe	1,909	15	2,504	20	6,434	52	956	8	596	5	12,399	100
Meatu	2,237	26	2,643	30	2,993	34	414	5	467	5	8,754	100
Shinyanga Urban	32	8	32	8	89	22	222	54	32	8	408	100
Kishapu	1,833	35	567	11	2,147	41	489	9	161	3	5,196	100
Total	18,349	23	16,126	20	25,080	31	8,507	10	12,972	16	81,034	100

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

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Maswa	216	67	0	0	108	33	0	0	0	0	325	100
Kahama	144	50	143	50	0	0	0	0	0	0	286	100
Bukombe	0	0	0	0	0	0	0	0	119	100	119	100
Meatu	0	0	81	100	0	0	0	0	0	0	81	100
Kishapu	148	39	67	18	81	21	81	21	0	0	376	100
Total	508	43	291	24	189	16	81	7	119	10	1,188	100

Table 12.1.18 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Improved Seeds by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	12,902	37	8,536	25	5,647	16	3,530	10	4,062	12	34,676	100
Maswa	6,488	30	5,877	27	7,651	35	758	4	857	4	21,630	100
Shinyanga Rural	1,293	29	682	15	906	20	594	13	1,002	22	4,475	100
Kahama	6,661	36	5,406	29	4,439	24	1,000	5	985	5	18,491	100
Bukombe	3,098	29	2,744	26	3,807	36	717	7	357	3	10,723	100
Meatu	2,612	24	2,865	26	3,945	36	467	4	1,154	10	11,043	100
Shinyanga Urban	63	5	247	21	491	42	285	24	95	8	1,182	100
Kishapu	8,065	50	2,362	15	4,145	26	1,124	7	489	3	16,184	100
Total	41,182	35	28,718	24	31,030	26	8,474	7	9,000	8	118,404	100

Table 12.1.19 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Bank Loan		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	357	67	178	33	0	0	0	0	535	100
Maswa	0	0	324	100	0	0	0	0	324	100
Shinyanga Rural	0	0	302	75	100	25	0	0	402	100
Kahama	7,498	89	431	5	243	3	266	3	8,437	100
Bukombe	358	60	119	20	119	20	0	0	597	100
Shinyanga Urban	64	54	55	46	0	0	0	0	119	100
Kishapu	315	100	0	0	0	0	0	0	315	100
Total	8,592	80	1,409	13	463	4	266	2	10,730	100

Table 12.1.20 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Farm Yard Manure by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Remittances		Bank Loan	
	Number	%	Number	%	Number	%	Number	%
Bariadi	8,568	69	1,713	14	179	1	0	0
Maswa	6,883	75	526	6	432	5	0	0
Shinyanga Rural	12,667	76	1,195	7	403	2	0	0
Kahama	24,123	88	1,043	4	410	1	715	3
Bukombe	6,756	75	119	1	956	11	0	0
Meatu	2,684	61	379	9	83	2	0	0
Shinyanga Urban	3,710	88	277	7	0	0	31	1
Kishapu	4,702	91	324	6	0	0	0	0
Total	70,093	79	5,578	6	2,463	3	745	1

Cont…..Table 12.1.20 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Farm Yard Manure by District, 2002/03 Agricultural Year

District	Produced on form		Other		Total	
	Number	%	Number	%	Number	%
Bariadi	0	0	1,923	16	12,383	100
Maswa	0	0	1,285	14	9,126	100
Shinyanga Rural	0	0	2,414	14	16,679	100
Kahama	0	0	1,116	4	27,407	100
Bukombe	0	0	1,189	13	9,019	100
Meatu	62	1	1,199	27	4,408	100
Shinyanga Urban	0	0	183	4	4,201	100
Kishapu	0	0	163	3	5,189	100
Total	62	0	9,471	11	88,413	100

Table 12.1.21 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying COMPOST Manure by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,760	91	0	0	177	9	0	0	1,937	100
Maswa	839	79	0	0	0	0	217	21	1,056	100
Shinyanga Rural	559	65	0	0	0	0	303	35	862	100
Kahama	5,406	88	630	10	0	0	98	2	6,134	100
Bukombe	1,553	68	0	0	239	11	478	21	2,270	100
Meatu	83	100	0	0	0	0	0	0	83	100
Shinyanga Urban	483	94	0	0	0	0	31	6	514	100
Kishapu	1,297	89	81	6	0	0	81	6	1,460	100
Total	11,981	84	711	5	416	3	1,208	8	14,316	100

Table 12.1.22 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Remittances		Bank Loan		Produced on form	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	22,199	76	6,580	22	0	0	0	0	0	0
Maswa	4,492	86	620	12	99	2	0	0	0	0
Shinyanga Rural	1,610	73	504	23	0	0	0	0	0	0
Kahama	15,473	88	1,383	8	144	1	133	1	0	0
Bukombe	10,608	86	1,552	13	0	0	119	1	0	0
Meatu	4,698	54	2,962	34	0	0	83	1	81	1
Shinyanga Urban	408	100	0	0	0	0	0	0	0	0
Kishapu	3,931	76	1,183	23	82	2	0	0	0	0
Total	63,419	78	14,784	18	325	0	336	0	81	0

Cont…. Table 12.1.22 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Other		Total	
	Number	%	Number	%
Bariadi	519	2	29,297	100
Maswa	0	0	5,212	100
Shinyanga Rural	102	5	2,216	100
Kahama	418	2	17,551	100
Bukombe	119	1	12,399	100
Meatu	930	11	8,754	100
Shinyanga Urban	0	0	408	100
Kishapu	0	0	5,196	100
Total	2,089	3	81,034	100

Table 12.1.23 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Herbicides by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Total	
	Number	%	Number	%	Number	%
Maswa	216	67	108	33	325	100
Kahama	286	100	0	0	286	100
Bukombe	119	100	0	0	119	100
Meatu	81	100	0	0	81	100
Kishapu	148	39	229	61	376	100
Total	851	72	337	28	1,188	100

Table 12.1.24 ACCESS TO INPUTS: Number of Agricultural households and Source of Finance for buying Improved Seeds by District, 2002/03 Agricultural Year

District	Sale of Farm Products		Other Income generating		Remittances		Bank Loan	
	Number	%	Number	%	Number	%	Number	%
Bariadi	25,918	75	7,535	22	163	0	179	1
Maswa	17,398	80	3,054	14	315	1	108	1
Shinyanga Rural	2,686	60	1,489	33	98	2	0	0
Kahama	15,249	82	2,965	16	144	1	133	1
Bukombe	9,171	86	955	9	0	0	119	1
Meatu	5,771	52	4,101	37	81	1	0	0
Shinyanga Urban	815	69	304	26	62	5	0	0
Kishapu	14,111	87	1,831	11	161	1	81	0
Total	91,120	77	22,235	19	1,023	1	620	1

Cont…..Table 12.1.24 ACCESS TO INPUTS: Number of Agricultural households and Source of Finance for buying Improved Seeds by District, 2002/03 Agricultural Year

District	Produced on form		Other		Total	
	Number	%	Number	%	Number	%
Bariadi	0	0	881	3	34,676	100
Maswa	0	0	755	3	21,630	100
Shinyanga Rural	0	0	202	5	4,475	100
Kahama	0	0	0	0	18,491	100
Bukombe	0	0	478	4	10,723	100
Meatu	136	1	954	9	11,043	100
Shinyanga Urban	0	0	0	0	1,182	100
Kishapu	0	0	0	0	16,184	100
Total	136	0	3,270	3	118,404	100

Table 12.1.25 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	28,725	37	43,811	57	348	0	0	0
Maswa	10,123	24	25,565	60	541	1	107	0
Shinyanga Rural	12,233	27	29,590	66	408	1	0	0
Kahama	22,117	30	44,752	61	422	1	572	1
Bukombe	10,476	20	36,095	69	1,195	2	119	0
Meatu	15,510	49	14,287	45	417	1	81	0
Shinyanga Urban	492	5	8,600	85	110	1	0	0
Kishapu	13,901	39	17,800	50	428	1	163	0
Total	113,577	31	220,499	60	3,868	1	1,042	0

Cont…,Table 12.1.25 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Locally Produced by		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,934	3	1,335	2	0	0	884	1	77,036	100
Maswa	1,936	5	3,358	8	216	1	1,082	3	42,928	100
Shinyanga Rural	1,406	3	1,121	2	0	0	102	0	44,861	100
Kahama	1,253	2	2,527	3	0	0	1,136	2	72,779	100
Bukombe	1,772	3	2,746	5	119	0	119	0	52,643	100
Meatu	326	1	448	1	0	0	422	1	31,492	100
Shinyanga Urban	268	3	519	5	0	0	92	1	10,080	100
Kishapu	1,455	4	1,187	3	0	0	373	1	35,308	100
Total	10,350	3	13,242	4	336	0	4,212	1	367,127	100

Table 12.1.26 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	1,951	3	1,592	2	42,580	65	10,355	16
Maswa	11,433	34	8,284	24	7,745	23	3,332	10
Shinyanga Rural	7,467	26	4,244	15	12,137	42	602	2
Kahama	18,154	34	12,632	23	17,539	33	1,491	3
Bukombe	16,054	36	16,183	37	7,353	17	836	2
Meatu	1,686	6	3,464	13	15,262	56	2,309	9
Shinyanga Urban	867	14	2,063	34	2,262	38	297	5
Kishapu	1,853	6	5,152	17	17,636	58	3,491	11
Total	59,464	21	53,614	19	122,514	42	22,713	8

Cont….Table 12.1.26 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Locally Produced by		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	6,152	9	867	1	0	0	1,692	3	65,188	100
Maswa	1,080	3	325	1	0	0	1,927	6	34,126	100
Shinyanga Rural	1,115	4	1,111	4	0	0	1,909	7	28,584	100
Kahama	364	1	2,623	5	123	0	1,002	2	53,931	100
Bukombe	936	2	2,262	5	0	0	597	1	44,221	100
Meatu	1,402	5	834	3	0	0	2,127	8	27,084	100
Shinyanga Urban	182	3	265	4	0	0	93	2	6,029	100
Kishapu	724	2	1,222	4	82	0	436	1	30,596	100
Total	11,955	4	9,509	3	205	0	9,783	3	289,758	100

Table 12.1.27 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	1,948	3	1,935	3	28,193	37	8,135	11
Maswa	4,429	10	3,090	7	13,354	32	2,382	6
Shinyanga Rural	4,757	11	2,222	5	13,967	31	2,015	5
Kahama	8,355	11	6,832	9	38,905	52	3,207	4
Bukombe	11,201	22	9,917	19	17,345	34	2,748	5
Meatu	1,788	6	4,219	13	7,802	25	1,229	4
Shinyanga Urban	895	9	2,998	31	2,068	21	188	2
Kishapu	2,929	9	5,015	15	12,956	38	5,801	17
Total	36,302	10	36,229	10	134,592	37	25,706	7

Cont….Table 12.1.27 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Locally Produced by		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	34,023	45	874	1	0	0	527	1	75,634	100
Maswa	16,371	39	757	2	108	0	1,704	4	42,196	100
Shinyanga Rural	19,711	44	714	2	201	0	814	2	44,401	100
Kahama	13,253	18	3,163	4	656	1	712	1	75,083	100
Bukombe	6,778	13	2,263	4	0	0	717	1	50,970	100
Meatu	12,235	39	2,066	7	167	1	1,903	6	31,409	100
Shinyanga Urban	2,752	29	415	4	0	0	335	3	9,652	100
Kishapu	6,302	18	645	2	81	0	355	1	34,084	100
Total	111,425	31	10,897	3	1,213	0	7,066	2	363,429	100

Table 12.1.28 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	3,199	7	35,092	73	1,064	2	0	0
Maswa	4,391	12	27,937	73	756	2	0	0
Shinyanga Rural	4,842	11	31,863	74	1,014	2	987	2
Kahama	7,706	12	46,014	72	414	1	143	0
Bukombe	2,348	6	31,347	77	1,194	3	119	0
Meatu	937	4	19,155	84	325	1	83	0
Shinyanga Urban	301	3	7,667	78	446	5	0	0
Kishapu	1,361	4	26,728	88	489	2	81	0
Total	25,086	8	225,803	76	5,703	2	1,414	0

Cont….Table 12.1.28 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Bariadi	3,369	7	4,668	10	882	2	48,274	100
Maswa	3,020	8	975	3	960	3	38,040	100
Shinyanga Rural	2,823	7	1,416	3	102	0	43,047	100
Kahama	3,049	5	5,622	9	718	1	63,666	100
Bukombe	1,413	3	4,300	11	119	0	40,841	100
Meatu	579	3	658	3	999	4	22,737	100
Shinyanga Urban	389	4	805	8	184	2	9,791	100
Kishapu	651	2	886	3	230	1	30,427	100
Total	15,292	5	19,330	7	4,195	1	296,824	100

Table 12.1.29 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	30,447	39	22,816	29	866	1	0	0
Maswa	6,135	14	26,942	63	640	1	0	0
Shinyanga Rural	7,114	16	29,258	65	1,322	3	694	2
Kahama	22,937	28	33,166	41	548	1	0	0
Bukombe	11,607	22	29,369	55	1,539	3	239	0
Meatu	9,013	29	14,900	47	327	1	0	0
Shinyanga Urban	432	4	7,325	72	446	4	0	0
Kishapu	5,798	16	23,957	68	870	2	0	0
Total	93,483	25	187,732	50	6,558	2	933	0

Cont…..Table 12.1.29 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Bariadi	17,649	23	5,268	7	527	1	77,572	100
Maswa	5,991	14	1,921	4	1,298	3	42,927	100
Shinyanga Rural	5,049	11	1,520	3	306	1	45,263	100
Kahama	10,395	13	13,620	17	144	0	80,810	100
Bukombe	6,189	12	4,058	8	119	0	53,121	100
Meatu	4,250	14	2,380	8	539	2	31,410	100
Shinyanga Urban	668	7	1,206	12	122	1	10,198	100
Kishapu	3,093	9	1,177	3	352	1	35,247	100
Total	53,284	14	31,151	8	3,408	1	376,549	100

Table 12.1.30 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required	
	Number	%	Number	%	Number	%	Number	%
Bariadi	3,014	7	36,859	86	894	2	357	1
Maswa	3,548	16	16,666	77	433	2	108	1
Shinyanga Rural	7,490	18	31,887	78	509	1	0	0
Kahama	7,597	12	48,247	77	548	1	286	0
Bukombe	3,902	9	35,050	82	1,195	3	119	0
Meatu	1,902	9	17,291	85	244	1	164	1
Shinyanga Urban	381	4	7,800	87	338	4	0	0
Kishapu	1,936	10	16,534	85	327	2	0	0
Total	29,770	11	210,334	81	4,488	2	1,035	0

Cont…….Table 12.1.30 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year

District	Do not Know How to Use		Input is of No Use		Locally Produced by		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	357	1	1,061	2	0	0	353	1	42,896	100
Maswa	217	1	217	1	0	0	433	2	21,622	100
Shinyanga Rural	303	1	599	1	0	0	0	0	40,788	100
Kahama	677	1	3,823	6	256	0	1,293	2	62,726	100
Bukombe	1,175	3	836	2	0	0	239	1	42,517	100
Meatu	411	2	62	0	0	0	376	2	20,449	100
Shinyanga Urban	120	1	196	2	0	0	182	2	9,017	100
Kishapu	82	0	163	1	0	0	316	2	19,358	100
Total	3,342	1	6,957	3	256	0	3,191	1	259,372	100

Table 12.1.31 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Total	
	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	535	100	0	0	535	100
Maswa	324	100	0	0	0	0	324	100
Shinyanga Rural	0	0	301	75	101	25	402	100
Kahama	3,715	44	4,219	50	504	6	8,437	100
Bukombe	358	60	239	40	0	0	597	100
Shinyanga Urban	55	47	63	53	0	0	119	100
Kishapu	78	25	237	75	0	0	315	100
Total	4,531	42	5,595	52	604	6	10,730	100

Table 12.1.32 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Does not Work		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	2,950	24	9,433	76	0	0	0	0	0	0	12,383	100
Maswa	5,246	57	3,447	38	433	5	0	0	0	0	9,126	100
Shinyanga Rural	9,463	57	7,011	42	204	1	0	0	0	0	16,679	100
Kahama	9,231	34	16,806	61	1,228	4	0	0	142	1	27,407	100
Bukombe	4,418	49	4,482	50	119	1	0	0	0	0	9,019	100
Meatu	659	15	3,541	80	208	5	0	0	0	0	4,408	100
Shinyanga Urban	941	22	2,685	64	124	3	452	11	0	0	4,201	100
Kishapu	1,913	37	2,625	51	651	13	0	0	0	0	5,189	100
Total	34,822	39	50,030	57	2,967	3	452	1	142	0	88,413	100

Table 12.1.33 ACCESS TO INPUTS: Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	177	9	1,583	82	177	9	0	0	1,937	100
Maswa	202	19	636	60	217	21	0	0	1,056	100
Shinyanga Rural	191	22	397	46	274	32	0	0	862	100
Kahama	524	9	4,033	66	1,577	26	0	0	6,134	100
Bukombe	717	32	1,195	53	239	11	119	5	2,270	100
Meatu	83	100	0	0	0	0	0	0	83	100
Shinyanga Urban	30	6	484	94	0	0	0	0	514	100
Kishapu	321	22	1,058	72	81	6	0	0	1,460	100
Total	2,245	16	9,387	66	2,565	18	119	1	14,316	100

Table 12.1.34 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Does not Work		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	6,245	21	21,827	75	1,048	4	0	0	178	1	29,297	100
Maswa	1,162	22	3,301	63	749	14	0	0	0	0	5,212	100
Shinyanga Rural	610	28	1,505	68	102	5	0	0	0	0	2,216	100
Kahama	8,279	47	8,855	50	273	2	142	1	0	0	17,551	100
Bukombe	4,059	33	6,907	56	836	7	477	4	119	1	12,399	100
Meatu	1,233	14	5,885	67	1,390	16	247	3	0	0	8,754	100
Shinyanga Urban	129	32	247	61	32	8	0	0	0	0	408	100
Kishapu	1,035	20	3,255	63	617	12	223	4	67	1	5,196	100
Total	22,751	28	51,782	64	5,047	6	1,089	1	365	0	81,034	100

Table 12.1.35 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Maswa	108	33	108	33	108	33	0	0	325	100
Kahama	144	50	143	50	0	0	0	0	286	100
Bukombe	0	0	119	100	0	0	0	0	119	100
Meatu	0	0	81	100	0	0	0	0	81	100
Kishapu	67	18	148	39	81	21	81	21	376	100
Total	319	27	599	50	189	16	81	7	1,188	100

Table 12.1.36 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	%
Bariadi	7,262	21	25,676	74	1,397	4	341	1	0	0	34,676	100
Maswa	9,965	46	10,690	49	758	4	217	1	0	0	21,630	100
Shinyanga Rural	1,407	31	2,968	66	101	2	0	0	0	0	4,475	100
Kahama	6,838	37	11,249	61	404	2	0	0	0	0	18,491	100
Bukombe	4,413	41	4,997	47	478	4	836	8	0	0	10,723	100
Meatu	1,430	13	8,036	73	1,415	13	83	1	79	1	11,043	100
Shinyanga Urban	251	21	822	70	78	7	30	3	0	0	1,182	100
Kishapu	4,406	27	8,029	50	1,890	12	1,860	11	0	0	16,184	100
Total	35,971	30	72,468	61	6,519	6	3,366	3	79	0	118,404	100

Table 12.1.37 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	10,564	14	67,008	86	77,572	100
Maswa	2,940	7	40,312	93	43,252	100
Shinyanga Rural	5,952	13	39,311	87	45,263	100
Kahama	25,676	32	55,541	68	81,217	100
Bukombe	12,051	23	41,189	77	53,240	100
Meatu	2,148	7	29,344	93	31,492	100
Shinyanga Urban	1,198	12	9,000	88	10,198	100
Kishapu	2,933	8	32,691	92	35,624	100
Total	63,462	17	314,395	83	377,857	100

Table 12.1.38 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Farm Yard Manure by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	37,354	48	40,218	52	77,572	100
Maswa	16,721	39	26,531	61	43,252	100
Shinyanga Rural	33,702	74	11,561	26	45,263	100
Kahama	39,548	49	41,789	51	81,337	100
Bukombe	31,203	59	22,038	41	53,240	100
Meatu	17,781	56	13,710	44	31,492	100
Shinyanga Urban	5,374	53	4,857	47	10,230	100
Kishapu	13,950	39	21,834	61	35,785	100
Total	195,634	52	182,537	48	378,171	100

Table 12.1.39 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year COMPOST Manure by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	13,704	18	63,867	82	77,572	100
Maswa	3,456	8	39,796	92	43,252	100
Shinyanga Rural	9,941	22	35,322	78	45,263	100
Kahama	13,060	16	68,157	84	81,217	100
Bukombe	16,846	32	36,394	68	53,240	100
Meatu	6,705	21	24,787	79	31,492	100
Shinyanga Urban	993	10	9,173	90	10,166	100
Kishapu	3,780	11	31,764	89	35,544	100
Total	68,484	18	309,261	82	377,746	100

Table 12.1.40 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	47,935	62	29,637	38	77,572	100
Maswa	11,592	27	31,660	73	43,252	100
Shinyanga Rural	7,173	16	38,090	84	45,263	100
Kahama	34,203	42	47,014	58	81,217	100
Bukombe	27,104	51	26,136	49	53,240	100
Meatu	19,853	63	11,639	37	31,492	100
Shinyanga Urban	1,430	14	8,768	86	10,198	100
Kishapu	12,271	34	23,352	66	35,624	100
Total	161,562	43	216,296	57	377,857	100

Table 12.1.41 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Herbicides by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	4,092	5	73,480	95	77,572	100
Maswa	2,260	5	40,992	95	43,252	100
Shinyanga Rural	2,438	5	42,825	95	45,263	100
Kahama	6,584	8	74,513	92	81,097	100
Bukombe	8,153	15	45,087	85	53,240	100
Meatu	1,532	5	29,960	95	31,492	100
Shinyanga Urban	662	6	9,536	94	10,198	100
Kishapu	3,456	10	32,168	90	35,624	100
Total	29,177	8	348,560	92	377,737	100

Table 12.1.42 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Number of Agricultural		Number of Agricultural		Total	
	Number	%	Number	%	Number	%
Bariadi	47,448	61	30,124	39	77,572	100
Maswa	25,091	58	18,161	42	43,252	100
Shinyanga Rural	21,196	47	24,067	53	45,263	100
Kahama	34,979	43	46,238	57	81,217	100
Bukombe	27,459	52	25,781	48	53,240	100
Meatu	20,064	64	11,427	36	31,492	100
Shinyanga Urban	2,777	27	7,421	73	10,198	100
Kishapu	20,865	59	14,677	41	35,542	100
Total	199,881	53	177,895	47	377,776	100

Table 12.2.1 ACCESS TO EQUIPMENT: Number of Equipment/Assets Owned/ Rented by the Household During 2002/03

District	Implement / Asset Name											
	Hand Hoe		Hand Powered Sprayer		Oxen		Ox Plough		Ox Seed Planter		Ox Cart	
	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented
Bariadi	299,108	876	6,146	15,127	166,411	166,575	41,515	39,254	0	178	7,307	16,680
Maswa	157,151	3,531	7,005	3,398	75,727	86,098	22,267	22,679	325	0	6,168	4,985
Shinyanga Rural	190,969	1,985	3,235	6,544	100,657	86,906	27,251	22,452	0	0	4,043	5,053
Kahama	342,361	14,502	6,467	7,918	89,667	45,568	26,188	14,101	144	0	6,879	3,762
Bukombe	244,232	2,703	6,195	6,088	33,940	8,933	7,529	3,106	0	239	1,413	478
Meatu	128,101	2,982	4,892	4,018	80,458	50,390	15,822	13,176	83	0	4,568	3,138
Shinyanga Urban	36,453	1,308	982	664	17,777	13,708	4,406	3,602	179	0	699	577
Kishapu	140,279	2,773	3,099	4,123	74,090	82,886	20,704	19,576	0	0	4,796	2,896
Total	1,538,653	30,659	38,021	47,880	638,727	541,062	165,681	137,946	731	417	35,873	37,569

Cont…..Table 12.2.1 ACCESS TO EQUIPMENT: Number of Equipment/Assets Owned/ Rented by the Household During 2002/03

District	Implement / Asset Name									
	Tractor		Tractor Plough		Tractor Harrow		Threshers / Shellers		Total	
	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented	Number Owned	Number Rented
Bariadi	175	3,006	175	3,006	0	0	0	0	520,836	244,702
Maswa	0	406	0	406	202	0	0	0	268,845	121,503
Shinyanga Rural	102	204	0	102	0	102	0	0	326,257	123,348
Kahama	143	139	143	139	0	0	0	0	471,991	86,130
Bukombe	0	239	0	239	0	239	0	239	293,309	22,502
Meatu	333	891	250	1,141	0	0	0	0	234,505	75,735
Shinyanga Urban	120	0	0	0	0	0	0	0	60,616	19,859
Kishapu	0	245	0	245	569	0	0	0	243,538	112,743
Total	872	5,131	567	5,278	772	341	0	239	2,419,897	806,521

Table 12.2.2 ACCESS TO EQUIPMENT: Number of Agricultural Households that used Farm Implements/Assets in 2002/03 by District, 2002/03 Agricultura Year

District	Implement / Asset Name									
	Hand Hoe	Hand Powered Sprayer	Oxen	Ox Plough	Ox Seed Planter	Ox Cart	Tractor	Tractor Plough	Tractor Harrow	Threshers / Shellers
Bariadi	77,397	21,112	68,925	68,907	178	22,937	3,006	3,006	0	0
Maswa	42,617	6,842	35,057	32,307	325	9,637	406	406	101	0
Shinyanga Rural	45,263	7,849	39,770	39,575	0	8,382	204	102	102	0
Kahama	81,086	13,524	31,785	31,515	144	9,815	282	282	0	0
Bukombe	52,300	11,687	9,331	8,032	239	1,772	239	239	239	239
Meatu	31,069	6,880	25,962	22,737	83	7,056	1,141	1,141	0	0
Shinyanga Urban	9,964	876	7,018	6,386	30	1,276	30	0	0	0
Kishapu	35,242	5,312	31,885	30,294	0	7,449	245	245	81	0
Total	374,937	74,081	249,732	239,752	999	68,324	5,553	5,421	524	239

Table 12.2.3 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using Hand Hoe by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Equipment / Asset of No Use		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	0	0	0	0	175	100	175	100
Maswa	0	0	318	60	216	40	0	0	0	0	534	100
Kahama	0	0	0	0	131	100	0	0	0	0	131	100
Bukombe	223	24	239	25	119	13	358	38	0	0	940	100
Meatu	0	0	256	61	0	0	167	39	0	0	423	100
Shinyanga Urban	15	7	157	77	0	0	32	16	0	0	205	100
Kishapu	0	0	239	80	61	20	0	0	0	0	300	100
Total	238	9	1,210	45	527	19	557	21	175	6	2,707	100

Table 12.2.4 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using Hand Powered Sprayer by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	7,155	13	18,375	33	22,521	40	0	0	8,052	14	357	1	56,460	100
Maswa	3,628	10	18,417	51	10,903	30	0	0	3,029	8	432	1	36,410	100
Shinyanga Rural	4,839	13	14,192	38	9,250	25	199	1	8,630	23	303	1	37,414	100
Kahama	4,113	6	29,458	44	15,162	22	0	0	18,959	28	0	0	67,693	100
Bukombe	1,861	5	25,762	63	8,835	22	119	0	4,148	10	239	1	40,964	100
Meatu	3,398	14	9,476	38	7,425	30	0	0	4,147	17	332	1	24,778	100
Shinyanga Urban	387	4	5,846	63	1,847	20	62	1	1,057	11	122	1	9,322	100
Kishapu	2,677	9	18,953	62	5,236	17	82	0	3,363	11	81	0	30,392	100
Total	28,059	9	140,479	46	81,179	27	463	0	51,386	17	1,868	1	303,433	100

Table 12.2.5 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OXEN by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	99	1	1,541	18	6,649	77	198	2	161	2	0	0	8,647	100
Maswa	107	1	5,105	62	2,780	34	95	1	108	1	0	0	8,195	100
Shinyanga Rural	0	0	2,016	37	3,374	61	0	0	0	0	102	2	5,493	100
Kahama	847	2	21,541	44	26,476	54	0	0	428	1	141	0	49,432	100
Bukombe	1,049	2	25,570	59	14,325	33	597	1	1,540	4	119	0	43,200	100
Meatu	0	0	2,427	45	2,504	46	164	3	164	3	188	3	5,447	100
Shinyanga Urban	64	2	1,592	50	1,267	40	62	2	195	6	0	0	3,181	100
Kishapu	0	0	2,035	54	1,703	46	0	0	0	0	0	0	3,739	100
Total	2,166	2	61,827	49	59,078	46	1,116	1	2,597	2	550	0	127,333	100

Table 12.2.6 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX Plough by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	457	5	1,912	22	5,938	69	198	2	161	2	0	0	8,665	100
Maswa	108	1	5,732	52	4,901	45	95	1	108	1	0	0	10,945	100
Shinyanga Rural	0	0	2,418	43	3,270	57	0	0	0	0	0	0	5,688	100
Kahama	1,138	2	21,191	43	26,945	54	0	0	429	1	0	0	49,702	100
Bukombe	944	2	26,390	59	15,507	35	119	0	1,420	3	119	0	44,499	100
Meatu	62	1	3,111	36	4,981	57	164	2	164	2	271	3	8,754	100
Shinyanga Urban	93	2	1,853	49	1,472	39	62	2	301	8	32	1	3,812	100
Kishapu	158	3	3,013	57	2,080	39	0	0	79	1	0	0	5,330	100
Total	2,960	2	65,620	48	65,093	47	638	0	2,663	2	422	0	137,397	100

Table 12.2.7 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX SEED PLANTER by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	30,404	39	14,784	19	20,987	27	179	0	10,506	14	533	1	77,394	100
Maswa	12,820	30	15,541	36	13,266	31	0	0	1,192	3	108	0	42,927	100
Shinyanga Rural	16,939	38	16,703	37	8,692	19	0	0	2,826	6	0	0	45,161	100
Kahama	13,960	17	24,937	31	37,274	46	135	0	4,767	6	0	0	81,073	100
Bukombe	7,885	15	23,702	45	18,216	35	239	0	2,131	4	0	0	52,173	100
Meatu	10,946	35	8,671	28	9,937	32	0	0	1,726	6	47	0	31,327	100
Shinyanga Urban	2,156	21	4,458	44	2,977	29	95	1	513	5	0	0	10,198	100
Kishapu	6,740	19	19,023	53	7,430	21	0	0	2,430	7	0	0	35,624	100
Total	101,851	27	127,820	34	118,780	32	648	0	26,090	7	688	0	375,877	100

Table 12.2.8 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using OX CART by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,276	2	15,413	28	29,886	55	179	0	7,712	14	169	0	54,634	100
Maswa	1,690	5	13,249	39	17,309	51	0	0	1,151	3	216	1	33,615	100
Shinyanga Rural	1,012	3	15,656	42	19,311	52	102	0	699	2	101	0	36,881	100
Kahama	794	1	25,123	35	42,857	60	98	0	2,410	3	120	0	71,402	100
Bukombe	2,066	4	25,623	50	21,179	42	239	0	1,653	3	0	0	50,760	100
Meatu	175	1	12,120	50	11,194	46	0	0	752	3	195	1	24,436	100
Shinyanga Urban	270	3	4,254	48	3,766	42	62	1	570	6	0	0	8,922	100
Kishapu	326	1	18,056	64	8,094	29	0	0	1,537	5	82	0	28,095	100
Total	7,608	2	129,496	42	153,595	50	680	0	16,483	5	883	0	308,745	100

Table 12.2.9 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,588	2	32,834	44	34,915	47	0	0	5,061	7	169	0	74,566	100
Maswa	3,220	8	19,087	45	19,572	46	0	0	751	2	216	1	42,846	100
Shinyanga Rural	6,055	13	19,348	43	19,050	42	0	0	606	1	0	0	45,059	100
Kahama	8,569	11	32,609	40	34,101	42	278	0	5,378	7	0	0	80,935	100
Bukombe	4,882	9	17,363	33	27,904	53	119	0	2,025	4	0	0	52,293	100
Meatu	504	2	14,782	49	14,476	48	0	0	331	1	94	0	30,186	100
Shinyanga Urban	686	7	4,160	41	4,825	47	32	0	465	5	0	0	10,168	100
Kishapu	163	0	16,265	46	16,355	46	0	0	2,514	7	82	0	35,379	100
Total	25,666	7	156,448	42	171,197	46	429	0	17,130	5	560	0	371,431	100

Table 12.2.10 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR PLOUGH by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,942	3	32,474	44	33,491	45	0	0	6,312	8	347	0	74,566	100
Maswa	2,812	7	18,671	44	20,388	48	0	0	758	2	216	1	42,846	100
Shinyanga Rural	5,950	13	19,443	43	19,364	43	0	0	405	1	0	0	45,161	100
Kahama	8,734	11	33,046	41	33,099	41	141	0	5,915	7	0	0	80,935	100
Bukombe	5,206	10	16,659	32	28,396	54	0	0	2,031	4	0	0	52,293	100
Meatu	550	2	15,935	53	13,441	44	0	0	331	1	94	0	30,351	100
Shinyanga Urban	593	6	4,235	42	4,752	47	64	1	554	5	0	0	10,198	100
Kishapu	241	1	16,487	47	16,055	45	0	0	2,514	7	82	0	35,379	100
Total	26,028	7	156,951	42	168,985	45	205	0	18,821	5	739	0	371,728	100

Table 12.2.11 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using TRACTOR HARROW by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	15,614	20	24,492	32	26,617	34	0	0	10,685	14	163	0	77,572	100
Maswa	5,582	13	17,227	40	19,252	45	0	0	975	2	216	1	43,252	100
Shinyanga Rural	6,253	14	17,646	39	19,952	44	0	0	1,310	3	0	0	45,161	100
Kahama	12,083	15	30,072	37	32,331	40	141	0	6,589	8	0	0	81,217	100
Bukombe	5,672	11	15,986	31	27,905	53	0	0	2,729	5	0	0	52,293	100
Meatu	2,716	9	14,194	45	10,965	35	0	0	3,569	11	47	0	31,492	100
Shinyanga Urban	619	6	4,444	44	4,424	43	32	0	680	7	0	0	10,198	100
Kishapu	731	2	16,530	46	15,015	42	0	0	3,266	9	82	0	35,624	100
Total	49,271	13	140,592	37	156,460	42	173	0	29,804	8	508	0	376,808	100

Table 12.2.12 ACCESS TO EQUIPMENT: Number of Agricultural Households NOT using THRESHERS/SHELLERS by Main Reason for NOT using and District

District	Not Available		Price Too High		No Money to Buy / Rent		Too Much Labour Required		Equipment / Asset of No		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	23,919	31	16,968	22	22,115	29	354	0	13,693	18	523	1	77,572	100
Maswa	9,114	21	15,301	35	17,430	40	0	0	1,191	3	216	1	43,252	100
Shinyanga Rural	9,987	22	16,902	37	15,646	35	0	0	2,625	6	102	0	45,263	100
Kahama	13,431	17	28,483	35	32,424	40	0	0	6,633	8	247	0	81,217	100
Bukombe	18,922	36	17,645	34	13,820	26	0	0	1,905	4	0	0	52,293	100
Meatu	5,628	18	11,333	36	9,095	29	0	0	5,341	17	94	0	31,492	100
Shinyanga Urban	1,926	19	4,179	41	3,111	31	32	0	950	9	0	0	10,198	100
Kishapu	3,999	11	16,190	45	12,432	35	0	0	2,920	8	82	0	35,624	100
Total	86,927	23	127,001	34	126,074	33	386	0	35,258	9	1,264	0	376,910	100

Table 12.2.13 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning Hand Hoes by Source of Finance and District

District	Sale of Farm Products		Other Income Generating		Remittances		Bank Loan		Credit		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	52,198	67	21,152	27	1,067	1	178	0	169	0	2,634	3	77,397	100
Maswa	35,271	84	4,062	10	1,381	3	216	1	0	0	1,186	3	42,116	100
Shinyanga Rural	33,165	74	8,985	20	399	1	0	0	204	0	2,205	5	44,958	100
Kahama	64,828	80	12,916	16	1,242	2	144	0	282	0	1,544	2	80,956	100
Bukombe	44,112	85	5,581	11	351	1	119	0	239	0	1,777	3	52,180	100
Meatu	22,822	74	4,789	16	81	0	247	1	83	0	2,874	9	30,896	100
Shinyanga Urban	6,657	67	2,791	28	238	2	64	1	31	0	124	1	9,904	100
Kishapu	31,157	89	3,435	10	80	0	245	1	0	0	244	1	35,160	100
Total	290,210	78	63,709	17	4,840	1	1,213	0	1,008	0	12,588	3	373,568	100

Table 12.2.14 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning Hand Powered Sprayer by Source of Finance and District

District	Sale of Farm Products		Other Income Generating		Credit		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	3,523	59	2,462	41	0	0	0	0	5,985	100
Maswa	3,443	100	0	0	0	0	0	0	3,443	100
Shinyanga Rural	1,713	77	400	18	0	0	102	5	2,214	100
Kahama	5,614	89	567	9	0	0	144	2	6,325	100
Bukombe	5,240	90	358	6	239	4	0	0	5,837	100
Meatu	2,390	79	564	19	0	0	83	3	3,037	100
Shinyanga Urban	344	100	0	0	0	0	0	0	344	100
Kishapu	1,704	89	140	7	81	4	0	0	1,926	100
Total	23,971	82	4,491	15	320	1	328	1	29,111	100

Table 12.2.15 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OXEN by Source of Finance and District

District	Sale of Farm Products		Other Income Generating		Remittances		Bank Loan		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	21,647	69	4,957	16	355	1	0	0	4,543	14	31,502	100
Maswa	14,080	92	433	3	325	2	0	0	528	3	15,365	100
Shinyanga Rural	15,423	78	2,106	11	918	5	0	0	1,416	7	19,863	100
Kahama	18,800	90	1,153	6	141	1	144	1	553	3	20,791	100
Bukombe	6,590	95	119	2	0	0	0	0	239	3	6,949	100
Meatu	9,992	67	954	6	83	1	0	0	3,774	25	14,804	100
Shinyanga Urban	3,111	84	423	11	0	0	0	0	154	4	3,687	100
Kishapu	12,134	86	716	5	158	1	0	0	1,042	7	14,048	100
Total	101,777	80	10,860	9	1,980	2	144	0	12,248	10	127,009	100

Table 12.2.16 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OX Plough by Source of Finance and District

District	Sale of Farm Products		Other Income Generating		Remittances		Bank Loan		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	24,773	78	5,935	19	177	1	0	0	1,058	3	31,942	100
Maswa	14,076	94	433	3	217	1	0	0	310	2	15,036	100
Shinyanga Rural	15,217	77	2,804	14	918	5	0	0	808	4	19,748	100
Kahama	17,908	89	1,338	7	141	1	134	1	686	3	20,207	100
Bukombe	4,931	93	234	4	0	0	119	2	0	0	5,284	100
Meatu	8,882	76	571	5	0	0	0	0	2,225	19	11,678	100
Shinyanga Urban	2,860	75	632	17	30	1	125	3	154	4	3,801	100
Kishapu	12,290	89	1,050	8	0	0	0	0	488	4	13,828	100
Total	100,938	83	12,997	11	1,483	1	378	0	5,729	5	121,525	100

Table 12.2.17 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OX SEED PLANTER by Source of Finance and District

District	Sale of Farm Products		Other Income Generating		Total	
	Number	%	Number	%	Number	%
Maswa	325	100	0	0	325	100
Kahama	144	100	0	0	144	100
Meatu	83	100	0	0	83	100
Shinyanga Urban	0	0	30	100	30	100
Total	552	95	30	5	582	100

Table 12.2.18 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning OX CART by Source of Finance and District

District	Sale of Farm Products		Other Income Generating Activities		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	5,422	78	1,381	20	0	0	163	2	6,967	100
Maswa	5,086	96	0	0	0	0	216	4	5,302	100
Shinyanga Rural	2,720	77	303	9	306	9	204	6	3,533	100
Kahama	6,217	96	263	4	0	0	0	0	6,480	100
Bukombe	1,294	100	0	0	0	0	0	0	1,294	100
Meatu	3,542	80	323	7	0	0	538	12	4,402	100
Shinyanga Urban	575	82	63	9	0	0	61	9	699	100
Kishapu	3,909	83	647	14	0	0	162	3	4,717	100
Total	28,765	86	2,980	9	306	1	1,343	4	33,394	100

Table 12.2.19 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR by Source of Finance and District

District	Sale of Farm Products		Bank Loan		Credit		Total	
	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	175	100	175	100
Shinyanga Rural	102	100	0	0	0	0	102	100
Kahama	0	0	143	100	0	0	143	100
Meatu	250	100	0	0	0	0	250	100
Shinyanga Urban	30	100	0	0	0	0	30	100
Total	382	55	143	20	175	25	699	100

Table 12.2.20 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR PLOUGH by Source of Finance and District

District	Sale of Farm Products		Bank Loan		Credit		Total	
	Number	%	Number	%	Number	%	Number	%
Bariadi	0	0	0	0	175	100	175	100
Kahama	0	0	143	100	0	0	143	100
Meatu	250	100	0	0	0	0	250	100
Total	250	44	143	25	175	31	567	100

Table 12.2.21 ACCESS TO EQUIPMENT: Number of Agricultural Households Owning TRACTOR HARROW by Source of Finance and District

District	Sale of Farm Products		Total	
	Number	%	Number	%
Maswa	101	100	101	100
Kishapu	81	100	81	100
Total	183	100	183	100

AGRICULTURE CREDIT

13.2a 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	%	
Bariadi	1,733	77	525	23	2,258
Maswa	650	75	217	25	867
Shinyanga Rural	100	25	302	75	401
Kahama	2,040	94	137	6	2,177
Bukombe	716	86	119	14	836
Meatu	81	33	165	67	246
Shinyanga Urban	0	0	23	100	23
Kishapu	82	33	164	67	245
Total	5,402	77	1,651	23	7,054
%	77		23		

13.2c AGRICULTURE CREDIT: Number of Households receiving Credits by Main Source of credit and region District the 2002/03 Agriculture Year

District	Family, Friend and Relative	Commercial Bank	Saving & Credit Society	Trader / Trade Store	Religious Organisation / NGO / Project	Other	Total
Bariadi	531	0	0	346	1,381	0	2,258
Maswa	542	0	0	108	0	217	867
Shinyanga Rural	0	0	0	0	0	401	401
Kahama	676	0	1,501	0	0	0	2,177
Bukombe	239	0	0	478	0	119	836
Meatu	81	83	0	82	0	0	246
Shinyanga Urban	0	0	0	23	0	0	23
Kishapu	163	0	0	0	0	82	245
Total	2,233	83	1,501	1,037	1,381	819	7,054
%	32	1	21	15	20	12	100

13.1a 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
Bariadi	3,128	15,731	4,887	3,112	28,173	333	175	0	19,776	75,314
Maswa	3,762	9,983	6,514	1,822	12,849	318	215	209	6,711	42,385
Shinyanga Rural	2,740	9,675	6,394	1,527	10,050	100	908	102	13,366	44,862
Kahama	6,180	12,761	14,721	1,474	20,417	1,163	266	0	22,058	79,040
Bukombe	2,609	20,415	3,564	1,054	11,791	239	358	0	12,374	52,404
Meatu	647	1,710	2,315	2,693	11,645	1,025	164	167	10,879	31,246
Shinyanga Urban	757	843	1,707	163	3,514	61	152	0	2,978	10,175
Kishapu	1,433	3,172	2,256	719	14,517	561	291	81	12,349	35,378
Total	21,257	74,290	42,359	12,564	112,955	3,798	2,529	560	100,492	370,804

13.1b 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	Irrigation Structures	Livestock	Other	Total Credits
Bariadi	696	705	0	1,378	528	0	0	179	3,485
Maswa	217	434	0	108	217	0	0	434	1,409
Shinyanga Rural	100	102	100	0	199	0	0	0	502
Kahama	529	1,227	1,368	1,652	392	0	137	410	5,715
Bukombe	478	239	119	358	119	119	0	0	1433.4027
Meatu	0	0	0	163	82	0	83	0	328
Shinyanga Urban	0	0	0	0	0	0	0	23.301541	23.301541
Kishapu	164	82	0	82	82	0	0	0	408.46176
Total Credits	2,183	2,788	1,588	3,741	1,618	119	220	1,046	13,304

TREE FARMING AND AGROFORESTRY

14.1 ON FARM TREE PLANTING: Number of Planted Trees by Species and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Senna Spp	Gravellis	Afzelia Quanzensis	Acacia Spp	Pinus Spp	Eucalyptus Spp	Cyprus Spp	Casurina Equisetfilia	Tectona Grandis	Terminalia Catapa
Bariadi	10	43	.	181	17	25	.	.	.	.
Maswa	38	2,005	.	.	.	52	.	.	.	.
Shinyanga Rural	10	16	.	284	.	.	.	3	.	.
Kahama	5	.	.	.	.	.	30	.	1	.
Bukombe	.	125	9	4	.	4	.	.	.	7
Meatu	.	93	.	120	.	.	.	.	.	.
Shinyanga Urban	3	68	.	77	.	.	.	.	.	1
Kishapu	.	4	.	733	.	.	.	.	.	.
Total	66	2,354	9	1,399	17	81	30	3	1	8
%	0	10	0	6	0	0	0	0	0	0

cont…. ON FARM TREE PLANTING: Number of Planted Trees by Species and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Terminalia Ivorensis	Berchemoides	Leucena Spp	Syszygium Spp	Azadritachta Spp	Jakaranda Spp	Albizia Spp	Calliandra Spp	Moringa Spp	TOTAL
Bariadi	.	.	.	.	.	.	.	.	.	11,261
Maswa	.	.	70	.	105	.	20	.	.	48
Shinyanga Rural	10	.	146	2	499	.	4	.	9	0
Kahama	.	32	.	1	91	.	.	.	.	0
Bukombe	.	.	.	.	.	.	.	.	.	0
Meatu	.	.	5,050	.	6	.	.	.	.	11,261
Shinyanga Urban	2	.	136	.	398	7	.	.	22	243
Kishapu	.	.	370	.	106	7	.	200	.	670
Total	12	32	5,772	3	1,205	14	24	200	31	23,483
%	0	0	25	0	5	0	0	1	0	100

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, Shinyanga Region

District	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
Bariadi	8	85	10	88	6	83	24	256
Maswa	4	2,056	3	222	2	12	9	2,290
Shinyanga Rural	15	151	9	215	2	617	26	983
Kahama	7	79	4	81	0	.	11	160
Bukombe	7	36	5	13	1	100	13	149
Meatu	1	5	4	5,098	4	166	9	5,269
Shinyanga Urban	28	523	9	191	0	.	37	714
Kishapu	4	1,330	5	63	1	20	10	1,413
Total	74	4,265	49	5,971	16	998	139	11,234

14.3 ON FARM TREE PLANTING: Number of responses by main use of planted trees and District for the 2002/03 agriculture yea, Shinyanga Region

District	Main Use						
	Planks / Timber	Poles	Fuel for Wood	Shade	Medicinal	Other	Total
Bariadi	3	1	18	8	0	0	30
Maswa	4	2	7	0	0	1	14
Shinyanga Rural	1	0	23	7	3	0	34
Kahama	7	2	0	1	1	2	13
Bukombe	4	0	3	2	0	3	12
Meatu	0	2	6	2	0	0	10
Shinyanga Urban	1	3	41	30	4	0	79
Kishapu	8	1	2	2	3	0	16
Total	28	11	100	52	11	6	208

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

District	Distance to Community Planted Forest (km)						
	1-9	10-19	20-29	30-39	40-49	Above 50	Total
Bariadi	14,360	4,433	1,180	1,323	705	1,737	23,738
Maswa	297	325	108	425	756	540	2,451
Shinyanga Rural	2,804	808	813	509	714	408	6,057
Kahama	2,283	0	2,137	2,152	0	144	6,716
Bukombe							
Meatu	852	92	313	203	359	235	2,054
Shinyanga Urban	1,101	118	88	88	0	29	1,426
Kishapu	896	1,106	646	80	642	480	3,850
Total	22,593	6,882	5,286	4,781	3,176	3,574	46,292
%	49	15	11	10	7	8	100

14 ON FARM TREE PLANTING: Number of responses by main use of planted trees and District for the 2002/03 agriculture year, Shinyanga Region

District	Main Use						
	Planks / Timber	Poles	Fuel for Wood	Shade	Medicinal	Other	Total
Bariadi	3	1	18	8	0	0	30
Maswa	4	2	7	0	0	1	14
Shinyanga Rural	1	0	23	7	3	0	34
Kahama	7	2	0	1	1	2	13
Bukombe	4	0	3	2	0	3	12
Meatu	0	2	6	2	0	0	10
Shinyanga Urban	1	3	41	30	4	0	79
Kishapu	8	1	2	2	3	0	16
Total	28.0	11.0	100.0	52.0	11.0	6.0	208.0

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

District	Second Use							
	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	Total
Bariadi	1	1	0	9	19	0	0	30
Maswa	1	4	0	6	1	0	2	14
Shinyanga Rural	2	6	3	8	11	3	1	34
Kahama	1	0	0	10	2	0	0	13
Bukombe	0	3	0	5	4	0	0	12
Meatu	0	0	0	1	2	4	3	10
Shinyanga Urban	1	3	1	23	38	7	2	75
Kishapu	1	8	1	4	0	2	0	16
Total	7	25	5	66	77	16	8	204

CROP EXTENSION

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

District	Households Receiving Extension Advice		Households Not Receiving Extension Advice		Total Number of Households
	Number	%	Number	%	
Bariadi	16,641	21	60,931	79	77,572
Maswa	2,469	6	40,783	94	43,252
Shinyanga Rural	12,421	27	32,842	73	45,263
Kahama	29,021	36	52,195	64	81,217
Bukombe	7,386	14	45,854	86	53,240
Meatu	14,761	47	16,731	53	31,492
Shinyanga Urban	3,364	33	6,834	67	10,198
Kishapu	18,190	51	17,434	49	35,624
Total	104,252	28	273,606	72	377,857

15.2 CROP EXTENSION: Number of Households By Quality of Extension Services and District During the 2002/03 Agricultural Year, Shinyanga Regio

District	Very Good		Good		Average		Poor		No Good		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Bariadi	4,228	26	12,258	74	0	0	0	0	0	0	16,486
Maswa	324	13	1,617	66	527	21	0	0	0	0	2,469
Shinyanga Rural	3,330	27	7,503	60	1,388	11	200	2	0	0	12,421
Kahama	2,046	7	19,828	72	5,571	20	142	1	0	0	27,587
Bukombe	830	11	5361	74	836	12	239	3	0	0	7,266
Meatu	1,273	9	7,874	53	5,239	35	239	2	135	1	14,761
Shinyanga Urban	104	3	2,082	62	775	23	339	10	64	2	3,364
Kishapu	1,342	7	9,551	53	6,567	36	489	3	159	1	18,109
Total	13,478	13	66,075	64	20,903	20	1,648	2	358	0	102,463

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

District	Government		NGO / Development Project		Cooperative		Large Scale Farm		Other		Not		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Bariadi	15,757	95	357	2	348	2	0	0	0	0	179	1	16,641
Maswa	2,144	86.84807554	217	9	108	4	0	0	0	0	0	0	2,469
Bukombe	11,617	95	400	3	0	0	99	1	0	0	100	1	12,217
Kahama	27,094	98	634	2	0	0	0	0	0	0	0	0	27,729
Bukombe	7,028	98	119	2	0	0	0	0	0	0	0	0	7,147
Meatu	14,101	96	494	3	0	0	83	1	0	0	0	0	14,678
Shinyanga Urban	3,301	98	31	1	0	0	0	0	32	1	0	0	3,364
Kishapu	17,547	97	237	1	0	0	160	1	0	0	81	0	18,026
Total	98,589	96	2,489	2	456	0	343	0	32	0	361	0	102,269

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

	Spacing								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total receiving advice	Total Number of households	% of total number of households
Bariadi	15,043	357	348	0	0	0	15,748	77,572	20
Maswa	1,927	217	108	0	0	0	2,252	43,252	5
Shinyanga Rural	9,705	400	0	99	0	100	10,304	45,263	23
Kahama	26,219	634	0	0	0	0	26,854	81,217	33
Bukombe	6,192	119	0	0	0	0	6,311	53,240	12
Meatu	13,939	494	0	0	0	0	14,434	31,492	46
Shinyanga Urban	3,001	31	0	0	32	0	3,064	10,198	30
Kishapu	17,004	237	0	0	0	81	17,322	35,624	49
Total	93,030	2,489	456	99	32	182	96,288	377,857	25

15.5 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agrochemicals by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Use of Agrochemicals							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	12,303	179	169	0	179	12,830	77,572	17
Maswa	1,603	216	0	108	0	1,928	43,252	4
Shinyanga Rural	5,052	601	0	0	0	5,652	45,263	12
Kahama	23,762	770	133	0	0	24,665	81,217	30
Bukombe	4,062	119	0	0	358	4,540	53,240	9
Meatu	8,976	0	0	83	245	9,304	31,492	30
Shinyanga Urban	1,226	0	0	0	31	1,256	10,198	12
Kishapu	10,706	81	0	82	0	10,869	35,624	31
Total	67,690	1,966	302	273	814	71,044	377,857	18.8

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

District	Erosion Control					
	Government	NGO / Development Project	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	4,742	358	0	5,099	77,572	7
Maswa	325	108	0	433	43,252	1
Shinyanga Rural	5,834	402	0	6,236	45,263	14
Kahama	17,032	328	142	17,502	81,217	22
Bukombe	1,666	0	358	2,025	53,240	4
Meatu	7,638	247	83	7,968	31,492	25
Shinyanga Urban	1,189	0	0	1,189	10,198	12
Kishapu	7,672	0	160	7,832	35,624	22
Total	46,097	1,443	743	48,284	377,857	13

15.7 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Organic Fertiliser Use by Source and District During the 2002/03 Agriculture Year

District	Organic Fertilizer Use							
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	10,512	0	348	169	0	11,029	77,572	14
Maswa	1,400	527	0	217	0	2,144	43,252	5
Shinyanga Rural	9,025	900	0	0	0	9,925	45,263	22
Kahama	20,525	0	140	0	142	20,807	81,217	26
Bukombe	4,399	119	0	0	119	4,638	53,240	9
Meatu	10,085	410	0	0	83	10,578	31,492	34
Shinyanga Urban	2,764	0	0	0	62	2,826	10,198	28
Kishapu	12,008	79	0	81	242	12,410	35,624	35
Total	70,719	2,035	488	467	649	74,358	377,857	20

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

	Inorganic Fertilizer Use								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	2,658	179	0	0	0	0	2,837	77,572	4
Maswa	216	325	0	0	0	0	541	43,252	1
Shinyanga Rural	3,128	701	0	0	0	201	4,030	45,263	9
Kahama	17,766	1,117	0	0	0	394	19,277	81,217	24
Bukombe	2,151	0	0	0	0	358	2,509	53,240	5
Meatu	4,355	165	0	0	0	0	4,519	31,492	14
Shinyanga Urban	539	0	0	0	32	0	571	10,198	6
Kishapu	3,751	237	80	160	0	162	4,390	35,624	12
Total	34,563	2,723	80	160	32	1,116	38,673	377,857	10

15.9 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source and District During the 2002/03 Agriculture Year

	Use of Improved Seed								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	11,110	0	0	169	0	0	11,279	77,572	15
Maswa	1,291	528	0	0	0	0	1,819	43,252	4
Shinyanga Rural	6,822	1,003	0	102	0	202	8,129	45,263	18
Kahama	21,642	624	275	0	0	282	22,823	81,217	28
Bukombe	4,764	0	0	119	0	0	4,884	53,240	9
Meatu	11,409	416	0	0	0	83	11,909	31,492	38
Shinyanga Urban	2,284	0	0	0	63	31	2,377	10,198	23
Kishapu	12,891	238	0	0	0	644	13,773	35,624	39
Total	72,213	2,809	275	390	63	1,242	76,993	377,857	20
%	93.8	3.6	0.4	0.5	0.1	1.6	100		

15.10 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Mechanisation/LST by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Mechanisation / LST							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	2,259	0	179	0	0	2,438	77,572	3
Maswa	324	0	0	0	0	324	43,252	1
Shinyanga Rural	2,730	102	0	0	202	3,035	45,263	7
Kahama	1,407	98	0	0	282	1,787	81,217	2
Bukombe	597	119	0	119	239	1,075	53,240	2
Meatu	3,766	0	0	0	165	3,931	31,492	12
Shinyanga Urban	693	0	0	0	30	723	10,198	7
Kishapu	2,137	0	0	0	238	2,376	35,624	7
Total	13,914	319	179	119	1,157	15,688	377,857	4

15.11 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Irrigation Technology by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Irrigation Technology							
District	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	4,048	0	179	0	0	4,227	77,572	5
Maswa	216	0	0	0	0	216	43,252	1
Shinyanga Rural	4,236	303	0	0	100	4,639	45,263	10
Kahama	7,134	240	0	0	142	7,516	81,217	9
Bukombe	1,912	0	0	0	239	2,151	53,240	4
Meatu	3,686	0	0	0	83	3,770	31,492	12
Shinyanga Urban	1,250	0	0	32	0	1,282	10,198	13
Kishapu	4,329	0	0	0	229	4,559	35,624	13
Total	26,812	543	179	32	794	28,359	377,857	8

15.12 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Crop Storage by Source and District During the 2002/03 Agriculture Year, Shinyanga 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		
Bariadi	10,470	178	0	348	0	0	10,996	77,572	14
Maswa	1,508	203	0	0	0	0	1,711	43,252	4
Shinyanga Rural	7,525	603	0	99	0	0	8,228	45,263	18
Kahama	21,309	647	275	0	0	0	22,230	81,217	27
Bukombe	2,748	0	0	0	0	119	2,868	53,240	5
Meatu	10,553	307	0	83	0	371	11,313	31,492	36
Shinyanga Urban	2,122	27	0	15	64	0	2,229	10,198	22
Kishapu	8,847	0	0	0	0	240	9,087	35,624	26
Total	65,082	1,965	275	545	64	730	68,660	377,857	18

15.13 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Vermin Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Vermin Control							Total Number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Bariadi	3,512	179	169	0	0	0	3,860	77,572	5
Maswa	210	0	0	108	0	0	318	43,252	1
Shinyanga Rural	5,538	201	0	0	0	0	5,739	45,263	13
Kahama	10,730	240	142	0	0	250	11,362	81,217	14
Bukombe	836	0	0	0	0	358	1,195	53,240	2
Meatu	5,530	0	0	0	0	407	5,937	31,492	19
Shinyanga Urban	1,280	0	0	0	32	0	1,312	10,198	13
Kishapu	5,426	0	0	0	0	226	5,652	35,624	16
Total	33,062	620	311	108	32	1,242	35,375	377,857	9
%	93.5	1.8	0.9	0.3	0.1	3.5	100		

15.14 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-Processing by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Agro-progressing					Total	Total Number of households	% of total number of households
	Government	NGO / Development Project	Large Scale Farm	Not applicable	Total			
Bariadi	5,513	356	174	179	6,222	6,222	77,572	8
Maswa	325	0	0	0	325	325	43,252	1
Shinyanga Rural	5,230	898	99	0	6,228	6,228	45,263	14
Kahama	11,217	0	0	569	11,786	11,786	81,217	15
Bukombe	1,075	0	0	358	1,434	1,434	53,240	3
Meatu	4,982	0	78	409	5,469	5,469	31,492	17
Shinyanga Urban	1,296	0	0	32	1,327	1,327	10,198	13
Kishapu	10,848	0	81	145	11,074	11,074	35,624	31
Total	40,484	1,255	433	1,692	43,864	43,864	377,857	11.6

15.15 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-Forestry by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Agro-forestry					Total Number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Not applicable	Total		
Bariadi	1,043	0	0	0	1,043	77,572	1
Maswa	649	203	108	0	960	43,252	2
Shinyanga Rural	4,637	201	0	0	4,838	45,263	11
Kahama	12,406	98	0	283	12,787	81,217	16
Bukombe	956	0	0	239	1,195	53,240	2
Meatu	4,779	83	0	0	4,862	31,492	15
Shinyanga Urban	747	0	0	0	747	10,198	7
Kishapu	3,755	0	80	145	3,980	35,624	11
Total	28,972	584	188	668	30,412	377,857	8.0
%	95.3	1.9	0.6	2.2	100		

15.16 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Bee Keeping by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Beekeeping					
District	Government	NGO / Development Project	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	532	0	0	532	77,572	1
Maswa	324	0	0	324	43,252	1
Shinyanga Rural	2,022	99	102	2,223	45,263	5
Kahama	426	110	276	812	81,217	1
Bukombe	0	0	358	358	53,240	1
Meatu	219	0	333	552	31,492	2
Shinyanga Urban	152	0	0	152	10,198	1
Kishapu	242	0	0	242	35,624	1
Total	3,917	210	1,070	5,196	377,857	1
%	75	4	21	100		

15.17 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Fish Farming by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Fish Farming							
District	Government	NGO / Development Project	Cooperative	Not applicable	Total	Total	Total Number of households	% of total number of households
Bariadi	179	0	0	0	179	179	77,572	0
Maswa	649	0	108	0	757	757	43,252	2
Shinyanga Rural	605	0	0	0	605	605	45,263	1
Kahama	280	0	0	276	556	556	81,217	1
Bukombe	0	0	0	358	358	358	53,240	1
Meatu	83	0	0	333	416	416	31,492	1
Shinyanga Urban	32	30	0	0	62	62	10,198	1
Kishapu	487	0	0	0	487	487	35,624	1
Total	2,313	30	108	968	3,419	3,419	377,857	0.9

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, Shinyanga Region

	Spacing			Use of Agrochemicals			Erosion Control		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	15,748	13,816	88	12,830	9,117	71	4,925	2,638	54
Maswa	2,252	2,144	95	1,928	1,711	89	433	433	100
Shinyanga Rural	10,406	9,393	90	5,145	1,110	22	6,034	4,120	68
Kahama	26,717	23,855	89	24,528	18,669	76	17,510	12,586	72
Bukombe	6,311	4,882	77	4,062	2,628	65	1,666	1,308	78
Meatu	14,434	10,454	72	8,391	4,265	51	7,395	1,790	24
Shinyanga Urban	3,032	1,957	65	1,168	612	52	1,161	612	53
Kishapu	17,482	14,828		10,869	3,551		7,832	1,720	455
Total	96,382	81,330	84	68,920	41,663	60	46,957	25,207	54

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, Shinyanga Region

	Organic Fertilizer Use			Inorganic Fertilizer Use			Use of Improved Seed		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	11,029	6,113	55	2,837	1,210	43	11,632	7,659	66
Maswa	2,144	1,718	80	649	216	33	1,711	1,710	100
Shinyanga Rural	10,026	8,010	80	3,422	1,414	41	8,229	3,715	45
Kahama	20,951	17,292	83	18,995	12,215	64	22,686	16,101	71
Bukombe	4,280	2,026	47	2,031	955	47	4,884	2,146	44
Meatu	10,578	3,678	35	4,031	1,659	41	11,993	7,160	60
Shinyanga Urban	2,917	1,924	66	556	239	43	2,377	984	41
Kishapu	12,407	4,861		4,228	478		13,936	8,834	
Total	74,332	45,621	61	36,748	18,387	50	77,447	48,310	62

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, Shinyanga Region

	Mechanisation / LST			Irrigation Technology			Crop Storage		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	2,438	1,896	78	3,359	1,925	57	11,353	9,930	87
Maswa	324	216	67	216	108	50	1,711	1,602	94
Shinyanga Rural	2,734	708	26	4,334	1,109	26	8,225	7,414	90
Kahama	945	562	60	7,099	5,299	75	22,502	19,834	88
Bukombe	478	1,433	300	1,195	717	60	2,748	2,390	87
Meatu	3,018	2,062	68	2,609	1,569	60	11,020	9,745	88
Shinyanga Urban	665	107	16	1,289	388	30	2,288	1,722	75
Kishapu	2,216	149		4,071	872		9,249	5,478	
Total	12,818	7,133	56	24,173	11,987	50	69,096	58,115	84

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, Shinyanga Region

	Vermin Control			Agro-progressing			Agro-forestry		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	3,155	2,973	94	5,690	5,154	91	1,049	882	84
Maswa	318	318	100	216	325	150	960	311	32
Shinyanga Rural	5,433	4,840	89	5,919	5,430	92	4,838	3,837	79
Kahama	11,221	9,520	85	10,938	10,529	96	12,508	7,771	62
Bukombe	478	956	200	717	1,075	150	597	478	80
Meatu	5,032	5,609	111	4,313	5,388	125	4,779	2,136	45
Shinyanga Urban	1,344	707	53	1,264	891	70	689	401	58
Kishapu	5,162	3,811		10,911	9,643		3,898	481	
Total	32,144	28,734	89	39,969	38,435	96	29,320	16,297	56

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, Shinyanga Region

	Agro-forestry			Beekeeping			Fish Farming		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	1,049	882	84	175	175	100	0	0	0
Maswa	960	311	32	324	108	33	865	649	75
Shinyanga Rural	4,838	3,837	79	2,121	503	24	605	0	0
Kahama	12,508	7,771	62	395	393	100	143	143	0
Bukombe	597	478	80	0	0	0	0	0	0
Meatu	4,779	2,136	45	498	331	67	416	250	60
Shinyanga Urban	689	401	58	152	57	38	32	0	0
Kishapu	3,898	481		80	0		162	0	
Total	29,320	16,297	56	3,744	1,567	42	2,223	1,220	55

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

District	Households Receiving Extension Advice		Households Not Receiving Extension Advice		Total Number of Households
	Number	%	Number	%	
Bariadi	16,641	21	60,931	79	77,572
Maswa	2,469	6	40,783	94	43,252
Shinyanga Rural	12,421	27	32,842	73	45,263
Kahama	29,021	36	52,195	64	81,217
Bukombe	7,386	14	45,854	86	53,240
Meatu	14,761	47	16,731	53	31,492
Shinyanga Urban	3,364	33	6,834	67	10,198
Kishapu	18,190	51	17,434	49	35,624
Total	104,252	28	273,606	72	377,857

15.2 CROP EXTENSION: Number of Households By Quality of Extension Services and District During the 2002/03 Agricultural Year, Shinyanga Region

District	Very Good		Good		Average		Poor		No Good		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Bariadi	4,228	26	12,258	74	0	0	0	0	0	0	16,486
Maswa	324	13	1,617	66	527	21	0	0	0	0	2,469
Shinyanga Rural	3,330	27	7,503	60	1,388	11	200	2	0	0	12,421
Kahama	2,046	7	19,828	72	5,571	20	142	1	0	0	27,587
Bukombe	830.072222	11.4	5360.97405	74	836	12	239	3	0	0	7,266
Meatu	1,273	9	7,874	53	5,239	35	239	2	135	1	14,761
Shinyanga Urban	104	3	2,082	62	775	23	339	10	64	2	3,364
Kishapu	1,342	7	9,551	53	6,567	36	489	3	159	1	18,109
Total	13,478	13	66,075	64	20,903	20	1,648	2	358	0	102,463

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

District	Government		NGO / Development		Cooperative		Large Scale		Other		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Bariadi	15,757	95	357	2	348	2	0	0	0	0	179	1	16,641
Maswa	2,144	86.8	217	9	108	4	0	0	0	0	0	0	2,469
Bukombe	11,617	95	400	3	0	0	99	1	0	0	100	1	12,217
Kahama	27,094	98	634	2	0	0	0	0	0	0	0	0	27,729
Bukombe	7,028	98	119	2	0	0	0	0	0	0	0	0	7,147
Meatu	14,101	96	494	3	0	0	83	1	0	0	0	0	14,678
Shinyanga Urban	3,301	98	31	1	0	0	0	0	32	1	0	0	3,364
Kishapu	17,547	97	237	1	0	0	160	1	0	0	81	0	18,026
Total	98,589	96	2,489	2	456	0	343	0	32	0	361	0	102,269

15.4 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Plant Spacing by Source and District During the 2002/ Agriculture Year, Shinyanga Regio

	Spacing								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total receiving advice	Total Number of households	% of total number of households
Bariadi	15,043	357	348	0	0	0	15,748	77,572	20
Maswa	1,927	217	108	0	0	0	2,252	43,252	5
Shinyanga Rural	9,705	400	0	99	0	100	10,304	45,263	23
Kahama	26,219	634	0	0	0	0	26,854	81,217	33
Bukombe	6,192	119	0	0	0	0	6,311	53,240	12
Meatu	13,939	494	0	0	0	0	14,434	31,492	46
Shinyanga Urbar	3,001	31	0	0	32	0	3,064	10,198	30
Kishapu	17,004	237	0	0	0	81	17,322	35,624	49
Total	93,030	2,489	456	99	32	182	96,288	377,857	25
%	97	3	0	0	0	0	100		

15.5 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agrochemicals by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Use of Agrochemicals							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	12,303	179	169	0	179	12,830	77,572	17
Maswa	1,603	216	0	108	0	1,928	43,252	4
Shinyanga Rural	5,052	601	0	0	0	5,652	45,263	12
Kahama	23,762	770	133	0	0	24,665	81,217	30
Bukombe	4,062	119	0	0	358	4,540	53,240	9
Meatu	8,976	0	0	83	245	9,304	31,492	30
Shinyanga Urbar	1,226	0	0	0	31	1,256	10,198	12
Kishapu	10,706	81	0	82	0	10,869	35,624	31
Total	67,690	1,966	302	273	814	71,044	377,857	18.8
%	95.3	2.8	0.4	0.4	1.1	100		

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

	Erosion Control					
District	Government	NGO / Development Project	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	4,742	358	0	5,099	77,572	7
Maswa	325	108	0	433	43,252	1
Shinyanga Rural	5,834	402	0	6,236	45,263	14
Kahama	17,032	328	142	17,502	81,217	22
Bukombe	1,666	0	358	2,025	53,240	4
Meatu	7,638	247	83	7,968	31,492	25
Shinyanga Urban	1,189	0	0	1,189	10,198	12
Kishapu	7,672	0	160	7,832	35,624	22
Total	46,097	1,443	743	48,284	377,857	13
%	95.5	3.0	1.5	100.0		

15.7 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Organic Fertiliser Use by Source and District During the 2002/03 Agriculture Year

	Organic Fertilizer Use							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	10,512	0	348	169	0	11,029	77,572	14
Maswa	1,400	527	0	217	0	2,144	43,252	5
Shinyanga Rural	9,025	900	0	0	0	9,925	45,263	22
Kahama	20,525	0	140	0	142	20,807	81,217	26
Bukombe	4,399	119	0	0	119	4,638	53,240	9
Meatu	10,085	410	0	0	83	10,578	31,492	34
Shinyanga Urban	2,764	0	0	0	62	2,826	10,198	28
Kishapu	12,008	79	0	81	242	12,410	35,624	35
Total	70,719	2,035	488	467	649	74,358	377,857	20
%	95.1	2.7	0.7	0.6	0.9	100.0		

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

	Inorganic Fertilizer Use								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	2,658	179	0	0	0	0	2,837	77,572	4
Maswa	216	325	0	0	0	0	541	43,252	1
Shinyanga Rural	3,128	701	0	0	0	201	4,030	45,263	9
Kahama	17,766	1,117	0	0	0	394	19,277	81,217	24
Bukombe	2,151	0	0	0	0	358	2,509	53,240	5
Meatu	4,355	165	0	0	0	0	4,519	31,492	14
Shinyanga Urban	539	0	0	0	32	0	571	10,198	6
Kishapu	3,751	237	80	160	0	162	4,390	35,624	12
Total	34,563	2,723	80	160	32	1,116	38,673	377,857	10
%	89.4	7.0	0.2	0.4	0.1	2.9	100.0		

15.9 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Use of Improved Seeds by Source and District During the 2002/03 Agriculture Year

	Use of Improved Seed								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	11,110	0	0	169	0	0	11,279	77,572	15
Maswa	1,291	528	0	0	0	0	1,819	43,252	4
Shinyanga Rural	6,822	1,003	0	102	0	202	8,129	45,263	18
Kahama	21,642	624	275	0	0	282	22,823	81,217	28
Bukombe	4,764	0	0	119	0	0	4,884	53,240	9
Meatu	11,409	416	0	0	0	83	11,909	31,492	38
Shinyanga Urban	2,284	0	0	0	63	31	2,377	10,198	23
Kishapu	12,891	238	0	0	0	644	13,773	35,624	39
Total	72,213	2,809	275	390	63	1,242	76,993	377,857	20
%	93.8	3.6	0.4	0.5	0.1	1.6	100		

15.10 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Mechanisation/LST by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Mechanisation / LST							
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	2,259	0	179	0	0	2,438	77,572	3
Maswa	324	0	0	0	0	324	43,252	1
Shinyanga Rural	2,730	102	0	0	202	3,035	45,263	7
Kahama	1,407	98	0	0	282	1,787	81,217	2
Bukombe	597	119	0	119	239	1,075	53,240	2
Meatu	3,766	0	0	0	165	3,931	31,492	12
Shinyanga Urban	693	0	0	0	30	723	10,198	7
Kishapu	2,137	0	0	0	238	2,376	35,624	7
Total	13,914	319	179	119	1,157	15,688	377,857	4
%	89	2	1	1	7	100		

15.11 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Irrigation Technology by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Irrigation Technology							
District	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	4,048	0	179	0	0	4,227	77,572	5
Maswa	216	0	0	0	0	216	43,252	1
Shinyanga Rural	4,236	303	0	0	100	4,639	45,263	10
Kahama	7,134	240	0	0	142	7,516	81,217	9
Bukombe	1,912	0	0	0	239	2,151	53,240	4
Meatu	3,686	0	0	0	83	3,770	31,492	12
Shinyanga Urban	1,250	0	0	32	0	1,282	10,198	13
Kishapu	4,329	0	0	0	229	4,559	35,624	13
Total	26,812	543	179	32	794	28,359	377,857	8
%	95	2	1	0	3	100		

15.12 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Crop Storage by Source and District During the 2002/03 Agriculture Year, Shinyanga Region.

	Crop Storage								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	10,470	178	0	348	0	0	10,996	77,572	14
Maswa	1,508	203	0	0	0	0	1,711	43,252	4
Shinyanga Rural	7,525	603	0	99	0	0	8,228	45,263	18
Kahama	21,309	647	275	0	0	0	22,230	81,217	27
Bukombe	2,748	0	0	0	0	119	2,868	53,240	5
Meatu	10,553	307	0	83	0	371	11,313	31,492	36
Shinyanga Urban	2,122	27	0	15	64	0	2,229	10,198	22
Kishapu	8,847	0	0	0	0	240	9,087	35,624	26
Total	65,082	1,965	275	545	64	730	68,660	377,857	18
%	94.8	2.9	0.4	0.8	0.1	1.1	100.0		

15.13 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Vermin Control by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

	Vermin Control								
District	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	3,512	179	169	0	0	0	3,860	77,572	5
Maswa	210	0	0	108	0	0	318	43,252	1
Shinyanga Rural	5,538	201	0	0	0	0	5,739	45,263	13
Kahama	10,730	240	142	0	0	250	11,362	81,217	14
Bukombe	836	0	0	0	0	358	1,195	53,240	2
Meatu	5,530	0	0	0	0	407	5,937	31,492	19
Shinyanga Urban	1,280	0	0	0	32	0	1,312	10,198	13
Kishapu	5,426	0	0	0	0	226	5,652	35,624	16
Total	33,062	620	311	108	32	1,242	35,375	377,857	9
%	93.5	1.8	0.9	0.3	0.1	3.5	100		

15.14 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-Processing by Source ar District During the 2002/03 Agriculture Year, Shinyanga Regio

District	Agro-progressing						Total Number of households	% of total number of households
	Government	NGO / Development Project	Large Scale Farm	Not applicable	Total	Total		
Bariadi	5,513	356	174	179	6,222	6,222	77,572	8
Maswa	325	0	0	0	325	325	43,252	1
Shinyanga Rural	5,230	898	99	0	6,228	6,228	45,263	14
Kahama	11,217	0	0	569	11,786	11,786	81,217	15
Bukombe	1,075	0	0	358	1,434	1,434	53,240	3
Meatu	4,982	0	78	409	5,469	5,469	31,492	17
Shinyanga Urban	1,296	0	0	32	1,327	1,327	10,198	13
Kishapu	10,848	0	81	145	11,074	11,074	35,624	31
Total	40,484	1,255	433	1,692	43,864	43,864	377,857	11.6
%	92.3	2.9	1.0	3.9	100.0	100.0		

15.15 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Agro-Forestry by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Agro-forestry					Total Number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Not applicable	Total		
Bariadi	1,043	0	0	0	1,043	77,572	1
Maswa	649	203	108	0	960	43,252	2
Shinyanga Rural	4,637	201	0	0	4,838	45,263	11
Kahama	12,406	98	0	283	12,787	81,217	16
Bukombe	956	0	0	239	1,195	53,240	2
Meatu	4,779	83	0	0	4,862	31,492	15
Shinyanga Urban	747	0	0	0	747	10,198	7
Kishapu	3,755	0	80	145	3,980	35,624	11
Total	28,972	584	188	668	30,412	377,857	8.0
%	95.3	1.9	0.6	2.2	100		

15.16 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Bee Keeping by Source and District During the 2002/03 Agriculture Year, Shinyanga Region

District	Beekeeping					
	Government	NGO / Development Project	Not applicable	Total	Total Number of households	% of total number of households
Bariadi	532	0	0	532	77,572	1
Maswa	324	0	0	324	43,252	1
Shinyanga Rural	2,022	99	102	2,223	45,263	5
Kahama	426	110	276	812	81,217	1
Bukombe	0	0	358	358	53,240	1
Meatu	219	0	333	552	31,492	2
Shinyanga Urban	152	0	0	152	10,198	1
Kishapu	242	0	0	242	35,624	1
Total	3,917	210	1,070	5,196	377,857	1
%	75	4	21	100		

15.17 CROP EXTENSION: Number of Agriculture Households Receiving Advice on Fish Farming by Source and District Duri the 2002/03 Agriculture Year, Shinyanga Region

District	Fish Farming							
	Government	NGO / Development Project	Cooperative	Not applicable	Total	Total	Total Number of households	% of total number of households
Bariadi	179	0	0	0	179	179	77,572	0
Maswa	649	0	108	0	757	757	43,252	2
Shinyanga Rural	605	0	0	0	605	605	45,263	1
Kahama	280	0	0	276	556	556	81,217	1
Bukombe	0	0	0	358	358	358	53,240	1
Meatu	83	0	0	333	416	416	31,492	1
Shinyanga Urban	32	30	0	0	62	62	10,198	1
Kishapu	487	0	0	0	487	487	35,624	1
Total	2,313	30	108	968	3,419	3,419	377,857	0.9
%	67.6	0.9	3.2	28.3	100.0	100.0		

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, Shinyanga Region

	Spacing			Use of Agrochemicals			Erosion Control		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	15,748	13,816	88	12,830	9,117	71	4,925	2,638	54
Maswa	2,252	2,144	95	1,928	1,711	89	433	433	100
Shinyanga Rural	10,406	9,393	90	5,145	1,110	22	6,034	4,120	68
Kahama	26,717	23,855	89	24,528	18,669	76	17,510	12,586	72
Bukombe	6,311	4,882	77	4,062	2,628	65	1,666	1,308	78
Meatu	14,434	10,454	72	8,391	4,265	51	7,395	1,790	24
Shinyanga Urban	3,032	1,957	65	1,168	612	52	1,161	612	53
Kishapu	17,482	14,828		10,869	3,551		7,832	1,720	455
Total	96,382	81,330	84	68,920	41,663	60	46,957	25,207	54

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, Shinyanga Region

	Organic Fertilizer Use			Inorganic Fertilizer			Use of Improved Seed		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	11,029	6,113	55	2,837	1,210	43	11,632	7,659	66
Maswa	2,144	1,718	80	649	216	33	1,711	1,710	100
Shinyanga Rural	10,026	8,010	80	3,422	1,414	41	8,229	3,715	45
Kahama	20,951	17,292	83	18,995	12,215	64	22,686	16,101	71
Bukombe	4,280	2,026	47	2,031	955	47	4,884	2,146	44
Meatu	10,578	3,678	35	4,031	1,659	41	11,993	7,160	60
Shinyanga Urban	2,917	1,924	66	556	239	43	2,377	984	41
Kishapu	12,407	4,861		4,228	478		13,936	8,834	
Total	74,332	45,621	61	36,748	18,387	50	77,447	48,310	62

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, Shinyanga Region

	Mechanisation / LST			Irrigation Technology			Crop Storage		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	2,438	1,896	78	3,359	1,925	57	11,353	9,930	87
Maswa	324	216	67	216	108	50	1,711	1,602	94
Shinyanga Rural	2,734	708	26	4,334	1,109	26	8,225	7,414	90
Kahama	945	562	60	7,099	5,299	75	22,502	19,834	88
Bukombe	478	1,433	300	1,195	717	60	2,748	2,390	87
Meatu	3,018	2,062	68	2,609	1,569	60	11,020	9,745	88
Shinyanga Urban	665	107	16	1,289	388	30	2,288	1,722	75
Kishapu	2,216	149		4,071	872		9,249	5,478	
Total	12,818	7,133	56	24,173	11,987	50	69,096	58,115	84

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, Shinyanga Region

	Vermin Control			Agro-progressing			Agro-forestry		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	3,155	2,973	94	5,690	5,154	91	1,049	882	84
Maswa	318	318	100	216	325	150	960	311	32
Shinyanga Rural	5,433	4,840	89	5,919	5,430	92	4,838	3,837	79
Kahama	11,221	9,520	85	10,938	10,529	96	12,508	7,771	62
Bukombe	478	956	200	717	1,075	150	597	478	80
Meatu	5,032	5,609	111	4,313	5,388	125	4,779	2,136	45
Shinyanga Urban	1,344	707	53	1,264	891	70	689	401	58
Kishapu	5,162	3,811		10,911	9,643		3,898	481	
Total	32,144	28,734	89	39,969	38,435	96	29,320	16,297	56

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, Shinyanga Region

	Agro-forestry			Beekeeping			Fish Farming		
District	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Bariadi	1,049	882	84	175	175	100	0	0	0
Maswa	960	311	32	324	108	33	865	649	75
Shinyanga Rural	4,838	3,837	79	2,121	503	24	605	0	0
Kahama	12,508	7,771	62	395	393	100	143	143	0
Bukombe	597	478	80	0	0	0	0	0	0
Meatu	4,779	2,136	45	498	331	67	416	250	60
Shinyanga Urban	689	401	58	152	57	38	32	0	0
Kishapu	3,898	481		80	0		162	0	
Total	29,320	16,297	56	3,744	1,567	42	2,223	1,220	55

ANIMAL CONTRIBUTION TO CROP PRODUCTION

17 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Number of Households Using Draft Animal to Cultivate Land By District

District	Use of Draft animals to cultivate land during 2002/03 agricultural Year					
	Households Using Draft Animals		Household Not Using Draft Animals		Total	
	Number	%	Number	%	Number	%
Bariadi	67,493	87	10,079	13	77,572	100
Maswa	34,293	79	8,959	21	43,252	100
Shinyanga Rural	39,760	88	5,503	12	45,263	100
Kahama	32,470	40	48,747	60	81,217	100
Bukombe	8,972	17	44,268	83	53,240	100
Meatu	24,684	78	6,808	22	31,492	100
Shinyanga Urban	6,894	68	3,305	32	10,198	100
Kishapu	31,630	89	3,994	11	35,624	100
Total	246,196	65	131,662	35	377,857	100

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owened, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year

District	Type of Craft														
	Oxen			Bulls			Cows			Donkeys			Total		
	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)
Bariadi	164,800	325,542	152,258	11,115	8,374	3,985	15,399	10,160	1,405	.	.	.	191,314	344,077	157,648
Maswa	75,299	158,286	93,455	7,107	4,115	583	39,566	108	0	650	434	0	122,622	162,943	94,038
Shinyanga Rural	99,637	185,114	77,317	13,397	18,527	2,595	14,472	102	21	3,021	1,429	103	130,527	205,171	80,035
Kahama	85,893	131,266	64,232	15,017	18,681	5,136	26,283	4,732	0	2,025	1,450	0	129,219	156,129	69,368
Bukombe	33,230	40,729	33,883	7,126	4,020	2,419	12,166	0	0	0	0	0	52,522	44,749	36,302
Meatu	71,161	115,925	75,234	10,281	18,485	2,094	25,492	2,476	0	1,269	652	66	108,202	137,537	77,393
Shinyanga Urban	16,821	29,891	11,992	2,819	2,523	260	2,249	161	26	350	253	0	22,239	32,829	12,277
Kishapu	73,463	151,641	101,734	4,672	9,069	1,305	1,801	1,128	0	712	2,614	444	80,649	164,453	103,484
Total	620,304	1,138,393	610,105	71,535	83,794	18,377	137,428	18,868	1,451	8,027	6,832	613	837,294	1,247,888	630,546

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owened, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year

District	Type of Craft														
	Oxen			Bulls			Cows			Donkeys			Total		
	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)
Bariadi	164,800	325,542	376,077.6	11,115	8,374	9,842.6	15,399	10,160	3,469.4	.	.	.	191,314	344,077	389,389.6
Maswa	75,299	158,286	230,833.7	7,107	4,115	1,440.8	39,566	108	0.0	650	434	0.0	122,622	162,943	232,274.5
Shinyanga Rural	99,637	185,114	190,972.7	13,397	18,527	6,408.6	14,472	102	51.0	3,021	1,429	255.1	130,527	205,171	197,687.4
Kahama	85,893	131,266	158,652.4	15,017	18,681	12,685.9	26,283	4,732	0.0	2,025	1,450	0.0	129,219	156,129	171,338.3
Bukombe	33,230	40,729	83,691.4	7,126	4,020	5,974.2	12,166	0	0.0	0	0	0.0	52,522	44,749	89,665.7
Meatu	71,161	115,925	185,827.1	10,281	18,485	5,171.7	25,492	2,476	0.0	1,269	652	163.0	108,202	137,537	191,161.8
Shinyanga Urban	16,821	29,891	29,619.8	2,819	2,523	642.4	2,249	161	63.2	350	253	0.0	22,239	32,829	30,325.4
Kishapu	73,463	151,641	251,283.9	4,672	9,069	3,224.6	1,801	1,128	0.0	712	2,614	1,096.4	80,649	164,453	255,604.9
Total	620,304	1,138,393	1,506,958.6	71,535	83,794	45,390.8	137,428	18,868	3,583.6	8,027	6,832	1,514.5	837,294	1,247,888	1,557,447.6

17.3 ANIMAL CONTRIBUTION TO CROPS: Number of Crop Growing Households Using Organic Fertilizer By Region During 2002/03 Agriculture Year

District	Organic fertilizer Application during 2002/03 Agriculture Year					
	Households using Organic Fertilizer		Households not Using Organic Fertilizer		Total	
	Number	%	Number	%	Number	%
Bariadi	11,364	13.6	64,964	22.3	76,328	20.3
Maswa	7,883	9.4	35,369	12.1	43,252	11.5
Shinyanga Rural	14,532	17.3	30,221	10.4	44,753	11.9
Kahama	25,893	30.9	55,180	18.9	81,073	21.6
Bukombe	11,409	13.6	41,599	14.3	53,008	14.1
Meatu	3,941	4.7	27,089	9.3	31,030	8.3
Shinyanga Urban	3,527	4.2	6,672	2.3	10,198	2.7
Kishapu	5,295	6.3	30,329	10.4	35,624	9.5
Total	83,843	100.0	291,423	100.0	375,266	100.0

17.4 ANIMAL CONTRIBUTION TO CROPS: Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year

District	Farm Yard Manure Area Applied		Compost Area Applied		Total Area aplied with Organic Fertilizers	
	Area (Ha)	%	Area (Ha)	%	Area (Ha)	%
Bariadi	11,100	13.5	585	10.2	11,685	13.3
Maswa	10,298	12.5	263	4.6	10,561	12.0
Shinyanga Rural	14,035	17.1	421	7.4	14,456	16.4
Kahama	21,123	25.7	2,875	50.4	23,998	27.3
Bukombe	10,693	13.0	1,301	22.8	11,994	13.6
Meatu	6,643	8.1	7	0.1	6,650	7.6
Shinyanga Urban	3,217	3.9	41	0.7	3,257	3.7
Kishapu	5,134	6.2	214	3.7	5,348	6.1
Total	82,243	100.0	5,707	100.0	87,950	100.0

CATTLE PRODUCTION

18.1 CATTLE PRODUCTION: Total Number Households rearing Cattle by District during 2002/03 agriculture year,Shinyanga Region

District	Households Rearing Cattle		Households Not Rearing Cattle		Total Agriculture households	Total livestock keeping households
	Number	%	Number	%		
Bariadi	34,951	45	42,621	55	77,572	38,084
Maswa	16,643	38	26,609	62	43,252	20,478
Shinyanga Rural	21,141	47	24,122	53	45,263	24,081
Kahama	27,522	34	53,695	66	81,217	32,009
Bukombe	13,120	25	40,120	75	53,240	18,695
Meatu	14,120	45	17,372	55	31,492	17,672
Shinyanga Urban	4,454	44	5,744	56	10,198	6,009
Kishapu	16,264	46	19,359	54	35,624	19,515
Total	148,216	39	229,641	61	377,857	**176,542**

18.2: Number of Households Rearing Cattle, Heads of Cattle and Average Heads per Household by Herd Size; on 1st October 2003

Herd Size	Cattle Rearing Households		Heads of Cattle		Average Number Per Household
	Number	%	Number	%	
1-5	33,399	23	114,330	4	3
6-10	39,489	27	314,678	12	8
11-15	25,933	17	332,706	13	13
16-20	16,263	11	290,695	11	18
21-30	13,966	9	354,786	14	25
31-40	6,737	5	240,901	9	36
41-50	3,927	3	180,556	7	46
51-60	2,964	2	165,182	6	56
61-100	4,320	3	338,570	13	78
101-150	608	0	71,580	3	118
151+	610	0	200,121	8	328
Total	148216	100	2,604,105	100	7

Table 18.3: Total 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	%
Regions	Number of Indigenous	%	Number of Improved Beef	%	Number of Improved Dairy	%	Total	%
Bulls	290,168	92.2	126	0.6	27	7.2	290,322	7.4
Cows	765,236	92.6	712	0.0	8,124	7.4	774,072	40.6
Steers	553,724	92.6	179	0.9	1,389	6.5	555,292	3.5
Heifers	406,859	93.5	.	0.0	618	6.5	407,477	22.9
Male Calves	215,035	91.8	358	0.0	403	8.2	215,796	12.5
Female Calves	360,510	91.8	.	0.0	636	8.2	361,146	13.1
Total	2,591,532	92.6	1,375	0.1	11,198	7.4	2,604,105	100.0

18.4 CATTLE PRODUCTION: Total Number of Cattle by Type and District As of 1st October 2003

	Indigenous			Beef			Dairy			Total Cattle		
District	Number of households	Number of Cattle	%	Number of households	Number of Cattle	%	Number of households	Number of Cattle	%	Number of households	Number of Cattle	%
Meatu	34,772	540,920	99.3	179	537	0.0	715	3,039	0.6	35,666	544,496	20.9
Maswa	16,643	311,082		0		0.0	108	1,192		16,752	312,274	12.0
Bariadi	21,141	317,388		0			99	398		21,241	317,785	12.2
Shinyanga Rural	27,522	406,317	99.1	142	712	0.0	917	2,962	0.7	28,581	409,991	15.7
Shinyanga Urban	13,120	332,685		0		0.0	0		0.0	13,120	332,685	12.8
Kahama	14,120	332,464		0			326	1,635		14,446	334,099	12.8
Bukombe	4,201	58,903	98.5	32	126	0.0	337	759	1.3	4,570	59,788	2.3
Kishapu	16,264	291,773		0			162	1,214		16,426	292,987	11.3
Total	147,784	2,591,532	99.5	353	1,375	0.0	2,664	11,198	2	150,801	2,604,105	67

18.5: Total Number of indigenous Cattle by Category of Cattle and District as on 1st October 2003

	Category - Indigenous						
District	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Bariadi	63,559	159,166	143,830	85,604	45,127	43,634	540,920
Maswa	23,994	92,999	70,596	58,897	29,975	34,622	311,082
Shinyanga Rural	46,253	91,477	70,127	50,351	25,775	33,404	317,388
Kahama	45,137	126,373	88,913	65,366	35,447	45,080	406,317
Bukombe	29,617	69,637	30,449	46,004	18,505	138,473	332,685
Meatu	42,782	113,944	70,502	47,055	27,498	30,683	332,464
Shinyanga Urban	8,377	18,090	13,693	8,399	5,555	4,789	58,903
Kishapu	30,448	93,551	65,613	45,183	27,153	29,825	291,773
Total	290,168	765,236	553,724	406,859	215,035	360,510	2,591,532

18.6: Total Number of Dairy Cattle by Category of cattle and District as on 1st October 2003

	Number of Improved Dairy Cattle						
District	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Bariadi	.	1,430	536	537	179	358	3,039
Maswa	.	1,192	.	.	.	.	1,192
Shinyanga Rural	.	398	.	.	.	.	398
Kahama	.	2,789	173	.	.	.	2,962
Bukombe	.	.	.	.	.	.	.
Meatu	.	816	656	.	.	162	1,635
Shinyanga Urban	27	286	23	81	225	116	759
Kishapu	.	1,214	.	.	.	.	1,214
Total	27	8,124	1,389	618	403	636	11,198

18.7: Total Number of Beef Cattle by Category of Cattle and District as on 1st October 2003

	Number of Improved Beef						
District	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Bariadi	.	.	179	.	358	.	537
Maswa	.	.	.	.	.	.	.
Shinyanga Rural	.	.	.	.	.	.	.
Kahama	.	712	.	.	.	.	712
Bukombe	.	.	.	.	.	.	.
Meatu	.	.	.	.	.	.	.
Shinyanga Urban	126	.	.	.	.	.	126
Kishapu	.	.	.	.	.	.	.
Total	126	712	179	0	358	0	1,375

18.8: Total Number of Cattle by Category and District as on 1st October 2003

	Total Cattle						
District	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	Total
Bariadi	63,559	160,596	144,545	86,141	45,663	43,992	544,496
Maswa	23,994	94,191	70,596	58,897	29,975	34,622	312,274
Shinyanga Rural	46,253	91,874	70,127	50,351	25,775	33,404	317,785
Kahama	45,137	129,874	89,086	65,366	35,447	45,080	409,991
Bukombe	29,617	69,637	30,449	46,004	18,505	138,473	332,685
Meatu	42,782	114,760	71,159	47,055	27,498	30,845	334,099
Shinyanga Urban	8,531	18,376	13,716	8,480	5,780	4,905	59,788
Kishapu	30,448	94,765	65,613	45,183	27,153	29,825	292,987
Total	290,322	774,072	555,292	407,477	215,796	361,146	2,604,105

GOATS PRODUCTION

19.1 GOAT PRODUCTION: Total Number of Goats by goat type and District as on 1st October 2003

District	Indigenous			Improved for Meat			Improved Dairy			Total	
	Number of households	Number of Goats	%	Number of households	Number of Goats	%	Number of households	Number of Goats	%	Number of households	Number of Goats
Bariadi	23,501	227,934	99	355	888	0	341	995	0.4	24,197	229,817
Maswa	14,269	207,202	99	215	2,157	1	0		0.0	14,484	209,359
Shinyanga Rural	15,628	154,135	100	0		0	99	199	0.1	15,727	154,334
Kahama	19,988	138,822	99	261	2,024	0	0		0.0	20,249	140,846
Bukombe	17,030	106,688	100	119	238	0	0		0.0	17,149	106,926
Meatu	13,099	214,466	99	245	984	0	137	220	0.1	13,480	215,670
Shinyanga Urban	3,654	31,171	99	81	201	1	62	62	0.2	3,797	31,434
Kishapu	14,936	189,543	100	0		0	0		0.0	14,936	189,543
Total	122,104	1,269,960	99	1,276	6,493	1	640	1,476	0.1	124,019	1,277,929

19.2 Number of Households Rearing Goats and Heads of Goats by Herd Size on 1st October 2003

Herd Size	Goat Rearing Households		Head of Goats		Average per Household
	Number	%	Number	%	
1-4	34,804	28.5	98,352	7.7	2.8
5-9	41,317	33.8	270,967	21.2	6.6
10-14	19,156	15.7	216,643	17.0	11.3
15-19	9,619	7.9	158,851	12.4	16.5
20-24	9,161	7.5	192,083	15.0	21.0
25-29	2,000	1.6	51,810	4.1	25.9
30-39	3,308	2.7	105,529	8.3	31.9
40+	2,914	2.4	183,695	14.4	63.0
Total	122,280	100.0	1,277,929.2	100.0	10.5

19.3 Total Number of Goats by Category and Type of Goat on 1st October 2003

Category of Goats	Indigenous Goats		Improved Meat Goats		Improved Dairy Goats		Total	
	Number	%	Number	%	Number	%	Number	%
Billy Goats	220,420	17	1,049	16		0	221,468	17
She Goats	63,142	5.0	1,545	23.8	115	7.8	64,802	5.1
Castrated Goat	678,195	53.4	2,552	39.3	312	21.1	681,058	53.3
Male Kid	152,433	12.0	308	4.7	177	12.0	152,919	12.0
She Kid	155,771	12.3	1,039	16.0	872	59.1	157,682	12.3
Total	1,269,960	100.0	6,493	100.0	1,476	100.0	1,277,929	100.0

19.4 Total Number of Indigenous Goat by Category and District on 1st October 2003

	Type					
District	Billy Goats	Castrated Goats	She Goats	Male Kids	She Kids	Total
Bariadi	37,541	12,283	121,439	28,963	27,708	227,934
Maswa	31,554	10,467	108,817	26,450	29,914	207,202
Shinyanga Rural	27,369	3,714	84,206	18,521	20,324	154,135
Kahama	26,454	4,248	75,718	15,912	16,489	138,822
Bukombe	21,830	822	66,179	8,688	9,169	106,688
Meatu	41,576	18,921	103,426	25,918	24,625	214,466
Shinyanga Urban	6,403	1,815	16,494	3,171	3,288	31,171
Kishapu	27,693	10,872	101,915	24,810	24,254	189,543
Total	220,420	63,142	678,195	152,433	155,771	1,269,960

19.5 Total Number of Improved Goat for Meat by Category and District on 1st October 2003

	Number of Improved Meat Goats					
District	Billy Goats	Castrated Goats	She Goats	Male Kids	She Kids	Total
Bariadi	.	.	357	.	531	888
Maswa	965	108	1,084	.	.	2,157
Shinyanga Rural	.	.	.	.	.	.
Kahama	.	1,437	353	.	235	2,024
Bukombe	.	.	119	119	.	238
Meatu	83	.	485	166	250	984
Shinyanga Urban	.	.	155	23	23	201
Kishapu	.	.	.	.	.	.
Total	1,049	1,545	2,552	308	1,039	6,493

19.6 Total Number of Improved Dairy Goats by Category and District on 1st October 2003

District	Number of Improved Dairy Goats					
	Billy Goats	Castrated Goats	She Goats	Male Kids	She Kids	Total
Bariadi	.	.	.	177	817	995
Maswa	.	.	.	.	.	.
Shinyanga Rural	.	.	199	.	.	199
Kahama	.	.	.	.	.	.
Bukombe	.	.	.	.	.	.
Meatu	.	83	83	.	54	220
Shinyanga Urban	.	32	30	.	.	62
Kishapu	.	.	.	.	.	.
Total	.	115	312	177	872	1,476

19.7 Total Number of Goats by Category and District on 1st October 2003

District	Total Goats					
	Billy Goats	Castrated Goats	She Goats	Male Kids	She Kids	Total
Bariadi	37,541	12,283	121,796	29,140	29,057	229,817
Maswa	32,519	10,575	109,901	26,450	29,914	209,359
Shinyanga Rural	27,369	3,714	84,405	18,521	20,324	154,334
Kahama	26,454	5,685	76,071	15,912	16,725	140,846
Bukombe	21,830	822	66,298	8,807	9,169	106,926
Meatu	41,659	19,004	103,994	26,084	24,929	215,670
Shinyanga Urban	6,403	1,847	16,678	3,194	3,311	31,434
Kishapu	27,693	10,872	101,915	24,810	24,254	189,543
Total	221,468	64,802	681,058	152,919	157,682	1,277,929

SHEEP PRODUCTION

20.1 Total Number of Sheep by Breed Type on 1st October 2003

Breed	Number of Indigenous Sheep		Number of Improved Mutton Sheep		Total Sheep	
	Number	%	Number	%	Number	%
Ram	90,767	18	108	100	90,875	18
Castrated Sheep	34,925	7		0	34,925	7
She Sheep	285,032	55		0	285,032	55
Male Lamb	57,431	11		0	57,431	11
She Lamb	48,880	9		0	48,880	9
Total	517,036	100	108	100	517,144	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 Agriculture Households	Total Livestock Keeping Households
	Number	%	Number	%		
Bariadi	10,251	13	67,321	87	77,572	38,084
Maswa	9,212	21	34,040	79	43,252	20,478
Shinyanga Rural	8,072	18	37,191	82	45,263	24,081
Kahama	6,923	9	74,294	91	81,217	32,009
Bukombe	2,482	5	50,758	95	53,240	18,695
Meatu	9,429	30	22,063	70	31,492	17,672
Shinyanga Urban	2,010	20	8,188	80	10,198	6,009
Kishapu	10,166	29	25,458	71	35,624	19,515
Total	58,545	15	319,312	85	377,857	**176,542**

20.3 Number of Sheep by Type of Sheep and District on 1st October 2003.

District	Number of Indigenous Sheep		Number of Improved for Mutton Sheep		Total Sheep	
	Number	%	Number	%	Number	%
Bariadi	78,539	15	.		78,539	15
Maswa	106,861	21	108	100	106,969	21
Shinyanga Rural	53,163	10	.		53,163	10
Kahama	30,133	6	.		30,133	6
Bukombe	8,745	2	.		8,745	2
Meatu	95,895	19	.		95,895	19
Shinyanga Urban	12,403	2	.		12,403	2
Kishapu	131,296	25	.		131,296	25
Total	517,036	100	108	100	517,144	100

20.4 Number of Sheep per Household by Category and Region as of 1st October 2003

District	Indigenous Sheep		Improved for Mutton Sheep		Total Households Raising Sheep	Average number of Sheep per household
	Number of Households	Average Sheep	Number of Households	Average Sheep		
Bariadi	24,371	2	1,157	3	24,660	3
Maswa	5,569	4	188	55	5,569	6
Shinyanga Rural	3,027	8	81	1	3,027	8
Kahama	87	11	23	1	109	9
Bukombe	61	3	0	0	61	3
Meatu	640	31	0	0	640	31
Shinyanga Urban	1,314	14	97	3	1,314	14
Kishapu						
Total	35,068	4	1,547	10	35,381	5

20.5 Number of Households and Heads of Sheep by Herd Size on 1st October 2003

Herd Size	Number of Households	%	Number of Sheep	%	Average Number per Household
1-4	24,068	41	61,760	12	3
5-9	19,302	33	124,766	24	6
10-14	7,749	13	86,035	17	11
15-19	2,834	5	45,230	9	16
20-24	1,185	2	25,694	5	22
25-29	788	1	21,277	4	27
30-39	872	2	28,827	6	33
40+	1,222	2	123,556	24	101
Total	58,021	100	517,144	100	9

20.6 Total Number of Indigenous Sheep by Sheep Type and District on 1st October 2003

	Number of Indigenous Sheep					
District	Rams	Castrated Sheep	She Sheep	Male Lambs	She Lambs	Total
Bariadi	21,540	10,009	35,099	5,314	6,577	78,539
Maswa	15,115	7,369	49,691	23,289	11,396	106,861
Shinyanga Rural	10,997	4,574	24,802	6,953	5,837	53,163
Kahama	4,535	570	18,169	3,425	3,434	30,133
Bukombe	1,653	.	6,263	716	112	8,745
Meatu	22,200	9,071	43,529	9,635	11,462	95,895
Shinyanga Urban	2,230	534	7,815	1,003	821	12,403
Kishapu	12,497	2,799	99,663	7,097	9,241	131,296
Total	90,767	34,925	285,032	57,431	48,880	517,036

20.7 Total Number of Improved Mutton Sheep by Type and District on 1st October 2003

	Number of Improved for Mutton					
District	Rams	Castrated Sheep	She Sheep	Male Lambs	She Lambs	Total
Bariadi	.	.	.	.	.	0
Maswa	108	.	.	.	.	108
Shinyanga Rural	.	.	.	.	.	0
Kahama	.	.	.	.	.	0
Bukombe	.	.	.	.	.	.
Meatu	.	.	.	.	.	.
Shinyanga Urban	.	.	.	.	.	0
Kishapu	.	.	.	.	.	
Total	108	.	.	.	.	108

20.8: Total Number of Sheep by Sheep Type and District on 1st October 2003

	Total Sheep					
District	Rams	Castrated Sheep	She Sheep	Male Lambs	She Lambs	Total
Bariadi	21,540	10,009	35,099	5,314	6,577	78,539
Maswa	15,223	7,369	49,691	23,289	11,396	106,969
Shinyanga Rural	10,997	4,574	24,802	6,953	5,837	53,163
Kahama	4,535	570	18,169	3,425	3,434	30,133
Bukombe	1,653	.	6,263	716	112	8,745
Meatu	22,200	9,071	43,529	9,635	11,462	95,895
Shinyanga Urban	2,230	534	7,815	1,003	821	12,403
Kishapu	12,497	2,799	99,663	7,097	9,241	131,296
Total	90,875	34,925	285,032	57,431	48,880	517,144

PIGS PRODUCTION

20.1 Number of Households Raising or Managing Pigs by District on 1st October 2003

District	Households Raising Pigs		Households Not Raising Pigs		Number of Agriculture Households
	Number	%	Number	%	
Bariadi	99	0	77,473	100	77,572
Maswa	0	0	43,252	100	43,252
Shinyanga Rural	0	0	45,263	100	45,263
Kahama	110	0	81,107	100	81,217
Bukombe	0	0	53,240	100	53,240
Meatu	164	1	31,328	99	31,492
Shinyanga Urban	202	2	9,974	98	10,176
Kishapu	81	0	35,542	100	35,623
Total	656	0	377,179	100	377,835

21.2 Number of Households and Pigs by Herd Size on 1st October 2003

Herd Size	Pig Rearing Households		Heads of pigs		Average per Household
	Number	%	Number	%	
1-4	521	79	1,254	38	2
5-9	112	17	684	21	6
40+	23	4	1,328	41	57
Total	656	100	3,266	100	5

21.3 Number of Households and Pigs by District on 1st October 2003

District	Number of Households	Number of Pigs	Average per Household
Bariadi	99	292	3
Kahama	110	221	2
Meatu	164	736	4
Shinyanga Urban	202	1,931	10
Kishapu	81	86	1
Total	656	3,266	5

21.3 Number of Pigs by Type of Pig and District on 1st October 2003

District	Pig Type					
	Boars	Castrated Males	Sow / Gilt	Male Piglets	She Piglets	Total
Bariadi	99	.	198	.	.	296
Kahama	110	.	110	.	.	221
Meatu	245	.	328	163	.	736
Shinyanga Urban	272	466	451	341	402	1,931
Kishapu	82	.	.	.	.	82
Total	807	466	1,087	503	402	3,266

LIVESTOCK PESTS AND PARASITE CONTROL

22.1 PESTS AND PARASITES: Number of Livestock Rearing households deworming Livestock by District during the 2002/03 Agricultural Year

District	Deworming Livestock		Not deworming Livestock		Total
	No of Households	%	No of Households	%	
Bariadi	20,832	55	17,253	45	38,084
Maswa	6,335	31	13,926	69	20,261
Shinyanga Rural	9,635	45	11,812	55	21,447
Kahama	14,856	52	13,753	48	28,609
Bukombe	6,287	34	12,407	66	18,695
Meatu	7,736	47	8,781	53	16,517
Shinyanga Urban	1,941	33	3,943	67	5,884
Kishapu	4,734	26	13,565	74	18,299
Total	72,356	43	95,440	57	167,796

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	Cattle		Goats		Sheep		Pigs	
	No of Households	%	No of Households	%	No of Households	%	No of Households	%
Bariadi	5,643	25	18,241	29	1,943	24	679	13
Maswa	2,459	11	4,733	8	944	12	968	18
Shinyanga Rural	2,103	9	8,336	13	501	6	1,619	30
Kahama	3,473	16	13,504	22	1,091	14	541	10
Bukombe	1,759	8	5,575	9	0	0	0	0
Meatu	4,239	19	6,080	10	2,391	30	1,038	19
Shinyanga Urban	592	3	1,635	3	263	3	102	2
Kishapu	1,886	9	4,055	7	844	11	409	8
Total	22,155	100	62,159	100	7,977	100	5,355	100

22.3 PESTS AND PARASITE: 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	Tick problems		No Tick problems		Total
	No of Households	%	No of Households	%	
Bariadi	29,822	84	5,793	16	35,615
Maswa	12,964	64	7,297	36	20,262
Shinyanga Rural	14,079	71	5,774	29	19,853
Kahama	22,402	74	8,068	26	30,470
Bukombe	7,564	42	10,421	58	17,985
Meatu	10,954	71	4,516	29	15,470
Shinyanga Urban	2,770	46	3,239	54	6,009
Kishapu	11,744	61	7,526	39	19,269
Total	112,299	68	52,634	32	164,933

22.4 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households by Method of Tick Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year

District	Method of Tsetse Flies Control										
	None		Spray		Dipping		Smearing		Other		
	No of Households	age	No of Households	%	No of Households	%	No of Households	%	No of Households	%	Total
Bariadi	3,363	11	25,214	85	179	1	-	-	1,066	4	29,822
Maswa	3,172	24	8,061	62	-	-	540	4	1,190	9	12,964
Shinyanga Rural	2,207	16	8,321	59	304	2	305	2	2,941	21	14,079
Kahama	1,548	7	19,307	86	-	-	286	1	1,261	6	22,402
Bukombe	478	6	6,251	83	239	3	119	2	478	6	7,564
Meatu	1,067	10	8,206	75	710	6	162	1	809	7	10,954
Shinyanga Urban	812	29	1,467	53	243	9	-	-	248	9	2,770
Kishapu	1,795	15	9,224	79	82	1	162	1	481	4	11,744
Total	14,444	13	86,052	77	1,756	2	1,575	1	8,473	8	112,299

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,

	Tsetse flies problems		No Tsetse flies problems		
District	No of Households	%	No of Households	%	Total
Bariadi	5,327	14	32,237	86	37,564
Maswa	108	1	19,722	99	19,830
Shinyanga Rural	101	0	20,232	100	20,334
Kahama	783	3	28,943	97	29,726
Bukombe	951	5	17,624	95	18,575
Meatu	6,548	41	9,430	59	15,977
Shinyanga Urban	182	3	5,674	97	5,856
Kishapu	1,297	7	17,076	93	18,374
Total	15,296	9	150,939	91	166,235

22.6 PESTS AND PARASITE: Number of Livestock Rearing Households by methods of tsetse flies control use and district during the 2002/03 Agricultural Year.

	Method of Tsetse Flies Control								
	None		Spray		Dipping		Trapping		
District	No of Households	age	No of Households	%	No of Households	%	No of Households	%	Total
Bariadi	1,780	33	2,671	50	536	10	341	6	5,327
Maswa	108	100	0	0	0	0	0	0	108
Shinyanga Rural	101	100	0	0	0	0	0	0	101
Kahama	429	55	354	45	0	0	0	0	783
Bukombe	239	25	712	75	0	0	0	0	951
Meatu	3,502	53	2,048	31	914	14	83	1	6,548
Shinyanga Urban	86	47	96	53	0	0	0	0	182
Kishapu	734	57	564	43	0	0	0	0	1,297
Total	6,318	41	6,444	42	1,449	9	424	3	15,296

OTHER LIVESTOCK

23a OTHER LIVESTOCK: Total Number of Other Livestock by Type as of 1st October 2003

	Chicken		Others	
Type	Number	%	Type	Number
Indigenous Chicken	2,935,380	99	Ducks	94,783
Layer	11,276	0	Turkeys	708
Broiler	32,934	1	Rabbits	5,263
			Donkeys	4,421
Total	2,979,590	100		105,175

23b OTHER LIVESTOCK: Number of Chicken by Category of chicken and District as of 1st October 2003

	Number of Chicken			
District	Indigenous Chicken	Layer	Broiler	Total number of chicken
Shinyanga Rural	528,510	684	22,160	551,354
Meatu	304,689	4,660	.	309,349
Maswa	405,467	102	.	405,569
Bariadi	858,896	3,124	10,775	872,794
Shinyanga Urban	383,126	.	.	383,126
Bukombe	227,622	1,524	.	229,146
Kahama	40,741	149	.	40,890
Kishapu	186,328	1,033	.	187,361
Total	2,935,380	11,276	32,934	2,979,590

23d OTHER LIVESTOCK: Total Number of households and chickens raised by flock size as of 1st October 2005

Flock size	Chicken rearing Households		Number of Chicken	Average chicken by households
	Number	%		
1 - 4	54,834	21	156,753	3
5 - 9	82,532	32	546,340	7
10 - 19	77,801	30	999,425	13
20 - 29	25,519	10	564,268	22
30 - 39	9,060	4	285,517	32
40 - 49	2,448	1	105,425	43
50 - 99	4,350	2	263,212	61
100+	501	0	58,649	117
Total	257,044	100	2,979,590	12

23e Head Number of Other Livestock by Type of Livestock and District

District	Type of livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Bariadi	53,587	179	5,263	2,170	.
Maswa	9,193	.	.	.	1,734
Shinyanga Rural	13,516	.	.	612	1,487
Kahama	5,165	.	.	981	1,715
Bukombe	4,063	.	.	.	3,734
Meatu	2,249	497	.	.	2,637
Shinyanga Urban	1,851	32	.	415	.
Kishapu	5,160	.	.	244	632
Total	94,783	708	5,263	4,421	11,938

23f LIVESTOCK/POULTRY POPULATION TREND: SHINYANGA REGION

	1995	1999	2003
Cattle	653,549	277,000	378,338
Improved Dairy	20,420	25,675	28,127
Goats	736,727	317,924	514,620
Sheep	246,263	85,679	164,209
Pigs	1,072	2,715	6,281
Indigenous Chicken	1,670,790	735,916	1,751,278
Layers	-	6,136	29,630
Broilers	2,986	22,327	7,859
Total Chickens	1,673,776	764,379	1,788,767

LIVESTOCK PRODUCTS

25.1 LIVESTOCK PRODUCTS: Number of Eggs, Hides and Skins Sold/Consumed/Utlilized by the household By District, during 2002/03 Agricultural Year

District	Product Name					
	Eggs		Hides		Skins	
	Sold	Consumed / Utilised	Sold	Consumed / Utilised	Sold	Consumed / Utilised
Bariadi	1,066,554	280,940	20,844	1,779	15,613	2,313
Maswa	288,733	160,572	9,891	217	10,466	2,708
Shinyanga Rural	316,508	198,516	6,162	1,222	7,237	611
Kahama	387,363	142,591	3,781	1,972	1,664	431
Bukombe	358,497	481,881	1,553	0	836	0
Meatu	77,085	66,516	28,611	1,717	34,582	1,954
Shinyanga Urban	167,661	35,079	1,730	0	1,697	94
Kishapu	484,980	104,223	15,202	800	19,027	562
Total	3,147,381	1,470,318	87,774	7,707	91,123	8,672

ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES

27.1 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Cattle Dip and District

District	Distance to Nearest Cattle Dip							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	4,335	0	0	0	0	0	0	4,335
Maswa	3,636	2,037	0	0	0	217	0	5,889
Shinyanga Rural	3,834	3,046	917	0	0	99	0	7,896
Kahama	3,489	3,436	144	849	1,868	1,922	0	11,707
Bukombe	119	0	0	0	0	0	0	119
Meatu	1,985	2,130	183	869	248	2,295	652	8,362
Shinyanga Urban	1,563	320	220	123	0	0	0	2,226
Kishapu	3,511	2,641	974	574	315	1,044	0	9,059
Total	22,470	13,610	2,438	2,414	2,431	5,576	652	49,592

27.2 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Spray Raced and District

District	Distance to Nearest Spray Raced						
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	Total
Bariadi	2,463	179	0	0	0	0	2,642
Maswa	1,934	108	0	0	0	0	2,042
Shinyanga Rural	2,243	204	0	0	0	0	2,447
Kahama	2,830	431	0	144	0	0	3,405
Meatu	2,417	415	167	0	220	934	4,153
Shinyanga Urban	964	127	0	0	0	0	1,090
Kishapu	4,073	78	0	0	0	0	4,152
Total	16,924	1,542	167	144	220	934	19,931

27.3 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Hand Powered Sprayer and District

District	Distance to Nearest Hand Powered Sprayer							
	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	27,327	714	179	0	0	176	0	28,395
Maswa	6,610	1,405	541	216	0	0	0	8,772
Shinyanga Rural	8,151	1,321	404	99	296	0	99	10,371
Kahama	11,480	1,949	0	133	133	135	0	13,830
Bukombe	3,331	0	118	0	0	0	0	3,449
Meatu	9,270	576	0	0	165	79	0	10,089
Shinyanga Urban	1,578	158	0	32	0	0	32	1,800
Kishapu	8,659	82	158	0	79	0	0	8,977
Total	76,405	6,205	1,400	480	673	390	130	85,683

27.4 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Cattle Crush and District

	Distance to Nearest Cattle Crush						
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	Total
Bariadi	3,164	3,662	0	0	179	537	7,542
Maswa	4,175	650	217	0	0	0	5,042
Shinyanga Rural	2,838	815	0	1,429	102	0	5,183
Kahama	4,098	120	0	287	0	0	4,505
Bukombe	597	118	0	0	0	0	715
Meatu	4,053	2,183	652	634	0	164	7,687
Shinyanga Urban	1,090	32	0	0	0	0	1,121
Kishapu	4,313	161	324	328	394	1,268	6,789
Total	24,328	7,740	1,193	2,678	675	1,969	38,584

27.5 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Primary Market and District

	Distance to Nearest Primary Market							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	4,134	6,261	878	2,315	3,307	5,613	163	22,672
Maswa	3,474	3,628	2,149	1,608	758	217	0	11,834
Shinyanga Rural	3,156	8,884	4,253	2,134	2,112	299	0	20,837
Kahama	4,432	8,367	1,950	5,877	3,732	1,219	137	25,714
Bukombe	2,258	2,714	2,020	358	1,785	464	0	9,600
Meatu	3,341	2,321	711	1,200	411	1,615	162	9,760
Shinyanga Urban	807	1,048	222	30	32	0	0	2,139
Kishapu	3,493	1,042	1,139	894	1,372	1,363	1,007	10,311
Total	25,096	34,266	13,322	14,416	13,509	10,789	1,469	112,868

27.6 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Secondary Market and District

	Distance to Nearest Secondary Market							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	2,730	1,205	2,299	708	7,064	11,347	1,609	26,962
Maswa	1,388	1,506	1,516	750	1,015	2,899	101	9,176
Shinyanga Rural	3,053	2,615	1,925	915	1,016	2,390	204	12,119
Kahama	1,387	1,272	992	1,577	2,845	2,573	1,777	12,423
Bukombe	948	836	836	119	239	119	119	3,218
Meatu	3,723	566	695	83	736	656	582	7,041
Shinyanga Urban	1,063	321	31	32	64	0	0	1,510
Kishapu	2,850	1,184	374	804	2,578	2,899	2,902	13,592
Total	17,142	9,505	8,670	4,989	15,557	22,883	7,295	86,041

27.7 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Abattoir and District

	Distance to Nearest Abattoir							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	1,697	198	1,768	1,598	6,840	12,810	1,965	26,876
Maswa	1,280	2,055	1,516	750	912	1,816	860	9,190
Shinyanga Rural	2,545	102	99	816	204	1,829	3,309	8,903
Kahama	1,972	572	1,417	1,435	1,842	2,860	3,468	13,567
Bukombe	358	0	0	0	119	343	239	1,060
Meatu	2,945	0	0	0	250	2,288	304	5,787
Shinyanga Urban	1,241	390	475	186	32	0	0	2,324
Kishapu	4,242	788	372	231	407	2,654	797	9,491
Total	16,282	4,105	5,648	5,016	10,606	24,600	10,941	77,199

27.8 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Slaughter Slab and District

	Distance to Nearest Slaughter Slab							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	3,522	5,062	526	713	3,031	1,413	0	14,267
Maswa	5,487	1,915	1,734	430	862	1,407	108	11,942
Shinyanga Rural	2,582	7,287	4,144	99	1,187	99	0	15,398
Kahama	6,729	5,330	1,285	3,144	1,722	285	0	18,494
Bukombe	2,856	1,054	946	478	119	119	119	5,692
Meatu	2,805	1,125	498	162	1,027	4,113	539	10,268
Shinyanga Urban	1,669	489	194	0	0	0	0	2,352
Kishapu	5,268	1,664	483	888	570	565	315	9,754
Total	30,917	23,926	9,808	5,913	8,519	8,002	1,082	88,167

27.9 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Hide/ Skin Shade and District

	Distance to Nearest Hide/ Skin Shade							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	3,003	3,569	1,042	1,069	4,980	9,539	1,786	24,988
Maswa	1,403	2,704	2,167	750	921	3,020	528	11,491
Shinyanga Rural	3,815	4,330	4,139	0	1,196	1,724	0	15,204
Kahama	2,965	144	702	0	1,287	1,019	718	6,835
Bukombe	1,061	0	0	0	0	0	0	1,061
Meatu	1,029	1,338	348	162	1,435	4,910	766	9,988
Shinyanga Urban	1,263	303	285	0	0	0	0	1,851
Kishapu	4,385	710	236	492	164	816	632	7,434
Total	18,923	13,098	8,919	2,472	9,983	21,028	4,430	78,853

27.10 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Input Supply and District

	Distance to Nearest Input Supply							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	5,908	6,665	2,262	3,394	9,878	13,511	1,959	43,578
Maswa	1,726	2,811	3,029	430	930	2,695	101	11,722
Shinyanga Rural	3,232	3,135	3,049	408	1,212	1,809	1,590	14,436
Kahama	5,795	4,495	1,290	1,999	2,770	3,004	6,582	25,935
Bukombe	712	1,287	2,019	1,074	3,463	717	0	9,271
Meatu	1,716	655	416	0	1,036	4,164	1,433	9,420
Shinyanga Urban	1,072	710	474	284	97	0	0	2,637
Kishapu	4,793	1,276	967	1,625	408	1,770	1,035	11,873
Total	24,953	21,033	13,506	9,214	19,792	27,671	12,702	128,872

27.11 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Veterinary Clinic and District

	Distance to Nearest Veterinary Clinic							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	2,461	1,071	876	5,131	8,949	11,319	3,398	33,204
Maswa	742	3,127	2,807	433	643	3,786	434	11,971
Shinyanga Rural	2,637	502	1,918	918	605	3,120	3,412	13,112
Kahama	3,510	668	421	0	3,871	3,836	4,099	16,405
Bukombe	836	113	836	119	835	0	956	3,696
Meatu	923	404	83	0	553	4,026	1,735	7,725
Shinyanga Urban	824	392	253	0	0	0	0	1,470
Kishapu	2,863	391	480	0	327	3,056	1,951	9,067
Total	14,797	6,668	7,674	6,601	15,783	29,143	15,984	96,651

27.12 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Village Holding Gound and District

	Distance to Nearest Village Holding Gound					
District	<5	5 - 9	15 - 19	30 - 49	50+	Total
Bariadi	3,175	0	0	0	535	3,709
Maswa	2,158	324	0	0	0	2,482
Shinyanga Rural	2,602	0	0	0	0	2,602
Kahama	3,782	0	0	0	143	3,925
Bukombe	119	0	0	0	0	119
Meatu	1,742	0	0	1,200	0	2,942
Shinyanga Urban	963	22	32	0	0	1,017
Kishapu	4,880	0	0	952	0	5,832
Total	19,421	346	32	2,153	678	22,630

27.13 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Village Watering Point/ Dam and District

	Distance to Nearest Village Watering Point/ Dam							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	18,056	5,605	175	178	0	0	0	24,014
Maswa	5,146	325	0	108	0	0	0	5,580
Shinyanga Rural	16,176	1,731	0	0	0	0	0	17,907
Kahama	27,349	1,610	131	0	144	137	0	29,371
Bukombe	4,171	358	0	0	0	0	0	4,530
Meatu	3,695	649	414	62	0	603	162	5,586
Shinyanga Urban	1,153	32	0	0	0	0	0	1,186
Kishapu	8,434	1,051	489	81	0	0	80	10,134
Total	84,182	11,361	1,208	429	144	740	242	98,306

27.14 ACCESS TO FUNCTIONAL LIVESTOCK FACILITIES: Number of households by Distance to Nearest Drencher and District

	Distance to Nearest Drencher							
District	<5	5 - 9	10 - 14	15 - 19	20 - 29	30 - 49	50+	Total
Bariadi	7,472	1,899	530	175	178	0	0	10,254
Maswa	3,101	1,939	649	216	0	542	325	6,773
Shinyanga Rural	4,230	612	99	99	395	99	0	5,533
Kahama	4,270	991	421	0	429	144	0	6,255
Bukombe	955	0	0	0	0	0	0	955
Meatu	3,144	629	81	0	162	525	0	4,541
Shinyanga Urban	972	0	0	0	0	0	0	972
Kishapu	5,351	78	82	0	0	0	0	5,511
Total	29,494	6,148	1,862	490	1,165	1,310	325	40,794

FISH FARMING

28.1 FISH FARMING: Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year

District	Number of Agricultural Households Doing Fish Farming		Number of Agricultural Households NOT Doing Fish Farming		Total	
	Number	%	Number	%	Number	%
Bariadi	0	0.0	77,572	100.0	77,572	100.0
Maswa	0	0.0	43,252	100.0	43,252	100.0
Shinyanga Rura	0	0.0	45,263	100.0	45,263	100.0
Kahama	430	0.5	80,787	99.5	81,217	100.0
Bukombe	0	0.0	53,240	100.0	53,240	100.0
Meatu	0	0.0	31,492	100.0	31,492	100.0
Shinyanga	0	0.0	10,198	100.0	10,198	100.0
Kishapu	0	0.0	35,624	100.0	35,624	100.0
Total	430	0.1	377,427	99.9	377,857	100.0

LIVESTOCK EXTENSION

29.1a LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Advice By Type of Service Provider and District, 2002/03 Agricultural Year

District	Did Household receive livestock advice during 2002/03?				Total	
	Households Receiving Advice		Households NOT Receiving			
	Number	%	Number	%	Number	%
Bariadi	8,884	11	68,688	89	77,572	100
Maswa	1,942	4	41,310	96	43,252	100
Shinyanga Rural	6,848	15	38,415	85	45,263	100
Kahama	14,122	17	67,095	83	81,217	100
Bukombe	2,369	4	50,871	96	53,240	100
Meatu	6,208	20	25,283	80	31,492	100
Shinyanga Urban	1,403	14	8,795	86	10,198	100
Kishapu	7,957	22	27,667	78	35,624	100
Total	49,733	13	328,124	87	377,857	100

29.1b 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		Total
	Government	NGO / Development Project	
Bariadi	1,759	0	1,759
Maswa	434	0	434
Shinyanga Rural	2,013	0	2,013
Kahama	7,648	0	7,648
Bukombe	239	0	239
Meatu	1,202	0	1,202
Shinyanga Urban	815	23	839
Kishapu	3,146	0	3,146
Total	17,256	23	17,280

29.1c LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year

District	Source of Advice		Total
	Government	NGO / Development Project	
Bariadi	3,513	179	3,692
Maswa	650	0	650
Shinyanga Rural	3,434	298	3,732
Kahama	9,904	0	9,904
Bukombe	478	0	478
Meatu	2,686	0	2,686
Shinyanga Urban	559	82	641
Kishapu	3,539	0	3,539
Total	24,763	559	25,321

29.1d LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year

District	Source of Advice		Total
	Government	NGO / Development Project	
Bariadi	1,410	179	1,589
Maswa	108	0	108
Shinyanga Rural	1,611	199	1,809
Kahama	4,519	0	4,519
Bukombe	239	0	239
Meatu	1,389	0	1,389
Shinyanga Urban	323	116	439
Kishapu	2,252	0	2,252
Total	11,851	493	12,344

29.1e LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Milk Hygene By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Development Project	Other	
Bariadi	2,116	0	0	2,116
Maswa	108	0	0	108
Shinyanga Rural	2,418	199	0	2,617
Kahama	5,518	0	0	5,518
Bukombe	358	0	0	358
Meatu	2,183	0	0	2,183
Shinyanga Urban	327	143	32	502
Kishapu	2,501	0	0	2,501
Total	15,529	342	32	15,903

29.1f LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year

District	Source of Advice		Total
	Government	NGO / Development Project	
Bariadi	7,874	171	8,045
Maswa	867	0	867
Shinyanga Rural	4,726	301	5,026
Kahama	10,007	0	10,007
Bukombe	1,553	0	1,553
Meatu	5,134	0	5,134
Shinyanga Urban	1,097	54	1,151
Kishapu	6,346	0	6,346
Total	37,603	526	38,130

29.1g LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Development Project	Other	
Bariadi	1,767	0	0	1,767
Maswa	434	0	0	434
Shinyanga Rural	1,914	99	0	2,014
Kahama	3,547	0	144	3,691
Bukombe	119	0	0	119
Meatu	2,666	0	79	2,745
Shinyanga Urban	360	23	0	383
Kishapu	4,106	0	81	4,187
Total	14,913	123	304	15,340

29.1h LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Development Project	Large Scale Farmer	
Bariadi	3,698	0	0	3,698
Maswa	325	0	0	325
Shinyanga Rural	2,596	99	0	2,696
Kahama	6,321	0	0	6,321
Bukombe	358	0	0	358
Meatu	2,987	0	0	2,987
Shinyanga Urban	112	23	0	135
Kishapu	3,879	79	82	4,040
Total	20,277	202	82	20,560

29.1i LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Group Formation and Strengtherning By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Development Project	Large Scale Farmer	
Bariadi	2,641	358	178	3,177
Maswa	217	108	0	325
Shinyanga Rural	1,707	298	0	2,006
Kahama	6,680	0	0	6,680
Bukombe	119	0	0	119
Meatu	1,380	0	0	1,380
Shinyanga Urban	307	54	0	361
Kishapu	2,821	0	0	2,821
Total	15,873	819	178	16,869

29.1j LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Development Project	Other	
Bariadi	3,353	176	0	3,530
Maswa	434	0	0	434
Shinyanga Rural	2,504	199	0	2,703
Kahama	6,733	0	0	6,733
Bukombe	478	0	0	478
Meatu	1,861	83	0	1,945
Shinyanga Urban	477	82	0	559
Kishapu	2,576	0	78	2,654
Total	18,416	541	78	19,035

29.1k LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Use of Improved Bulls By Source and District, 2002/03 Agricultural Year

District	Source of Advice		Total
	Government	NGO / Development Project	
Bariadi	2,122	0	2,122
Maswa	426	108	534
Shinyanga Rural	1,314	200	1,514
Kahama	4,767	144	4,911
Bukombe	239	0	239
Meatu	2,664	0	2,664
Shinyanga Urban	602	55	657
Kishapu	2,661	0	2,661
Total	14,794	506	15,301

29.1l LIVESTOCK EXTENSION: Number of Agricultural Households By Quality of Extension Services and District, 2002/03 Agricultural Year

	Quality of Service										Total	
	Very Good		Good		Average		Poor		No Good			
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	1,223	13	7,856	85	169	2	0	0	0	0	9,248	100
Maswa	1,406	25	2,266	40	1,834	33	108	2	0	0	5,614	100
Shinyanga Rural	2,319	31	4,727	63	406	5	0	0	0	0	7,452	100
Kahama	1,899	14	10,177	75	1,116	8	393	3	0	0	13,585	100
Bukombe	239	11	1,424	67	358	17	0	0	119	6	2,141	100
Meatu	929	13	3,449	50	2,185	31	0	0	383	6	6,946	100
Shinyanga Urban	78	6	442	32	650	47	217	16	0	0	1,388	100
Kishapu	884	11	3,495	45	3,406	44	0	0	0	0	7,785	100
Total	8,979	17	33,835	62	10,125	19	719	1	503	1	54,160	100

29.1m LIVESTOCK EXTENSION: Number of Agricultural Households By Source of Extension Services and District, 2002/03 Agricultural Year

	Extension Provider										Total	
	Government		NGO / Development		Co-operative		Large Scale		Other			
District	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Bariadi	8,884	20	8,884	20	8,884	20	8,884	20	8,884	20	44,419	100
Maswa	1,942	20	1,942	20	1,942	20	1,942	20	1,942	20	9,709	100
Shinyanga Rural	6,848	20	6,848	20	6,848	20	6,848	20	6,848	20	34,238	100
Kahama	14,122	20	13,981	20	13,981	20	13,981	20	13,981	20	70,047	100
Bukombe	2,369	20	2,369	20	2,369	20	2,369	20	2,369	20	11,847	100
Meatu	6,208	20	6,208	20	6,208	20	6,208	20	6,208	20	31,042	100
Shinyanga Urban	1,403	20	1,371	20	1,371	20	1,371	20	1,371	20	6,887	100
Kishapu	7,957	20	7,957	20	7,957	20	7,957	20	7,957	20	39,785	100
Total	49,733	20	49,560	20	49,560	20	49,560	20	49,560	20	247,974	100

29.13 LIVESTOCK EXTENSION: Number of Agricultural Households with/ without Contact farmers/ Group Member and District, 2002/03 Agricultural Year

District	Number of Agricultural Households WITH Contact Farmers / Group Members		Number of Agricultural Households WITHOUT Contact Farmers / Group Members		Total	
	Number	%	Number	%	Number	%
Bariadi	3,996	5	73,576	95	77,572	100
Maswa	744	2	42,508	98	43,252	100
Shinyanga Rural	3,008	7	42,255	93	45,263	100
Kahama	4,687	6	76,530	94	81,217	100
Bukombe	597	1	52,643	99	53,240	100
Meatu	642	2	30,849	98	31,492	100
Shinyanga Urban	664	7	9,535	93	10,198	100
Kishapu	2,785	8	32,838	92	35,624	100
Total	17,123	5	360,735	95	377,857	100

30.1 GOVERNMENT REGULATORY PROBLEMS: Number of Agricultural Households by Whether Face Problems with Governmet Regulation During 2003/04 by District, 2002/03 Agricultural Year

District	Did you face problems with Govt regulations during 02/03?				Total	
	Yes		No			
	Number	%	Number	%	Number	%
Bariadi	870	1	76,702	99	77,572	100
Maswa	542	1	42,710	99	43,252	100
Shinyanga Rural	102	0	45,161	100	45,263	100
Kahama	983	1	80,233	99	81,217	100
Bukombe	1,195	2	52,045	98	53,240	100
Meatu	993	3	30,498	97	31,492	100
Shinyanga Urban	140	1	10,059	99	10,198	100
Kishapu	623	2	35,001	98	35,624	100
Total	5,448	1	372,410	99	377,857	100

ACCESS TO INFRASTRUCTURE AND OTHER SERVICES

33.1a ACCESS TO SERVICES: Number of Agricultural Households by Distance to Services by District, 2002/03 Agricultural Year

District	Mean Distance to											
	Primary School	Secondary School	Health Clinic / Dispensary	Hospital	District Capital	Regional Capital	Feeder Road	All weather Road	Tarmac Road	Primary Market	Secondary Market	Tertiary Market
Bariadi	3.1	14.9	5.2	31.7	34.0	163.9	2.4	13.9	114.0	8.5	20.7	27.9
Maswa	2.4	16.3	6.1	32.5	32.0	102.4	3.3	3.5	98.8	6.5	14.1	22.6
Shinyanga Ruralal	1.8	19.5	4.4	46.7	47.1	49.1	1.4	5.8	43.0	7.5	12.4	43.5
Kahama	2.1	21.0	11.2	44.7	44.6	147.7	1.7	8.0	35.9	6.4	15.7	40.4
Bukombe	2.4	18.7	10.7	52.2	40.3	196.3	2.0	3.9	14.8	7.2	13.5	23.3
Meatu	2.9	22.1	8.3	42.7	46.1	174.7	2.3	5.6	169.4	9.1	13.7	54.1
Shinyanga Urbanan	1.7	7.6	5.1	10.0	11.1	14.9	1.3	2.7	13.1	6.2	9.0	9.4
Kishapu	2.1	23.2	7.4	45.2	38.3	52.8	2.8	3.6	43.9	12.6	26.1	41.3
Total	2.4	18.6	7.7	40.9	39.3	130.6	2.2	7.1	68.3	7.9	16.5	34.2

Regional Capital	130.61
Tarmac Road	68.27
Hospital	40.88
District Capital	39.32
Tertiary Market	34.15
Secondary School	18.65
Secondary Market	16.48
Primary Market	7.90
Health Clinic / Dispensary	7.71
All weather Road	7.10
Primary School	2.39
Feeder Road	2.18

33.1 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Primary School and District, 2002/03 Agricultural Year

District	Distance to Primary School										Total Number of Households	Mean
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	17,755	23	36,621	47	22,933	30	0	0	262	0	77,572	3.1
Maswa	6,459	15	20,911	48	15,667	36	108	0	108	0	43,252	2.4
Shinyanga Rural	10,639	24	25,644	57	8,675	19	204	0	102	0	45,263	1.8
Kahama	14,915	18	43,020	53	22,433	28	848	1	0	0	81,217	2.1
Bukombe	6,541	12	29,156	55	17,304	33	0	0	239	0	53,240	2.4
Meatu	2,913	9	12,258	39	16,154	51	167	1	0	0	31,492	2.9
Shinyanga Urban	2,810	28	5,907	58	1,427	14	23	0	32	0	10,198	1.7
Kishapu	7,858	22	17,144	48	10,378	29	244	1	0	0	35,624	2.1
Total	69,889	18	190,660	50	114,971	30	1,594	0	743	0	377,857	2.4

33.2 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Secondary School and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Secondary School										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	178	0	4,946	6	20,598	27	30,164	39	21,686	28	77,572	14.9
Maswa	434	1	3,979	9	13,116	30	15,695	36	10,029	23	43,252	16.3
Shinyanga Rural	204	0	489	1	15,938	35	10,714	24	17,919	40	45,263	19.5
Kahama	570	1	3,669	5	17,108	21	26,228	32	33,643	41	81,217	21.0
Bukombe	232	0	239	0	13,355	25	18,767	35	20,647	39	53,240	18.7
Meatu	165	1	1,734	6	5,328	17	7,792	25	16,472	52	31,492	22.1
Shinyanga Urban	583	6	650	6	5,472	54	3,461	34	32	0	10,198	7.6
Kishapu	163	0	897	3	9,676	27	13,630	38	11,257	32	35,624	23.2
Total	2,527	1	16,603	4	100,591	27	126,451	33	131,684	35	377,857	18.6

33.3 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Health Clinic School and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Health Clinic										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	5,897	8	21,799	28	43,822	56	4,808	6	1,245	2	77,572	5.2
Maswa	3,287	8	10,850	25	23,628	55	4,418	10	1,069	2	43,252	6.1
Shinyanga Rural	2,400	5	12,073	27	28,053	62	2,738	6	0	0	45,263	4.4
Kahama	5,069	6	11,141	14	44,142	54	10,552	13	10,312	13	81,217	11.2
Bukombe	1,309	2	2,390	4	28,505	54	15,547	29	5,489	10	53,240	10.7
Meatu	1,297	4	4,412	14	14,455	46	9,593	30	1,736	6	31,492	8.3
Shinyanga Urban	957	9	1,887	18	6,137	60	1,187	12	31	0	10,198	5.1
Kishapu	2,077	6	8,842	25	18,695	52	3,675	10	2,334	7	35,624	7.4
Total	22,293	6	73,393	19	207,436	55	52,519	14	22,216	6	377,857	7.7

33.4 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Hospital School and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Hospital										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	177	0	338	0	4,233	5	6,795	9	66,029	85	77,572	31.7
Maswa	542	1	0	0	4,009	9	6,909	16	31,792	74	43,252	32.5
Shinyanga Rural	102	0	0	0	607	1	5,468	12	39,087	86	45,263	46.7
Kahama	0	0	133	0	6,428	8	14,535	18	60,121	74	81,217	44.7
Bukombe	717	1	0	0	2,146	4	8,014	15	42,363	80	53,240	52.2
Meatu	81	0	1,363	4	3,225	10	2,034	6	24,789	79	31,492	42.7
Shinyanga Urban	31	0	835	8	4,630	45	4,051	40	652	6	10,198	10.0
Kishapu	134	0	1,096	3	2,462	7	2,476	7	29,455	83	35,624	45.2
Total	1,784	0	3,765	1	27,740	7	50,283	13	294,286	78	377,857	40.9

33.5 ACCESS TO SERVICES: Number of Agricultural Households by Distance to District Capital and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to District Capital										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	0	0	99	0	2,623	3	6,896	9	67,955	88	77,572	34.0
Maswa	325	1	0	0	4,009	9	5,492	13	33,426	77	43,252	32.0
Shinyanga Rural	99	0	0	0	102	0	4,866	11	40,196	89	45,263	47.1
Kahama	0	0	0	0	5,858	7	10,811	13	64,548	79	81,217	44.6
Bukombe	478	1	118	0	696	1	10,544	20	41,404	78	53,240	40.3
Meatu	248	1	704	2	2,979	9	2,030	6	25,531	81	31,492	46.1
Shinyanga Urban	63	1	221	2	4,337	43	4,933	48	643	6	10,198	11.1
Kishapu	0	0	1,186	3	1,095	3	4,344	12	28,998	81	35,624	38.3
Total	1,213	0	2,329	1	21,699	6	49,916	13	302,701	80	377,857	39.3

33.6 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Districtal Capital and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Districtal Capital										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	715	1	0	0	178	0	709	1	75,970	98	77,572	163.9
Maswa	325	1	108	0	434	1	217	1	42,168	97	43,252	102.4
Shinyanga Rural	0	0	0	0	204	0	5,468	12	39,592	87	45,263	49.1
Kahama	948	1	133	0	143	0	144	0	79,849	98	81,217	147.7
Bukombe	2,502	5	478	1	119	0	471	1	49,670	93	53,240	196.3
Meatu	163	1	0	0	0	0	0	0	31,329	99	31,492	174.7
Shinyanga Urban	64	1	258	3	4,239	42	4,901	48	736	7	10,198	14.9
Kishapu	160	0	81	0	704	2	1,523	4	33,155	93	35,624	52.8
Total	4,877	1	1,058	0	6,022	2	13,432	4	352,468	93	377,857	130.6

33.7 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Feeder Road and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Feeder Road										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	30,610	39	24,685	32	17,464	23	4,456	6	356	0	77,572	2.4
Maswa	17,521	41	16,663	39	7,659	18	1,192	3	217	1	43,252	3.3
Shinyanga Rural	23,242	51	14,540	32	7,178	16	303	1	0	0	45,263	1.4
Kahama	43,588	54	24,624	30	10,707	13	2,155	3	144	0	81,217	1.7
Bukombe	17,091	32	28,159	53	6,920	13	956	2	114	0	53,240	2.0
Meatu	11,448	36	9,330	30	10,466	33	165	1	83	0	31,492	2.3
Shinyanga Urban	5,651	55	3,212	31	1,303	13	0	0	32	0	10,198	1.3
Kishapu	18,086	51	13,304	37	4,152	12	0	0	82	0	35,624	2.8
Total	167,236	44	134,517	36	65,849	17	9,226	2	1,029	0	377,857	2.2

33.8 ACCESS TO SERVICES: Number of Agricultural Households by Distance to All Weather Road and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to ALL Wealther Road										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	12,939	17	13,935	18	24,516	32	11,858	15	14,324	18	77,572	13.9
Maswa	10,038	23	15,504	36	13,351	31	3,935	9	424	1	43,252	3.5
Shinyanga Rural	12,094	27	7,004	15	20,110	44	3,648	8	2,408	5	45,263	5.8
Kahama	22,062	27	18,505	23	22,943	28	11,232	14	6,475	8	81,217	8.0
Bukombe	11,727	22	21,514	40	16,296	31	2,627	5	1,075	2	53,240	3.9
Meatu	5,719	18	6,806	22	13,006	41	5,795	18	166	1	31,492	5.6
Shinyanga Urban	3,222	32	3,118	31	3,278	32	580	6	0	0	10,198	2.7
Kishapu	11,200	31	10,364	29	12,021	34	1,320	4	718	2	35,624	3.6
Total	89,001	24	96,751	26	125,522	33	40,994	11	25,590	7	377,857	7.1

33.9 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Tarmac Road and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Tarmac Road										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	1,238	2	0	0	707	1	4,646	6	70,981	92	77,572	114.0
Maswa	2,709	6	0	0	434	1	95	0	40,014	93	43,252	98.8
Shinyanga Rural	2,162	5	101	0	0	0	4,143	9	38,858	86	45,263	43.0
Kahama	2,449	3	6,455	8	5,606	7	14,755	18	51,952	64	81,217	35.9
Bukombe	4,528	9	6,368	12	18,144	34	7,727	15	16,473	31	53,240	14.8
Meatu	1,235	4	0	0	0	0	0	0	30,256	96	31,492	169.4
Shinyanga Urban	571	6	336	3	4,207	41	4,210	41	875	9	10,198	13.1
Kishapu	5,692	16	639	2	5,636	16	1,696	5	21,960	62	35,624	43.9
Total	20,585	5	13,898	4	34,734	9	37,271	10	271,370	72	377,857	68.3

33.10 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Primary Market and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Primary Market										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	8,652	11	13,655	18	34,951	45	14,255	18	6,060	8	77,572	8.5
Maswa	2,231	5	10,686	25	25,149	58	3,885	9	1,300	3	43,252	6.5
Shinyanga Rural	1,882	4	7,045	16	22,495	50	12,045	27	1,795	4	45,263	7.5
Kahama	6,768	8	13,347	16	44,088	54	14,598	18	2,416	3	81,217	6.4
Bukombe	2,737	5	8,173	15	30,361	57	11,020	21	948	2	53,240	7.2
Meatu	2,070	7	2,242	7	18,891	60	5,811	18	2,477	8	31,492	9.1
Shinyanga Urban	650	6	1,725	17	6,047	59	1,554	15	223	2	10,198	6.2
Kishapu	2,186	6	4,886	14	10,003	28	10,666	30	7,882	22	35,624	12.6
Total	27,176	7	61,760	16	191,985	51	73,835	20	23,102	6	377,857	7.9

33.11 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Secondary Market and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Secondary Market										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	3,021	4	4,318	6	11,679	15	15,570	20	42,983	55	77,572	20.7
Maswa	1,244	3	4,822	11	15,383	36	13,785	32	8,017	19	43,252	14.1
Shinyanga Rural	183	0	4,166	9	18,716	41	17,095	38	5,104	11	45,263	12.4
Kahama	691	1	2,385	3	23,374	29	36,103	44	18,664	23	81,217	15.7
Bukombe	717	1	1,791	3	22,646	43	16,716	31	11,370	21	53,240	13.5
Meatu	479	2	1,746	6	11,071	35	11,143	35	7,053	22	31,492	13.7
Shinyanga Urban	633	6	715	7	5,479	54	2,531	25	840	8	10,198	9.0
Kishapu	1,379	4	2,695	8	3,032	9	6,807	19	21,711	61	35,624	26.1
Total	8,347	2	22,637	6	111,380	29	119,751	32	115,742	31	377,857	16.5

33.12 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Tertiary Market and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Tertiary Market										Total Number of Households	Mean Distance
	Less than 1		1 - 2.9		3 - 9 9		10 - 19.9		Above 20			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%		
Bariadi	1,538	2	889	1	4,381	6	13,977	18	56,787	73	77,572	27.9
Maswa	650	2	1,841	4	11,117	26	8,957	21	20,687	48	43,252	22.6
Shinyanga Rural	295	1	1,278	3	3,156	7	6,080	13	34,453	76	45,263	43.5
Kahama	1,062	1	503	1	9,236	11	12,721	16	57,695	71	81,217	40.4
Bukombe	829	2	4,119	8	12,535	24	12,471	23	23,286	44	53,240	23.3
Meatu	463	1	1,451	5	1,967	6	1,791	6	25,819	82	31,492	54.1
Shinyanga Urban	556	5	273	3	5,056	50	3,483	34	831	8	10,198	9.4
Kishapu	328	1	1,920	5	3,296	9	3,817	11	26,262	74	35,624	41.3
Total	5,722	2	12,274	3	50,744	13	63,296	17	245,821	65	377,857	34.2

33.13 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Veterinary Clinic and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Veterinary Clinic																Mean Distance
	<5		5 - 9		10 - 14		15 - 19		20 - 29		30 - 49		50 +		Total		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households		
Bariadi	0	0	1,993	3	178	0	1,071	1	7,639	10	5,800	7.8	57,562	78	74,244		151.8
Maswa	3,467	8	6,133	15	4,404	11	864	2	2,119	5	9,499	23.0	14,841	36	41,328		47.9
Shinyanga Rural	300	1	102	0	2,536	6	2,835	6	2,416	5	14,243	32.2	21,733	49	44,166		50.7
Kahama	4,927	6	7,181	9	4,708	6	6,768	9	9,181	12	11,074	14.0	35,517	45	79,356		50.1
Bukombe	4,894	9	453	1	1,912	4	0	0	3,100	6	118	0.2	41,336	80	51,813		100.1
Meatu	492	2	3,145	10	1,022	3	968	3	2,423	8	6,178	20.2	16,358	53	30,587		83.5
Shinyanga Urban	681	7	2,136	22	534	6	31	0	0	0	0	0.0	6,211	65	9,592		51.5
Kishapu	3,065	9	625	2	2,346	7	81	0	1,466	4	10,264	28.8	17,778	50	35,624		51.5
Total	17,825	5	21,767	6	17,641	5	12,617	3	28,345	8	57,177	15.6	211,337	58	366,709		80.8

33.14 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Extension Center

District	Distance (Kilometer) to Extension Center																Mean Distance
	<5		5 - 9		10 - 14		15 - 19		20 - 29		30 - 49		50 +		Total		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households		
Bariadi	520	1	2,767	4	4,227	6	3,735	5	22,289	31	25,035	34.8	13,346	19	71,919		49.3
Maswa	3,468	8	6,135	15	4,192	10	1,730	4	3,622	9	12,861	30.7	9,933	24	41,940		37.1
Shinyanga Rural	302	1	303	1	2,530	6	2,835	6	2,623	6	14,846	33.1	21,416	48	44,855		49.5
Kahama	3,262	5	13,711	19	4,371	6	5,549	8	3,291	5	2,239	3.1	38,770	54	71,193		50.1
Bukombe	1,553	3	3,748	7	4,439	8	5,239	10	6,327	12	8,421	16.1	22,690	43	52,416		85.3
Meatu	220	1	4,482	15	1,382	5	1,292	4	2,668	9	6,919	22.8	13,364	44	30,328		44.0
Shinyanga Urban	684	8	1,576	19	90	1	31	0	0	0	0	0.0	6,094	72	8,476		33.0
Kishapu	2,284	7	2,503	8	2,081	6	1,638	5	1,142	4	9,615	29.7	13,102	40	32,365		39.7
Total	12,294	3	35,225	10	23,312	7	22,048	6	41,962	12	79,937	22.6	138,715	39	353,493		51.4

33.15 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Research Station and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Research Station																Mean Distance
	<5		5 - 9		10 - 14		15 - 19		20 - 29		30 - 49		50 +		Total		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households		
Bariadi	179	0	0	0	0	0	178	0	179	0	0	0.0	77,036	99	77,572		192.1
Maswa	3,468	8	0	0	108	0	0	0	189	0	744	1.7	38,742	90	43,252		146.9
Shinyanga Rural	201	0	0	0	100	0	0	0	305	1	3,260	7.2	41,396	91	45,263		149.5
Kahama	427	1	0	0	0	0	0	0	0	0	133	0.2	80,657	99	81,217		263.6
Bukombe	358	1	0	0	0	0	0	0	0	0	0	0.0	52,882	99	53,240		318.7
Meatu	489	2	0	0	0	0	0	0	0	0	0	0.0	30,940	98	31,429		253.5
Shinyanga Urban	1,868	19	992	10	0	0	0	0	30	0	0	0.0	6,970	71	9,860		146.4
Kishapu	2,594	7	0	0	810	2	80	0	651	2	82	0.2	31,406	88	35,624		170.1
Total	9,584	3	992	0	1,019	0	258	0	1,355	0	4,219	1.1	360,030	95	377,457		216.8

33.16 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Plant Protection Lab and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Plant Protection Lab													Mean Distance
	<5		5 - 9		10 - 14		20 - 29		30 - 49		50 +		Total	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	
Bariadi	178	0	177	0	0	0	348	0	353	0	76,516	99	77,572	192.8
Maswa	3,468	8	0	0	108	0	95	0	108	0	39,473	91	43,252	147.6
Shinyanga Rural	611	1	0	0	0	0	101	0	3,362	7	41,088	91	45,161	145.5
Kahama	571	1	0	0	0	0	0	0	418	1	80,228	99	81,217	258.3
Bukombe	358	1	0	0	118	0	238	0	0	0	52,526	99	53,240	312.2
Meatu	572	2	0	0	0	0	0	0	83	0	30,836	98	31,492	250.0
Shinyanga Urban	1,778	18	1,022	10	0	0	0	0	0	0	7,026	72	9,826	145.4
Kishapu	2,342	7	0	0	485	1	733	2	164	0	31,900	90	35,624	172.2
Total	9,878	3	1,200	0	711	0	1,513	0	4,488	1	359,592	95	377,383	214.4

33.17 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Land Registration Office and District, 2002/03 Agricultural Year

District	Distance (Kilometer) to Land Registration Office																Mean Distance
	<5		5 - 9		10 - 14		15 - 19		20 - 29		30 - 49		50 +		Total		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households		
Bariadi	346	0	1,082	1	3,698	5	3,556	5	22,834	30	36,025	47	8,573	11	76,113		33.5
Maswa	2,700	6	4,334	10	2,811	7	969	2	4,542	11	21,845	51	5,942	14	43,144		40.7
Shinyanga Rural	201	0	204	0	1,631	4	3,037	7	3,727	8	18,371	41	18,092	40	45,263		48.9
Kahama	417	1	2,716	3	3,110	4	7,640	9	13,550	17	24,131	30	29,281	36	80,846		44.0
Bukombe	239	0	119	0	7,545	14	3,568	7	9,546	18	9,803	18	22,420	42	53,240		40.7
Meatu	162	1	2,395	8	329	1	1,541	5	3,167	11	8,687	29	13,757	46	30,039		46.5
Shinyanga Urban	652	7	2,192	23	594	6	784	8	0	0	5,301	56	0	0	9,522		25.2
Kishapu	1,218	3	547	2	1,198	3	0	0	1,374	4	17,951	50	13,335	37	35,624		50.1
Total	5,935	2	13,589	4	20,916	6	21,095	6	58,741	16	142,115	38	111,401	30	373,792		41.9

33.18 ACCESS TO LIVESTOCK STRUCTURES: Number of Agricultural Households by Distance to Livestock Development Center

District	Distance (Kilometer) to Livestock Development Center																Mean Distance
	<5		5 - 9		10 - 14		15 - 19		20 - 29		30 - 49		50 +		Total		
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households		
Bariadi	163	0	10,367	14	5,904	8	11,208	15	7,102	10	533	1	39,127	53	74,405		91.1
Maswa	3,792	9	3,901	9	1,299	3	541	1	419	1	4,327	10	28,756	67	43,035		75.4
Shinyanga Rural	604	2	7,767	19	8,193	20	1,186	3	3,089	8	3,464	9	15,690	39	39,992		44.6
Kahama	10,620	13	565	1	110	0	566	1	2,378	3	1,998	2	64,980	80	81,217		127.3
Bukombe	5,490	10	119	0	236	0	1,314	2	119	0	0	0	45,841	86	53,121		164.6
Meatu	847	3	1,367	4	4,009	13	774	2	1,672	5	4,381	14	18,027	58	31,077		117.9
Shinyanga Urban	1,558	16	1,040	11	472	5	0	0	30	0	0	0	6,475	68	9,575		66.7
Kishapu	3,246	9	78	0	1,958	5	328	1	1,061	3	6,876	19	22,077	62	35,624		84.3
Total	26,320	7	25,205	7	22,181	6	15,917	4	15,871	4	21,578	6	240,972	65	368,045		102.8

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	2,110	8	10,808	40	7,582	28	3,934	15	2,311	9	26,745
Maswa	2,273	8	4,287	16	13,730	50	4,969	18	2,250	8	27,509
Shinyanga Rural	2,028	14	1,302	9	4,007	27	2,640	18	4,668	32	14,645
Kahama	1,350	1	24,852	25	11,230	11	29,070	30	31,959	32	98,461
Bukombe	1,538	5	3,784	13	3,565	13	16,353	57	3,215	11	28,455
Meatu	672	2	4,566	12	4,146	11	15,303	41	12,883	34	37,570
Shinyanga Urban	95	3	2,362	72	731	22	92	3	0	0	3,281
Kishapu	568	2	3,965	11	8,647	25	11,996	34	9,761	28	34,937
Total	10,634	4	55,927	21	53,637	20	84,358	31	67,047	25	271,602

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	884	9	6,752	69	1,411	14	452	5	357	4	9,855
Maswa	541	10	2,145	39	2,029	36	528	9	325	6	5,568
Shinyanga Rural	306	13	102	4	808	33	306	13	914	38	2,436
Kahama	787	5	6,226	38	2,826	17	1,786	11	4,688	29	16,312
Bukombe	358	5	2,647	35	1,432	19	2,744	36	357	5	7,538
Meatu	136	2	1,768	23	937	12	2,317	30	2,623	34	7,781
Shinyanga Urban	0	0	864	63	484	35	31	2	0	0	1,379
Kishapu	82	1	3,277	37	1,956	22	2,040	23	1,613	18	8,968
Total	3,094	5	23,780	40	11,883	20	10,203	17	10,877	18	59,838

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	529	17	154	5	1,237	39	889	28	357	11	3,166
Maswa	108	3	0	0	2,044	53	1,300	33	434	11	3,885
Shinyanga Rural	204	11	102	6	102	6	711	39	710	39	1,829
Kahama	141	1	4,147	26	2,475	15	4,937	31	4,398	27	16,098
Bukombe	0	0	119	3	474	12	2,747	70	596	15	3,936
Meatu	0	0	161	4	411	10	2,188	54	1,316	32	4,076
Shinyanga Urban	0	0	152	83	0	0	31	17	0	0	182
Kishapu	0	0	0	0	1,142	23	2,041	42	1,695	35	4,877
Total	982	3	4,836	13	7,884	21	14,842	39	9,505	25	38,049

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	350	14	179	7	1,058	43	536	22	357	14	2,479
Maswa	108	3	108	3	2,044	50	1,408	34	426	10	4,094
Shinyanga Rural	306	17	0	0	0	0	711	39	812	44	1,829
Kahama	141	1	4,061	25	2,648	16	4,850	30	4,398	27	16,098
Bukombe	112	3	119	3	354	9	2,747	70	596	15	3,929
Meatu	83	2	83	2	333	8	2,190	54	1,392	34	4,080
Shinyanga Urban	30	20	121	80	0	0	0	0	0	0	152
Kishapu	161	3	0	0	1,142	24	1,796	38	1,613	34	4,713
Total	1,291	3	4,671	12	7,579	20	14,238	38	9,594	26	37,374

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	174	4	1,060	27	1,408	36	710	18	531	14	3,885
Maswa	108	2	325	7	2,785	62	866	19	424	9	4,508
Shinyanga Rural	908	33	101	4	606	22	303	11	812	30	2,729
Kahama	0	0	7,788	37	1,694	8	4,946	23	6,762	32	21,191
Bukombe	239	5	540	11	593	13	2,866	61	477	10	4,715
Meatu	210	2	1,430	16	1,291	14	3,597	40	2,384	27	8,912
Shinyanga Urban	32	10	244	72	63	19	0	0	0	0	339
Kishapu	81	1	162	3	1,878	32	2,120	36	1,613	28	5,855
Total	1,753	3	11,650	22	10,318	20	15,409	30	13,004	25	52,134

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		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Bariadi	0	0	715	27	1,233	46	357	13	357	13	2,661
Maswa	325	9	324	9	2,152	62	434	13	217	6	3,452
Shinyanga Rural	102	3	997	31	1,183	37	204	6	710	22	3,196
Kahama	282	3	1,145	12	566	6	1,700	17	6,205	63	9,897
Bukombe	232	6	119	3	354	9	2,627	69	477	13	3,809
Meatu	79	1	333	5	841	13	2,437	39	2,623	42	6,313
Shinyanga Urban	32	13	182	74	31	13	0	0	0	0	245
Kishapu	163	3	0	0	1,142	23	1,878	38	1,695	35	4,877
Total	1,214	4	3,816	11	7,502	22	9,637	28	12,283	36	34,451

33.19g TYPE OF SERVICE: Number of Agricultural Households by Level of Satisfaction of the Service and District, 2002/03 Agricultural Year

TYPE OF SERVICE	LEVEL OF SATISFACTION OF THE SERVICE								
	Very Good		Good		Average		Poor		No good
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households
Veterinary Clinic	10,634	4	55,927	21	53,637	20	84,358	31	67,047
Extension Centre	3,094	5	23,780	40	11,883	20	10,203	17	10,877
Research Station	982	3	4,836	13	7,884	21	14,842	39	9,505
Plant Protection Lab	1,291	3	4,671	12	7,579	20	14,238	38	9,594
Land Registration Office	1,753	3	11,650	22	10,318	20	15,409	30	13,004
Livestock Development Centre	1,214	4	3,816	11	7,502	22	9,637	28	12,283
OVERALL %		4		21.214		20.02		30.13	

HOUSEHOLD FACILITIES

34.1 Number of Agricultural Households by Type of Toilet and District during the 2002/03 Agriculture Year

District	Type of Toilet					
	No Toilet	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine	Other Type	Total Number of Households
Bariadi	9,310	1,764	65,608	533	356	77,572
Maswa	5,344	851	36,651	405	-	43,252
Shinyanga Rural	4,145	2,920	38,005	91	102	45,263
Kahama	16,227	3,866	60,927	197	-	81,217
Bukombe	4,398	1,912	46,691	239	-	53,240
Meatu	892	897	29,353	350	-	31,492
Shinyanga Urban	473	76	9,244	390	15	10,198
Kishapu	2,714	400	32,266	244	0	35,624
Total	43,503	12,686	318,745	2,450	474	377,857
%	11.0	0.7	86.5	1.8	0.1	100.0

34.2A Number of Households Reporting Average Number of Rooms and Type of Roofing Materials by District; 2002/03 Agricultural Year

District	Average Number of Rooms per Household	Type of Roofing Material							
		Iron Sheets	Tiles	Concrete	Asbestos	Grass / Leaves	Grass & Mud	Other	Total
Bariadi	3	49,428	333	0	0	17,850	8,371	1,590	77,572
Maswa	3	10,796	217	0	0	6,687	25,552	0	43,252
Shinyanga Rural	3	7,831	200	0	0	24,754	12,477	0	45,263
Kahama	2	23,036	381	123	0	53,009	4,557	110	81,217
Bukombe	2	18,127	239	119	0	23,166	11,588	0	53,240
Meatu	3	8,751	572	0	244	3,867	18,059	0	31,492
Shinyanga Urban	3	2,405	31	0	0	1,575	6,188	0	10,198
Kishapu	3	5,055	82	0	814	1,607	28,066	0	35,624
Total	3	125,429	2,054	243	1,058	132,516	114,858	1,700	377,857
%		33.2	0.5	0.1	0.3	35.1	30.4	0.4	100.0

34.2B Percent of Households Reporting Average Number of Rooms and Type of Roofing Materials by District; 2002/03 Agricultural Year

District	Average Number of Rooms per Household	Type of Roofing Material							
		Iron Sheets	Tiles	Concrete	Asbestos	Grass / Leaves	Grass & Mud	Other	Total
Bariadi	3	64	0	0	0	23	11	2	100
Maswa	3	25	1	0	0	15	59	0	100
Shinyanga Rural	3	17	0	0	0	55	28	0	100
Kahama	2	28	0	0	0	65	6	0	100
Bukombe	2	34	0	0	0	44	22	0	100
Meatu	3	28	2	0	1	12	57	0	100
Shinyanga Urban	3	24	0	0	0	15	61	0	100
Kishapu	3	14	0	0	2	5	79	0	100
Total	3	33	1	0	0	35	30	0	100
%		33.2	0.5	0.1	0.3	35.1	30.4	0.4	100.0

34.3 Number of Agricultural Households by Type of Owned Assets and District during 2002/03 Agricultural YearDistrict

Type of Owned Asse	District								Total
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu	
Radio	35,698	19,852	23,650	43,003	32,301	13,930	6,001	17,816	192,251
Landline phone	154	189	98	0	119	141	77	80	858
Mobile phone	1,352	297	788	1,541	0	1,186	317	244	5,725
Iron	12,880	6,915	5,969	16,974	6,289	6,936	2,096	6,390	64,449
Wheelbarrow	5,655	4,265	8,757	8,950	2,388	3,495	1,047	4,836	39,393
Bicycle	48,792	26,632	30,282	54,571	36,154	20,598	6,738	22,764	246,531
Vehicle	1,051	541	503	977	353	286	217	307	4,236
Television / Video	1,059	412	506	837	119	397	200	162	3,692
Total Agricultural Households per District	77,572	43,252	45,263	81,217	53,240	31,492	10,198	35,624	

34.3 Propotion of Agricultural Households by Type of Owned Assets and District during 2002/03 Agricultural YearDistrict

Type of Owned Asset	District							
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu
Radio	46	46	52	53	61	44	59	50
Landline phone	0	0	0	0	0	0	1	0
Mobile phone	2	1	2	2	0	4	3	1
Iron	17	16	13	21	12	22	21	18
Wheelbarrow	7	10	19	11	4	11	10	14
Bicycle	63	62	67	67	68	65	66	64
Vehicle	1	1	1	1	1	1	2	1
Television / Video	1	1	1	1	0	1	2	0

34.4a Number of Agriculture Households by Main Source of Energy Used for Lighting and District during 2002/03 Agricultural Year

Main Source of Energy for Lighting	District								
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu	Total
Mains Electricity	792	290	301	137	478	329	158	0	2,485
Solar	175	0	0	0	119	0	0	149	443
Gas (Biogas)	179	108	100	0	0	0	30	81	498
Hurricane Lamp	11,469	6,820	4,262	12,961	6,049	5,340	2,206	5,125	54,233
Pressure Lamp	2,296	1,732	708	3,140	1,193	249	404	2,492	12,214
Wick Lamp	61,260	33,544	39,083	63,503	44,923	25,183	7,337	27,290	302,123
Candles	0	0	301	284	119	81	0	0	785
Firewood	1,402	757	508	1,192	358	310	32	486	5,044
Total Agricultural Households per District	77,572	43,252	45,263	81,217	53,240	31,491	10,166	35,624	377,825

34.4b Proportion of Agriculture Households by Main Source of Energy Used for Lighting and District during 2002/03 Agricultural Year

Main Source of Energy for Lighting	District								
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu	Total
Mains Electricity	1	1	1	0	1	1	2	0	1
Solar	0	0	0	0	0	0	0	0	0
Gas (Biogas)	0	0	0	0	0	0	0	0	0
Hurricane Lamp	15	16	9	16	11	17	22	14	14
Pressure Lamp	3	4	2	4	2	1	4	7	3
Wick Lamp	79	78	86	78	84	80	72	77	80
Candles	0	0	1	0	0	0	0	0	0
Firewood	2	2	1	1	1	1	0	1	1
Total	100	100	100	100	100	100	100	100	100

34.5a Number of Households by Main Source of Energy for Cooking and District during 2002/03 Agricultural Year

District	District								
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu	Total
Mains Electricity	349	0	101	0	0	0	31	82	562
Gas (Biogas)	178	0	0	0	0	0	0	0	178
Bottled Gas	0	0	102	267	119	83	92	0	663
Parraffin / Kerocine	154	95	0	0	0	83	47	0	379
Charcoal	1,142	2,737	888	5,213	1,431	1,193	990	1,056	14,650
Firewood	74,864	40,205	44,172	75,465	51,212	29,008	8,931	34,162	358,020
Crop Residues	0	215	0	273	478	1,125	78	245	2,413
Livestock Dung	885	0	0	0	0	0	30	79	993
Total Agricultural Households per District	77,572	43,252	45,263	81,217	53,240	31,492	10,198	35,624	377,857

34.5b Proportion of Agriculture Households by Main Source of Energy Used for Cooking and District during 2002/03 Agricultural Year

Main Source of Energy for Lighting	District								
	Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu	Total
Mains Electricity	0	0	0	0	0	0	0	0	0
Gas (Biogas)	0	0	0	0	0	0	0	0	0
Bottled Gas	0	0	0	0	0	0	1	0	0
Parraffin / Kerocine	0	0	0	0	0	0	0	0	0
Charcoal	1	6	2	6	3	4	10	3	4
Firewood	97	93	98	93	96	92	88	96	95
Crop Residues	0	0	0	0	1	4	1	1	1
Livestock Dung	1	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100

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							
		Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	nyanga Urban	Kishapu
Piped Water	Wet	13,845	3,456	4,621	9,580	6,683	3,918	2,114	1,588
	Dry	14,006	6,160	4,217	9,449	6,805	3,837	2,081	1,520
Protected Well	Wet	33,369	12,022	5,546	24,020	8,315	9,153	4,219	1,118
	Dry	34,233	16,857	6,653	24,188	8,194	9,322	4,365	1,033
Protected / Covered Spring	Wet	881	325	505	1,991	1,044	165	92	-
	Dry	704	433	507	1,989	924	249	184	632
Uprotected Well	Wet	14,145	11,025	14,113	38,002	32,544	3,855	1,605	11,085
	Dry	11,505	5,408	15,316	38,990	32,424	4,388	1,747	8,902
Unprotected Spring	Wet	5,605	1,081	3,916	2,849	597	700	278	399
	Dry	4,723	1,183	4,418	4,080	956	83	278	1,198
Surface Water (Lake / Dam / River / Stream)	Wet	8,503	9,824	12,315	1,884	357	13,028	1,423	14,941
	Dry	11,867	10,829	12,837	1,466	357	13,188	1,452	17,933
Covered Rainwater Catchment	Wet	175	95	0	131	239	166	32	1,534
	Dry	0	108	101	0	239	166	0	1,122
Uncovered Rainwater Catchment	Wet	1,049	4,412	4,046	2,512	1,314	250	406	4,959
	Dry	534	2,274	1,018	697	1,075	83	32	3,284
Water Vendor	Wet	0	0	0	247	0	94	30	-
	Dry	0	0	0	357	0	94	30	-
Tanker Truck	Wet	0	0	0	0	0	81	0	-
	Dry	0	0	98	0	0	81	31	-
Other	Wet	0	1,013	201	0	2,147	81	0	-
	Dry	0	0	99	0	2,266	0	0	-
Total Agricultural Households per District		77,572	43,252	45,263	81,217	53,240	31,492	10,198	35,624

36.7 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							
		Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu
Piped Water	Wet	18	8	10	12	13	12	21	4
	Dry	18	14	9	12	13	12	20	4
Protected Well	Wet	43	28	12	30	16	29	41	3
	Dry	44	39	15	30	15	30	43	3
Protected / Covered Spring	Wet	1	1	1	2	2	1	1	-
	Dry	1	1	1	2	2	1	2	2
Uprotected Well	Wet	18	25	31	47	61	12	16	31
	Dry	15	13	34	48	61	14	17	25
Unprotected Spring	Wet	7	3	9	4	1	2	3	1
	Dry	6	3	10	5	2	0	3	3
Surface Water (Lake / Dam / River / Stream)	Wet	11	23	27	2	1	41	14	42
	Dry	15	25	28	2	1	42	14	50
Covered Rainwater Catchment	Wet	0	0	-	0	0	1	0	4
	Dry	-	0	0	-	0	1	-	3
Uncovered Rainwater Catchment	Wet	1	10	9	3	2	1	4	14
	Dry	1	5	2	1	2	0	0	9
Water Vendor	Wet	-	-	-	0	-	0	0	-
	Dry	-	-	-	0	-	0	0	-
Tanker Truck	Wet	-	-	-	-	-	0	-	-
	Dry	-	-	0	-	-	0	0	-
Bottled Water	Wet	-	2	0	-	4	0	-	-
	Dry	-	-	0	-	4	-	-	-

34.8 Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agriculture Year

Distance to Main Source of Drinking Water	Season	District							
		Bariadi	Maswa	Shinyanga R	Kahama	Bukombe	Meatu	Shinyanga U	Kishapu
Less than 100m	Wet	2,122	7,076	4,036	15,978	5,329	2,719	2,049	3,054
	Dry	2,462	3,380	1,612	13,805	4,498	1,305	1,847	1,193
100 - 299 m	Wet	8,588	4,863	4,154	5,109	2,146	1,147	498	1,772
	Dry	7,892	2,589	1,820	4,343	2,151	496	428	632
300 - 499 m	Wet	5,137	2,600	599	3,819	956	1,643	226	723
	Dry	5,137	1,950	200	3,054	717	1,487	226	401
500 - 999 m	Wet	22,949	9,040	12,408	15,473	6,801	4,638	1,941	4,858
	Dry	20,329	4,708	5,685	14,495	6,562	3,790	1,540	1,495
1 - 1.99 Km	Wet	27,509	12,325	18,253	27,255	20,646	12,157	4,325	13,961
	Dry	25,913	17,184	17,227	26,192	19,572	10,763	4,236	9,039
2 - 2.99 Km	Wet	7,588	5,633	4,406	8,750	14,502	5,213	620	6,096
	Dry	9,525	8,301	8,344	10,314	14,251	6,245	872	6,351
3 - 4.99 Km	Wet	3,330	1,066	1,102	4,375	2,503	2,972	453	4,231
	Dry	5,083	4,065	5,051	5,536	3,220	4,718	869	7,000
5 - 9.99 Km	Wet	350	650	305	458	358	1,002	86	850
	Dry	1,231	1,074	5,324	3,478	2,270	2,388	181	8,229
10Km and above	Wet	-	-	-	-	-	-	-	80
	Dry	-	-	-	-	-	299	-	1,285
Total Agricultural Households per District		77,572	43,252	45,263	81,217	53,240	31,492	10,198	35,624

34.9 Proportion of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agriculture Year

Distance to Main Source of Drinking Water	Season	District							
		Bariadi	Maswa	Shinyanga R	Kahama	Bukombe	Meatu	Shinyanga U	Kishapu
Less than 100m	Wet	3	16	9	20	10	9	20	9
	Dry	3	8	4	17	8	4	18	3
100 - 299 m	Wet	11	11	9	6	4	4	5	5
	Dry	10	6	4	5	4	2	4	2
300 - 499 m	Wet	7	6	1	5	2	5	2	2
	Dry	7	5	0	4	1	5	2	1
500 - 999 m	Wet	30	21	27	19	13	15	19	14
	Dry	26	11	13	18	12	12	15	4
1 - 1.99 Km	Wet	35	28	40	34	39	39	42	39
	Dry	33	40	38	32	37	34	42	25
2 - 2.99 Km	Wet	10	13	10	11	27	17	6	17
	Dry	12	19	18	13	27	20	9	18
3 - 4.99 Km	Wet	4	2	2	5	5	9	4	12
	Dry	7	9	11	7	6	15	9	20
5 - 9.99 Km	Wet	0	2	1	1	1	3	1	2
	Dry	2	2	12	4	4	8	2	23
10Km and above	Wet	-	-	-	-	-	-	-	0
	Dry	-	-	-	-	-	1	-	4

34.10 Number of Agricultural Households by Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agricultural Year

Time Spent to and from Main Source of Drinking Water	Season	District							
		Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu
Less than 10	Wet	347	1,703	502	3,116	1,424	737	774	1,129
	Dry	844	581	505	2,701	1,190	162	729	233
10 - 19 Minutes	Wet	14,526	7,415	6,404	18,498	7,824	3,762	1,140	6,305
	Dry	10,690	3,631	2,788	13,888	6,156	2,480	954	3,136
20 - 29 Minutes	Wet	9,781	4,535	6,337	12,756	3,778	2,323	1,089	3,981
	Dry	8,546	3,455	3,125	10,587	3,181	1,543	868	1,636
30 - 39 Minutes	Wet	26,034	11,048	15,193	26,116	20,944	7,041	3,943	10,150
	Dry	21,313	8,789	10,558	23,480	18,435	5,434	3,369	6,300
40 - 49 Minutes	Wet	8,561	2,922	4,645	4,607	3,323	4,100	1,232	1,977
	Dry	7,466	2,491	4,245	5,188	3,437	3,536	1,202	1,008
50 - 59 Minutes	Wet	2,573	3,438	3,736	2,416	1,307	1,528	243	857
	Dry	2,768	2,356	1,191	2,609	2,496	1,894	273	553
above one Hour	Wet	15,750	12,190	8,445	13,708	14,641	12,001	1,777	11,224
	Dry	25,945	21,949	22,851	22,764	18,344	16,443	2,804	22,759
Total Agricultural Households per District		77,572	43,252	45,263	81,217	53,240	31,492	10,198	35,624

34.11 Proportion of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water by Season (Wet and Dry) and District during 2002/03 Agricultural Year

Time Spent to and from Main Source of Drinking Water	Season	District							
		Bariadi	Maswa	Shinyanga Rural	Kahama	Bukombe	Meatu	Shinyanga Urban	Kishapu
Less than 10	Wet	0	4	1	4	3	2	8	3
	Dry	1	1	1	3	2	1	7	1
10 - 19 Minutes	Wet	19	17	14	23	15	12	11	18
	Dry	14	8	6	17	12	8	9	9
20 - 29 Minutes	Wet	13	10	14	16	7	7	11	11
	Dry	11	8	7	13	6	5	9	5
30 - 39 Minutes	Wet	34	26	34	32	39	22	39	28
	Dry	27	20	23	29	35	17	33	18
40 - 49 Minutes	Wet	11	7	10	6	6	13	12	6
	Dry	10	6	9	6	6	11	12	3
50 - 59 Minutes	Wet	3	8	8	3	2	5	2	2
	Dry	4	5	3	3	5	6	3	2
above one Hour	Wet	20	28	19	17	27	38	17	32
	Dry	33	51	50	28	34	52	27	64

34.12A Number of Households by Number of Meals the Household Normally Took per Day by District

Number of Meals per Day	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
One	714	9	1,607	20	1,715	21	561	7	956	12	2,310	28	71	1	239	3	8,173	2.2
Two	48,466	29	13,758	8	14,494	9	34,903	21	38,793	23	9,744	6	2,537	2	4,352	3	167,046	44.2
Three	28,038	14	27,886	14	28,952	14	45,609	23	13,492	7	19,229	10	7,527	4	30,870	15	201,603	53.4
Four	353	34	0	0	102	10	144	14	0	0	209	20	64	6	163	16	1,035	0.3
Total	77,572	21	43,252	11	45,263	12	81,217	21	53,240	14	31,492	8	10,198	3	35,624	9	377,857	100.0

34.12B Number of Households by Number of Meals the Household Normally Took per Day by District

Number of Meals per Day	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
One	714	1	1,607	4	1,715	4	561	1	956	2	2,310	7	71	1	239	1	8,173	2.2
Two	48,466	62	13,758	32	14,494	32	34,903	43	38,793	73	9,744	31	2,537	25	4,352	12	167,046	44.2
Three	28,038	36	27,886	64	28,952	64	45,609	56	13,492	25	19,229	61	7,527	74	30,870	87	201,603	53.4
Four	353	0	0	0	102	0	144	0	0	0	209	1	64	1	163	0	1,035	0.3
Total	77,572	100	43,252	100	45,263	100	81,217	100	53,240	100	31,492	100	10,198	100	35,624	100	377,857	100.0
One and Two Two Meals Per Day		63		36		36		44		75		38		26		13		46

34.13A Number of Households by Number of Days the Household Consumed Meat during the Preceding Week by District

Number of Days	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	48,154	29	24,829	15	20,071	12	27,827	17	12,744	8	13,263	8	4,524	3	12,325	8	163,738	43.3
One	18,863	16	10,575	9	16,218	13	26,425	22	24,736	20	9,431	8	3,547	3	11,315	9	121,110	32.1
Two	7,940	12	5,003	8	7,083	11	19,653	30	10,688	16	6,828	10	1,383	2	7,879	12	66,457	17.6
Three	1,914	10	2,111	11	1,085	6	5,686	31	3,201	17	959	5	409	2	3,096	17	18,460	4.9
Four	353	8	521	11	302	7	829	18	1,407	30	589	13	266	6	362	8	4,629	1.2
Five	348	16	107	5	99	5	516	24	344	16	246	11	0	0	484	23	2,143	0.6
Six	0	0	0	0	102	38	0	0	119	45	0	0	46	17	0	0	268	0.1
Seven	0	0	107	10	303	29	280	27	0	0	177	17	23	2	163	15	1,052	0.3
Total	77,572	21	43,252	11	45,263	12	81,217	21	53,240	14	31,492	8	10,198	3	35,624	9	377,857	100.0

34.13B Number of Households by Number of Days the Household Consumed Meat during the Preceding Week by District

Number of Days	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	48,154	62	24,829	57	20,071	44	27,827	34	12,744	24	13,263	42	4,524	44	12,325	35	163,738	43.3
One	18,863	24	10,575	24	16,218	36	26,425	33	24,736	46	9,431	30	3,547	35	11,315	32	121,110	32.1
Two	7,940	10	5,003	12	7,083	16	19,653	24	10,688	20	6,828	22	1,383	14	7,879	22	66,457	17.6
Three	1,914	2	2,111	5	1,085	2	5,686	7	3,201	6	959	3	409	4	3,096	9	18,460	4.9
Four	353	0	521	1	302	1	829	1	1,407	3	589	2	266	3	362	1	4,629	1.2
Five	348	0	107	0	99	0	516	1	344	1	246	1	0	0	484	1	2,143	0.6
Six	0	0	0	0	102	0	0	0	119	0	0	0	46	0	0	0	268	0.1
Seven	0	0	107	0	303	1	280	0	0	0	177	1	23	0	163	0	1,052	0.3
Total	77,572	100	43,252	11	45,263	12	81,217	21	53,240	14	31,492	8	10,198	3	35,624	9	377,857	100.0

34.14 Number of Households by Number of Days the Household Consumed Fish during the Preceding Week by District

Number of Days	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	40,053	47	33,048	11	30,037	11	47,995	1	7,625	1	19,647	20	4,819	9	19,103	9	202,328	53.5
One	15,442	45	6,223	13	7,786	12	18,589	2	24,634	2	6,311	15	3,351	11	7,779	11	90,113	23.8
Two	10,611	39	2,621	16	2,914	16	9,235	2	10,153	2	4,567	17	1,283	8	5,656	8	47,041	12.4
Three	7,104	28	511	18	2,214	20	3,770	3	5,835	3	419	21	458	7	2,146	7	22,457	5.9
Four	2,328	29	533	14	1,512	23	824	4	2,134	3	209	21	255	6	559	6	8,354	2.2
Five	974	16	208	26	295	25	669	6	2,268	4	127	16	0	7	230	7	4,772	1.3
Six	706	13	0	26	403	28	0	5	119	3	0	22	32	2	81	2	1,343	0.4
Seven	352	15	108	29	102	28	133	9	472	5	212	12	0	2	70	2	1,449	0.4
Total	77,572	33	43,252	17	45,263	19	81,217	3	53,240	3	31,492	18	10,198	7	35,624	7	377,857	100.0

34.15A Number of Agricultural Households Reporting the Status of Food Satisfaction of the Household during the Preceding Year by District

Status of Food Satisfaction	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Never	15,693	12	8,379	7	17,625	14	42,528	34	17,954	14	7,041	6	3,360	3	13,306	11	125,885	33.3
Seldom	31,327	23	15,379	11	15,831	12	21,727	16	24,022	18	12,262	9	4,006	3	9,448	7	134,001	35.5
Sometimes	3,520	15	3,307	14	2,834	12	6,425	27	3,677	15	1,702	7	231	1	2,423	10	24,119	6.4
Often	13,496	25	11,129	20	6,962	13	3,643	7	4,855	9	5,706	10	1,508	3	7,763	14	55,062	14.6
Always	13,535	35	5,058	13	2,011	5	6,895	18	2,733	7	4,780	12	1,093	3	2,684	7	38,789	10.3
Total	77,572	21	43,252	11	45,263	12	81,217	21	53,240	14	31,492	8	10,198	3	35,624	9	377,857	100.0

34.15B Number of Agricultural Households Reporting the Status of Food Satisfaction of the Household during the Preceding Year by District

Status of Food Satisfaction	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Never	15,693	20	8,379	19	17,625	39	42,528	52	17,954	34	7,041	22	3,360	33	13,306	37	125,885	33.3
Seldom	31,327	40	15,379	36	15,831	35	21,727	27	24,022	45	12,262	39	4,006	39	9,448	27	134,001	35.5
Sometimes	3,520	5	3,307	8	2,834	6	6,425	8	3,677	7	1,702	5	231	2	2,423	7	24,119	6.4
Often	13,496	17	11,129	26	6,962	15	3,643	4	4,855	9	5,706	18	1,508	15	7,763	22	55,062	14.6
Always	13,535	17	5,058	12	2,011	4	6,895	8	2,733	5	4,780	15	1,093	11	2,684	8	38,789	10.3
Total	77,572	100	43,252	100	45,263	100	81,217	100	53,240	100	31,492	100	10,198	100	35,624	100	377,857	100.0

34.16 Number of Households by Main Source of Cash Income and District during 2002/03 Agriculture Year

Main Source of Cash Income	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Sales of Food Crops	5,082	3	9,064	6	14,711	10	53,745	36	38,424	26	7,814	5	6,410	4	12,748	9	147,998	39.2
Sale of Livestock	3,028	16	1,403	8	6,851	37	2,506	14	597	3	2,314	12	741	4	1,076	6	18,516	4.9
Sale of Livestock Products	535	15	311	9	402	11	982	27	587	16	356	10	97	3	318	9	3,588	0.9
Sales of Cash Crops	39,674	33	27,434	23	1,703	1	13,909	12	6,550	5	17,179	14	125	0	13,686	11	120,261	31.8
Sale of Forest Products	1,064	27	108	3	1,009	26	337	9	597	15	549	14	54	1	161	4	3,879	1.0
Business Income	4,022	22	741	4	7,062	38	2,166	12	2,259	12	791	4	434	2	1,139	6	18,613	4.9
Wages & Salaries in Cash	2,178	28	1,026	13	786	10	1,182	15	239	3	857	11	532	7	971	12	7,770	2.1
Other Casual Cash Earnings	21,098	42	2,530	5	11,530	23	5,430	11	2,706	5	1,171	2	1,580	3	4,351	9	50,395	13.3
Cash Remittance	892	22	635	15	706	17	820	20	470	11	0	0	85	2	526	13	4,133	1.1
Fishing	0	0	0	0	504	63	0	0	0	0	128	16	0	0	162	20	794	0.2
not applicable	0	0	0	0	0	0	139	7	810	42	333	17	141	7	486	25	1,910	0.5
Total	77,572	21	43,252	11	45,263	12	81,217	21	53,240	14	31,492	8	10,198	3	35,624	9	377,857	100.0

34.17 Number of Agricultural Households by Type of Roofing Material and District during the 2002/03 Agricultural Year

Roofing Materials	District																Total	
	Bariadi		Maswa		Shinyanga Rural		Kahama		Bukombe		Meatu		Shinyanga Urban		Kishapu			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Iron Sheets	49,428	234	10,796	427	7,831	68	23,036	424	18,127	670	8,751	748	2,405	152	5,055	116	125,429	248.9
Tiles	333	2	217	9	200	2	381	7	239	9	572	49	31	2	82	2	2,054	4.1
Concrete	0	0	0	0	0	0	123	2	119	4	0	0	0	0	0	0	243	0.5
Asbestos	0	0	0	0	0	0	0	0	0	0	244	21	0	0	814	19	1,058	2.1
Grass / Leaves	17,850	85	6,687	264	24,754	215	53,009	976	23,166	856	3,867	330	1,575	100	1,607	37	132,516	263.0
Grass & Mud	8,371	40	25,552	1,010	12,477	108	4,557	84	11,588	428	18,059	1,543	6,188	392	28,066	645	114,858	227.9
Other	1,590	8	0	0	0	0	110	2	0	0	0	0	0	0	0	0	1,700	3.4
Total Number of Households	77,572	21	43,252	1,710	45,263	393	81,217	1,496	53,240	1,967	31,492	2,690	10,198	645	35,624	819	377,857	749.8