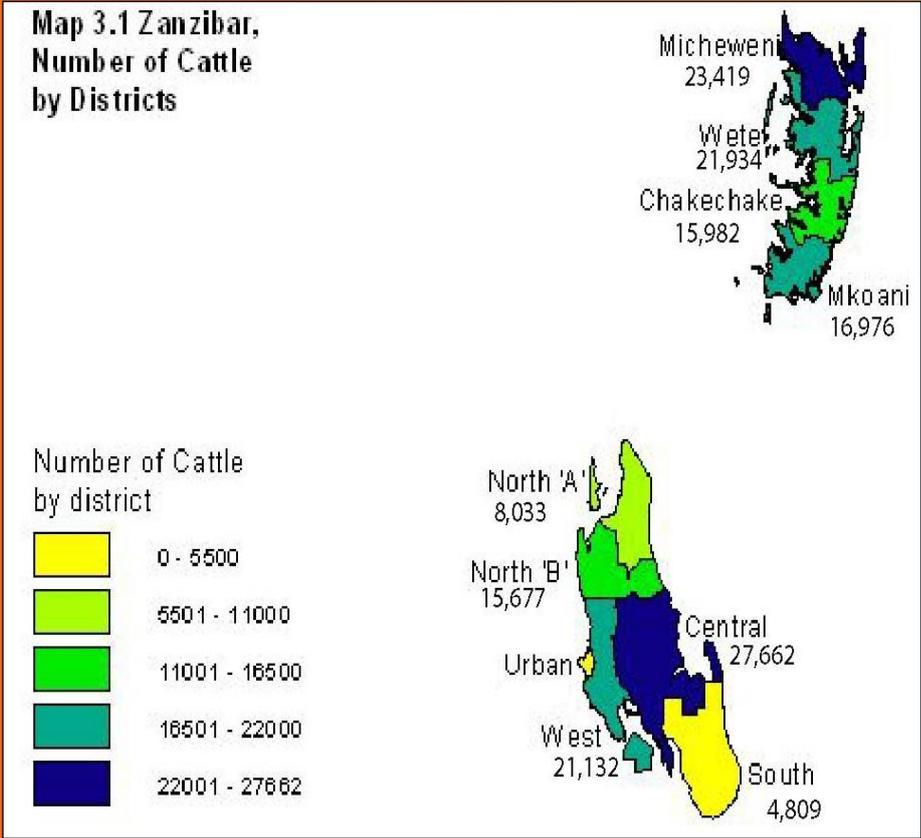




The Revolutionary Government of Zanzibar
 NATIONAL SAMPLE CENSUS OF AGRICULTURE 2007/2008
 VOLUME VI: LIVESTOCK SECTOR -ZANZIBAR REPORT



Executed jointly by the Office of the Chief Government Statistician, National Bureau of Statistics, Ministries of Agriculture and Natural Resources and Livestock and Fishery in Zanzibar.



January 2012



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SMALL HOLDER AGRICULTURE

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TABLE OF CONTENTS

ABBREVIATIONS	iii
PREFACE	iv
EXECUTIVE SUMMARY	vi
LIST OF TABLES.....	viii
LIST OF MAPS.....	x
1.0 BACKGROUND INFORMATION	1
2.0 INTRODUCTION	1
2.1 Rationale for Conducting the National Sample Census of Agriculture.....	1
2.2 Census Objectives.....	2
2.3 Census Coverage	2
2.3.1 Census Scope	3
2.3.2 Main Activities Undertaken.....	4
2.4 Census Methodology	4
2.4.1 Census Organization.....	4
2.4.2 Tabulation Plan Preparation	5
2.4.3 Sample Design	5
2.4.4 Questionnaire Design and Other Census Instruments	6
2.4.5 Field Pilot-Testing	7
2.4.6 Training of Trainers, Supervisors and Enumerators.....	7
2.4.7 Information, Education and Communication (IEC) Campaign.....	7
2.4.8 Data Collection	7
2.4.9 Field Supervision and Consistency Checks	8
2.4.10 Data Processing and Analysis.....	8
2.4.11 Data Entry.....	8
2.4.12 Batch Validation	9
2.4.13 Tabulations	9
2.4.14 Analysis and Report Preparation	9
2.4.15 Data Quality Control.....	9
2.5 Funding Arrangements	9
3.1 Livestock Population and Growth	10
3.1.1 Cattle Population	11
3.1.2 Goat Population	14

3.1.3	Sheep Population	19
3.1.4	Pig Population.....	21
3.1.5	Chicken Population.....	21
3.1.6	Other Livestock	28
3.2	Livestock products -Milk Production	29
3.3	Contribution of Livestock to Crop production	32
3.4	Livestock Diseases and control	32
3.4.1	Common Livestock Diseases.....	32
3.4.2	Livestock Disease Control Methods.....	39
3.4.3	Deworming Practices	43
3.5	Bee Keeping.....	46
3.5.1	Beehives by Type of Bees	47
3.5.2	Quantity of Honey Harvested and Average Prices	48
3.5.3	Honey Outlets by Location and Region.....	49
3.6	Access to Extension Services by District	50
3.6.1	Sources of Extension Services.....	50
3.6.2	Extension Advice by Type of Messages.....	51
3.6.3	Number of Households which Received Advice Messages on Disease Control.....	51
	CONCLUSIONS	52
	5. APPENDICES	57

ABBREVIATIONS

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	Enumeration Areas
EU	European Union
GDP	Gross Domestic Product
Ha	Hectares
IAS	Integrated Agricultural Survey
ICR	Intelligent Character Recognition
IEC	Information, Education and Communication
JICA	Japanese International Cooperation Agency
LRHH	Livestock Raising Households
MANR	Ministry of Agriculture and Natural Resources
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
OCGS	Office of the Chief Government Statistician
PORALG	President's Office, Regional Administration and Local Government
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
RAAS	Rapid Appraisal Agricultural Survey
RSM	Regional Statistical Manager
SPSS	Statistical Package for Social Science
TOT	Training of Trainers
UNDP	United Nations Development Programme
UNFAO	United Nations Food and Agricultural Organization
VPO	Vice President Office

PREFACE

At the end of the 2007/08 Agricultural Year, the Office of the Chief Government Statistician, (OCGS) in collaboration with National Bureau of Statistics (NBS) and Ministries of Agriculture and Natural Resources; Livestock and Fisheries conducted the 2007/08 Agricultural Sample Census. This is the second Sample Census of Agriculture to be carried out in Zanzibar, the first one was conducted in 2002/03 Agricultural year.

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, and poverty indicators. In addition to this, the census was large in its scope and coverage as it provides data that can be disaggregated at district level and thus allow comparisons with the 2002/03 National Sample Census of Agriculture. The census covered smallholders in rural areas only and all the large scale farms. This report provide the results of the small holder farming in livestock sector. The results presented in this report are detailed data on cattle, goats, pigs, sheep, chicken and other livestock.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information that can assist in the proper planning of the agricultural 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 agricultural households in the country. Furthermore, the report will provide deeper understanding on the procedures and techniques applied in carrying out the census.

On behalf of the Government of Tanzania Zanzibar, I wish to express my appreciation for the financial support provided by the development partners, in particular, the Department for International Development (DFID) and the Japanese Government through the Japan International Cooperation Agency (JICA) and others who contributed through the pooled fund mechanism.

My appreciation also goes to all those who in one-way or the other, have contributed to the success of the survey. In particular, I would also like to mention the enormous effort made by the Planning Group composed of professionals from the Agricultural and Environmental Statistics Section of the Office of Chief Government Statistician (OCGS), Agricultural Statistics Department of the National Bureau of Statistics (NBS), Ministry of Agriculture and Natural Resources, Ministry of

Livestock and Fishery Zanzibar. Other are Ministry of Food Security and Cooperatives, Ministry of Livestock Development and Fisheries, Ministry of Water and Irrigation, the Prime Minister's Office, Regional Administration and Local Government, Ministry of Industries, Trade and Marketing in Tanzania Mainland and the Food and Agriculture Organization of the United Nations and the Censuses and Surveys Technical Working Group (CSTWG).

Finally, I would like to extend my sincere gratitude to all professional staff of the Office of the Chief Government Statistician and National Bureau of Statistics, Mainland, the sector Ministries of Agriculture and Natural Resources the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. Certainly, without their dedication, the census would not have been such a success.

Mr. Mohamed Hafith Rajab
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Zanzibar

EXECUTIVE SUMMARY

Agriculture is an important economic sector of the Zanzibar economy in terms of food production, employment generation, production of raw materials for industry, and generation of foreign exchange earnings. The agricultural sector produces about 30.8 percent of GDP (Economic Survey, 2009) and the contribution of livestock was estimated to be 4.5 percent.

In 2007, 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 production data normally collected in an agriculture census. The 2007/08 Agricultural Sample Census was designed to meet the data needs of a wide range of users down to district level including policy makers at local, district, and National levels, rural development agencies, funding institutions, researchers, NGOs, farmers' organizations, etc. This report provides detailed description of the state of the livestock sub-sector in Zanzibar for the agricultural year 2007/08. The detailed tabulations and analysis were based mainly on smallholder farms. In some cases, contribution of large scale farms is also included to give the overall Zanzibar estimates.

The main types of livestock and poultry covered in the 2007/08 Agricultural Sample Census are cattle, goats, sheep, pigs, chicken, ducks, turkeys, rabbits, and donkeys. There was an equivalent of 170,715 livestock units in total representing a total of 228, 538 major livestock of different species. The goat livestock units were about 13,794, sheep were about 114.8 and pigs about 1,005 units. Chicken were kept by 60% of the households, while cattle were kept by 30% of the agricultural households.

The trend shows that the number of goats increased by 31 percent, sheep by 18 percent and pigs by 10 percent per annum, while the number of cattle had declined by -0.9 percent between 2003 and 2008. The average number of cattle and goats per household were 4 and 9 respectively. Most of the cattle were kept in the Central district followed by Micheweni, Wete and West districts. However, Micheweni district had more cattle rearing households than the rest of the districts. Milk production from cows during the wet season was 115,021 liters (56%) and dropped to 87,490 litres (43%) during the dry season. Average milk production per cow was 2.5 liters during the wet season and 2.3 litres during the dry season. The number of milked cows also dropped from 44,718 during the wet season to 36,639 in the dry season. The price of milk was slightly higher than in the Mainland whereby the prices were Tshs. 508 in the wet season and increased to Tshs. 538 during the dry season.

Regarding small ruminants, Central district has more households raising goats than any other district. About 4 percent of the agricultural households in Tanzania Zanzibar kept improved goats although, the number of improved goats was less than 20 percent. Sheep on the other hand are less important and only 574 households raised sheep most of which were found in the West district. With regard to chicken, over 90 percent of agricultural households raised chicken and a bigger proportion (21%) of chicken were kept in the West district and were dominated by the unimproved type (local). The trend shows that, the number of chicken has remained stagnant between 2003 and 2008. However, the number of layers has increased by 36 percent with an annual growth rate of about 7 percent, though there was a decline of 30 percent in the number of broilers.

Apart from providing meat, milk and draught power, livestock supply organic fertilizers in terms of manure. In Zanzibar, a total of 6,806 households (7.7% of all households planting during Long rain) use organic fertilizers. Organic fertilizer was used on only 2,926 ha representing 7.8 percent of the total planted area during long rain season. Farm yard manure was used in all the districts but, was more common in the Central, South, North B and West. Mkoani and Chakechake were at the bottom in terms of organic fertiliser use.

Livestock diseases have remained the most challenging constraint in the livestock sector. Common diseases affecting ruminants include Tick Borne Diseases (TBD), Tse- tse fly infestations, FMD and Lumpy skin Disease. Almost 50 percent of the cattle raising households encountered Tick Borne Diseases, and the problem was more serious in the Central district followed by Chake chake, Micheweni and Mkoani. Spraying with acaricides was the most common method used to control infections. Dipping and smearing were the commonest methods of tick control. For chicken, the Newcastle Disease and the Fowl Typhoid were reported to be a challenge in most of the agricultural households and only 10 percent of the households vaccinated their chicken against the Newcastle disease.

Access to extension services varied between the districts and Micheweni district had the highest access (79%) followed by Chakechake(74%), Wete and Mkoani districts, each with (65%). North 'A', West and North 'B' districts had less access to extension services. The government accounted for 50 percent of the extension services provided, other sources being NGOs/development projects, newspapers, radios, and televisions.

ILLUSTRATIONS

List of Tables

Table 3.1: Census Sample Size.....	5
Table 3.2: Number of Livestock by Type.....	11
Table 3.3: Number of Households and Number of Cattle by Herd Size.....	11
Table 3.4: Number of Households Raising Goats by Herd Size.....	15
Table 3.5: Number of Households Raising Pigs by Herd Size.....	21
Table 3.6: Households Raising Chicken by Flock Size.....	25
Table 3.7: Households Raising Local Chicken by Flock Size.....	25
Table 3.8: Improved Chicken Population by Flock Size.....	28
Table 3.9: Population of Other Livestock by District.....	28
Table 3.10: Number of Households and Livestock by Type.....	29
Table 3.11: Total Milk Production and Percentage by District.....	29
Table 3.12: Average Milk Production per Cow per day, by Category of Cow, Season and District.....	30
Table 3.13: Average Cattle Milk price (Tshs/litre) per season by category of cow and District ...	30
Table 3.14 Animal Contribution to Crops: Number of Households and Planted Area by Organic Fertilizer use and District - Long Rainy Season.....	32
Table 3.15 Number and Percentages of Livestock Raising Households practicing various Tick Control methods by District.....	40
Table 3.16 Number and Percentages of Livestock Raising Households which Practiced Newcastle Control Methods by District.....	41
Table 3.17: Number and Percentages of LRHH which Practiced Fowl Typhoid Control Methods by District.....	43
Table 3.18: Number of Goats/Sheep Rearing Households which Dewormed Goats/Sheep by District.....	45
Table 3.19 Number of Livestock Rearing Households which Dewormed Pigs by District.....	45
Table 3.20 Number of Livestock Rearing Households which Dewormed Chicken by District.....	46
Table 3.21: Number of Agricultural Households Involved in Honey Production by District.....	47
Table 3.22: Number of Beehives by Type and District.....	48
Table 3.23: Quantity of Honey Harvested and Sold by Type of Bees and District.....	48
Table 3.24: Average Prices of Honey (Tshs /litre) by Type of Bees and by District.....	49
Table 3.25 Number of Agricultural Households by Location and Honey Outlets.....	51
Table 3.26 Percentage of Households which Received Extension Advice by Type of Message...51	51

List of Charts

Chart 3.1:	Total Number of Livestock by Type.....	10
Chart 3.2:	Number of Households Keeping Livestock by Type.....	10
Chart 3.3:	Cattle Population and Average Head per Household by District.....	12
Chart 3.4:	Cattle Population Tend	12
Chart 3.5:	Percentage of Households Rearing Indigenous Cattle by District.....	13
Chart 3.6:	Percentage of Indigenous Cattle by District.....	13
Chart 3.7:	Percentage of Households Rearing Improved Dairy Cattle by Districts.....	13
Chart 3.8:	Percentage of Improved Dairy Cattle by District.....	14
Chart 3.9:	Dairy Cattle Population Trend.....	14
Chart 3.10:	Goats Population Trend.....	14
Chart 3.11:	Number and Percentage of Households Rearing Goats by District.....	15
Chart 3.12:	Number of Percentage of Goats by District.....	15
Chart 3.13:	Number of Goats by Type and District.....	18
Chart 3.14:	Percentage of Sheep Population by District.....	18
Chart 3.15:	Sheep Population Trend.....	19
Chart 3.16:	Pigs Population Trend.....	21
Chart 3.17:	Number of Household Rearing Chicken by District.....	21
Chart 3.18:	Chicken Population by District.....	23
Chart 3.19:	Chicken Population trend.....	23
Chart 3.20:	Indigenous Chicken Population Trend.....	25
Chart 3.21:	Number of Indigenous Chicken.....	25
Chart 3.22:	Improved of Chicken Population Trend.....	27
Chart 3.23:	Percent and Number of Improved Chicken by District.....	27
Chart 3.24:	Layers Population by District.....	27
Chart 3.25:	Percent of HH Affected by Various Livestock Diseases.....	33
Chart 3.26:	Number and Percent of LRHH Encountering Lumpy Skin Diseases by District.....	33
Chart 3.27:	Number and Percent of LRHH Encountering Tick Problems by District.....	35
Chart 3.28:	Number and Percent of LRHH Encountering Foot and Mouth Disease by District	35
Chart 3.29:	Number and Percent of LRHH Encountering Newcastle Problem by District.....	35
Chart 3.30:	Number and Percent of LRHH Encountering Fowl typhoid by District.....	35
Chart 3.31:	Percent of HH reporting Newcastle Control by Methods.....	40
Chart 3.31:	Percent of LRHH Practicing Newcastle Control by District.....	41
Chart 3.32:	Percent of LRHH reporting Fowl Typhoid Control methods.....	42
Chart 3.33:	Percent of LRHH Controlling Fowl Typhoid by District.....	42
Chart 3.34:	Percentage of LRHH Deworming Livestock by District.....	43
Chart 3.35:	Proportion of Households that Dewormed Cattle by District.....	43
Chart 3.36:	Proportion of HH that Dewormed Goats/Sheep by District.....	44
Chart 3.37:	Proportion of HH that Dewormed pigs by Districts.....	44
Chart 3.38:	Proportion of LRHH Deworming Chicken by District.....	46
Chart 3.39:	Percent of Household Selling Honey by District.....	50
Chart 3.40:	Percentage of Households Receiving Livestock Extension Advice by District	50
Chart 3.41:	Percent and distribution of Source of Extension Advice.....	50
Chart 3.42:	Number of Households Receiving Extension Advice on Disease Control District.....	51

List of Maps

Map 3.1	Zanzibar: Number of Cattle by District.....	16
Map 3.2	Zanzibar: Cattle Population per Sq. km.....	16
Map 3.3	Zanzibar: Dairy Cattle Population by District	17
Map 3.3	Zanzibar: Dairy Cattle Population by District.....	17
Map 3.4	Zanzibar: Goat Population by District.....	15
Map 3.5	Zanzibar: Goat Population by District.....	20
Map 3.6	Zanzibar: Improvement Dairy Goat Population by District.....	20
Map 3.7	Sheep Population by District.....	22
Map 3.8	Zanzibar: Pig Population by District.....	22
Map 3.9	Zanzibar: chicken Population Destiny.....	24
Map 3.10	Zanzibar Chicken Population Destiny by District.....	24
Map 3.11	Zanzibar: Indigenous Chicken population by District.....	26
Map 3.12	Zanzibar: :layers Population by district.....	26
Map 3.13	Zanzibar: Milk Production.....	31
Map 3.15	Zanzibar: Number of households Encountering Lumpy Skin Disease by District.....	36
Map 3.16	Zanzibar: Number of Households Encountering TTick Borne District.....	36
Map 3.17	Zanzibar: Number of Households Encountering Heliminthosis by District.....	37
Map 3.18	Zanzibar: Number of Households Encountering Helminthosis by District.....	37
Map 3.19	Zanzibar: Number of Households Encountering Tse tse by District	38
Map 3.20	Zanzibar: Number of Households Encountering Fowl Typhoid by District.....	38

1.0 BACKGROUND INFORMATION

Agriculture is an important economic sector of the Zanzibar economy in terms of food production, employment generation, production of raw materials for industries, and generation of foreign exchange earnings. The agricultural sector contributes about 30.8 percent to the GDP (Economic Survey, 2009). Having a diversity of climatic and geographical zones, Zanzibar's farmers grow a wide variety of food and cash crops as well as fruits, vegetables and spices. In 2009, the percentage share of livestock sub-sector to GDP was 4.5 percent. The main types of livestock raised in Zanzibar are cattle, goats, sheep, pigs and chicken. Besides meat production, other products from livestock include hides and skins, milk and eggs. Livestock also contributes to crop and vegetable production by providing draft power for cultivation and organic manure.

This report covers the Livestock Sector in Tanzania Zanzibar (Volume VI). Other census reports include; the Technical Report (Volume I), National Crop Report (Volume II), National Livestock Report Volume III, 21 Regional Census Reports for Tanzania Mainland (Volume IV) and Large Scale Farms Report (Volume V)

This report is in four main sections: Introduction, Results, Conclusions and Appendices. The definitions relating to all aspects of this report can be found in the questionnaires (Appendix I).

2.0 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 Tanzania Zanzibar for the 2007/08 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

2.1 Rationale for Conducting the National Sample Census of Agriculture

The Government of Tanzania has embarked on various plans geared to eradicate extreme poverty by the year 2025 and Tanzania Zanzibar by the year 2020. In order to facilitate intervention and monitoring activities of the Poverty Monitoring Master Plan, the government has planned a series of censuses and surveys to assist in policy formulation, planning and to track on changes in the well-being of the population of Tanzania Mainland and Tanzania Zanzibar. In this Master Plan, a series of Agricultural Censuses and Surveys are planned to be done after every five years. The first one was undertaken in 2002/03 agricultural year, the second for the year 2007/08 and the third one for the year 2012/13 and so on depending on the availability of financial resources.

Demands for reliable and timely agricultural data have become significantly for monitoring outcomes and progress of the poverty monitoring tools like the Agricultural Sector Development Programme (ASDP) and performance of the respective MDAs (ASLMs).

Following the decentralization of the Government's administration and planning functions, there has been a pressing need for agricultural and rural development data disaggregated at regional and district levels. The availability of district level estimates provides essential baseline information on the state of agriculture that supports decision making by the Local Government Authorities and 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.

2.2 Census Objectives

The 2007/08 Agricultural 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, NGOs, farmers' organizations, and the like. The dataset is numerous in its sample and detailed in its scope and coverage to meet the user demand.

The census was carried out in order to:

- Identify structural changes in the size of farm household holdings, crop and livestock production, farm inputs and farm implement use. It also seeks to determine if there are any improvements in rural infrastructure and the level of agricultural 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 Natural Resources and other stakeholders
- Obtain 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

The census was conducted for both large and small scale farms. The overall sample for small holders in the 2007/08 Agricultural Sample Census had a total of 317 rural EAs. The data were

collected from a sample of 4,755 rural agricultural households. Data were also collected from 38 Large scale farms on a complete enumeration basis.

2.3.1 Census Scope

The census covered agricultural households in detail as well as many other aspects of rural development. It was conducted using three different questionnaires:

- Small scale farm questionnaire;
- Community level questionnaire, and
- Large scale farm questionnaire.

The small scale farm questionnaire was the main census instrument and it included questions related to crop and livestock production and practices, population demographics, access to services, community resources and infrastructure, and issues on poverty and gender. The main topics covered were:

- Household demographics and activities of the household members;
- Land access/ownership/tenure and use;
- Crop and livestock production and productivity,
- Access to inputs and farming implements,
- Access and use of credit;
- Access to infrastructure (roads, district and regional headquarters, markets, advisory services, schools, hospitals);
- Crop marketing, storage and agro processing;
- Tree farming, agro-forestry, and fish farming;
- Access and use of communal resources (grazing land, communal forests, water for humans and livestock, beekeeping);
- Investment activities (irrigation structures, water harvesting, erosion control, fencing);
- Off farm income and non agricultural related activities;
- Households living conditions (housing, sanitary facilities);
- Livelihood constraints; and
- Poverty Indicators.

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 price.

The Large Scale Farm questionnaire was administered to large farms either privately or corporately managed.

2.3.2 Main Activities Undertaken

The main focus at all stages of census execution was on data quality which was strongly emphasized all the time. The main activities undertaken include:

- Census organization
- Tabulation plan preparation
- Sample design
- Design of census questionnaires and other instruments
- Pilot-test
- Training of trainers, supervisors and enumerators
- Information Education and Communication (IEC) campaign
- Data Collection
- Field supervision and consistency checks
- Data processing:
 - Scanning
 - Structure formatting application
 - Batch validation application
 - Manual data entry application
 - Tabulation preparation using SPSS and Excel

- Table formatting and charts using Excel, map generation using Arc GIS and Excel
- Report preparation using Word and Excel

2.4 Census Methodology

2.4.1 Census Organization

The census was conducted by the Office of the Chief Government Statistician, (OCGS), Ministry of Agriculture and Natural Resources and Ministry of Livestock and Fisheries in collaboration with National Bureau of Statistics (NBS). At the national level, the census was headed by Chief Government Statistician in collaboration with the Director General of the National Bureau of Statistics. The Planning Group formed by the Director General of NBS and the Chief Government Statistician of OCGS consisted of staff from the Department of Agricultural Statistics of NBS,

Department of Economic Statistics of OCGS, Department of Policy and Planning of the Ministry of Agriculture, Food Security and Cooperatives, Department of Policy and Planning of the Ministry of Livestock and Fisheries Development in Tanzania Mainland, the Ministry of Livestock and Fisheries and the Ministry of Agriculture and Natural Resources in Zanzibar. The Planning Group was responsible for all the census operations.

The implementation of the census activities at regional level was overseen by the Regional Statistical Officers and Regional Agricultural Officers. At district level, the implementation of the census activities were managed by District Agricultural Development Officers (DADOs) while at National level, there was a national mobile team to supervise the census operations.

The Censuses and Surveys Technical Working Group (CSTWG) under MKUKUTA provided support in sourcing financing, approving budget allocations and monitoring progress of the census.

A Technical Committee for the census was established with members from key stakeholder organizations and its function 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.

2.4.2 Tabulation Plan Preparation

The tabulation plan was developed considering the tabulations from previous 2002/03 census and surveys to allow trend analysis and comparisons as well as the needs of end users.

Table 3.1: Census Sample Size

2.4.3 Sample Design

The Mainland sample consisted of 317EAs/ villages. These EAs/villages were drawn from the Zanzibar National Master Sample (NMS) developed to serve as a National framework for the conduct of household based surveys in the country. The National Master Sample was developed from the previous 2002 Population and Housing Census. The total of 317 EAs were selected and 4,755 agricultural households were covered (Table 3.1).

Description	Number
Households	4,755
Villages/EAs	317
Districts	9
Regions	5

A two stage sampling was used. The number of villages/Enumeration Areas (EAs) was selected for the first stage with a probability proportional to the number of villages/EAs in each district. In the

second stage, 15 households were selected from a list of agriculture households in each Village/EA using systematic random sampling. Table 1 gives the sample size of households, villages/EAs and districts.

2.4.4 Questionnaire Design and Other Census Instruments

The questionnaires were designed following users demand to ensure that the questions asked were in line with the users data needs. Several features were incorporated into the design of the questionnaires to increase the accuracy of the data:

- Where feasible, all variables were extensively coded to reduce post enumeration coding errors;
- The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the respondent;
- 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 Intelligent Character Recognition (ICR) technologies for data capture;
- Skip patterns were used to reduce unnecessary and incorrect coding of sections which do not apply to the respondent;
- Each section was clearly numbered to facilitate the use of skip patterns and provided a reference for data type coding for the programming of CSpro and SPSS. Three other instruments were used;
- Village Listing Forms were used for listing the households in the village/EA and from this list, a systematic sample of 15 agricultural households were selected;
- A Training Manual was used by the trainers for the cascade/pyramid training of supervisors and enumerators; and
- Enumerators Instructions Manual was used as a reference material.

2.4.5 Field Pilot-Testing

The Questionnaire was pilot-tested in both Unguja and Pemba. This was done to test the wording, flow and relevance of the questions and to finalise crop lists, questionnaire coding and manuals. In addition, several data collection methodologies had to be finalized, namely; livestock numbers, mixed cropping, use of percentages in the questionnaire and finalizing skip patterns and documenting consistency checks.

2.4.6 Training of Trainers, Supervisors and Enumerators

During the training, cascade/pyramid training techniques were employed to maintain statistical standards. The top level of training was provided to 13 National and regional supervisors. The trainers were members of the Planning Group from the Office of the Chief Government Statistician and Ministries of Agriculture and Natural Resources Livestock and Fishery.. The training concentrated more on questionnaires, listing forms, field level census methodology, and definitions. Emphasis was placed on consistency checking in the field. Tests were given to the supervisors and enumerators and the best 50 percent of the trainees were selected for the enumeration of the smallholder questionnaire and the community level questionnaire.

2.4.7 Information, Education and Communication (IEC) Campaign

Radios, televisions, newspapers, leaflets, t-shirts and caps were used to create awareness among the public on the Agriculture Sample Census. This helped in sensitizing the public on field level activities in order to increase the response rate. The t-shirts and caps were given to the field staff and village chairpersons. The village chairpersons assisted in locating the selected households.

2.4.8 Data Collection

Data collection activities for the 2007/08 Agricultural Sample Census lasted for three months from June to August, 2009. The interview method was used to collect data during the census. Data collection was monitored by a hierarchical system of supervisors which included the Mobile Response Team, Regional and District Supervisors. The Mobile Response Team, which was headed by the Manager of Agricultural Statistics Department, provided the overall direction to the field operations and responded to queries arising outside the scope of the training exercise. Decisions made on the definitions and procedures were then communicated back to all enumerators via the Regional and District Supervisors.. The enumeration was conducted by staff from the Ministry of Agriculture and Natural Resources and the Ministry of Livestock and Fisheries. Supervision was

provided by senior officers of the same Ministries and the Office of the Chief Government Statistician.

During the household listing exercise, 177 enumerators participated during the listing exercise and enumeration of small holder questionnaire. Additional five percent of the enumerators were kept as reserve in case of drop outs during the enumeration exercise. The enumerators were supervised by District Supervisors.

2.4.9 Field Supervision and Consistency Checks

Enumerators were trained on how to probe the respondents until they were satisfied with the response given before they recorded them in the questionnaire. The first check of the questionnaire was carried out by enumerators in the field during enumeration, followed by district, Regional and National Supervisors. Supervisory visits at all levels of supervision focused on checking on the completeness of the questionnaires and consistency. Inconsistencies encountered were corrected, and where necessary, call backs to the respondents were made by the enumerators to obtain the correct information. Further quality control checks were made by supervisors in each district.

2.4.10 Data Processing and Analysis

Data processing involved the following processes:

- Data entry;
- Data structure formatting;
- Batch validation; and
- Tabulation.

2.4.11 Data Entry

Scanning and ICR data capture technology was used. This did not only increase the speed of data entry but it also increased the accuracy of the data due to the reduction of keystroke errors. Interactive validation routines were incorporated into the ICR software to trap errors during the verification process.

Prior to scanning, all questionnaires underwent a manual cleaning exercise by checking that the questionnaire had a full set of pages, correct identification and good hand-writing. A score was given to each questionnaire based on the legibility and the completeness of the enumeration. This score was used to assess the quality of enumeration and supervision. CSPro was used for data entry of questionnaires that were rejected by ICR extraction application.

2.4.12 Batch Validation

A batch validation program was developed in CSPro in order to identify inconsistencies within a questionnaire. This is in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. It took 6 months to screen, edit and validate the data from the smallholder questionnaire. After the long process of data cleaning, the tabulations were prepared based on the pre-designed tabulation plan.

2.4.13 Tabulations

Statistical Package for Social Sciences (SPSS) was used to produce the Census tabulations and Microsoft Excel was used to organize the tables and compute additional indicators. Excel was also used to produce charts while Arc GIS was used for producing the maps.

2.4.14 Analysis and Report Preparation

The report writing was outsourced to Sokoine University of Agriculture, the analysis in the reports focused on district comparisons, time series and National production estimates. Microsoft Excel was used to produce charts; Arc GIS and Excel were used to generate maps, whereas Microsoft Word was used in the compilation and writing the report.

2.4.15 Data Quality Control

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 process, it is believed 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 questionnaires were within the norms for Tanzania and they followed the expected time series trends when compared to historical data.

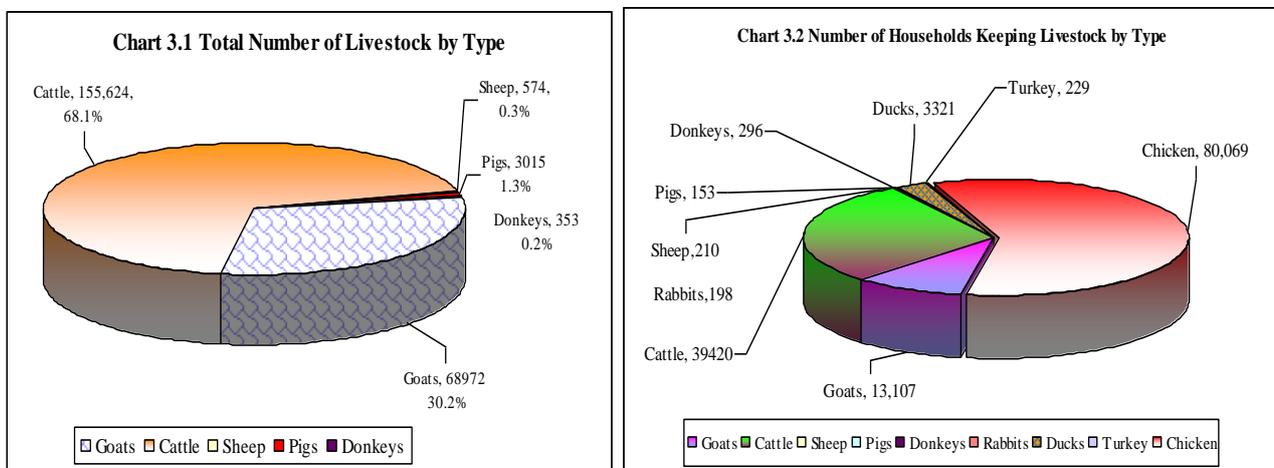
2.5 Funding Arrangements

The 2007/08 Agricultural Sample Census was supported mainly by the Department for International Development (DFID) and the Japan International Cooperation Agency (JICA) who financed most of the operational activities. Other funds for operational activities were from the Government of Tanzania. In addition, technical assistance was provided by the Food and Agricultural Organization (FAO).

3.0 LIVESTOCK AND POULTRY RESULTS

3.1 Livestock Population and Growth

Livestock sector including poultry plays a significant role in the economy of agricultural households in Tanzania Zanzibar. Livestock generate considerable amount of cash income and determine the household economic and social status in many communities. An estimated 45,684 households (About 35 % of agricultural households) kept livestock (excluding poultry). The main types and number of livestock and poultry covered in the 2007/08 National Sample Census of Agriculture are cattle, goats, sheep, pigs, chicken, ducks, turkeys, rabbits, donkeys. This section analyzes the results in relation to the population, growth rates, husbandry and the provision of services at district levels. Also, it includes data on population and growth rate trends on livestock in comparison with the previous Agricultural Sample Census for the period between 1995 and 2008.



In the surveyed households, cattle were the most dominant specie amounting to 155,624 (68%) followed by goats 68,972 (30%), pigs 3,015 (2%), sheep 574 (0.3%) and donkeys 353 (0.2%) (Chart 3.1).

Other livestock species were chicken 1,078,962, Ducks 34,279, rabbits 1,262, turkeys 881 and dogs 4,214. Out of the total chicken 932,469 were indigenous, 130,034 were layers and 16,459 were broilers.

The number of households keeping different types of livestock were as follows: those kept chicken were 80,069 (59%), cattle were 39,420 (29%), goats were 13,107 (10%) and ducks were

3,321(2%). However, households which reared sheep, pigs, donkeys, turkeys and rabbits were very few (Chart 3.2).

Table 3.2 summarizes production data for different types of livestock. Ducks, Turkeys, Rabbits and Donkeys are of relative minor importance. On average, households kept about four cattle, five goats, three sheep, thirteen chicken and 20 pigs. Very few households kept ducks, turkeys, rabbits, and donkeys. For example, an average of one donkey was kept per household.

Table 3.2: Number of Livestock by Type

Livestock Type	No. of Household	No. of Livestock	No. per Household
Cattle	39,420	155,624	4
Goats	13,107	68,972	5
Sheep	210	574	3
Pigs	153	3,015	20
Donkeys	296	353	1
Ducks	3,321	324,279	10
Turkeys	229	881	4
Chicken	80,069	1,078,962	13
Rabbits	198	1,262	6

Expressing livestock number in terms of livestock units (LSU), the results show that, there was an equivalent of 170,715 livestock units in total representing 228,538 major livestock of different

species (cattle, goats, sheep, pigs and donkeys).

Cattle livestock units were 155,624, goats 13,794, sheep 115, pigs 1,005 and donkeys 176 units. The LSU is used to estimate total quantity of livestock based on cow having a LSU of 1, a goat or sheep 1/5 LSU, a pig 1/3 LSU and a donkey 1/2 LSU.

3.1.1 Cattle Population

The total number of cattle raised in by the smallholders was 155,624 heads out of which, the indigenous type represented 95.5% of the total cattle population.

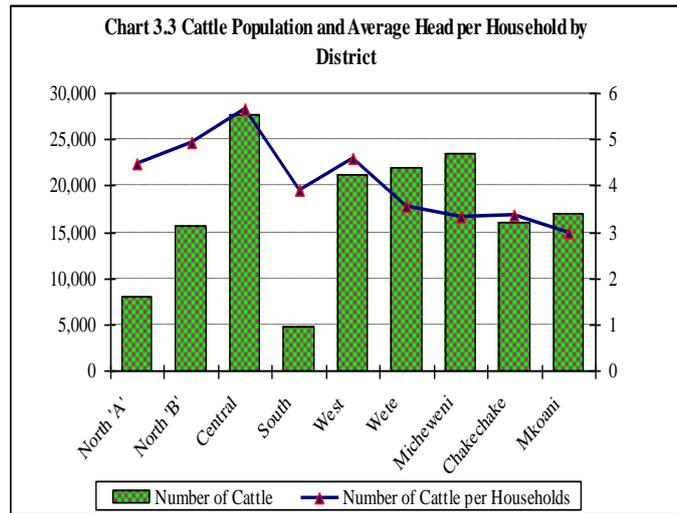
Table 3.3: Number of Households and Number of Cattle by Herd Size

Herd size	Cattle Rearing Households	%	Herd of Cattle	%	Average Per Household
1 - 5	31,627	80.2	83,610	53.7	2.64
6 - 10	6,001	15.2	43,716	28.1	7.28
11 - 15	1,232	3.1	15,662	10.1	12.71
16 - 20	331	0.8	5,797	3.7	17.52
21 - 30	148	0.4	3,704	2.4	25.09
31 - 40	51	0.1	1,736	1.1	34.00
41 - 50	30	0.1	1,398	0.9	46.00
Total	39,420	100	155,624	100	3.95

On average, the herd size of cattle per holding in the smallholder sector was 4 heads (Table 3.1). Of the total 39,420 cattle keeping households, 95.4 percent reared between 1 and 10 heads. Three percent of the households reared between 11 and 15 cattle while there were few households with more

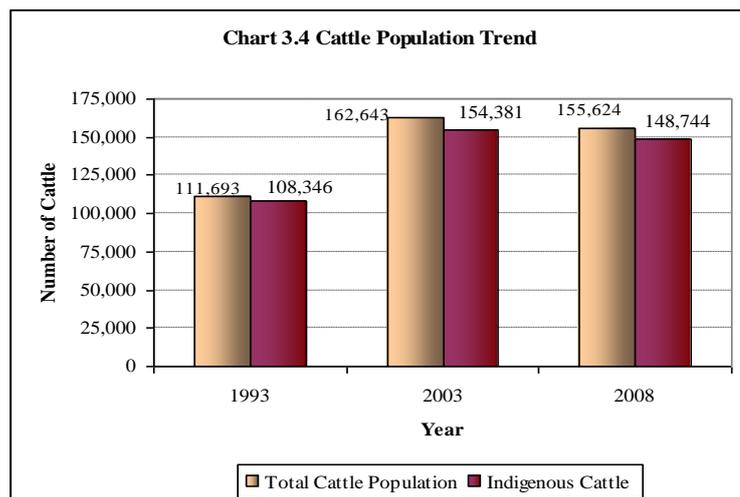
than 15 cattle per household. Their range is between 18 and 46 heads per household (Table 3.3).

However, smallholders with fewer animals (1 to 5) raised more than half of the cattle population. Central district had the largest cattle population (27,662) followed by Micheweni (23,419), Wete (21,934) and West (21,132) (Chart 3.3, Maps 3.1 and 3.2). Other districts with relatively large number of cattle are Mkoani (16,976), Chakechake (15,982), North 'B' (15,677). Although North 'A' and South districts had



fewer numbers of cattle, the number of cattle per household was comparable to that of Wete district which had a large number of cattle population. South district had the least number of cattle compared to other districts (Chart 3.3). Highest cattle population density was in West and Wete (89 cattle per square kilometre), followed by Mkoani (22), Chakechake (70), North B (64). The lowest density was in South (12 cattle per Sq. Km) (Map 3.2).

Cattle population (both indigenous and exotic or their crosses) has increased by approximately 27 percent from about 111,693 heads in 1993 to 155,624 heads in 2008. However, in the period between 2003 and 2008, the total cattle population of the smallholder has decreased by 4.5% from 162,643 to 155,624 heads giving an annual negative growth rate of about

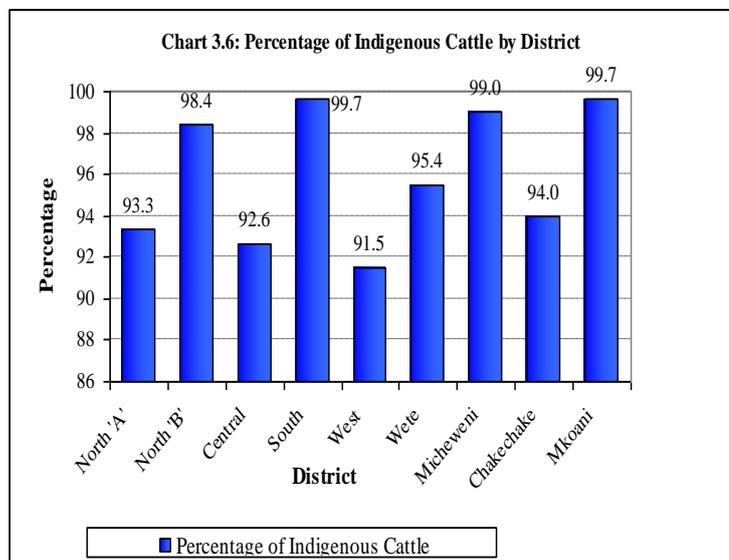
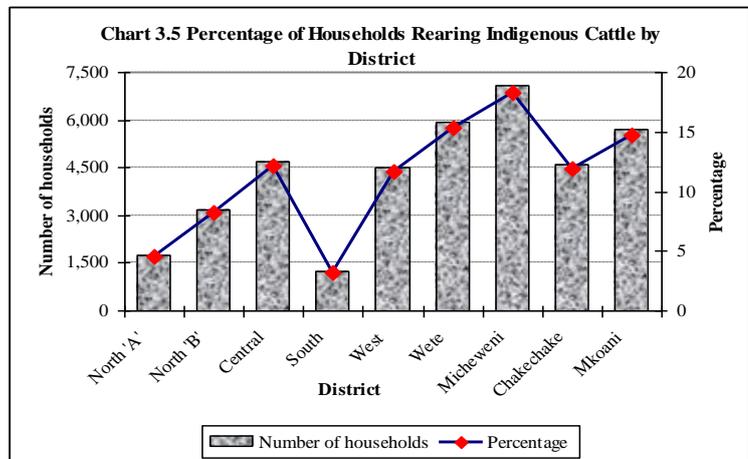


0.9 percent per annum over the five year period. The indigenous cattle population also has decreased from 154,381 to 148,744 heads representing a total decrease of 3.7% and a negative annual growth rate of 0.75% (Chart 3.4).

Indigenous Cattle Population

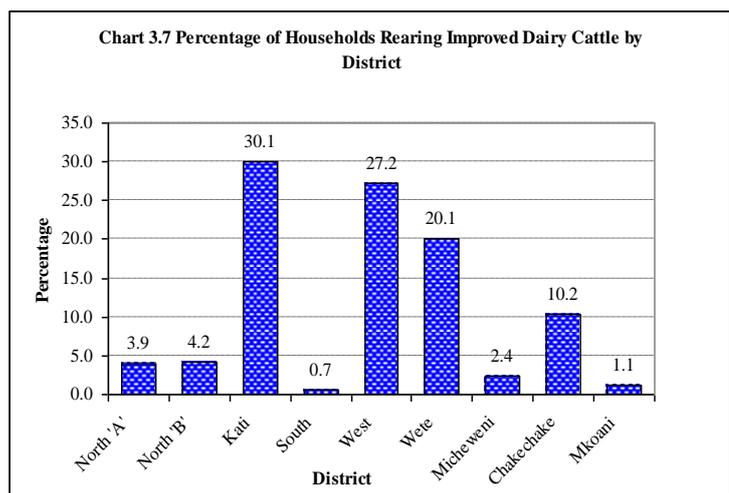
The cattle population is mainly dominated by the indigenous type 95.6%, while the improved dairy cattle contributed only 4.5 percent and no improved cattle for beef. The census results show a decrease in the number of indigenous cattle from 108,346 in 1993 to 148,744 heads in 2008 representing a 3.7 percent decrease (Chart 3.4).

Districts with more households rearing indigenous cattle include; Micheweni district reared (18.3%) followed by Wete (15.4%), Mkoani (14.8%) and Central district (12.1%). The same districts had more indigenous cattle than other districts (Charts 3.5 and Charts 3.6). Nevertheless, the following districts had moderate percentages of households with livestock: Chakechake (11.9%), West (11.6%) and North 'B' (8.2%). However, North 'A' (4.6%) and South (3.2%) districts had least number of households rearing indigenous cattle than other districts. In total, the indigenous cattle accounted for more than 90% of the entire cattle population in each district (Chart 3.6).



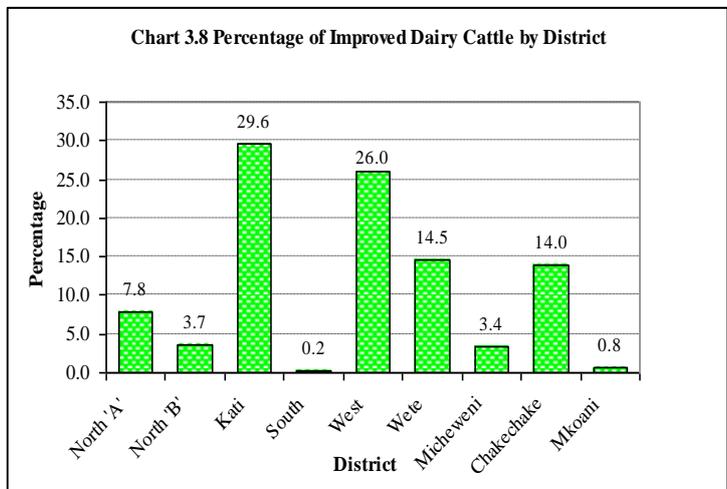
Improved Cattle Population

All of the improved cattle are of dairy type (100%) reared by 2,422 households and there were no improved cattle for beef. The Central district (Kati) had 730 households rearing dairy cattle representing 30.1

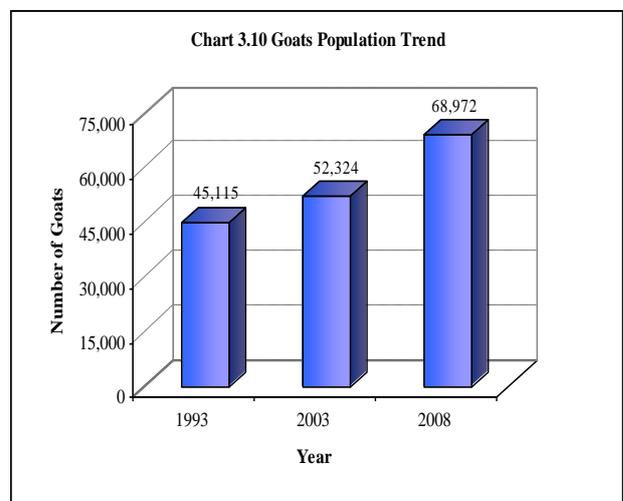
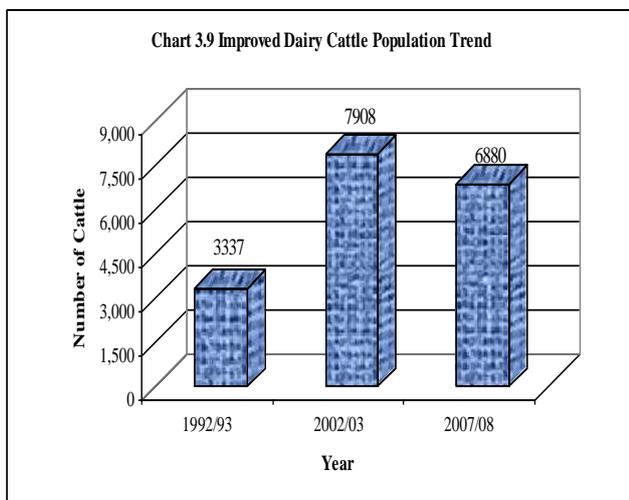


percent of the total households followed by West with 659 (27.2%), Wete with 487 (20.1%) and Chakechake with 248 (10.2%) households. North-B, North 'A', Micheweni, Mkoani and South districts had very few (less than 5%) households engaged in the rearing of improved dairy cattle (Chart 3.7).

In terms of numbers, the Central district had the highest population of dairy cattle amounting to 2,037 (29.6%), followed by West 1,790 (26%), Wete 999 (14.5%) and Chakechake 961 (14%). The contribution of North 'A' to the total number of improved dairy cattle was only 7.8%. North-B, Micheweni, Mkoani and South had the least number of improved dairy cattle (Chart 3.8, Map 3.3).



Over the past 15 years, the number of dairy cattle (pure or their crosses) has increased by 137% between 1993 and 2008 despite that the number of dairy cattle has declined by 13% between 2003 and 2008. In the overall, there was a two fold increase from about 3,337 heads in 1993 to 6,880 heads in 2008 representing an annual growth rate of 7% (Chart 3.9).



3.1.2 Goat Population

The total number of goats raised by smallholders was 68,972. Goat population increased from 45,115 in 1993 to 68,972 in 2008, representing an increase of about 53 percent and an annual

growth rate of 3.5% over the 15 years period (Chart 3.10). Between 1993 and 2003, the percentage increase was 16% while the growth has doubled to 32% between 2003 and 2008.

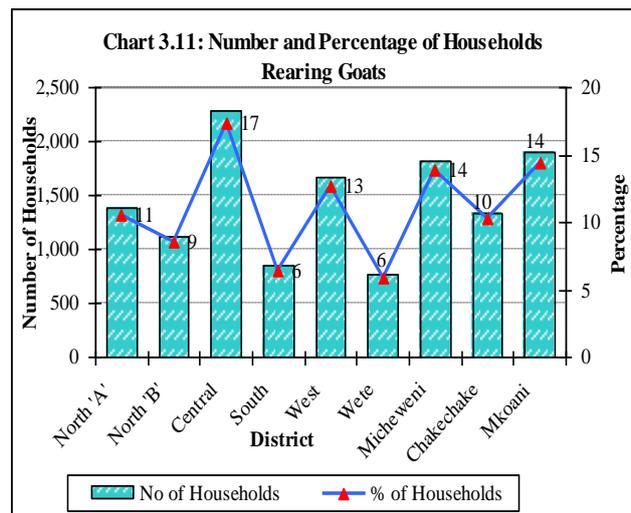
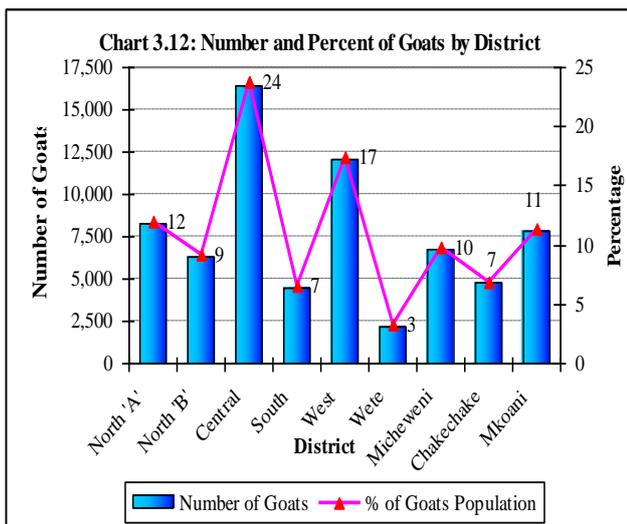
The average number of goats per household was 5 goats. Most of the households (90.5%) raised between 1 to 9 goats representing 60.7% of the total goat population. The remaining households (9.5%) raised 39.4% of the goats (Table 3.4).

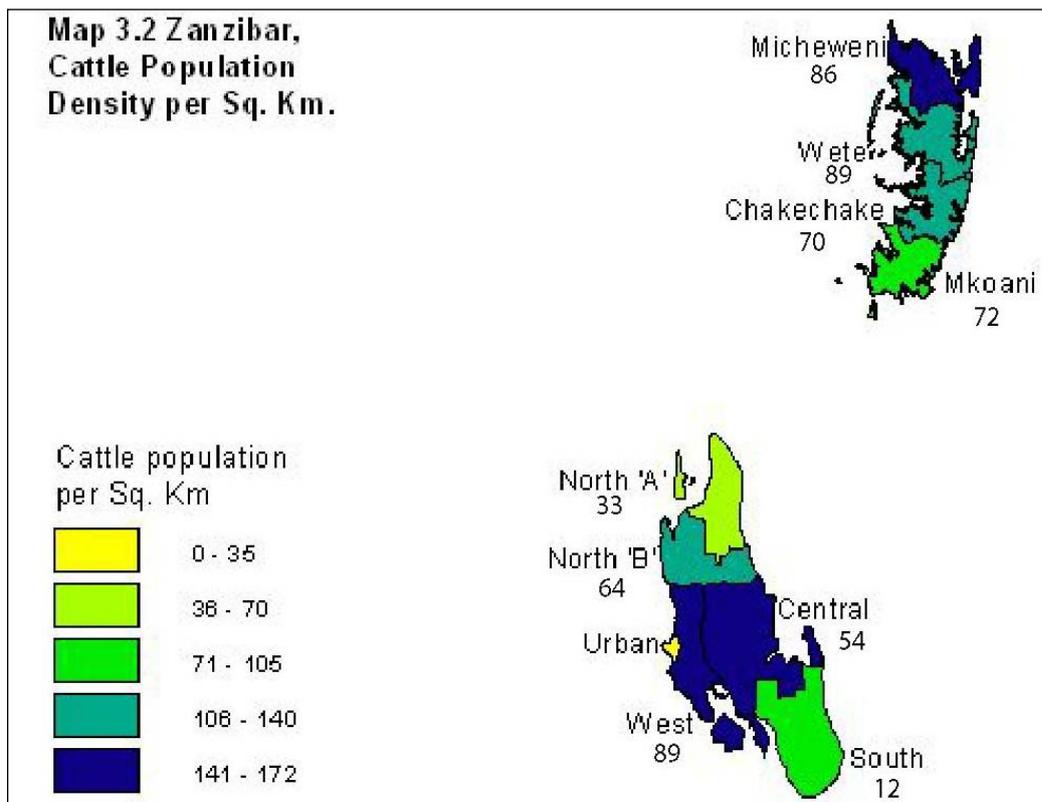
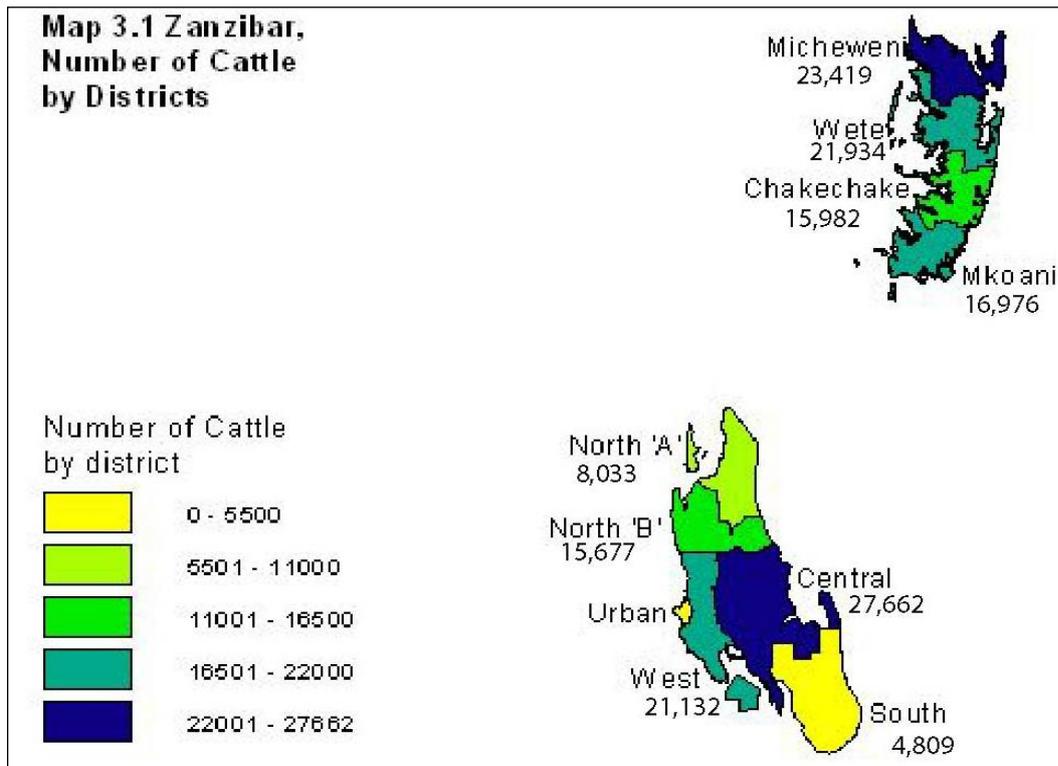
Table 3.4: Number of Households Raising Goats by Herd Size

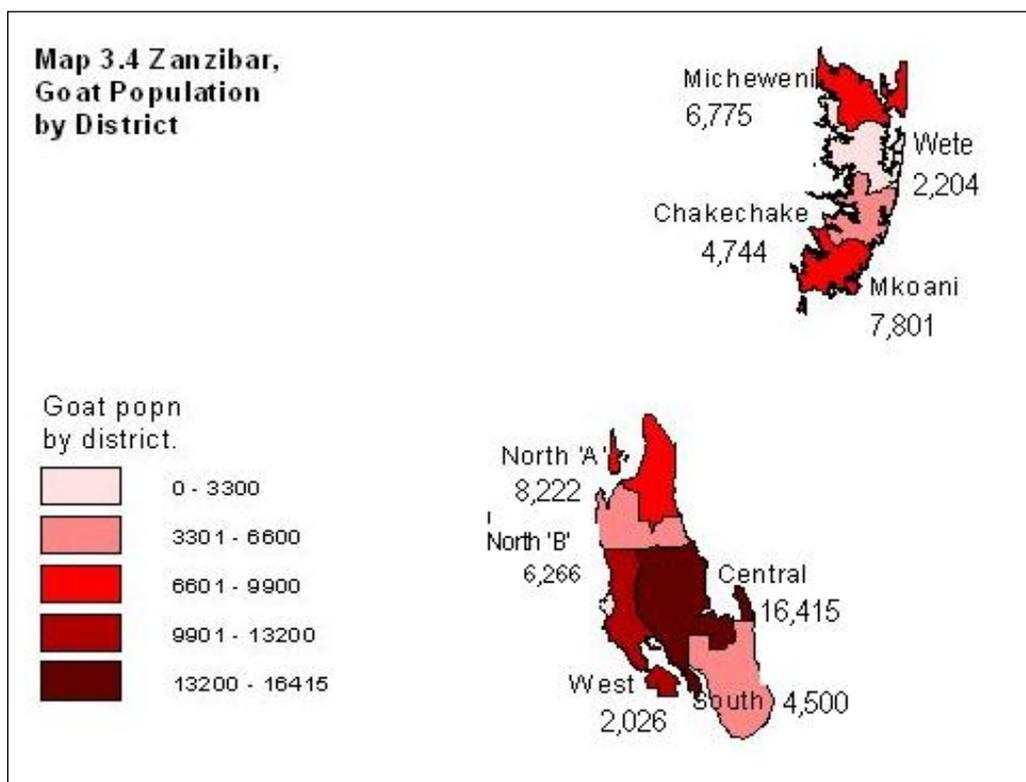
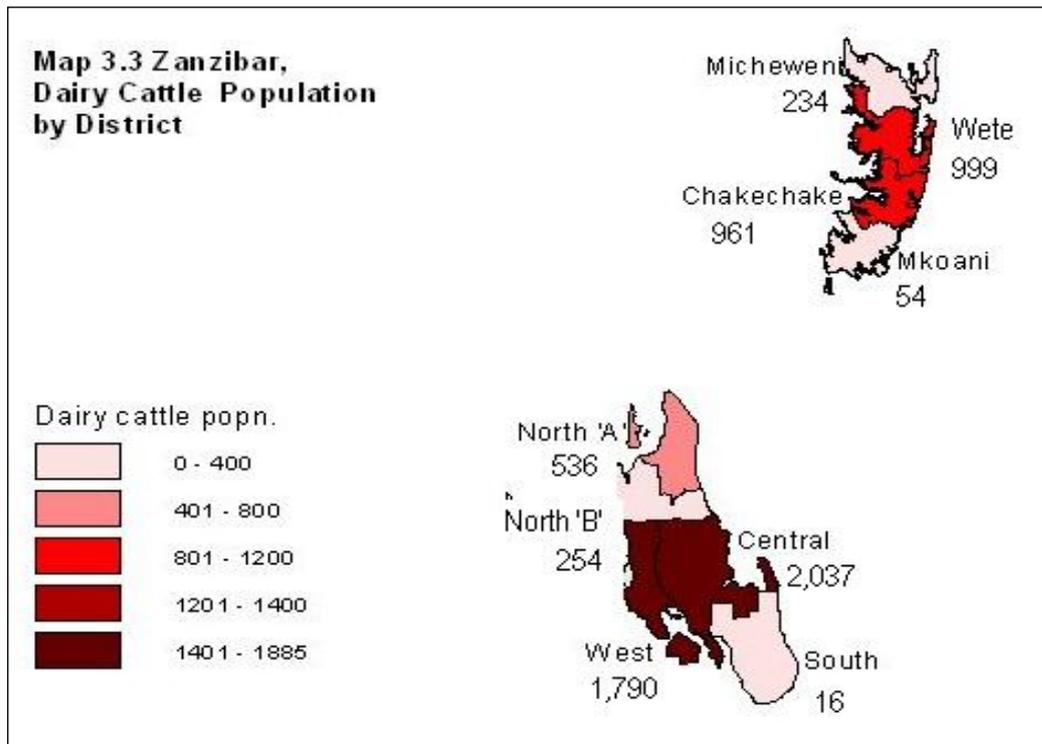
Herd Size	Households		Goat		Number Per Household
	Number	Percent	Number	Percent	
1 - 4	8,372	63.9	20,734	63.9	2
5 - 9	3,486	26.6	21,131	26.6	6
10 - 14	826	6.3	9,369	6.3	11
15 - 19	163	1.2	2,536	1.2	16
20 - 24	58	0.4	1,289	0.4	22
40+	202	1.5	13,914	1.58	69
Total	13,107	100	68,972	100	5

With regard to households raising goats a total of 13,107 households were reported to managed goats. Central district had more households (17%) followed by Mkoani and Micheweni with 14 percent each, West (13%), North 'A' (11%), and Chakechake(10%). Other districts with lower percentages are North 'B'(9%), South (6%) and Wete (6%) (Chart3.11).

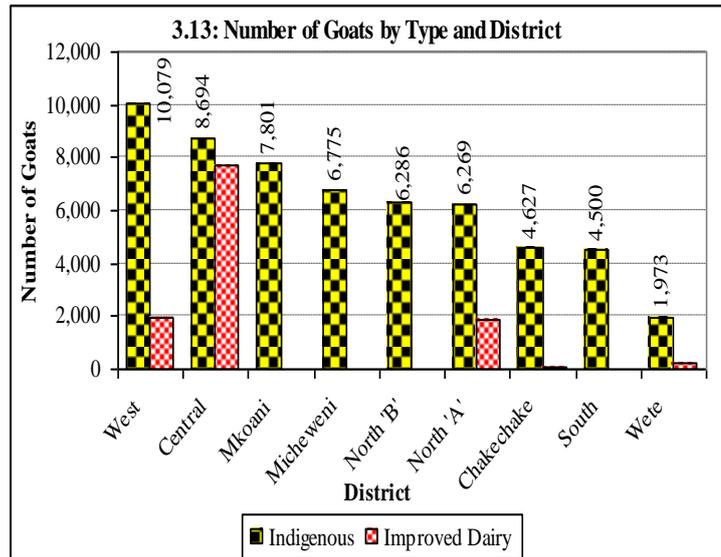
The leading districts with more goats include Central with 16,415 (24%), West with 12,026 (17%) and North 'A' district with 8,222 (12%) ((Table 3.4 & Map 3.4).



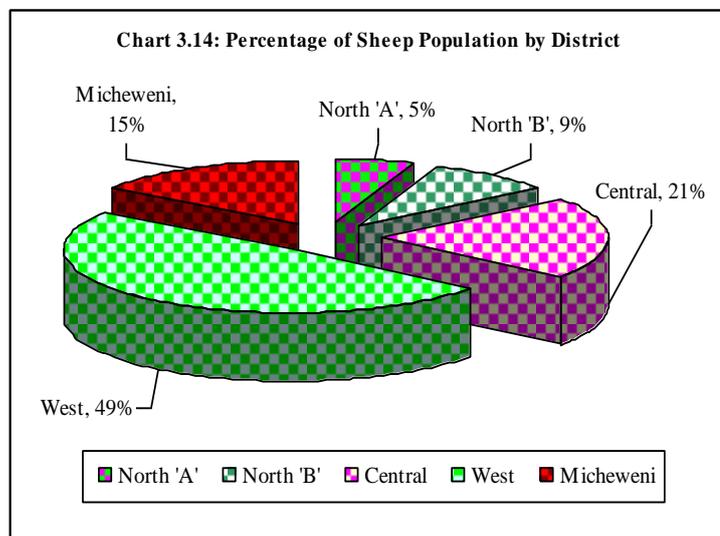




The districts of South, Chakechake and Wete had the least numbers of goats. Out of 13,107 agricultural households rearing goats, 12,817 (97.8%) households reared indigenous goats, 444 (3.4%) households kept improved goats and only 32 (0.24%) households kept improved goats for meat. Highest goat densities were found in West, South and Central (51 goats per Sq. km). Others were North (34), Mkoani (34) and Micheweni (25) Wete district had the lowest goat concentration of only 9 goats per Sq. km (Map 3.5).

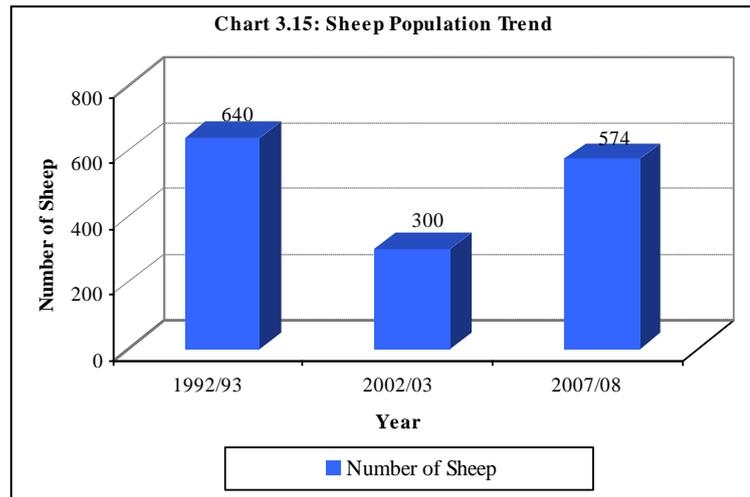


The number of indigenous goats was 57,004 (82.6%), improved dairy goats 11,905 (17.3%) and 63 (0.1%) improved goats for meat. In total the number of improved goats (Improved for meat and Improved dairy) was 11,968 or 17.4% of the total goat population. Most of the improved goats were in the Central district (7,721), West district (1,947) and North 'A' district (1,890). However, the districts of South, North-B, Micheweni and Mkoani had no improved goats (Chart 3.13, Map 3.6)

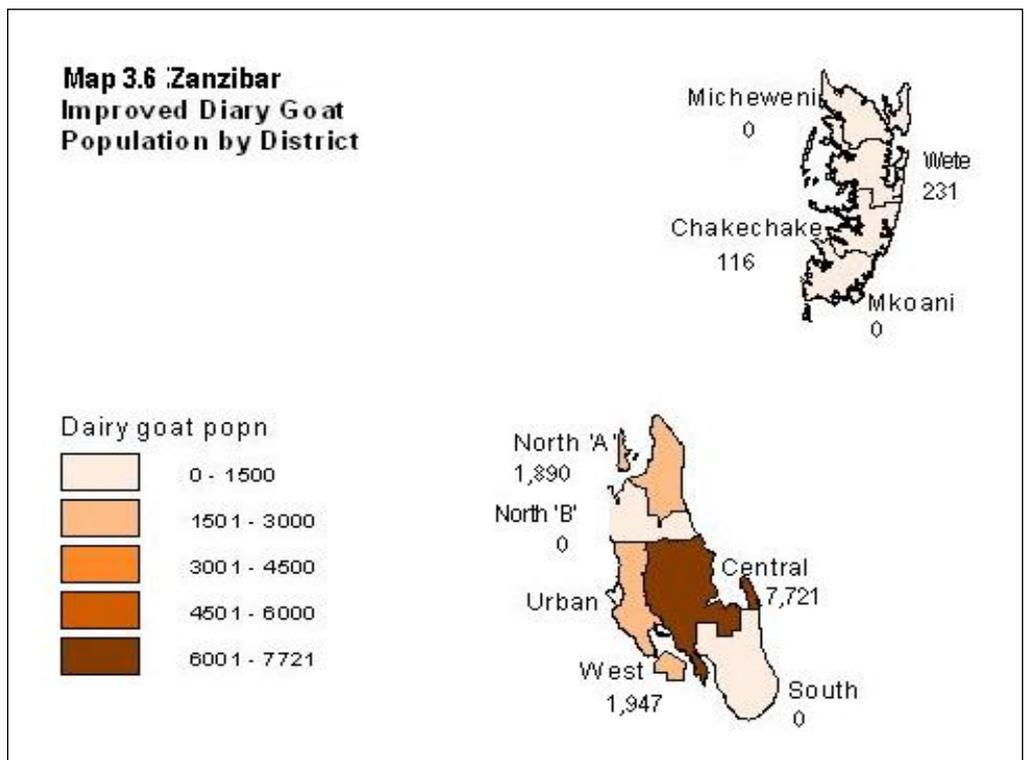
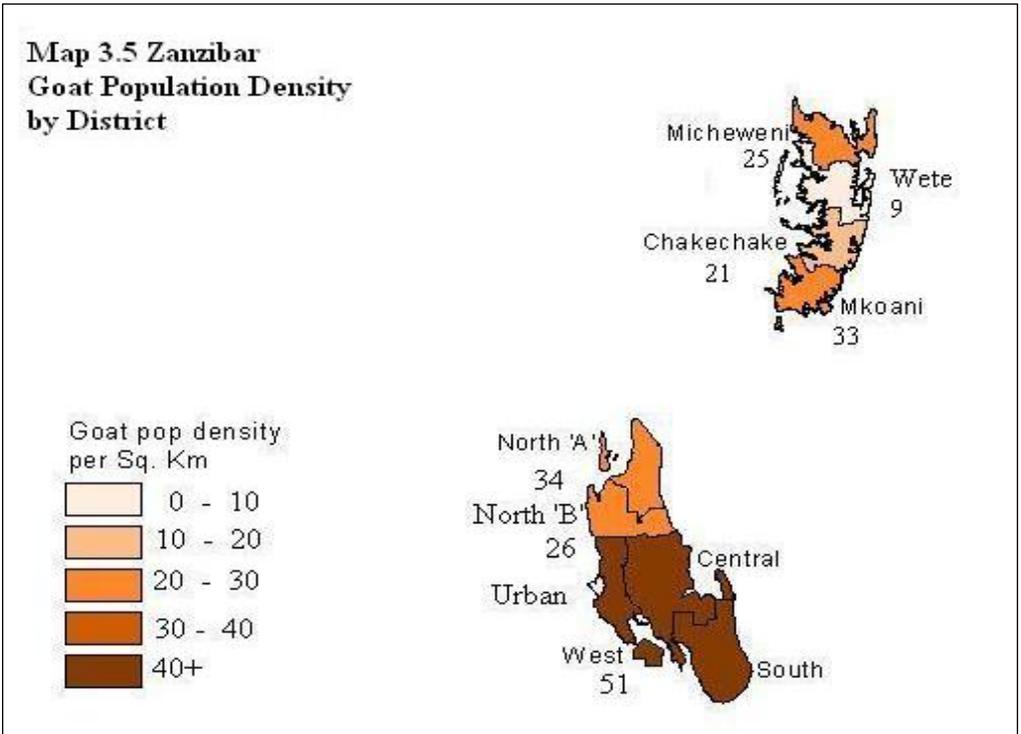


3.1.3 Sheep Population

Sheep keeping is insignificant in Zanzibar with only 210 households engaged in sheep rearing. All the reared sheep were of indigenous type. Most of the sheep were found in five districts namely: West (49%), Central (21%), Micheweni (15%), North 'B'(9%) and North 'A' (6%) (Chart 3.14). The average number of sheep per household rearing sheep was 3.

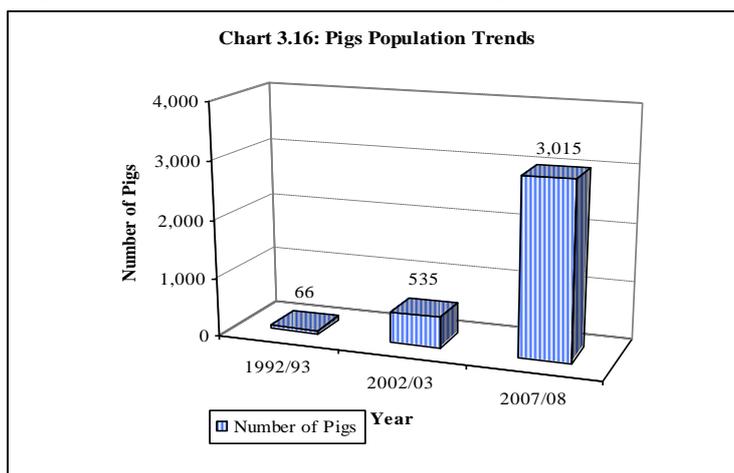


Unlike goat population which increased between 1993 and 2003, sheep population declined by 53 percent in the same period. However, the trend was reversed between 2003 and 2008, whereby the number of sheep increased from 300 to 574 representing a 91 percent increase. On the overall, the annual growth rate over the 15 years period was only 0.6 percent (Chart 3.15).



3.1.4 Pig Population

The number of pigs as by 1st October, 2008 was estimated to be 3,015 heads. These were kept by 153 households, representing an average of 20 pigs per household. Almost all the pigs were kept in the South Unguja and Urban West regions (62.5%) in the central district and (37.5%) in the West district. About 40 percent of the households kept between 5 and 9 pigs, 20 percent kept between 15 and 19 pigs and the remaining 40 percent of the households raised between 30 and 39 pigs. Moreover, most of the pigs (67.7%) were raised by 40 percent of the households in the category of 30-39 pigs.



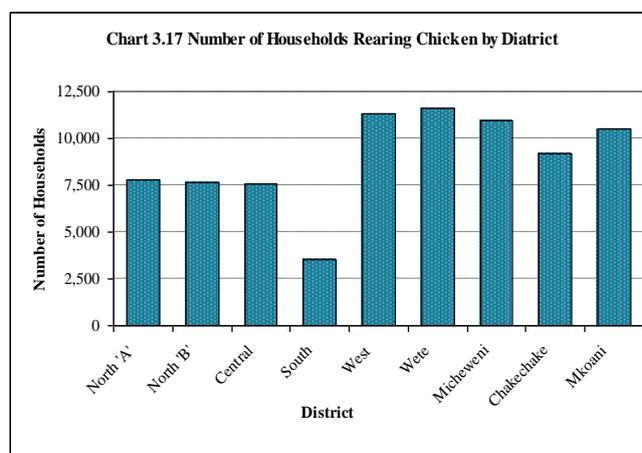
In this cluster, the average number of pigs per household was 33 heads (Table 3.5). In total, the average number of pigs per household was 20. Also, over the fifteen years period, the pig population has increased dramatically from 66 heads in 1992/1993 to 3,015 heads in 2007/2008. This represents an increase of 4,468 percent with an average annual growth rate of 298 percent (Chart 3.16).

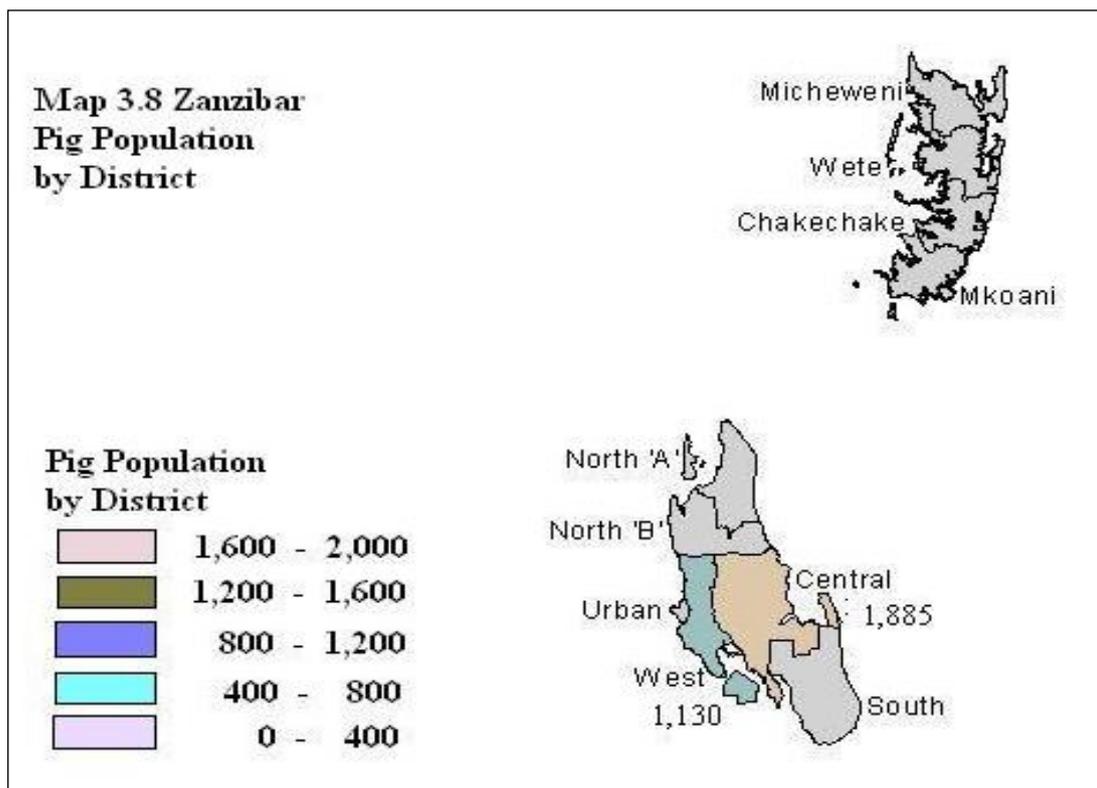
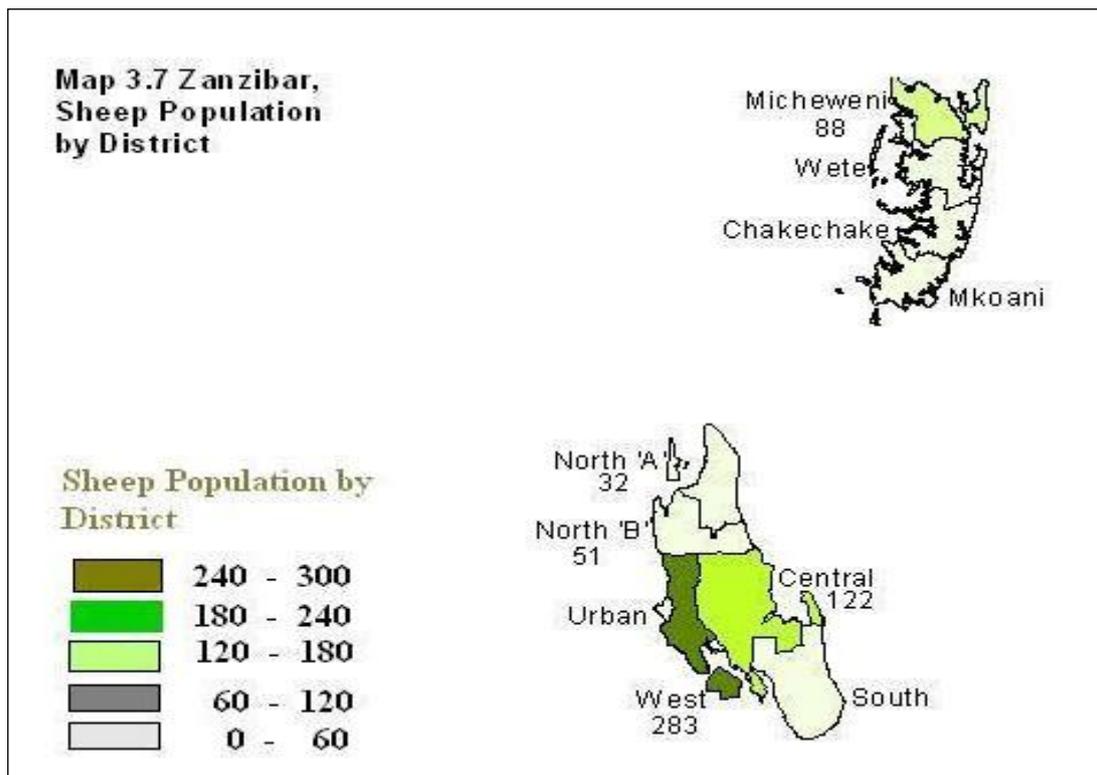
Table 3.5: Number of Households Raising Pigs by Herd Size

Herd Size	Pig Rearing Households		Herd of Pigs		Average per HH
	Number	%	Number	%	
5 - 9	61	40	395	13.1	6.5
15 - 19	30	20	578	19.2	19.0
30 - 39	62	40	2,042	67.7	33.0
Total	153	100	3,015	100	19.7

3.1.5 Chicken Population

Many households in Zanzibar keep chicken especially the indigenous ones or their crosses with either layer or broiler types (hereafter referred to as local). The census results show that 80,069 households equivalent to 60.6 percent of all the agricultural households were engaged in poultry keeping. These households kept 1,078,962 chickens of which 86.4 percent were indigenous, 12.1 percent were layers and 1.5 percent were broilers. More households in Wete, West, Micheweni and Mkoani districts kept chicken compared to other districts (Chart. 3.17).

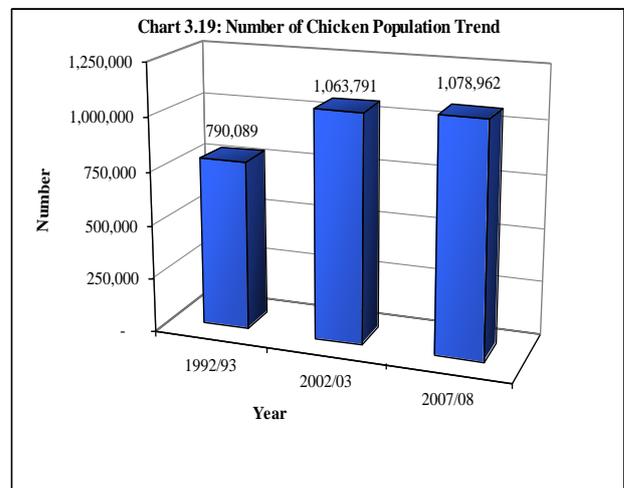
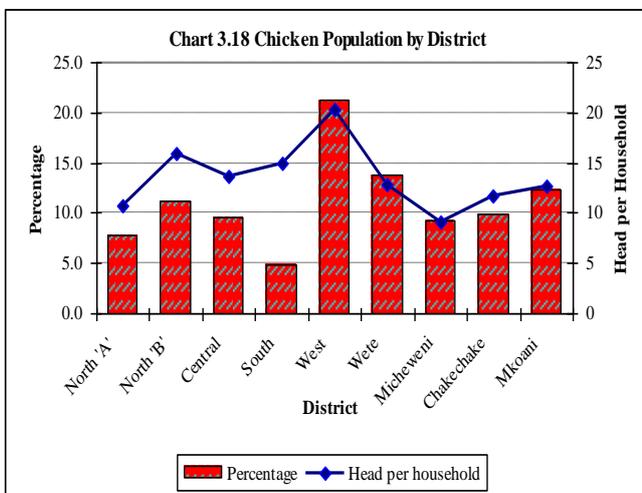




In terms of number of chicken, West district kept 21 percent of the total chicken population. Other districts with relatively high population of chicken were Wete, Mkoani and North 'B' (Chart. 3.18 and Map 3.10) whereas South and North 'A' districts had the least number of chicken.

About 75 percent of the total chicken population was kept by 96.9 percent of the households whereby the flock size was in the range of 1 to 49. These were mainly indigenous/ local types (Table 3.6).

The remaining 25percent of the chicken were kept by 2,438 (3%) of the total chicken raising households. The average number of chicken per household was 13. However, the number of chicken has increased from 790,089 to 1,078,962 (an increase of 36.6 percent) over the 15 years period (1993 to 2008) (Chart 3.19).



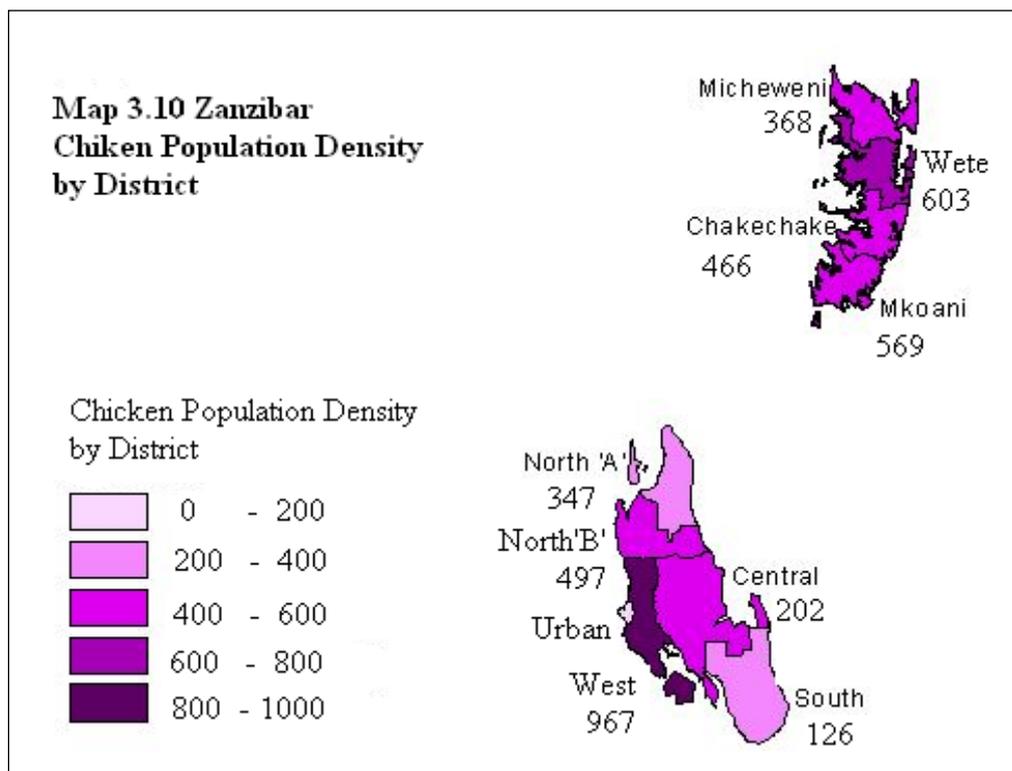
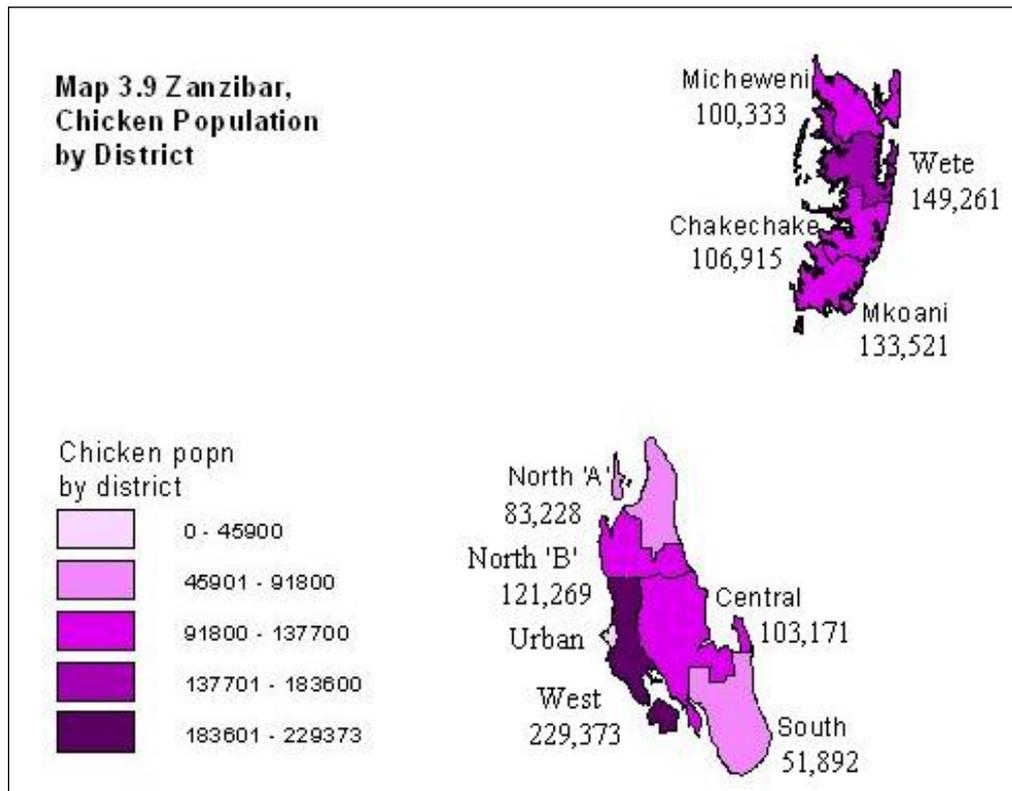


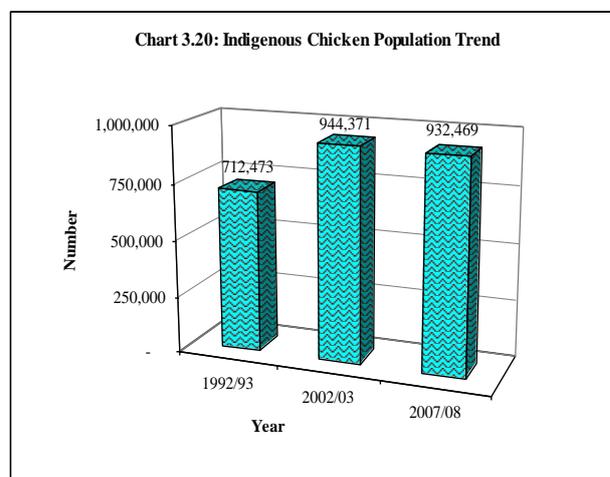
Table 3.6: Households Raising Chicken by Flock Size

Flock Size	Number of Households	%	Number of Chicken	%
1-49	77,631	96.9	804,726	75
50-99	1451	1.81	86,245	8
100-299	842	1.05	124,647	12
300-499	114	0.14	38,225	4
700+	31	0.04	25,120	2
Total	80,069	100.00	1,078,962	100

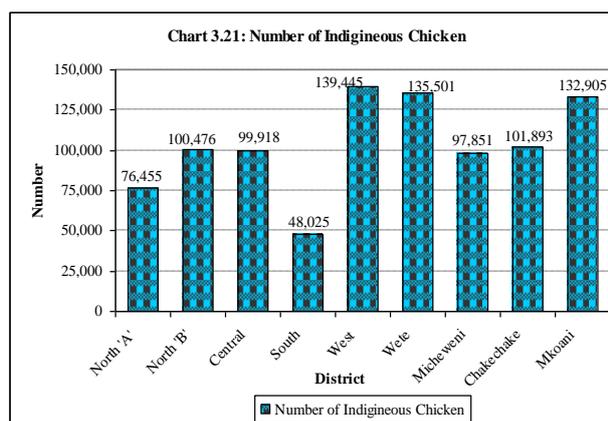
Indigenous Chicken Population

There were 932,469 or 86% of the total indigenous chicken. The number has increased from 712,473 in 1992/1993 to 932,469 in 2007/08, an overall increase of 31% and a 2% average growth per annum over the 15 years period (1993 to 2008) (Chart 3.20).

About 98 percent of the local chicken keeping households kept less than 50 birds per household and the households had a chicken population of 76,731 or 85 percent of the total local chicken. Only about 2 percent of the households kept more than 50 chicken per household which represented 15 percent of the total chicken population. However, there was no household with 500 or more local chicken (Table. 3.7).

**Table 3.7: Households Raising Local Chicken by Flock Size**

Flock Size	Indigenous chicken			
	Number of Households	%	Number of Indigenous Chicken	%
1-49	76,731	98	795,432	85
50-99	1,306	2	76,320	8
100-299	359	0	50,537	5
300-499	25	0	10,180	1
700+	0	0	0	0
Total	78,422	100	932,469	100

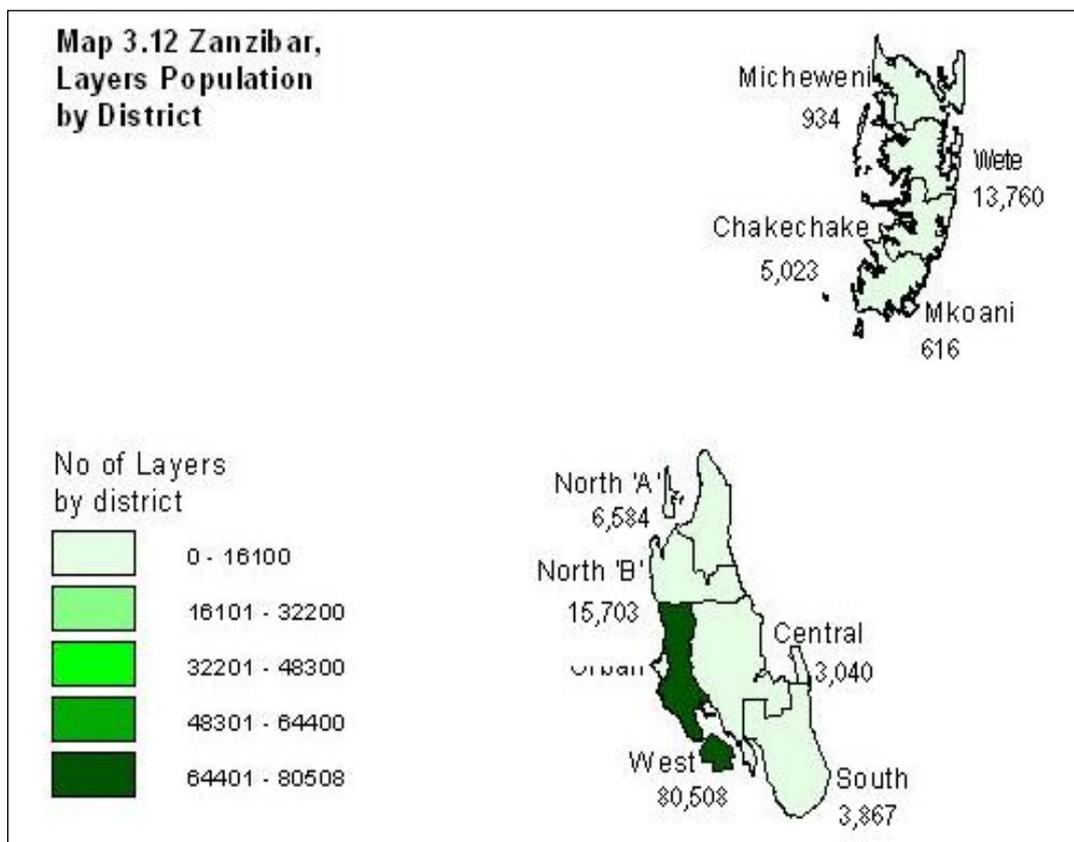
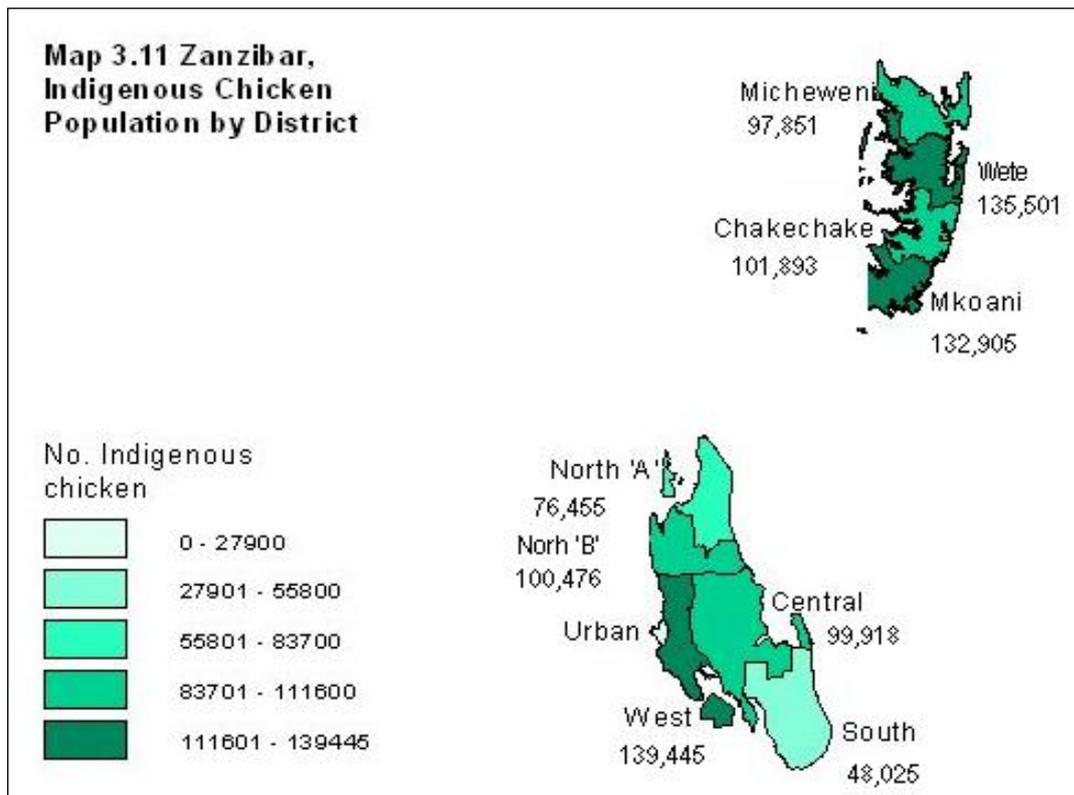


Most of the indigenous chicken were kept in

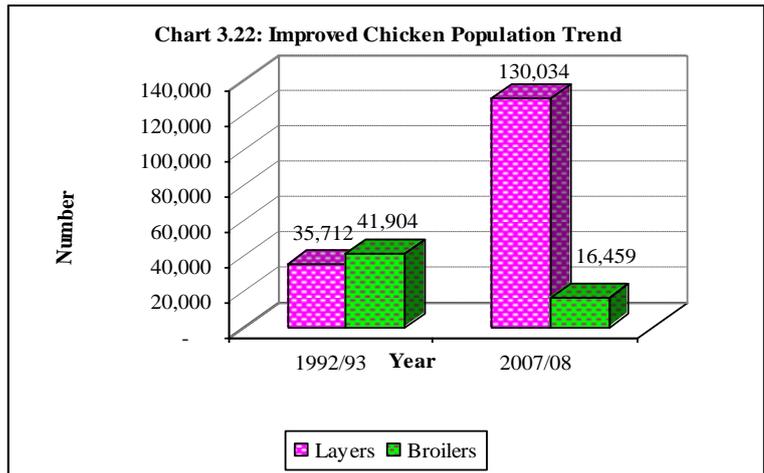
West, Wete and Mkoani districts. Other districts with about 10% of the populations include North-B, Central, Micheweni and Chakechake while. South district had the least number of indigenous chickens (Chart 3.21 and Map 3.11).

Improved Chicken Population

The number of improved chicken in the smallholder sector is relatively small. The survey results show that there were about 146,493 chicken representing 13.6 percent of the total chicken population. About 12.1 percent of the improved chickens were layers and 1.5 percent was broilers.

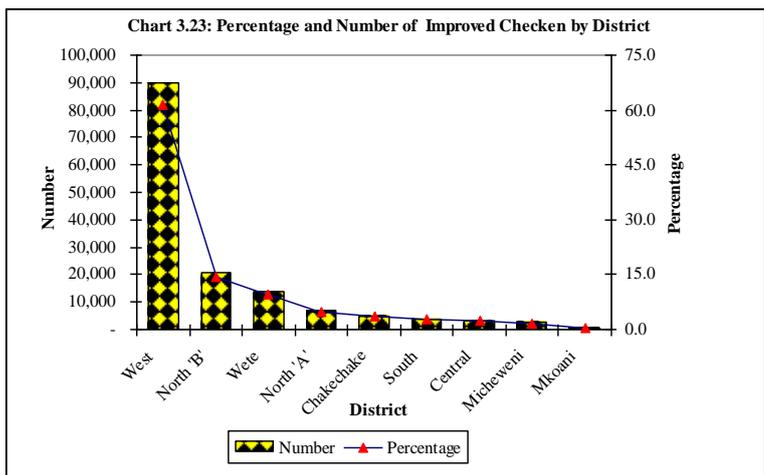


The number of layers increased from 35,712 in 1992/1993 to 130,034 in 2007/2008 an increase of 264 percent, while the number of broilers decreased from 41,904 to 16,459 a decrease of 60.7 percent (Chart 3.22).



Most of the layers and broilers were kept mainly in the West district followed by North 'B' district, Wete and North 'A' (Chart 3.23, Map 3.12).

The 52 percent of the household that kept layers raised between 1 and 49 chicken; however, this cluster raised only 5.6 percent of the total layer population. About 29 percent of the households kept between 100 and 299 birds representing 45.8 percent of the total number of layers. Almost two thirds of the households kept broilers,



and the flock size ranged between 1 and 49 birds. The remaining one third kept 88 percent of the broiler population (Table 3. 8).

The percentage of layers in West and North B districts were relatively higher at about 62percent and 12percent respectively. The remaining districts had a total contribution of 26percent of the improved layer population (Chart 3.24). North 'B' and West districts had the highest concentration of broilers with contributions of 30.9 percent and 57.2 percent respectively. Districts of South, Central, Wete, Chakechake and Mkoani had no broilers or their percentage contributions were negligible.

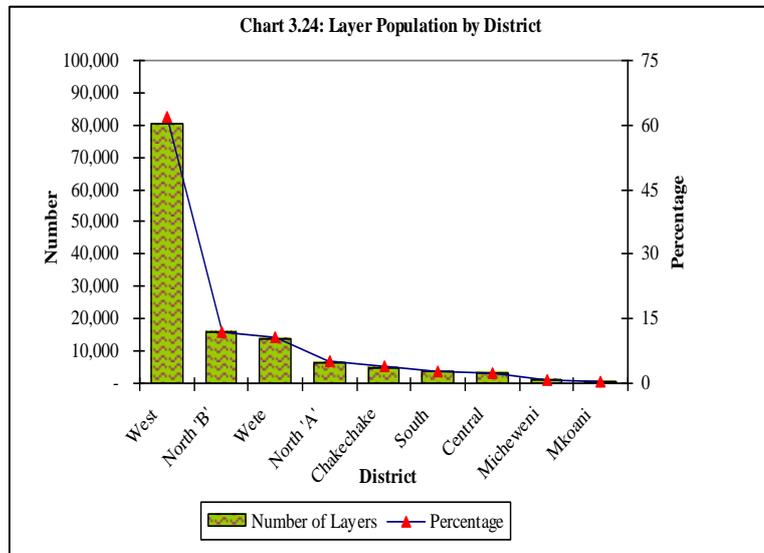


Table 3.8: Improved Chicken Population by Flock Size

Flock Size	Layers				Broilers			
	Number of Households	Number of Layers	%	Number of Chicken Per Household	Number of Households	Number of Broilers	%	Number of Chicken Per Household
1-49	721	7,345	5.6	10	179	1,949	12	11
50-99	145	9,925	7.6	68	0	0	0	0
100-299	394	59,600	45.8	151	88	14,510	88	164
300-499	88	28,045	21.6	318	0	0	0	0
700+	31	25,120	19.3	800	0	0	0	0

3.1.6 Other Livestock

Other livestock includes ducks, guinea pigs, turkeys, rabbits and donkeys. They are less important to the overall contribution to household food security and are kept by fewer households. Proportionally, there were more ducks compared to other livestock types and donkeys were the least in the population. Donkeys are mainly used as pack animals. Most of the ducks and rabbits were found in West district with contributions 47 percent for ducks and 57 percent for rabbits, while guinea pigs were more in North B and Central districts and donkeys were concentrated more in Chakechake district (Table 3.9).

Table 3.9: Population of Other Livestock by District

District	Ducks	%	Guinea pigs	%	Turkeys	%	Rabbits	%	Donkeys	%
North 'A'	6,332	18	0	0	0	0	0	0	63	18
North-B	4,556	13	331	40	305	35	0	0	0	0
Central	2,097	6	213	26	122	14	0	0	30	9
South	1,803	5	81	10	244	28	97	8	0	0
West	16,077	47	0	0	157	18	722	57	0	0
Wete	1,589	5	0.	0	0	0	256	20	51	15
Micheweni	555	2	175	21	0	0	0	0	0	0
Chakechake	922	3	23	3	0	0	186	15	155	44
Mkoani	348	1	0	0	54	6	0	0	54	15
Total	34,279	100	823	100	881	100	1,262	100	353	100

However, more households kept ducks than any other species (Table 3.10). The average number of ducks per household was 10 while the average number of turkeys, rabbits and donkeys per household were 4, 6 and 1 respectively.

Table 3.10: Number of Households and Livestock by Type

Type of Livestock	Number of Household	Number of livestock	Average number per HH
Ducks	3,321	34,279	10
Turkeys	229	881	4
Rabbits	198	1,262	6
Donkey	296	353	1
Others	1839	5037	3

3.2 Livestock products -Milk Production

Most of the milk is produced from cows. In Zanzibar there was a total of 44,718 cows milked during the wet season (6.5% improved type; 93.5% indigenous type) and 36,639 cows during the dry season (7.6 % improved type; 92.4% indigenous types). The total milk production during the wet season was 111,616 lt and dropped to 84,385 lt during the dry season. The average milk production was 2.5 liters during the wet season and 2.3 lt during the dry season. West district ranked highest in total production (both during the wet and dry season (23 and 27% of total production respectively). It was followed by Central (19%), Wete (13%) and North B (14%). The four districts produced about 69% of total milk during the wet season. Other district produced moderate amount of milk and the least were North A and Mkoani (Table 3.11, Map 3.13).

Table 3. 11: Total Milk Production and Percentage by District

District	Wet season (Lt)	Perct	Dry Season (Lt)	Percent
North 'A'	9623	9	7225	9
North 'B'	15298	14	11779	14
Central	21548	19	11894	14
South	1610	1	868	1
West	25651	23	22832	27
Wete	13970	13	11623	14
Micheweni	9482	8	8168	10
Chakechake	9626	9	8139	10
Mkoani	8213	7	4962	6
Total	111616		84385	

The average milk production per cow per day was 7 liters and 2 litres for improved dairy type and local type during both the wet and dry season respectively. However, highest production during the two seasons was recorded in North A and West for improved types with average of 12 and 10 litres respectively. Milk production from

indigenous cows did not differ much between district and ranged from 2 to 3 litres per day during the wet season. During the dry season the range in milk production per cows was between 1 and 2 litres per day (Table 3.11). The disparity between district for improved type could be linked to type of improved animals (exotic blood levels), and management.

The price of milk varied between districts, seasons and type of animals. During the wet season the average price of milk from improved cattle was slightly higher than that from indigenous cattle, being 507 Tsh and 479 Tsh respectively.

Table 3.12: Average Milk Production per Cow per day, by Category of Cow, Season and District

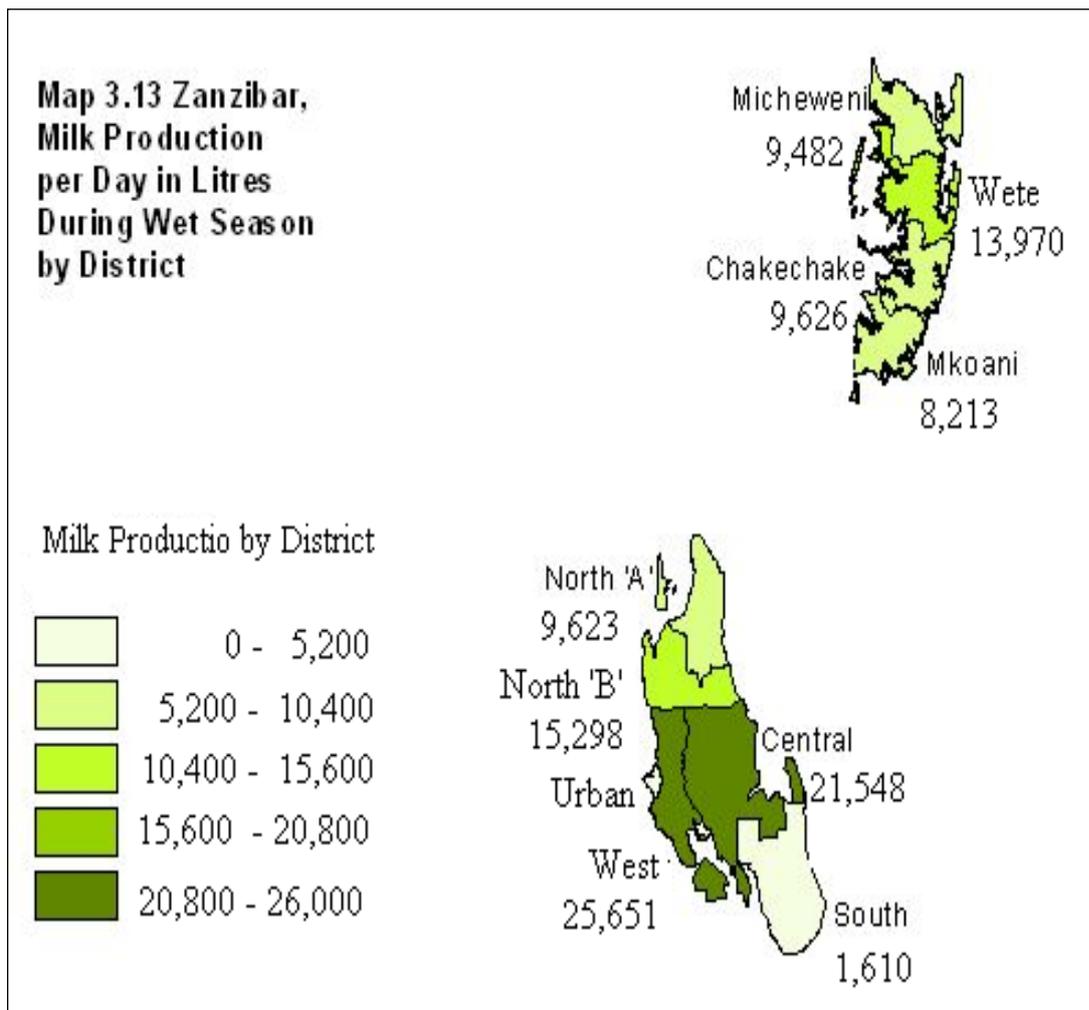
District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean (ltr)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)
North 'A'	12	3	3	12	2	2
North 'B'	6	3	3	6	2	3
Central	6	2	3	5	2	2
South	.	2	2	2	1	1
West	10	3	4	10	3	4
Wete	6	2	2	6	2	2
Micheweni	4	2	2	4	2	2
Chakechake	6	2	2	7	2	2
Mkoani	0	2	2	0	2	2
Total	7	2	2.5	7	2	2.3

The same pattern was observed during the dry season, whereby milk from improved cattle increased to 522 Tsh (2.9% increase), while that of indigenous cattle was 495 Tsh (an increase of 3.3%) (Table 3.12). During the wet season, highest price per litter was recorded in North A (570 Tsh) followed by Wete (507 Tsh), West (502 tsh) and Mkoani (501 Tsh). For the remaining districts the prices were near equal ranging from 449 Tsh to 491 Tsh in South district. Near similar pattern was displayed during the dry season, North A leading in the price charged per liter. For both season lowest price were found in central district which price being 450 Tsh and 461 Tsh respectively.

Table 3.13: Average Cattle Milk price (Tshs/litre) per season by category of cow and District

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean	Mean	Mean	Mean	Mean	Mean
North 'A'	900	553	570	800	565	572
North 'B'	450	449	449	450	468	467
Central	435	453	450	445	465	461
South	.	491	491	750	492	512
West	541	494	502	583	508	518
Wete	491	508	507	509	496	497
Micheweni	575	455	459	633	484	488
Chakechake	557	445	456	543	482	488
Mkoani	60	506	501	0	533	533
Total	507	479	481	522	495	497

Milk production from goats was insignificant. A total of 1018 litres were estimated to be produced during 2007/08 agricultural year from 880 goats each producing on average about 1.2 litres per day. The price of goat milk was however, higher than that of cow's milk, being 903 Tsh on average (Table 3.13).



3.3 Contribution of Livestock to Crop production

In addition to provision of milk and draught power, livestock has important contribution to crop production in terms of manure provision. In Zanzibar, a total of 6,806 households (7.7% of all households planting during Long rain) use organic fertilizers (mainly manure). Organic fertilizer was used on 2,926 ha representing 7.8 percent of the total planted area during long rain season (MASIKA) (Table 3.14).

Districts with higher proportion of area planted with organic manure were Central (21.7%), South (16.5%), North B (14.1%) and West (13.7%). Uses of organic manure in other districts were less than 10 percent of planted area during long rain, the least being Mkoani (3.2) and Chakechake (1.9%) (Table 3.14). The extent of fertilizer use does not match with the number of livestock kept. For example, Michweni and Wete ranked second and third respectively in terms of number of cattle, but were among the lowest user of organic fertilizers.

Table 3.14 Animal Contribution to Crops: Number of Households and Planted Area by Organic Fertilizer use and District - Long Rainy Season

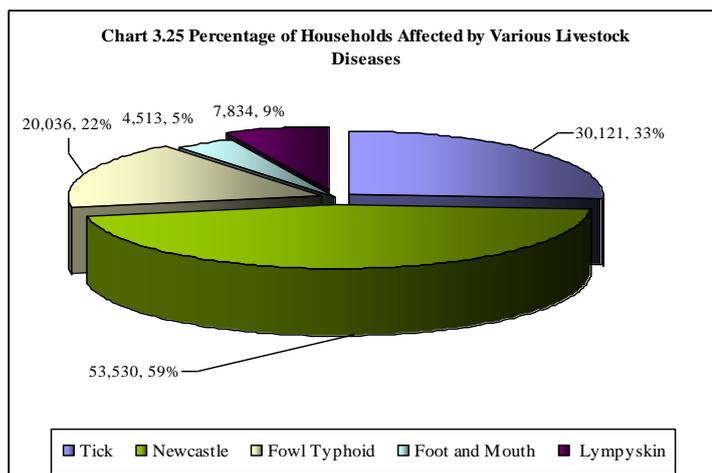
Districts	Organic Fertilizer Use						% of Planted area using Organic Fertilizer
	Number of Households using Organic Fertilizer	Planted Area Applied with Organic Fertilizer	Number of Households NOT using Organic Fertilizer	Planted Area NOT Applied with Organic Fertilizer	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
North 'A'	1,134	437	11,845	5,435	12,979	5,872	7.4
North 'B'	1,120	487	6,261	2,961	7,380	3,448	14.1
Central	1,246	721	5,259	2,600	6,505	3,321	21.7
South	227	30	910	150	1,137	179	16.5
West	1,162	388	6,782	2,436	7,944	2,825	13.7
Wete	743	283	13,248	5,804	13,991	6,087	4.6
Micheweni	701	304	12,848	4,959	13,549	5,263	5.8
Chakechake	178	96	10,991	5,055	11,169	5,152	1.9
Mkoani	295	179	13,415	5,327	13,709	5,506	3.2
Total	6,806	2,926	81,558	34,727	88,364	37,653	7.8

3.4 Livestock Diseases and control

3.4.1 Common Livestock Diseases

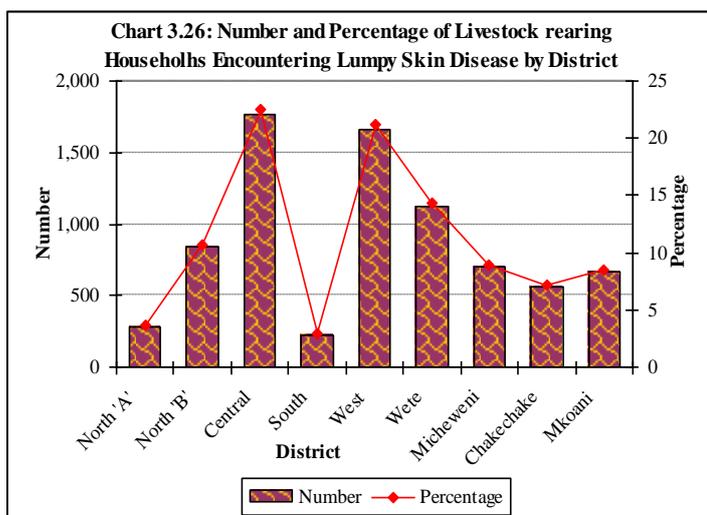
The most common diseases infecting ruminant livestock include Tick Borne Diseases (T.B.D), Foot and Mouth Diseases and Lumpy Skin Disease (LSD), while in poultry, the Newcastle disease and Fowl Typhoid were the most challenging. Newcastle disease infected 53,530 households and these presenting 59 percent of the total livestock rearing households (91,380).

The number of households reporting Fowl Typhoid, infection was 20,036 representing 22 percent of the total livestock rearing households. The number of households rearing livestock reported to be infected by Tick Borne Disease were 30,121 (33%), Lumpy Skin disease 7,834 (9%), and Foot and Mouth Disease (FMD) 4,513 (5%) of the total households rearing livestock (Chart 3.25).



Lumpy Skin Disease (LSD)

A total of 7,834 (9%) cattle rearing households have reported to have been affected by the Lumpy Skin Disease. The highly infected districts with the disease were: Central with 1,763 (23%) households, this followed by West with 1,664 (21%) households, Wete district accounted 1,127 (14%) households rearing livestock. Fewer incidences of the



disease were in North 'A' district where only 4 percent of the households reported to have been affected by the disease. About nine and seven percent of the households in Micheweni and Chakechake districts reported the incidences respectively. South and Mkoani districts had three and nine percents of cases of the cattle keeping households. In Wete district, 1,127 households rearing livestock equivalent to 14 percent of the cattle keeping households were affected with the LSD (Chart 3.26, Map 3.15).

Tick Borne Disease

Incidences of Tick Borne Disease (TBD) were highest reported in Central district with 4,377 households or 48 percent of the households rearing livestock within the district. Chakechake district had 4,201 (39%) cases followed by Micheweni district with 4,585(36%) reported cases within the district. Other districts with moderate cases were Mkoani district with 3,981(34%) cases,

Wete district with 4,254 (33%) cases and North 'B' district with 2,672 (33%) cases (Chart 3.27, Map 3.16).

Worm Problems

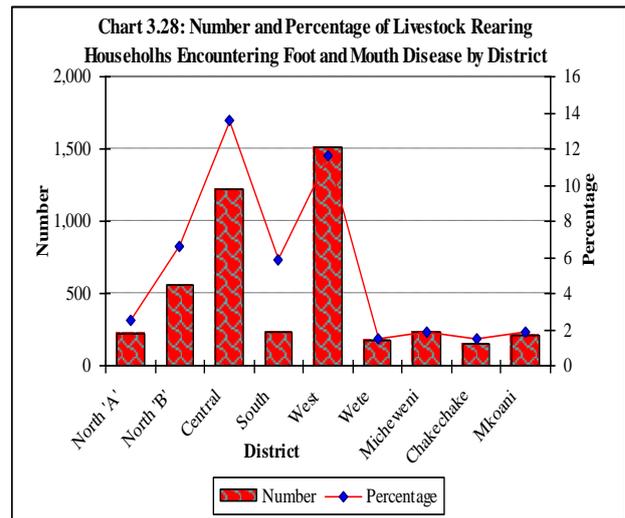
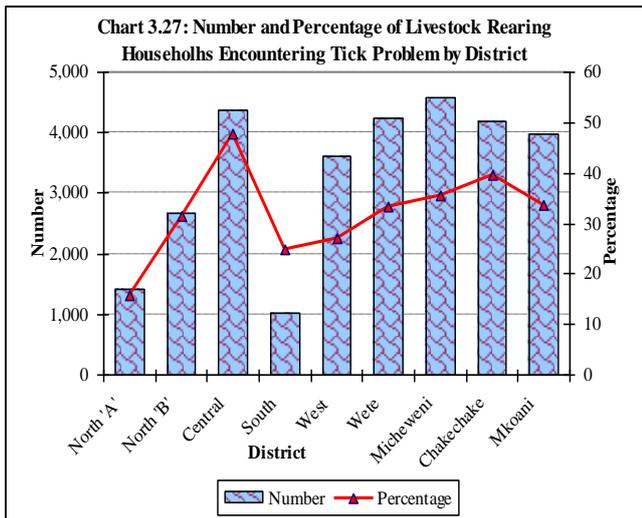
The distribution of households reporting worm problems (Helminthosis) is presented in Map 3.17. There were more household encountering worm problems in West, followed by Central district. Other districts with moderate intensity were North A, North B, Micheweni and Wete. Mkoani reported fewer incidences of worms.

Tse tse problems

Although there were programmes to eradicate Tsetse in Zanzibar, the 2007/08 agricultural census still indicate that the problem still exist. Map 3.18 shows that In Pemba Island there were more tse tse cases than in Unguja island. Mkoani district had higher number of households reporting Tsetse problems (714), It was followed by Micheweni (555 hh), Chakechake (403 hh). In Unguja more incidences were reported in West (471 hh), North A (410 hh) and Central (304 hh) (Map 3.18).

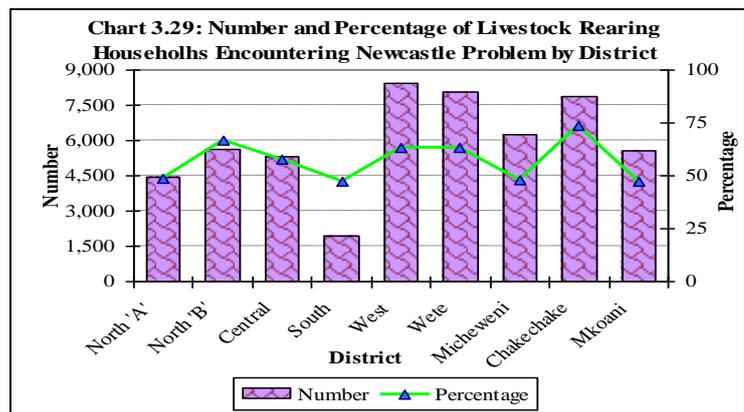
Foot and Mouth Disease

Foot and Mouth Disease was one of the serious diseases which was reported to infect 4,513 (10%) of the total households rearing livestock. The highly infected districts include Central with 1,216(14%) households and West district with 1,507 (12%) households. South and North 'B' districts had few households reporting to encountered Foot and Mouth Disease with only 6 percent and 7 percent respectively. Incidences of FMD were the least in Wete and Chakechake districts, each with one percent followed by North 'A' (3%). In Micheweni and Mkoani districts only 2 percent of the cattle rearing households reported the FMD cases in each of the districts (Chart 3.28, Map 2.22).



Newcastle Disease

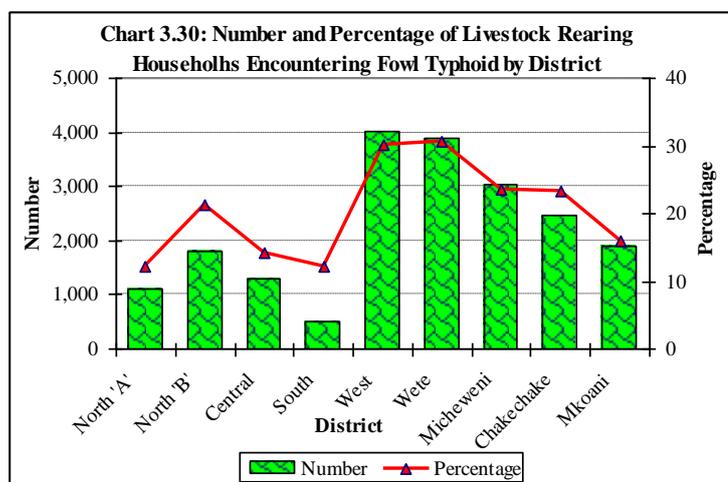
Newcastle is one of the serious poultry disease which affected 53,530 households or 59 percent of the total livestock rearing households. The leading districts were, Chakechake with 7,875 households or 74 percent, North B with 5,650 or 67 percent, West and Wete districts, each with 63 percent, Central (58%), North A (49%), Micheweni (48%), Mkoani and within the districts (Chart 3.29, Map 3.19).

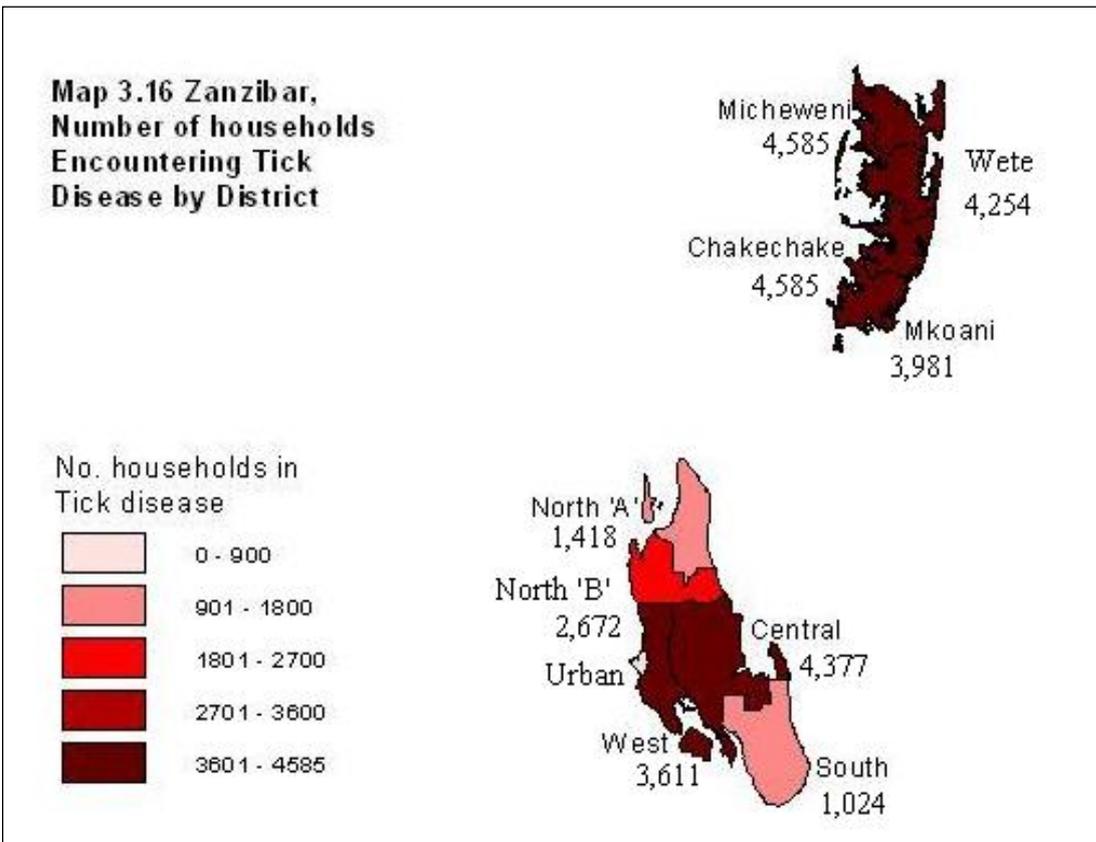
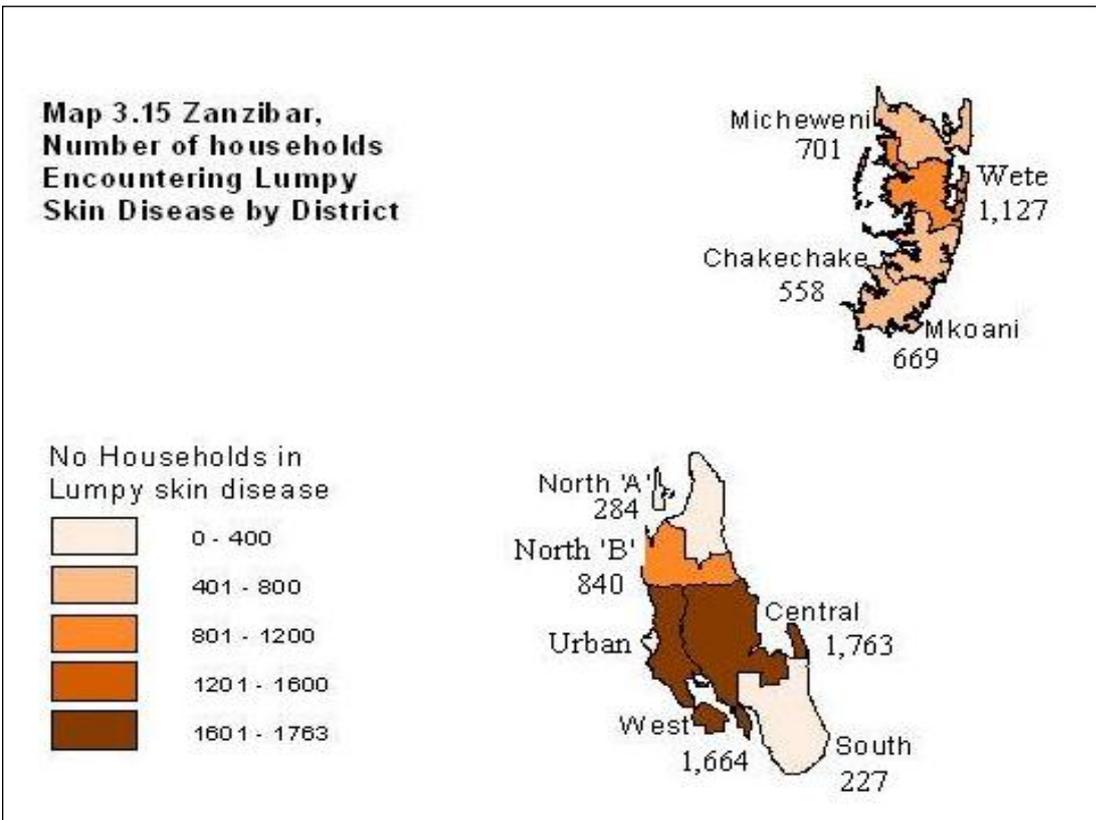


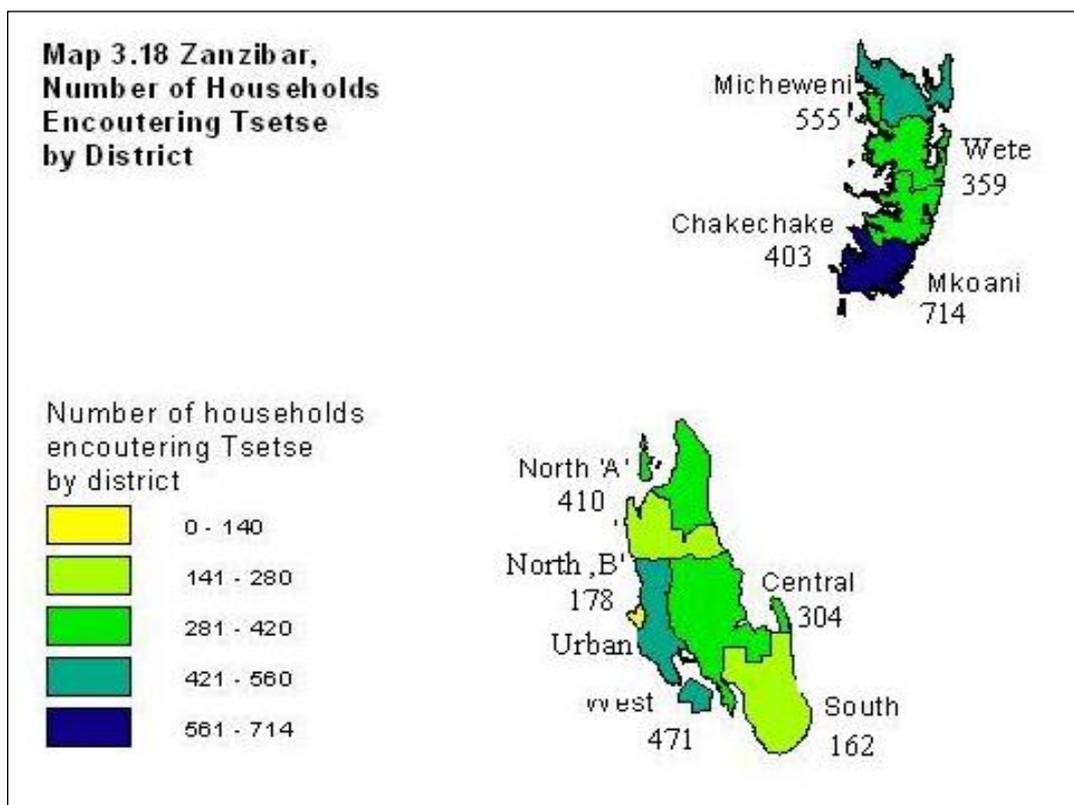
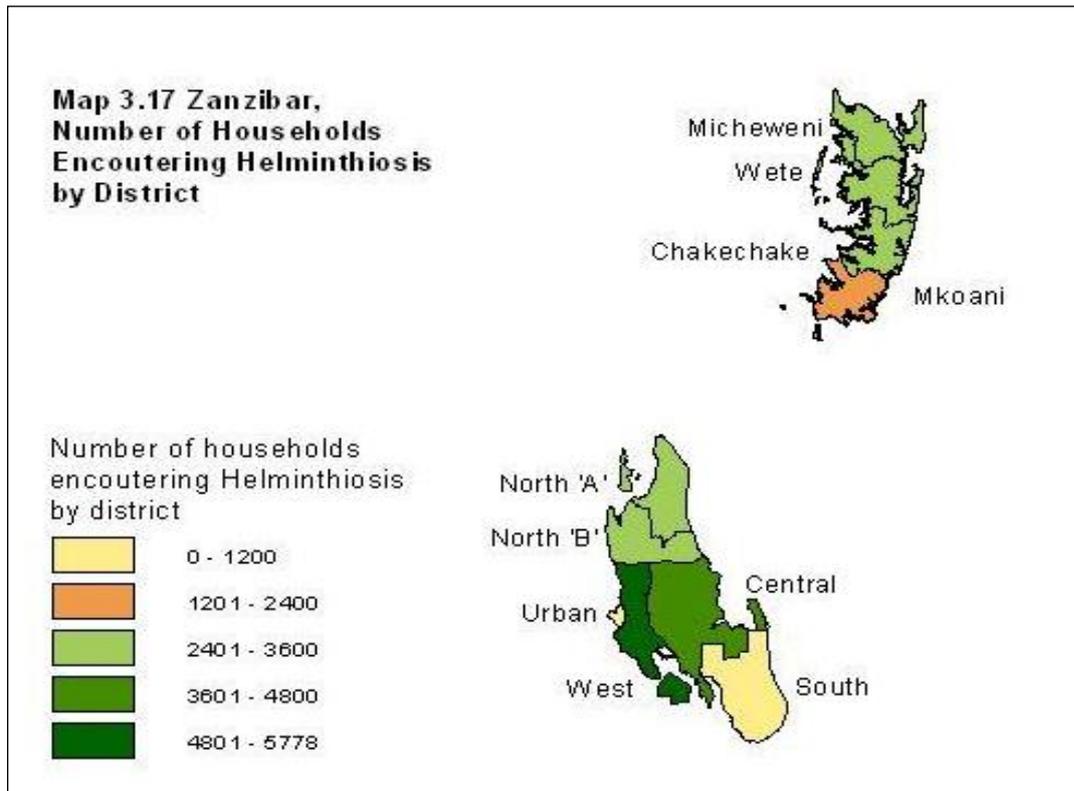
South districts, each with 47 percent of the households

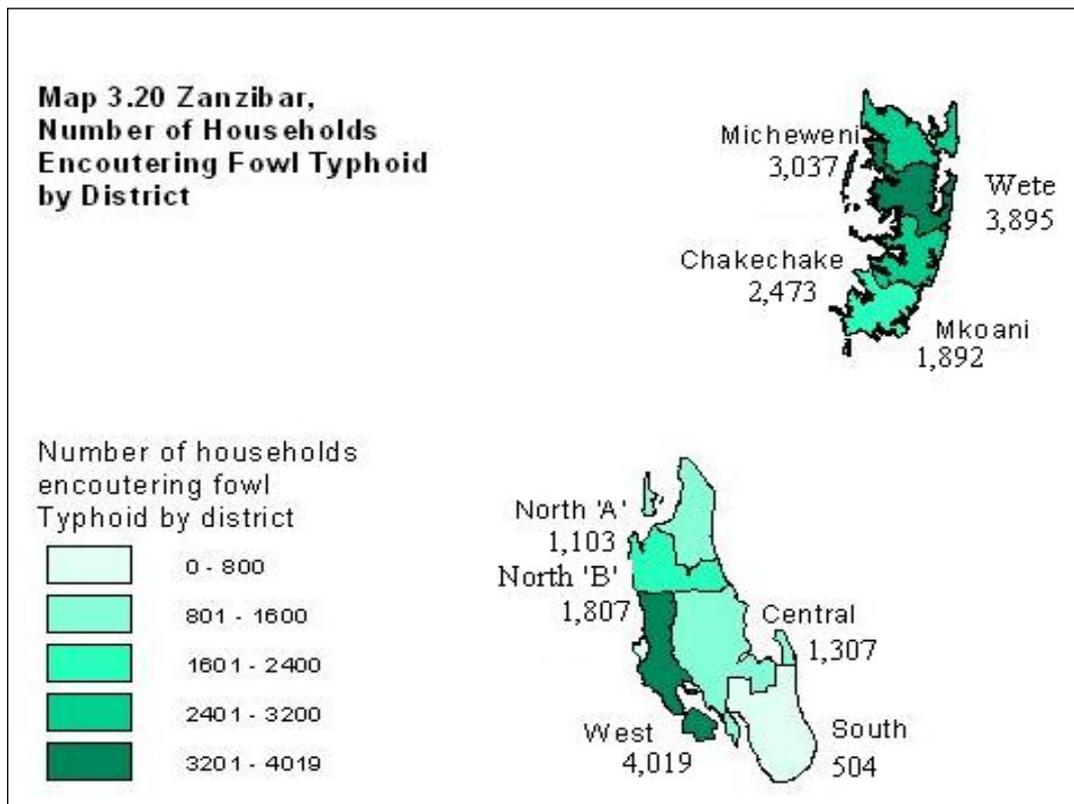
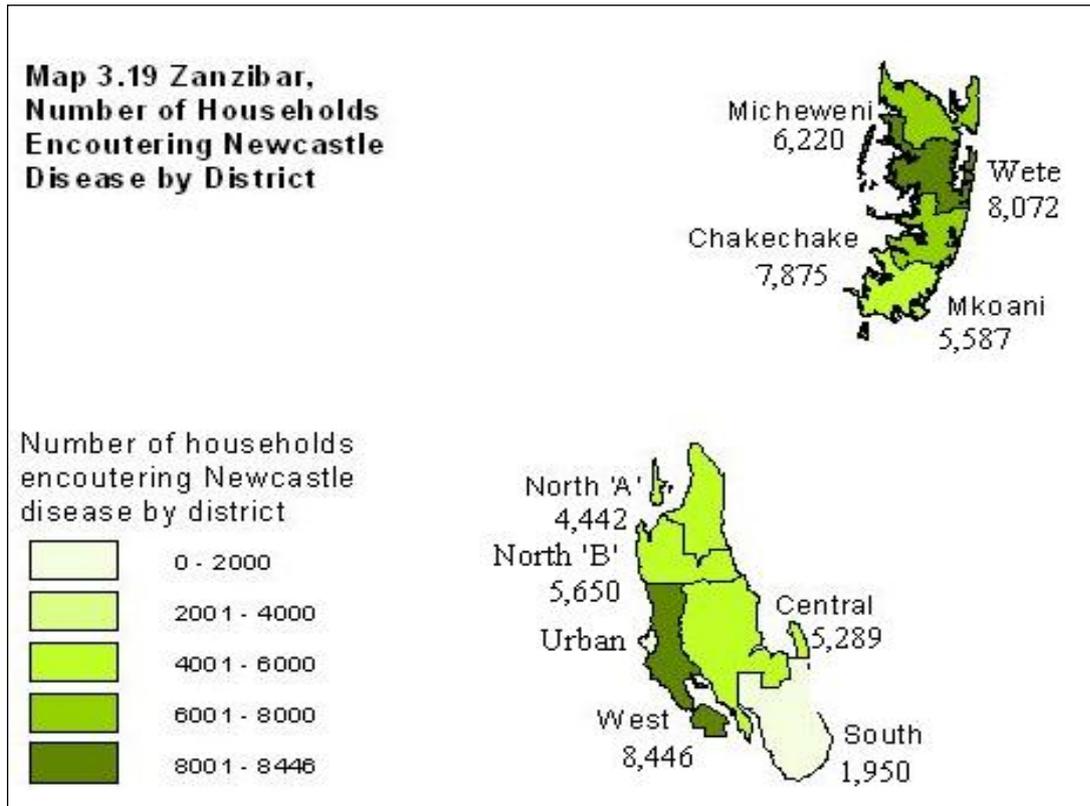
Fowl Typhoid Disease

Fowl Typhoid was reported by 20,036 households or 22 percent of the total livestock rearing households. The highest incidence of the problem was reported in Wete of which 3,895 (31 %) of the total households rearing livestock within the district encountered the problem and was followed by West district (30%). The disease was moderately encountered in Micheweni district (24%), Chakechake (23%) and North B (21%). Less than 15% of the cases were reported in the districts of Central (14%), South (12%) and North 'A' (12%) (Chart 3.30, Map 3.20).









3.4.2 Livestock Disease Control Methods

The livestock pest control methods focused on Tick problem, Newcastle, Disease and Fowl Typhoid. Livestock diseases were observed in almost all the surveyed districts, with some districts reporting more incidences of particular diseases than in other districts. Since diseases occurrence varies by types of livestock there are different control methods for such diseases. This section presents in detail various control methods by type of the Diseases, Type of the Methods and by District.

Tick Control Methods

Tick borne disease was reported as being the most serious disease infecting ruminants in Zanzibar. The disease was most notorious in Central, Chakechake and Micheweni. The severity of the disease was reported as moderate in Mkoani, Wete, and North B, and low in North A, South and West. Among the Tick control methods reported, spraying was the most commonly method applied by 19 percent of the households in Zanzibar followed by Smearing applied by 8 percent of the livestock raising households. Dipping and other methods accounted to 4 and 2 percents respectively of the livestock raising households applying the method (Table 3.11).

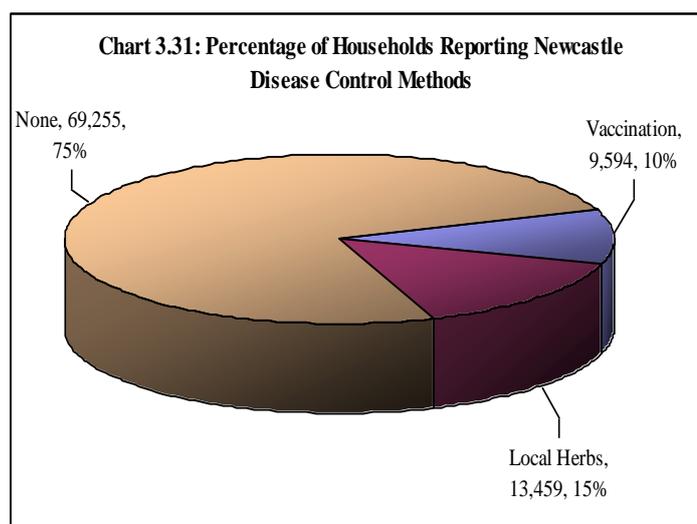
There were also variations in the application of these methods by district. Spray methods was practised in all the districts; however the method was most practised in Chake (26%), Central (23%), South (21%), and Mkoani (20%). Smearing was the second most applied tick control method especially in Central (19%), and West (15%). The method was moderately applied in Wete (8%), North B (7%); lowly applied in Micheweni and Chake chake by 5 percent each. Dipping was the least applied method by all the districts in livestock raising households applying the method. There is however the largest percentage (66%) of the livestock raising households reported not to apply any control methods against tick borne disease across the nine surveyed districts (Table 3.15).

Table 3.15 Number and Percentages of Livestock Raising Households practicing various Tick Control methods by District

District	Dipping		Spraying		Smearing		None		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
North-A	410	4	819	9	410	4	7,371	81	95	1	9,104	100
North-B	254	3	1,451	17	585	7	6,108	72	76	1	8,475	100
Central	426	5	2,128	23	1,763	19	4,742	52	91	1	9,150	100
South	65	2	845	21	244	6	2,941	72	16	0	4,110	100
West	408	3	2,512	19	1,978	15	8,289	62	157	1	13,345	100
Wete	820	6	2,101	16	974	8	8,430	66	436	3	12,761	100
Micheweni	759	6	2,307	18	701	5	8,760	68	380	3	12,907	100
Chake	186	2	2,821	26	488	5	6,759	63	395	4	10,650	100
Mkoani	696	6	2,321	20	464	4	7,979	68	348	3	11,808	100
Total	4,024	4	17,304	19	7,607	8	61,380	66	1,994	2	92,309	100

Newcastle Control Methods

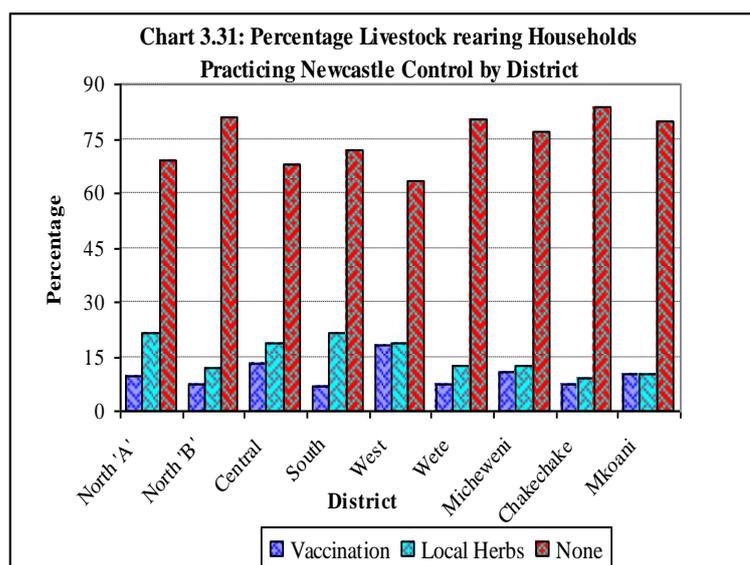
Newcastle problem was a notorious problem which affected poultry. In Zanzibar, incidences of the disease were reported as severe in Chakechake and North B districts, followed by West and Wete with the remaining districts reporting the disease incidence as moderate and slightly severe. The Newcastle control methods practised in



Zanzibar were use of Local herbs, practised by 15 percent of the poultry raising households, and vaccination practised by 10 percent of the poultry raising households. Seventy five percent (75%) of the poultry raising households reported not to have practised any Newcastle control methods (Chart 3.31).

The application of these two control methods against the Newcastle problem varied from district to district. Local herbs, which was most popular control method in all the districts, was highly practised in North A and South, at 21 percent of the livestock raising households in each of the two districts followed by Central and West districts with 19 percent of livestock raising households in each district. The method was also practised by only 12 percent in each of the livestock raising households of North B, Wete, and Micheweni districts. The method was least practised in Chakechake (9%) followed by Mkoani (10%).

Vaccination was widely used in West (18%) followed by Central (13%) and moderately used in Wete (11%), Mkoani (10%), and North (9%). The method was less used in North B, South, Wete, and Chakechake districts where only 7 percent of the livestock raising households in each of the districts reported to have been applying vaccination (Chart 3.31).



On the whole, the application of vaccination against the Newcastle disease was not as popular as the local herbs and that the districts which applied local herbs most of them had low percentages of livestock raising households using vaccination against the disease. The vice versa was however not the case because the districts with high percentages of livestock raising households which applied vaccination were not necessarily the ones which had low application of local herbs. Therefore, the trend implies that the local herbs were considered as the best alternative, and vaccination was considered as a supplementary method. Generally, Chakechake district had the highest percentage (84%) of households not practicing any Newcastle control method, followed by North B (81%), Mkoani and Wete districts each represented by 80 percent, Micheweni (77%), South (72%), North A (69%), West (68%) of the livestock raising households not to have applied any Newcastle control method (table 3.16 and Chart 3.31).

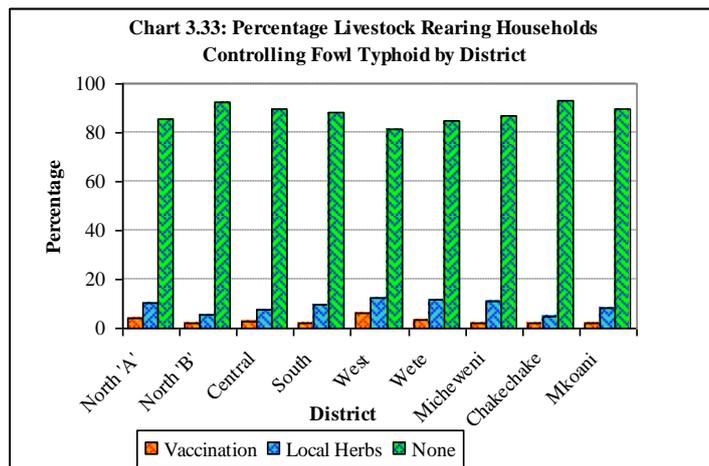
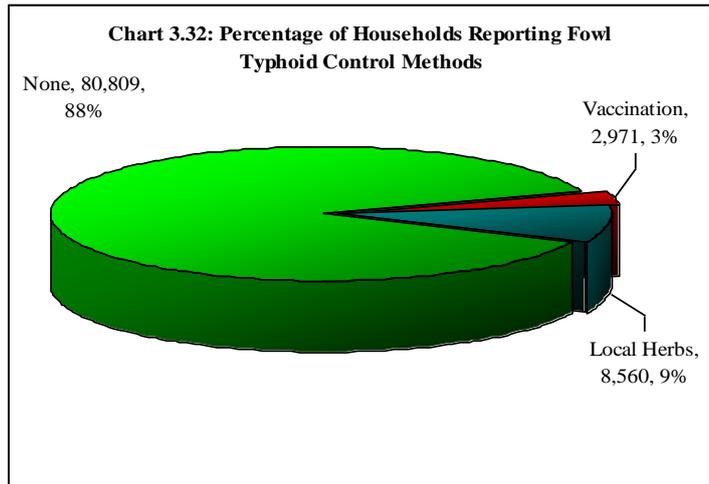
Table 3.16 Number and Percentages of Livestock Raising Households which Practiced Newcastle Control Methods by District

District	Vaccination		Local Herbs		None		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	851	9	1,953	21	6,300	69	9,104	100
North-B	611	7	993	12	6,871	81	8,475	100
Central	1,186	13	1,733	19	6,232	68	9,150	100
South	276	7	877	21	2,957	72	4,110	100
West	2,386	18	2,512	19	8,446	63	13,345	100
Wete	948	7	1,589	12	10,224	80	12,761	100
Micheweni	1,372	11	1,606	12	9,928	77	12,907	100
Chake	760	7	992	9	8,898	84	10,650	100
Mkoani	1,205	10	1,205	10	9,398	80	11,808	100
Total	9,594	10	13,459	15	69,255	75	92,309	100

Fowl Typhoid Control Methods

Fowl typhoid was another disease that affected poultry in Zanzibar. The incidences of the disease were reported as severe in Wete, West districts; and moderately in Micheweni, Chakechake and North B districts. Low incidences of the disease were reported in North A, South, Central and Mkoani districts. The control methods for Fowl Typhoid included prophylactic treatment and use of local herbs. Local herbs were more widely practised than vaccination or any other therapeutic approaches against Fowl Typhoid.

Local herbs were reported to be used by 8,560 households or 9 percent as compared to 2,971 or 3 percent of the poultry raising households. It is apparent that the number of poultry raising households which applied Fowl Typhoid Control Methods was much lower than that which applied Newcastle Control Method. This implies that the Newcastle disease affected more poultry raising households than did the Fowl Typhoid. This situation is also reflected by higher numbers and percentages of poultry raising households which reported not to have used any Fowl Typhoid Control Methods (Chart 3. 33, Table 3. 13).



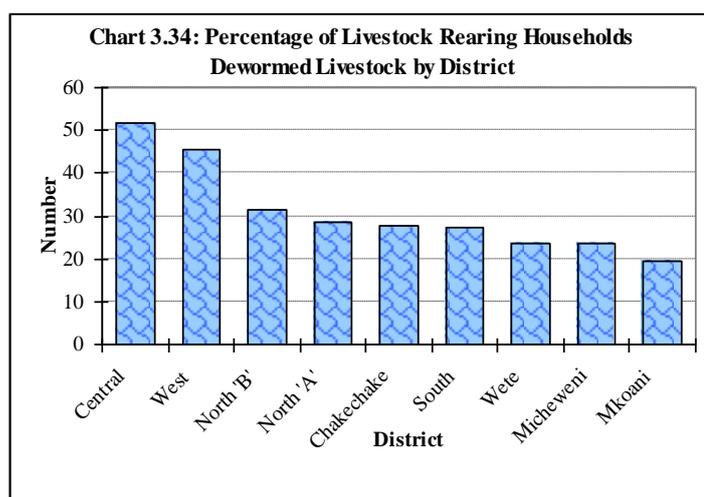
The trend of application of the Fowl Typhoid Control Methods by District and by Method Type indicates that Local Herbs was more widely applied in all the districts. However, West had the highest percentage (12%) of the households which applied Local Herbs, followed by Wete and Micheweni districts, each with 11 percent of the households. The method was moderately applied in the districts of North A (10%), South (9%), Mkoani and Central, each with 8 percent, Chakechake (5%) and North B (6%) (Chart 3.36, Table 3.17).

Table 3.17: Number and Percentages of LRHH which Practiced Fowl Typhoid Control Methods by District

District	Vaccination		Local Herbs		None		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	347	4	945	10	7,812	86	9,104	100
North-B	153	2	484	6	7,839	92	8,475	100
Central	274	3	699	8	8,207	89	9,180	100
South	81	2	390	9	3,639	89	4,110	100
West	848	6	1,664	12	10,833	81	13,345	100
Wete	461	4	1,461	11	10,839	85	12,761	100
Micheweni	292	2	1,431	11	11,184	87	12,907	100
Chake	248	2	496	5	9,906	93	10,650	100
Mkoani	268	2	991	8	10,550	89	11,808	100
Total	2,971	3	8,560	9	80,809	88	92,339	100

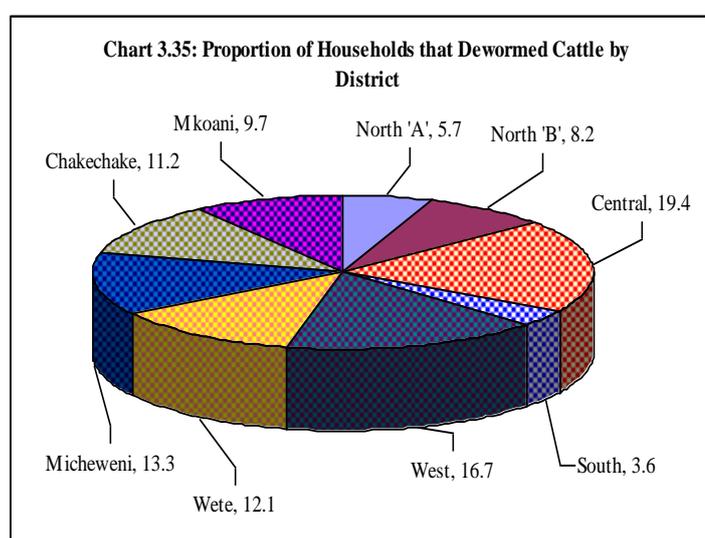
3.4.3 Deworming Practices

Deworming was generally practiced in all the districts for cattle, goats, sheep, pigs, and chicken. There was however some variations on the extent of the practice by district and by type of livestock. Deworming was practiced in the districts as follows: Central (52%), West (45%), North B (31%), North A (29%), Chakechake (28%), South (27%), Wete (24%), Micheweni (24%) and Mkoani (19%) of the total livestock rearing households with the districts (Chart 3.34).



Deworming of Cattle

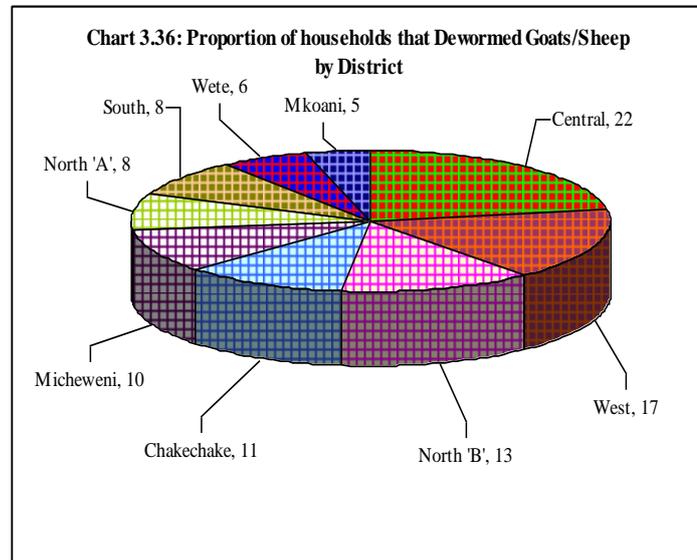
Deworming of cattle was practiced by households in all the districts. A total of 17,084 households were reported to dewormed cattle and this represents 60.8 percent of the total household that dewormed livestock. Deworming was mostly practiced in Central and West districts with 19.4 and 16.7 percents respectively. This was followed by Micheweni (13.3%) and Wete (12.1%).



Deworming was moderately practiced in the districts of Chakechake by (11.2%) and Mkoani (9.7%) Deworming of cattle was lowly practiced in the districts of South with (3.6%), North 'A' (5.7%) and the least district was North 'A' with only 5.7 percent of the total household deworming cattle (Chart 3.35).

Deworming of Goats and Sheep

Deworming was practiced for goats sheep in all the districts. The result reveals that a total of 4,109 households reported to dewormed Goats/sheeps and this represent 15 percent of the total livestock rearing households deworming livestock. However, deworming for goats/sheep was mostly practised in Central 912 (22%), West 691(17%), North 'B' 534(13%), Chakechake 457(11%) and



this was followed by Micheweni with 409(10%). The method was moderately practiced in North 'A' 347(8%), Wete (6%) and Mkoani (5%) (Chart 3.36, Table 3.18).

Deworming of Pigs

Deworming of Pigs was practiced by only two out of nine of the surveyed districts. A total of 122 households rearing pigs were reported to deworm pigs and this represent 80 percent of the total pigs rearing households. The districts which practised deworming of pigs include; Central and West. All households rearing pigs in West district were reported to deworm pigs. In Central district the deworming pigs households accounted for 75 percent, the remaining 25 percent within the district were reported not to deworm pigs (Table 3.19).

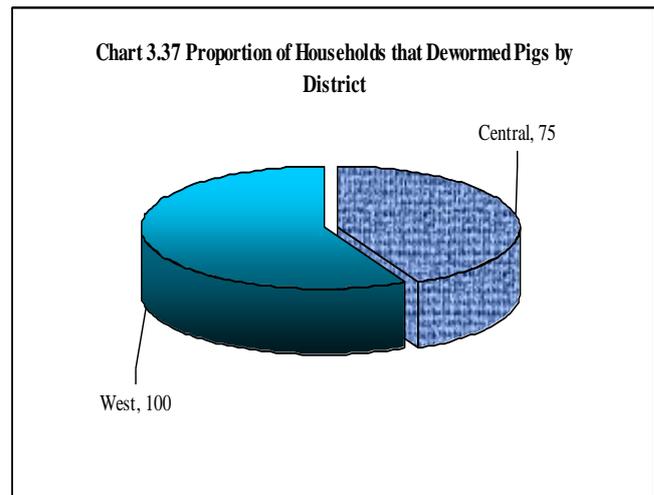


Table 3.18: Number of Goats/Sheep Rearing Households which Dewormed Goats/Sheep by District

District	Deworming Goats/Sheep		Not Deworm Goats/Sheep		Not Applicable		Number of Goats/Sheep Rearing households
	Number	%	Number	%	Number	%	
North 'A'	347	8	410	11	1,890	9	2646
North-B	534	13	102	3	2,112	10	2749
Central	912	22	912	25	3,009	14	4833
South	341	8	211	6	666	3	1218
West	691	17	502	14	4,773	22	5966
Wete	231	6	359	10	2,486	12	3075
Micheweni	409	10	555	15	2,394	11	3358
Chake Chake	457	11	186	5	2,325	11	2969
Mkoani	187	5	402	11	1,740	8	2329
Total	4,109	100		100	21,396	100	29,143

The was no household which raised pigs in North 'B', North 'A', South and all districts in Pemba.

Table 3.19 Number of Livestock Rearing Households which Dewormed Pigs by District

District	Deworming Pigs		Not Deworm Pigs		Total	
	Number	%	Number	%	Number of Pigs Rearing households	%
North 'A'	0		0		0	
North-B	0		0		0	
Central	91	75	31	25	122	100
South	0	0	0	0	0	0
West	31	100	0	0	31	100
Wete	0	0	0	0	0	0
Micheweni	0	0	0	0	0	0
Chake Chake	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0
Total	122	80	31	20	153	100

Deworming of Chicken

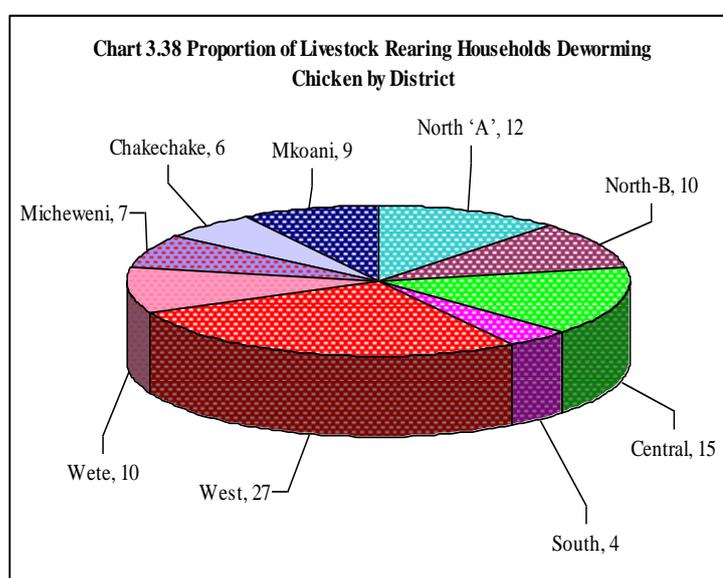
Chicken deworming was found to be a common practice by most of the chicken raising households in all the districts. The practice was however, more popular in West of which 3,360 household (27%) and Central with 1885 (15%) of the total household dewormed chicken. The practice was moderately practiced in North B and North 'A' with 1,222 (10%) and 1481(12%) of the households respectively. Mkoani had 1,151 (9%), Wete (10%), Chakechake (6%) and the least district was South with 487(4%) of the chicken raising households that dewormed. (Chart 3.38, Table 3.20).

Table 3.20 Number of Livestock Rearing Households which Dewormed Chicken by District

District	Deworming Chicken		Not Deworming Chicken		Not Applicable		Total Number of LRHH
	Number	%	Number	%	Number	%	
North 'A'	1,481	12	945	7	567	11	2,993
North-B	1,222	10	942	7	611	12	2,774
Central	1,885	15	2,067	14	1,094	21	5,046
South	487	4	699	5	260	5	1,446
West	3,360	27	1,915	13	1,068	20	6,343
Wete	1,281	10	2,332	16	333	6	3,946
Micheweni	934	7	2,570	18	526	10	4,030
Chake Chake	806	6	1,635	11	496	9	2,938
Mkoani	1,151	9	1,205	8	295	6	2,651

3.5 Bee Keeping

Bee keeping was also practised in Zanzibar, but not as widely as in the Mainland. Only one percent of the total agricultural households were involved in honey production. District-wise, South and Micheweni districts had the highest percentages of households involved in honey production at 3.7 percent and 2 percent respectively. Honey production was moderately practised in Mkoani (1.7%), Wete (1.2%), Chakechake and Central each with 0.7 percent, North B and West, each with 0.2 percent of the total agricultural households within the districts. However, the activity was reported not to have been practised in North A (Table 3.21).



the activity was reported not to have been practised in North A (Table 3.21).

Table 3.21: Number of Agricultural Households Involved in Honey Production by District

District	Agricultural Households Involved in Honey Production/Collection		Agricultural Households NOT Involved in Honey Production/Collection		Total	
	Number	%	Number	%	Number	%
North 'A'	0	0.0	18,901	100.0	18,901	100.0
North-B	25	0.2	11,427	99.8	11,452	100.0
Central	91	0.7	13,588	99.3	13,679	100.0
South	244	3.7	6,336	96.3	6,580	100.0
West	31	0.2	18,620	99.8	18,651	100.0
Wete	179	1.2	15,195	98.8	15,374	100.0
Micheweni	350	2.0	17,170	98.0	17,520	100.0
Chakechake	93	0.7	13,742	99.3	13,835	100.0
Mkoani	268	1.7	15,931	98.3	16,199	100.0
Total	1,282	1.0	130,911	99.0	132,193	100.0

3.5.1 Beehives by Type of Bees

The survey results show that, there were a total of 87,725 beehives out of which, 62,797 (72%) were of improved type and the remaining 24,928 (28%) were local beehives, both types kept stingless and sting bees.

Chakechake had the highest percentage of improved beehives (97%) followed by Central (20%) and Mkoani (17%). Micheweni had the lowest percentage of improved hives (7%). As for local beehives, South, West and Wete districts had the highest percentage of local beehives of which all the beehives are locally made (100%) and kept both stingless and sting bees. Other district with highest percentage includes Micheweni and Mkoani with 93 and 83 percents respectively. The least proportion of number of local beehives was recorded in Chakechake district with (3%).

All the sting bees were kept in local beehives. West and Wete districts kept sting bees only. However, Micheweni was the second leading district with 69 percent of the total local beehives. Mkoani was the third leading district with 63 percent followed by South with 21 percent and Central with 20 percent of the local beehives (Table 3.22).

Table 3.22: Number of Beehives by Type and District

District	Stingless Bees				Sting Bees				Total
	Improved Beehives		Local Beehives		Improved Beehives		Local Beehives		
	Number	%	Number	%	Number	%	Number	%	
North-B	0	0	0	0	0	0	0	0	0
Central	152	20	456	60	0	0	152	20	760
South	0	0	12,055	79	0	0	3,249	21	15,304
West	0	0	0	0	0	0	628	100	628
Wete	0	0	0	0	0	0	1,230	100	1,230
Micheweni	263	7	905	24	0	0	2,599	69	3,767
Chakechake	62,007	97	0	0	0	0	1,860	3	63,867
Mkoani	375	17	428	20	0	0	1,366	63	2,169
Total	62,797	72	13,844	16	0	0	11,084	13	87,725

3.5.2 Quantity of Honey Harvested and Average Prices

The quantity of honey harvested from sting bees was slightly higher (22,262 lts or 54%) than that harvested from stingless bees (19,087 lts or 46%). Also, the quantity of sting bees honey sold was slightly higher (17,807lt or 51%) than that sold from stingless bees (17,084lt or 49%). This implies that the quantity of honey harvested was directly proportional to the quantity of honey sold; that is, the higher the quantity harvested the higher the quantity sold (Table 3.19).

On average, honey from Chakechake was the highest priced (at Tshs. 9,999 per litre) than that from other districts; the second highest priced honey was sold in West (at Tshs. 8,000 per litre). Micheweni, Mkoani and South districts sold their honey at moderate prices of Tshs. 7,612 per litre, Tshs. 7,510 per litre, and Tshs.6, 651 per litre respectively (Table 3.23).

Table 3.23: Quantity of Honey Harvested and Sold by Type of Bees and District

District	Stingless Bees				Sting Bees				Total	
	Honey Harvested		Honey Sold		Honey Harvested		Honey Sold		Honey Sold (lts)	Honey Harvested (lts)
	Quantity (lts)	%	Quantity (lts)	%	Quantity (lts)	%	Quantity (lts)	%		
North-B	0	0	0	0	0	0	254	100	254	0
Central	608	71	608	71	243	29	243	29	851	851
South	12,672	53	12,640	55	11,161	47	10,495	45	23,135	23,834
West	0	0	0	0	1,884	100	0	0	0	1,884
Wete	51	4	0	0	1,230	96	922	100	922	1,281
Micheweni	3,533	55	1,694	48	2,862	45	1,840	52	3,533	6,395
Chakechake	0	0	0	0	1,240	0	1,240	0	1,240	1,240
Mkoani	2,222	38	2,142	43	3,641	62	2,811	57	4,953	5,864
Total	19,087	46	17,084	49	22,262	54	17,807	51	34,890	41,349

Table 3.24: Average Prices of Honey (Tshs /litre) by Type of Bees and by District

The price of honey was lowest in North B and was sold at Tshs. 3,000 per litre, followed by Central and Wete districts which sold their honey at Tshs. 3,500 per liter and Tshs. 4,429 per litre respectively.

District	Stingless Bees (Price per Litre)	Sting Bees (Price per Litre)	Average Price Per Litre
North-B	0	3,000	3,000
Central	5,000	1,000	3,500
South	2,033	5,635	6,651
West	0	8,000	8,000
Wete	0	4,429	4,429
Micheweni	5,400	4,912	7,612
Chakechake	0	9,999	9,999
Mkoani	7,500	3,760	7,510
Total	14,560	25,687	25,955

On average, honey from stingless bees was sold at higher prices than that from sting bees in all districts except South district which sold its honey from sting bees at a higher price than the honey harvested from stingless bees. Districts which had higher prices per litre from stingless bees include; Mkoani (at Tshs. 7,500 per litre), Micheweni (at Tshs. 5,400 per litre) and Central (at Tshs. 5,000 per litre) (Table 3.24).

Table 3.25: Number of Agricultural Households by Location and Honey Outlets

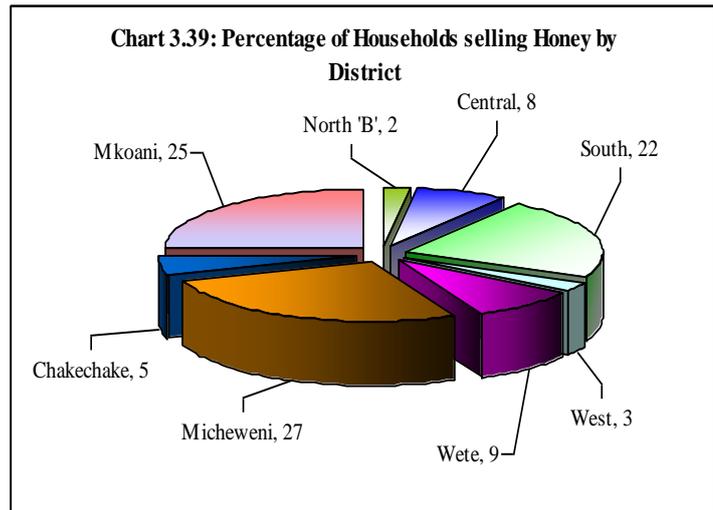
Outlet	Number of Households	%
Neighbours	894	66
Local markets	121	9
Secondary markets	63	5
Processing industries	0	0
Large scale farms	0	0
Trade at farms	109	8
Did not sell	161	12

3.5.3 Honey Outlets by Location and Region

In terms of outlets, neighbours were the major outlet for the produced honey as reported by 894 (66%) of the total households that produced/collect honey. The local markets were second largest outlet reported by 121 (9%) followed by trade at farms 109 (8%) and secondary markets 63 (4.7 per cent of the total households that produced/collect honey). A total of 161(12%) households that produced/collect honey were reported not to have sold honey to any outlet (Table 3.25).

District-wise, Micheweni had more households 321 or 27 percent of the total households which sold honey this was followed by Mkoani with 295 (25%), South district account 260 (22%). Wete

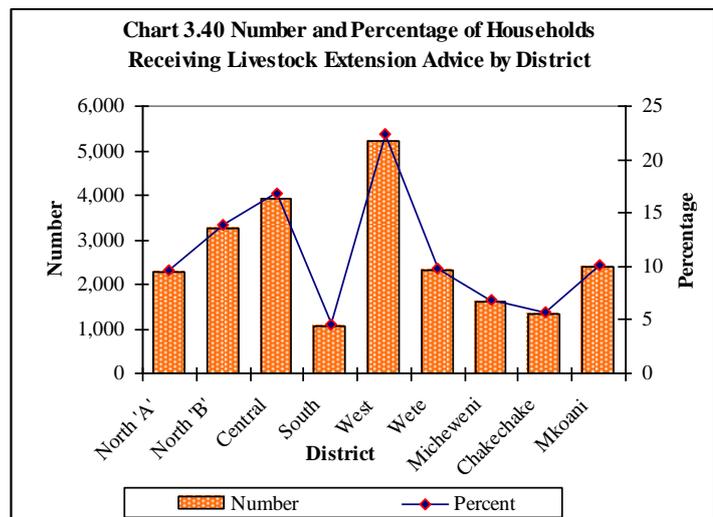
and Central districts had moderate number of households that sold honey with 102(9%) and 91(9%) respectively. The lowest number of household that reported to sell honey was in North 'B' and West districts of which accounted 2 and 3 percents (Chart 3.39).



3.6 Access to Extension Services by District

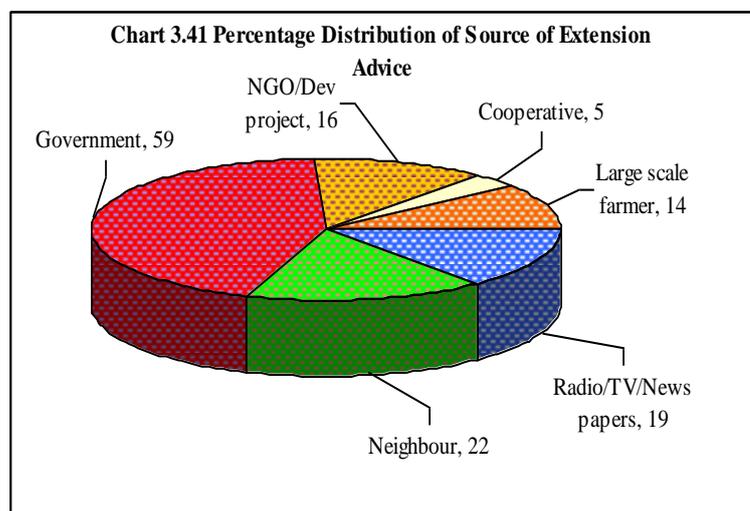
In Zanzibar, all the districts were observed to have received livestock

extension messages. The survey shows that, a total of 23,336 households received extension services presenting 26 percent of all the livestock keepers in Zanzibar (91,380 households). West district had the highest number of households (5,212 or 22.3 percent) receiving extension services, followed by Central district 3,921(16.8%), North 'B' 3,258 (14%), Mkoani 2,374 (10.2%), Wete 2,306 (9.9%), North A 2,268 (9.7%), South district 1,072 (4.6%), Chakechake 1,318 (5.6%) and Micheweni 1,606 (6.9%) (Chart 3.40).



3.6.1 Sources of Extension Services

The main source of livestock extension services was the Government accounting for 59 percent of the households which received advices. Other sources of advice came from neighbours (22%), Non Governmental Organizations (NGOs) and Development Projects (16%), Large Scale Farmers (14%), Radios/TVs/Newspapers (19%) and Cooperatives (5%) (Chart 3.41).



3.6.2 Extension Advice by Type of Messages

Extension Advice by Type of Messages provided included: proper feeding, advice on housing, proper milking and milk hygiene, disease control, pasture establishment, group formation, calf rearing, use of improved bulls, and livestock feeds processing.

Of these messages, disease control was provided to 21 percent of the households. Extension messages on feeds and proper feeding were provided to 9,615 (12%) and housing messages were provided to 9,222 (12%) households. Fewer households were provided with advice messages on use of improved bulls (6%), livestock feed processing (7%), proper milk hygiene (8%) and group formation (9%) (Table 3.26).

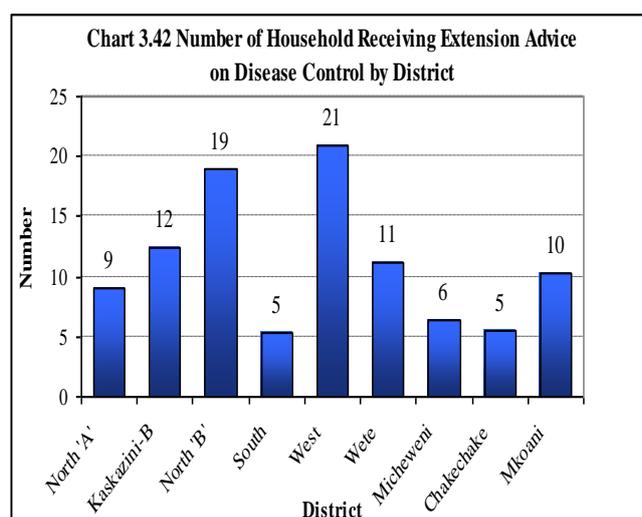
3.6.3 Number of Households which Received Advice Messages on Disease Control

As observed earlier, livestock diseases and the high rate of livestock infections were serious problems encountering livestock raising households. Advice on disease control was therefore very critical.

Table 3.26 Percentage of Households which Received Extension Advice by Type of Message

Advice	Number of Households	Percentage
Feeds and Proper Feeding	9,615	12
Advice on Housing	9,222	12
Proper Milking and Milk Hygiene	5,984	8
Livestock Fattening	4,535	6
Disease Control	16,150	21
Herd/Flock Size	4,479	6
Pasture Establishment	2,823	4
Group Formation	7,108	9
Calf Rearing	7,441	10
Improved Bulls	4,714	6
Livestock Feeds Processing	5,451	7

Most of the households received advice on disease controls. The situation was as follows: West 3391(21%), Central 3070 (19%), North 'B' 2,111(12%), Wete 1,794(11%), Mkoani 1,669(10%), Micheweni 1,022(6%). The district with smallest number of households that received advice on disease control were South and Chakechake with 5 percents each (Chart 3.42).



CONCLUSIONS

The livestock sector analysis focused mainly on livestock numbers by specie, district livestock distribution, productivity, livestock diseases, access to services and contribution to crop production. Data for the 2007/08 Agricultural Sample Census is compared with the previous census data so as to identify any structural changes within the districts between the census periods.

The main livestock species kept by smallholder farmers include cattle, goats, sheep, pigs and chicken. In the 2007/08 Agricultural Sample Census, there were about 132,959 households which kept livestock of which, 39,420 (29.6%) households kept cattle, 80,069 (60.2%) households kept chicken, 13,107 (9.9%) households kept goats. Pigs and sheep keeping households were 363 (0.3%) in total. In the surveyed households, chicken were the most dominant specie with 1,078,962 (82.5%) flocks followed by cattle (155,624 (11.9%) herds, goats 68,972 (5.3%) herds, donkeys and pigs. The proportion of households which kept donkeys, sheep and pig population were in total less than one percent. The total number of cattle raised by the smallholders was 155,624 heads out of which, the indigenous type represented 95.5 percent of the total cattle population. On average, the herd size per cattle holding in the smallholder sector was 4 heads. Central district followed by Micheweni, West and Wete were the leading districts in terms of cattle populations. In the five year period between 2003 and 2008, the total cattle population among the smallholders decreased by 4.5 percent from 162,643 to 155, 624 heads giving an annual negative growth rate of about 0.9 percent per annum over the five year period. Central district had the highest concentration of dairy cattle (29.7%) of the total dairy cattle population compared to other districts.

The average number of goats per household was 5 goats, the number has decreased by 9 percent compared to 2002/03 Agricultural Sample Census. Most of the households (97%) raised between 1 and 14 goats representing 74 percent of the total goat population. Among the districts, Central, West, North 'A' and Mkoani had the highest number of goats. The number of goats has increased by 30 percent between 2003 and 2008 with an annual growth rate of about 6 percent.

Unlike the goat population increase between 1993 and 2003, sheep population declined by 53 percent in the same period. However, the trend was reversed between 2003 and 2008, whereby the number of sheep increased from 300 to 574 representing an increase of 91 percent. For pigs, the trend was positive although the increase was small.

About 75 percent of the entire chicken population was kept by 96 percent of the households whereby the flock size was in the range between 1 and 49. The chickens were mainly of indigenous/ local type. The leading districts in terms of number of chicken were West (21.3%), Wete (13.8%), Mkoani (12.4%), North 'B' (11.2%) Chakechake (9.9%) and South (4.8%). These districts accounted for 73.4 percent of the total chicken population.

Most of the milk (99%) was from cows and production during the wet season was 111,616 litres per day which dropped to 84,383 litres per day during the dry season. Average milk production per cow was 2.5 litres during the wet season and 2.3 litres during the dry season. The number of milked cows has also dropped from 44,718 during the wet season to 36,639 in the dry season. The main milk producing districts were West (23%), Central (19%), Wete (13%) and North 'B'(14%). The four districts produced 69 percent of the total milk production in Wet season.

Contribution of livestock to crop production was very small as measured by the proportion of planted area using organic fertilizers. Only 7% of all households planting during Long rain used organic fertilizers and the area planted with organic fertilizers was only 7.8 percent. There were differences in the extent to which manure were used among districts. Furthermore the proportion of land applied did not correlate with the number of livestock owned, probably because most of the livestock are indigenous, and grazed on communal land,

Common diseases which affected the ruminants include Tick Borne Disease (TBD), Foot and Mouth Disease (FMD) and Lumpy Skin Disease. Almost 76 percent of the cattle raising households encountered Tick Borne Disease. The problem was more serious in Central district followed by Chakechake, Micheweni and Mkoani. Spraying with acaricides was the most common method used to control the infections. Dipping and smearing was however, less practiced. For chicken, Newcastle Disease and Fowl Typhoid were reported to remain as a challenge.

Access to livestock extension services was critical taking into consideration the widespread nature of the livestock diseases and the high rates of livestock infection. All the districts were observed to have received livestock extension messages. The main source of livestock extension services was the Government with about 59 percent of the households which received advice. Livestock diseases and the high rates of livestock infections were the serious problems encountered by the livestock raising households.

Access to extension services varied within the districts. West district had the highest number (22.3%) of the households which received regular extensions services followed by Central (16.7%) and North 'B'(14%). Chakechake and South districts had the least access to extension services of which jointly account only 10 percent. The government provided most of the needed extension services. Advice on disease controls was therefore very critical.

District Profiles

The following District Profiles summarize the status of Livestock Production in each district.

Central

Central district kept most of the cattle, particularly the improved dairy type. It also had more households with goats and higher number of goat population than any other district. The district also kept most of the pigs (63%) of the total pig population followed by West. However, the district had higher incidences of TBD, Lumpy sSkin disease, FMD and Worm infestations. Central district by its location had more access to extension services particularly from the government.

Micheweni

This district was second best in the number of livestock and ranked highest in the number of indigenous cattle. The proportion of dairy cattle was less than 2percent. It ranked third in terms of number of sheep. FMD was less than 2 percent. Incidences of TBD were high and the district was third in TBD cases after Central and Chake Chake. In terms of extension services, the district had relatively the lowest number of households which received extension services than any other district. Similary, the district had also received fewer advices on livestock disease control than Central and West.

Wete

Wete disrict ranked third in the number of livestock, number of cattle, improved dairy cattle and was also third in terms of number of households which kept improved dairy types. The district was second best in the number of chicken, especially the indigenous type. Incidence of TBD was 33 percent of the total livestock rearing households within the district. Access to extension services was moderate and was comparable to Micheweni and Chakechake(less than20%) and advices on disease was also modest (13.4%) compared to Central district in which 15.3 percent of the households reported to have received such advices from the government.

West

West district ranked first in the number of sheep followed by Central and Micheweni. However, the district was second best in the number of improved dairy cattle, number of households keeping dairy cattle and number of goats. It produced more milk than other districts followed by Central, Wete and North 'B' districts. It also ranked first in the number of chicken (21.3%) of the total chicken population and was second in number of pigs (37%). The access to extension services was generally good and the district had the highest number of households 5,212 (22.3%) with access to extension services.

North –'A'

North –A district kept the least number of livestock compared to other districts. It was second with smallest number of cattle, both indigenous and improved types. About 11 percent of the households kept 12 percent of the goats.. The district also had the lowest number of sheep (6%) and kept about 10 percent of the total chicken population.

With regard to disease incidences, the district North 'A' encountered less livestock diseases of all types in most of the livestock rearing households. Newcastle was moderate with about 30 percent of the agricultural households. A large number of households did not control Tick Borne disease and only 6 percent of the households did vaccination against the Newcastle disease. There was absolutely no Honey production and the district received little extension advices.

North-'B'

North –'B' district had few livestock just like North 'A'. It was the third with lowest number of cattle in Zanzibar and only 4.2 percent of the households kept 3.7 percent of the improved dairy cattle. The number of goat and sheep number was moderately low and also, the district raised 9.5 percent of the chicken population.

Disease incidences were low compared to other districts. Only 13 percent of the households reported incidences of Lumpy Skin disease, Tick Borne (3%), FMD (8%). Relatively, there were high incidences of Newcastle disease (slightly greater than 60%) and about 22 percent of the households did not control the disease. The district was third highest with proportion of households which dewormed their livestock and was first in terms of sheep and goat deworming. However, extension services were very poor.

South

Livestock keeping was not important in South district compared to other districts. The district had the least number of cattle, sheep and, goats. There is no household recorded to kept pigs. Very few (0.7%) dairy cattle were raised and the district was the second with lowest number of households which raised goats. As a result, disease incidences and extension services on the livestock were lowest. However, the district ranked highest in terms of honey production and honey sales.

Chakechake

The district had a moderate number of cattle sheep and goats. About 94 percent of the cattle population were of indigenous type. Households owned few goats, sheep and chicken. Tick Borne problem was reported by about 50 percent of the households, while incidences of other diseases were lower. The district was the third highest in the number of households which dewormed their cattle and second highest in the number of households which dewormed their sheep..

Honey production was moderate though the district had the highest number of stingless beehives. However, the average price of honey was highest in the district and livestock extension services were the second highest, but with moderate low advices on the livestock diseases.

Mkoani

The district had a moderate number of cattle (16,976 heads). Most (99%) of the cattle were of indigenous type . Goat population was fourth highest, though the district ranked second in terms of number of households rearing goats. The district was the third largest with number of households which kept indigenous chicken. The district had the moderate incidences of Tick Borne infection. In terms of Helminth control, it had the highest number of households which dewormed their cattle but was the least in sheep and goat deworming. Extension services were moderate and the district had few households engaged in honey production.

5. APPENDICES

Appendix I: Livestock and Poultry Tabulation List

Appendix II: Livestock and Poultry Tables

Appendix III: Questionnaires

Appendix I: Livestock and Poultry Tabulation List

Table Number	Description	Page
TYPE OF AGRICULTURE HOUSEHOLD		
Table 2.1	Number of Households by Type of Household and District during 2007/08 Agriculture year	65
Table 2.2	Number of Agriculture Households by type of Holding by District during 2007/08 Agriculture year	65
Table 2.3	Number of Agriculture Households by Type and Size of Holding, 2007/08 Agricultural Year	66
LIVESTOCK CONTRIBUTION TO CROP PRODUCTION		
Table 2.4	Number of Households and Planted Area by Organic Fertiliser Use and District SHORT RAINY SEASON	66
Table 2.5	Number of Households and Planted Area by Organic Fertiliser Use and District - LONG RAINY SEASON	67
CATTLE PRODUCTION		
Table 9.1.1	Total Number of Households Rearing Cattle by District during 2007/08 Agriculture Year	67
Table 9.1.2	Number of Cattle by Type and District as of 1st October 2008	68
Table 9.1.3	Number of Households rearing cattle, Head of Cattle and Average Head per Household by Herd size During the 2007/08 Agricultural Year.....	68
Table 9.1.4	Total Number of Cattle by Cattle Types and Category, 2007/08 Agricultural Year	68

Table 9.1.5	Total Number of Indigenous Cattle by Category of Cattle and District During the 2007/08 Agricultural Year.....	69
Table 9.1.6	Total Number of Improved Dairy Cattle by Category of Cattle and District During the 2007/08 Agricultural Year.....	69
Table 9.1.7	Total Number Households rearing Cattle and Method of Cattle Identification by District during, 2007/08 Agricultural Year.....	70

MILK PRODUCTION

Table 9.2.1	Number of Milked Cows by Category of Cattle, Season and District, During the 2007/08 Agricultural Year.....	71
Table 9.2.2	Average milk production per cow per day, by Category of Cow, Season and District, During the 2007/08 Agricultural Year	71
Table 9.2.3	Average number of days for cows on milked, by category of Cattle, Season and District, During the 2007/08 Agricultural Year.....	71
Table 9.2.4	Average Cattle Milk price (Tshs/litre) per season by category of cow and District, During the 2007/08 Agricultural Year.....	72

GOAT PRODUCTION

Table 9.3.1	Number of Agriculture Households Rearing Goats by District during ... the 2007/08 Agricultural Year.....	72
Table 9.3.2	Number of Goats by Type and District as of 1st October 2008	72
Table 9.3.3	Number of Households rearing Goat, Head of Goat and Average Head per Household by Herd size During the 2007/08 Agricultural Year	73
Table 9.3.4	Total Number of Goats by Category and Type of Goat as of 1st October 2008	73

Table 9.3.5	Total Number of Goats by Category and Type of Goat as of 1st October 2008	73
Table 9.3.6	Number of Improved Goats for Meat by Category and District as of 1st October 2008	74
Table 9.3.7	Number of Improved Dairy Goats by Category and District as of 1st October 2008	74
Table 9.3.8	Number of Milked Goat by Category of Goat, Season type and District, During the 2007/08 Agricultural Year	75

SHEEP PRODUCTION

Table 9.4.1	Total Number Households Rearing Sheep by District during, 2007/08 Agricultural Year	75
Table 9.4.2	Number of Household Rearing and number of Sheep by Type and District as of 1st October 2008	75
Table 9.4.3	Number of Indigenous Sheep by Category of Sheep and District as of 1st October 2007/08 Agriculture year	76
Table 9.4.4	Number of Households rearing Sheep, Head of Sheep and Average Head per Household by Herd size During the 2007/08 Agricultural Year	76

PIG PRODUCTION

Table 9.5.1	Number of Households Raising Pigs by Districts during 2007/08 Agriculture Year	76
Table 9.5.2	Number of Households Rearing Pigs, Head of Pigs and Average Head per Household by Herd Size as of 1st October 2008.....	77
Table 9.5.3	Total Number of Pigs by Type of Pigs and District as of 1st October 2008	77

CHICKEN PRODUCTION AND OTHER LIVESTOCK

Table 9.6.1	Total Number of Pigs by Type of Pigs and District as of 1st October 2008	77
Table 9.6.2	Number of Households Keeping Chickens and Average Number of Chickens per Household by Flock Size as of 1st October 2008.....	78
Table 9.6.3	Number of Other Livestock by Type of livestock by District as of 1st October 2008	78
Table 9.6.4	Number of Households Keeping Other Livestock and Average Number per Household by Flock Size as of 1st October 2008.....	78
Table 9.6.5	Total Number of Other Livestock by Type as of 1st October 2008	79

LIVESTOCK PESTS & PARASITE CONTROL

Table 9.7.1	Number of Livestock Rearing households deworming Livestock by District during 2007/08 Agriculture Year.....	79
Table 9.7.2	Number of Livestock Rearing households that dewormed Livestock by type of livestock and District, 2007/08 Agricultural Year	80
Table 9.7.3	Number of Livestock Rearing Households Normally Encountering Tick Problems by District during 2007/08 Agriculture Year	81
Table 9.7.4	Number of Livestock Rearing Households by Method of Tick Control and District during 2007/08 Agriculture Year	81
Table 9.7.5	Number of Livestock Rearing Households normally Encountering Newcastle Disease Problems by District during 2007/08 Agriculture Year	82
Table 9.7.6	Number of Livestock Rearing Households by Method of Newcastle Disease Control by District during 2007/08 Agriculture Year	82

Table 9.7.7	Number of Livestock Rearing Households normally Encountering Fowl Typhoid Disease Problems by District during 2007/08 Agriculture Year	82
Table 9.7.8	Number of Livestock Rearing Households by Method of Fowl Typhoid Disease Control by District during 2007/08 Agriculture Year	83
Table 9.7.9	Number of Livestock Rearing Households normally Encountering Foot and Mouth Disease Problems by District during 2007/08 Agriculture Year.....	84
Table 9.7.10	Number of Livestock Rearing Households Normally Encountering Lymphskin Disease Problems by District during 2007/08 Agriculture Year.....	83

LIVESTOCK EXTENSION

Table 9.8.1	Number of Households Receiving Extension Advice by District during the 2007/08	84
Table 9.8.2	Number of Households receiving Livestock advice (overall) By Source of Extension and District during the 2007/08 agriculture year	85
Table 9.8.3	Number of Households receiving Livestock advice (overall) By Source of Extension and District during the 2007/08 agriculture year	85
Table 9.8.4	Number of households receiving Extension Advice on Proper Livestock Housing by District during the 2007/08 Agriculture Year	86
Table 9.8.5	Number of households Receiving Extension advice on Proper Milking and Milk Hygiene by District during the 2007/08 Agriculture year.....	86
Table 9.8.6	Number of households Receiving Extension advice on Livestock fattening by District during the 2007/08 Agriculture Year	87
Table 9.8.7	Number of households receiving extension advice on Disease control (dipping/spraying) by District during the 2007/08 Agriculture year.....	87

Table 9.8.8	Number of households Receiving Extension Advice on Herd/Flock size and Selection by District during the 2007/08 Agriculture Year	88
Table 9.8.9	Number of households Receiving Extension Advice on Pasture Establishment by District during the 2007/08 Agriculture Year	88
Table 9.8.10	Number of Households Receiving Extension Advice on Group formation and Strengthening by District during the 2007/08 Agriculture year	89
Table 9.8.11	Number of Households Receiving Extension Advice on Calf Rearing by District during the 2007/08 Agriculture Year.....	89
Table 9.8.12	Number of Households Receiving Extension Advice on Use of Improved Bulls by District during the 2007/08 Agriculture Year.....	90
Table 9.8.13	Number of Households Receiving Extension Advice on Livestock Feeds Processing by District during the 2007/08 Agriculture Year	91

FISH FARMING

Table 9.9.1	Number of Agriculture Households Practising Fish Farming by District during the 2007/08 Agriculture Year.....	92
Table 9.9.2	Number of Agriculture Households by System of Fish Farming and District during the 2007/08 Agriculture Year.....	92
Table 9.9.3	Number of Agriculture Households by Source of Fingerling by Districts during the 2007/08 Agriculture Year.....	92
Table 9.9.4	Number of Agriculture Households by Location of Selling Fish and District during the 2007/08 Agriculture Year.....	93
Table 9.9.6	Number of Agricultural Households By frequency of stocking of Fingerings in fish ponds and District, 2007/08 Agricultural Year	93

Table 9.9.7	Number of Agricultural Households By level of Care of fish Ponds by District, 2007/08 Agricultural Year	93
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BEE KEEPING

Table 9.10.1	Number of Agricultural Households involved in Honey Production/Collection and District, 2007/08 Agricultural Year	94
Table 9.10.2	Number of Agricultural Households By Honey production/Collection and District, 2007/08 Agricultural Year	94
Table 9.10.3	Number of Agricultural Households, type of bee Hives and Type of Bees by District, 2007/08 Agricultural Year	95
Table 9.10.4	Quantity of Honey Harvested and Sold by Size of Bees and District during the 2007/08 Agriculture Year.....	95
Table 9.10.5	Average price of Honey (Tshs/litre) by Size of Bees and District during the 2007/08 Agriculture Year	96
Table 9.10.6	Number of Agriculture Households by Location of Selling Honey and District during the 2007/08 Agriculture Year	96

APPENDIX II: LIVESTOCK AND POULTRY TABLES

2.1. TYPE OF AGRICULTURE HOUSEHOLD: Number of Households by Type of Household and District during 2007/08 Agriculture year

District	Rural Households involved in Agriculture		Rural households NOT Involved in Agriculture		Total Rural Households		Number of Urban Households		Total Number of Households
	Number	%	Number	%	Number	%	Number	%	Number
North 'A'	18,901	14.3	0	0.0	18901	13.8	1,286	6.37	20,187
North 'B'	11,452	8.7	0	0.0	11452	8.3	1,873	14.1	13,325
Central	13,679	10.3	473	9.2	14152	10.3	646	4.4	14,799
South	6,580	5.0	498	9.6	7078	5.2	917	11.5	7,995
West	18,651	14.1	2,830	54.8	21481	15.6	19,111	47.1	40,592
Wete	15,374	11.6	404	7.8	15778	11.5	6,277	28.5	22,055
Micheweni	17,520	13.3	410	7.9	17930	13.1	1,740	8.8	19,671
Chakechake	13,835	10.5	311	6.0	14146	10.3	4,807	25.4	18,953
Mkoani	16,199	12.3	237	4.6	16436	12.0	2,918	15.1	19,355
Total	132,193	100.0	5,163	100.0	137356	100.0	39,576	22.4	176,932

2.2 TYPE OF AGRICULTURE HH: Number of Agriculture Households by type of Holding by District during 2007/08 Agriculture year

District	Crops Only		Livestock Only		Pastoralist		Crops & Livestock		Total Number of Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number	%	Number	%	Number	%	Number	%			
North 'A'	16,318	86	126	1	0	0.0	2,457	13	18,901	18,775	2,583
North 'B'	7,457	65	153	1	0	0.0	3,843	34	11,452	11,300	3,996
Central	8,177	60	91	1	0	0.0	5,411	40	13,679	13,588	5,502
South	4,890	74	32	0	0	0.0	1,657	25	6,580	6,547	1,690
West	12,591	68	1,130	6	0	0.0	4,930	26	18,651	17,521	6,060
Wete	8,712	57	77	1	0	0.0	6,585	43	15,374	15,298	6,662
Micheweni	9,899	56	146	1	0	0.0	7,475	43	17,520	17,374	7,621
Chakechake	8,789	64	31	0	0	0.0	5,015	36	13,835	13,804	5,046
Mkoani	9,675	60	54	0	0	0.0	6,471	40	16,199	16,146	6,524
Total	86,509	65	1,840	1	0	0.0	43,844	33	132,193	130,353	45,684

2.3 TYPE OF AGRICULTURE HOUSEHOLD: Number of Agriculture Households By Type and Size of Holding, 2007/08 Agricultural Year

Size of Holding (ha)	Type of Agriculture Household							
	Crops only		Livestock only		Crops and Livestock		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0.01 - 0.50	31,359	78.8	1,756	4.4	6,656	16.7	39,771	100
0.51 - 1.00	28,467	66.7	29	0.1	14,173	33.2	42,670	100
1.01 - 1.50	15,922	57.2	29	0.1	11,893	42.7	27,843	100
1.51 - 2.00	5,286	49.7	0	0.0	5,354	50.3	10,640	100
2.01 - 2.50	3,109	47.4	26	0.4	3,424	52.2	6,559	100
2.51 - 3.00	908	46.1	0	0.0	1,062	53.9	1,970	100
3.01 - 3.50	494	52.4	0	0.0	450	47.6	944	100
3.51 - 4.00	279	58.8	0	0.0	195	41.2	474	100
4.01 -4.50	382	65.8	0	0.0	199	34.2	581	100
4.51 -5.00	61	27.9	0	0.0	159	72.1	220	100
Above 5	242	46.4	0	0.0	280	53.6	522	100
Total	86,509	65.4	1,840	1.4	43,844	33.2	132,193	100

2.4 ANIMAL CONTRIBUTION TO CROPS: Number of Households and Planted Area by Organic Fertiliser Use and District - SHORT RAINY SEASON

District	Organic Fertilizer Use						% of Planted area using Organic Fertilizer
	Number of Households using Organic Fertilizer	Planted Area Applied with Organic Fertilizer	Number of Households NOT using Organic Fertilizer	Planted Area NOT Applied with Organic Fertilizer	Total Number of Households Planting in VULI	Total Planted Area in VULI	
North 'A'	1,040	365	7,371	2,844	8,411	3,209	11.4
North 'B'	916	375	4,937	2,140	5,853	2,515	14.9
Central	2,006	884	5,411	2,416	7,417	3,300	26.8
South	1,056	202	3,136	826	4,192	1,028	19.6
West	1,507	484	4,333	1,250	5,840	1,734	27.9
Wete	102	36	1,973	696	2,076	733	5.0
Micheweni	701	305	4,117	1,022	4,818	1,327	23.0
Chakechake	93	35	946	302	1,039	336	10.3
Mkoani	80	11	1,794	613	1,874	624	1.7
Total	7,502	2,696	34,018	12,109	41,520	14,805	18.2

2.5 ANIMAL CONTRIBUTION TO CROPS: Number of Households and Planted Area by Organic Fertiliser Use and District - LONG RAINY SEASON

Districts	Organic Fertilizer Use						% of Planted area using Organic Fertilizer
	Number of Households using Organic Fertilizer	Planted Area Applied with Organic Fertilizer	Number of Households NOT using Organic Fertilizer	Planted Area NOT Applied with Organic Fertilizer	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
North 'A'	1,134	437	11,845	5,435	12,979	5,872	7.4
North 'B'	1,120	487	6,261	2,961	7,380	3,448	14.1
Central	1,246	721	5,259	2,600	6,505	3,321	21.7
South	227	30	910	150	1,137	179	16.5
West	1,162	388	6,782	2,436	7,944	2,825	13.7
Wete	743	283	13,248	5,804	13,991	6,087	4.6
Micheweni	701	304	12,848	4,959	13,549	5,263	5.8
Chakechake	178	96	10,991	5,055	11,169	5,152	1.9
Mkoani	295	179	13,415	5,327	13,709	5,506	3.2
Total	6,806	2,926	81,558	34,727	88,364	37,653	7.8

9.1.1 CATTLE PRODUCTION: Total Number of Households Rearing Cattle by District during 2007/08 Agriculture Year

District	Households rearing cattle		Households not rearing cattle		Total Agriculture households	Total Number of Households Rearing Livestock
	Number	%	Number	%		
North 'A'	1,796	9.5	17,106	90.5	18,901	2,583
North 'B'	3,181	27.8	8,271	72.2	11,452	3,996
Central	4,894	35.8	8,785	64.2	13,679	5,502
South	1,235	18.8	5,345	81.2	6,580	1,690
West	4,616	24.7	14,036	75.3	18,651	6,060
Wete	6,175	40.2	9,199	59.8	15,374	6,662
Micheweni	7,067	40.3	10,454	59.7	17,520	7,621
Chakechake	4,736	34.2	9,100	65.8	13,835	5,046
Mkoani	5,721	35.3	10,478	64.7	16,199	6,524
Total	39,420	29.8	92,773	70.2	132,193	45,684

9.1.2 CATTLE PRODUCTION: Number of Cattle by Type and District as of 1st October 2008

District	Indigenous			Improved Beef			Improved Dairy			Total		
	Number of households	Number of Cattle	%	Number of households	Number of Cattle	%	Number of households	Number of Cattle	%	Number of households Rearing cattle	Number of Cattle	%
North 'A'	1,764	7,497	93.3	0	0	0.0	95	536	6.7	1,796	8,033	100
North 'B'	3,181	15,423	98.4	0	0	0.0	102	254	1.6	3,181	15,677	100
Central	4,681	25,625	92.6	0	0	0.0	730	2,037	7.4	4,894	27,662	100
South	1,235	4,793	99.7	0	0	0.0	16	16	0.3	1,235	4,809	100
West	4,490	19,342	91.5	0	0	0.0	659	1,790	8.5	4,616	21,132	100
Wete	5,945	20,935	95.4	0	0	0.0	487	999	4.6	6,175	21,934	100
Micheweni	7,067	23,185	99.0	0	0	0.0	58	234	1.0	7,067	23,419	100
Chakechake	4,612	15,021	94.0	0	0	0.0	248	961	6.0	4,736	15,982	100
Mkoani	5,721	16,922	99.7	0	0	0.0	27	54	0.3	5,721	16,976	100
Total	38,696	148,744	95.6	0	0	0.0	2,422	6,880	4.4	39,420	155,624	100

9.1.3 CATTLE PRODUCTION: Number of Households rearing cattle, Head of Cattle and Average Head per Household by Herd size During the 2007/08 Agricultural Year

Herd size	Cattle Rearing Households	%	Herd of Cattle	Average Per Household
1 - 5	31,627	80.2	83,610	3
6 - 10	6,001	15.2	43,716	7
11 - 15	1,232	3.1	15,662	13
16 - 20	331	0.8	5,797	18
21 - 30	148	0.4	3,704	25
31 - 40	51	0.1	1,736	34
41 - 50	30	0.1	1,398	46
Total	39,420	100.0	155,624	4

9.1.4 CATTLE PRODUCTION: Total Number of Cattle by Cattle Types and Category, 2007/08 Agricultural Year

Cattle Types	Indigeneous	Improved Beef	Improved Dairy	Total Cattle	%
Castrated Bulls (Oxen)	3,906	0	151	4,057	2.1
Uncastrated Bulls	27,197	0	630	27,828	20.3
Cows	58,061	0	3,292	61,354	31.9
Steers	2,362	0	145	2,507	1.9
Heifers	24,972	0	900	25,873	17.2
Male Calves	14,910	0	837	15,747	12.2
Female Calves	17,334	0	923	18,258	14.3
Tota	148,744	0	6,880	155,624	100.0

9.1.5 CATTLE PRODUCTION: Total Number of Indigenous Cattle by Category of Cattle and District During the 2007/08 Agricultural Year

District	Cattle Type															
	Castrated Bulls (Oxen)		Uncastrated Bulls		Cows		Steers		Heifers		Male Calves		Female Calves		Total	
	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%
North 'A'	95	2.48	1,071	22.31	3,654	36.36	.	.00	819	10.74	630	10.74	1,229	17.36	7,497	100.00
North 'B'	865	1.85	2,341	19.44	5,599	30.86	433	3.09	1,705	10.19	1,858	15.12	2,621	19.44	15,423	100.00
Central	578	2.61	4,225	21.67	10,518	28.46	365	1.31	4,560	17.75	2,584	14.10	2,797	14.10	25,625	100.00
South	130	2.31	942	22.54	2,193	36.42	114	2.89	585	13.29	390	9.83	439	12.72	4,793	100.00
West	502	2.29	4,333	25.79	7,096	28.37	251	2.01	2,795	15.19	2,010	11.46	2,355	14.90	19,342	100.00
Wete	128	.40	3,818	18.40	8,661	34.60	256	1.80	3,459	19.60	2,281	12.00	2,332	13.20	20,935	100.00
Micheweni	526	2.44	4,380	19.92	8,059	30.45	175	.94	4,847	19.17	2,453	12.78	2,745	14.29	23,185	100.00
Chakechake	806	3.10	2,480	15.48	5,953	36.46	527	4.13	2,124	15.05	1,581	12.73	1,550	13.07	15,021	100.00
Mkoani	277	1.57	3,606	24.23	6,328	30.77	241	1.49	4,079	24.48	1,125	7.69	1,267	9.76	16,922	100.00
Total	3,906	2.63	27,197	18.28	58,061	39.03	2,362	1.59	24,972	16.79	14,910	10.02	17,334	11.65	148,744	100.00

9.1.6 CATTLE PRODUCTION: Total Number of Improved Dairy Cattle by Category of Cattle and District During the 2007/08 Agricultural Year

District	Cattle Type															
	Castrated Bulls (Oxen)		Uncastrated Bulls		Cows		Steers		Heifers		Male Calves		Female Calves		Total	
	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%	Total Cattle	%
North 'A'	95	16.7	0	0.0	252	33.3	0.0	0.0	32	16.7	95	16.7	63	16.7	536	100.0
North 'B'	0	0.0	0	0.0	127	50.0	0.0	0.0	51	16.7	51	16.7	25	16.7	254	100.0
Central	0	0.0	122	7.0	1,003	41.9	0.0	0.0	274	14.0	274	14.0	365	23.3	2,037	100.0
South	0	0.0	16	100.0	.	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	16	100.0
West	0	0.0	251	17.1	722	31.7	94.2	7.3	345	19.5	157	9.8	220	14.6	1,790	100.0
Wete	26	3.3	154	13.3	487	43.3	51.2	6.7	77	10.0	77	10.0	128	13.3	999	100.0
Micheweni	0	0.0	88	28.6	58	28.6	0.0	0.0	29	14.3	29	14.3	29	14.3	234	100.0
Chakechake	31	6.7	0	0.0	589	40.0	0.0	0.0	93	13.3	155	26.7	93	13.3	961	100.0
Mkoani	0	0.0	0	0.0	54	100.0	0.0	0.0	0	0.0	0	0.0	0	0.0	54	100.0
Total	151	2.0	630	11.1	3,292	38.5	145.4	3.3	900	14.9	837	13.5	923	16.8	6,880	100.0

9.1.7 CATTLE PRODUCTION: Total Number Households rearing Cattle and Method of Cattle Identification by District during, 2007/08 Agricultural Year

District	Branding		Cattle Clan		Ear notching		Colour		Earrings		Others		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
North 'A'	63	3.4	284	15.3	95	5.1	1,260	67.8	0	0.0	158	8.5	1,859	100.0
North 'B'	127	4.0	534	16.8	102	3.2	2,061	64.8	25	0.8	331	10.4	3,181	100.0
Central	182	3.7	547	11.0	61	1.2	3,526	71.2	152	3.1	486	9.8	4,955	100.0
South	16	1.3	162	13.0	65	5.2	959	76.6	16	1.3	32	2.6	1,251	100.0
West	63	1.4	345	7.4	31	0.7	3,171	68.2	283	6.1	754	16.2	4,647	100.0
Wete	128	2.1	512	8.3	128	2.1	5,099	82.2	0	0.0	333	5.4	6,201	100.0
Micheweni	292	4.1	321	4.5	58	0.8	5,928	83.5	0	0.0	496	7.0	7,096	100.0
Chakechake	0	0.0	248	5.2	0	0.0	3,589	75.8	0	0.0	899	19.0	4,736	100.0
Mkoani	27	0.5	357	6.2	80	1.4	4,962	86.7	0	0.0	295	5.1	5,721	100.0
Total	899	2.3	3,312	8.4	620	1.6	30,556	77.1	476	1.2	3,784	9.5	39,646	100.0

9.2.1 CATTLE PRODUCTION: Number of Milked Cows by Category of Cattle, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
North 'A'	126	3,339	3,465	189	2,835	3,024
North 'B'	153	4,657	4,810	153	4,326	4,479
Central	942	6,748	7,691	882	4,104	4,985
South	0	959	959	49	650	699
West	816	5,495	6,311	659	4,961	5,621
Wete	333	6,637	6,970	487	5,509	5,996
Micheweni	117	5,607	5,723	88	4,847	4,935
Chakechake	434	4,589	5,023	279	3,658	3,937
Mkoani	.	3,766	3,766	.	2,963	2,963
Total	2,921	41,796	44,718	2,785	33,854	36,639

9.2.2 CATTLE PRODUCTION: Average milk production per cow per day, by Category of Cow, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean (ltr)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)
North 'A'	12	3	3	12	2	2
North 'B'	6	3	3	6	2	3
Central	6	2	3	5	2	2
South	.	2	2	2	1	1
West	10	3	4	10	3	4
Wete	6	2	2	6	2	2
Micheweni	4	2	2	4	2	2
Chakechake	6	2	2	7	2	2
Mkoani	0	2	2	0	2	2
Total	7	2	2.5	7	2	2.3

9.2.3 CATTLE PRODUCTION: Average Number of days for Cows on Milked, by Category of Cattle, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean	Mean	Mean	Mean	Mean	Mean
North 'A'	45	99	98	45	98	96
North 'B'	163	115	117	163	102	104
Central	154	125	130	120	109	112
South	.	86	86	53	89	86
West	190	136	145	186	130	137
Wete	131	120	121	140	121	123
Micheweni	69	93	93	54	88	87
Chakechake	164	106	111	151	113	116
Mkoani	0	117	117	0	105	105
Total	155	114	117	137	108	111

9.2.4 CATTLE PRODUCTION: Average Cattle Milk price (Tshs/litre) per season by category of cow and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean	Mean	Mean	Mean	Mean	Mean
North 'A'	900	553	570	800	565	572
North 'B'	450	449	449	450	468	467
Central	435	453	450	445	465	461
South	.	491	491	750	492	512
West	541	494	502	583	508	518
Wete	491	508	507	509	496	497
Micheweni	575	455	459	633	484	488
Chakechake	557	445	456	543	482	488
Mkoani	60	506	501	0	533	533
Total	507	479	481	522	495	497

9.3.1 GOAT PRODUCTION: Number of Agriculture Households Rearing Goats by District during the 2007/08 Agricultural Year

District	Raising goats		Not raising goats		Total	Total Number of Households Rearing Livestock
	No of households	%	No of households	%		
North 'A'	1,386	7.3	17,515	92.7	18,901	2,583
North 'B'	1,120	9.8	10,333	90.2	11,452	3,996
Central	2,280	16.7	11,399	83.3	13,679	5,502
South	845	12.8	5,735	87.2	6,580	1,690
West	1,664	8.9	16,987	91.1	18,651	6,060
Wete	769	5.0	14,606	95.0	15,374	6,662
Micheweni	1,810	10.3	15,710	89.7	17,520	7,621
Chakechake	1,341	9.7	12,494	90.3	13,835	5,046
Mkoani	1,892	11.7	14,307	88.3	16,199	6,524
Total	13,107	9.9	119,086	90.1	132,193	45,684

9.3.2 GOAT PRODUCTION: Number of Goats by Type and District as of 1st October 2008

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	%	Households Rearing goats	Number of Goats
North 'A'	1,386	6,269	76	32	63	1	32	1,890	23.0	1,386	8,222
North 'B'	1,120	6,286	100	0	0	0	0	0	0.0	1,120	6,286
Central	2,189	8,694	53	0	0	0	182	7,721	47.0	2,280	16,415
South	845	4,500	100	0	0	0	0	0	0.0	845	4,500
West	1,633	10,079	84	0	0	0	63	1,947	16.2	1,664	12,026
Wete	717	1,973	90	0	0	0	51	231	10.5	769	2,204
Micheweni	1,810	6,775	100	0	0	0	0	0	0.0	1,810	6,775
Chakechake	1,225	4,627	98	0	0	0	116	116	2.5	1,341	4,744
Mkoani	1,892	7,801	100	0	0	0	0	0	0.0	1,892	7,801
Total	12,817	57,004	83	32	63	0	444	11,905	17.3	13,107	68,972

9.3.3. Goat PRODUCTION: Number of Households rearing Goat, Head of Goat and Average Head per Household by Herd size During the 2007/08 Agricultural Year

District	Goat Rearing Households	%	Head of Goat	Average Per Household
1 - 4	8,372	63.88	20,734	2.48
5 - 9	3,486	26.60	21,131	6.06
10 - 14	826	6.30	9,369	11.34
15 - 19	163	1.24	2,536	15.58
20 - 24	58	.44	1,289	22.16
40+	202	1.54	13,914	68.97
Total	13,107	100.00	68,972	5.26

9.3.4 GOAT PRODUCTION: Total Number of Goats by Category and Type of Goat as of 1st October 2008

Category	Indigenous		Improved Meat		Improved Dairy		Total	
	Number	%	Number	%	Number	%	Number	%
Billy Goat	8,294	89	63	1	938	10	9,295	1,909
Castrated Goat	1,294	100	0	0	0	0	1,294	266
She Goat	31,698	85	0	0	5,677	15	37,375	7,677
Male Kid	7,692	80	0	0	1,880	20	9,572	1,966
She Kid	8,025	70	0	0	3,410	30	11,435	2,349
Total	57,004	83	63	0	11,905	17	68,972	14,167

9.3.5 GOAT PRODUCTION: Total Number of Indigenous Goat by Category and District as of 1st October 2008

District	Goat Type											
	Billy Goat		Castrated Goat		She Goat		Male Kid		She Kid		Total	
	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%
North 'A'	756	12.1	126	2.0	3,654	58.3	882	14.1	851	13.6	6,269	100.0
North 'B'	1,043	16.6	127	2.0	3,283	52.2	738	11.7	1,094	17.4	6,286	100.0
Central	1,125	12.9	152	1.7	5,076	58.4	1,155	13.3	1,186	13.6	8,694	100.0
South	764	17.0	130	2.9	2,128	47.3	731	16.2	747	16.6	4,500	100.0
West	1,413	14.0	188	1.9	5,495	54.5	1,319	13.1	1,664	16.5	10,079	100.0
Wete	487	24.7	26	1.3	1,076	54.5	154	7.8	231	11.7	1,973	100.0
Micheweni	964	14.2	234	3.4	3,796	56.0	1,110	16.4	672	9.9	6,775	100.0
Chakechake	806	17.4	124	2.7	2,922	63.1	372	8.0	403	8.7	4,627	100.0
Mkoani	937	12.0	187	2.4	4,266	54.7	1,232	15.8	1,178	15.1	7,801	100.0
Total	8,294	14.6	1,294	2.3	31,698	55.6	7,692	13.5	8,025	14.1	57,004	100.0

9.3.6 GOAT PRODUCTION: Number of Improved Goats for Meat by Category and District as of 1st October 2008

District	Goat Type											
	Billy Goat		Castrated Goat		She Goat		Male Kid		She Kid		Total	
	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%	Total Goat	%
North 'A'	63	100.00	0	0	0	0	0	0	0	0	63	100.00
North 'B'	0	0	0	0	0	0	0	0	0	0	0	0
Central	0	0	0	0	0	0	0	0	0	0	0	0
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0	0	0
Wete	0	0	0	0	0	0	0	0	0	0	0	0
Micheweni	0	0	0	0	0	0	0	0	0	0	0	0
Chakechake	0	0	0	0	0	0	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0	0	0	0	0	0	0
Total	63	100.00	0	0	0	0	0	0	0	0	63	100.00

9.3.7 GOAT PRODUCTION: Number of Improved Dairy Goats by Category and District as of 1st October 2008

District	Goat Type											
	Billy Goat		Castrated Goat		She Goat		Male Kid		She Kid		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
North 'A'	0	0	0	0	0	0	0	0	1,890	100.00	1,890	100.00
North 'B'	0	0	0	0	0	0	0	0	0	0	0	0
Central	912	11.81	0	0	3,435	44.49	1,854	24.02	1,520	19.69	7,721	100.00
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	1,947	100.00	0	0	0	0	1,947	100.00
Wete	26	11.11	0	0	179	77.78	26	11.11	0	0	231	100.00
Micheweni	0	0	0	0	0	0	0	0	0	0	0	0
Chakechake	0	0	0	0	116	100.00	0	0	0	0	116	100.00
Mkoani	0	0	0	0	0	0	0	0	0	0	0	0
Total	938	7.88	0	0	5,677	47.69	1,880	15.79	3,410	28.64	11,905	100.00

9.3.8 Goat PRODUCTION: Number of Milked Goat by Category of Goat, Season type and District, During the 2007/08 Agricultural Year

District	Number of Milked goat			Average milk production per goat per day			Average number of days goats are milked			Average price per litre per season		
	Wet Season	Dry Season	Total	Wet Season	Dry Season	Total	Wet Season	Dry Season	Total	Wet Season	Dry Season	Total
	North 'A'	0	0	0	0	0	0	0	0	0	0	0
North 'B'	0	0	0	0	0	0	0	0	0	0	0	0
Central	304	182	486	.7	.6	.7	78	72	75	960	960	960
South	0	0	0	0	0	0	0	0	0	0	0	0
West	126	63	188	2.0	2.0	2.0	75	60	70	1000	1000	1000
Wete	102	102	205	1.8	1.3	1.6	70	70	70	667	667	667
Micheweni	0	0	0	0	0	0	0	0	0	1000	0	1000
Chakechake	0	0	0	0	0	0	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0	0	0	0	1100	1000	1050
Total	532	348	880	1.3	1.0	1.1	75	70	73	917	890	904

9.4.1 SHEEP PRODUCTION: Total Number Households Rearing Sheep by District during, 2007/08 Agricultural Year

District	Households rearing Sheep		Households NOT rearing Sheep		Total	
	Number	%	Number	%	Number	%
North 'A'	32	0.2	18,870	99.8	18,901	100.0
North 'B'	25	0.2	11,427	99.8	11,452	100.0
Central	61	0.4	13,618	99.6	13,679	100.0
South	0	0.0	6,580	100.0	6,580	100.0
West	63	0.3	18,588	99.7	18,651	100.0
Wete	0	0.0	15,374	100.0	15,374	100.0
Micheweni	29	0.2	17,491	99.8	17,520	100.0
Chakechake	0	0.0	13,835	100.0	13,835	100.0
Mkoani	0	0.0	16,199	100.0	16,199	100.0
Total	210	0.2	131,983	99.8	132,193	100.0

9.4.2 SHEEP PRODUCTION: Number of Household Rearing and number of Sheep by Type and District as of 1st October 2008

District	Number of house hold	%	Total				
			Number of Indigenous	%	Number of Improved for Mutton	%	Total Sheep
North 'A'	32	0.2	32	100.0	0	0.0	32
North 'B'	25	0.2	51	100.0	0	0.0	51
Central	61	0.4	122	100.0	0	0.0	122
South	0	0.0	0	100.0	0	0.0	0
West	63	0.3	283	100.0	0	0.0	283
Wete	0	0.0	0	100.0	0	0.0	0
Micheweni	29	0.2	88	100.0	0	0.0	88
Chakechake	0	0.0	0	100.0	0	0.0	0
Mkoani	0	0.0	0	100.0	0	0.0	0
Total	210	0.2	574	100.0	0	0.0	574

9.4.3 SHEEP PRODUCTION: Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October 2007/08 Agriculture year

District	Number of Indigenous					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
North 'A'	0	32	0	0	0	32
North 'B'	0	0	51	0	0	51
Central	30	61	30	0	0	122
South	0	0	0	0	0	0
West	31	0	157	0	94	283
Wete	0	0	0	0	0	0
Micheweni	58	0	29	0	0	88
Chakechake	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0
Total	120	92	267	0	94	574

9.4.4 SHEEP PRODUCTION: Number of Households rearing Sheep, Head of Sheep and Average Head per Household by Herd size During the 2007/08 Agricultural Year

Herd size	Sheep Rearing Households	%	Herd of sheep	Average Per Household
1 - 4	178	85.03	386	2
5 - 9	31	14.97	188	6
Total	210	100.00	574	3

9.5.1 PIG PRODUCTION: Number of Households Raising Pigs by Districts during 2007/08 Agriculture Year

District	Households					
	Rearing Pigs		Not Rearing pigs		Total	
	Number	%	Number	%	Number	%
North 'A'	0	0.0	18,901	100.0	18,901	100.0
North 'B'	0	0.0	11,452	100.0	11,452	100.0
Central	122	0.9	13,557	99.1	13,679	100.0
South	0	0.0	6,580	100.0	6,580	100.0
West	31	0.2	18,620	99.8	18,651	100.0
Wete	0	0.0	15,374	100.0	15,374	100.0
Micheweni	0	0.0	17,520	100.0	17,520	100.0
Chakechake	0	0.0	13,835	100.0	13,835	100.0
Mkoani	0	0.0	16,199	100.0	16,199	100.0
Total	153	0.1	132,040	99.9	132,193	100.0

9.5.2 PIG PRODUCTION: Number of Households Rearing Pigs, Head of Pigs and Average Head per Household by Herd Size as of 1st October 2008

Herd Size	Pig rearing households		Head of pigs		Average per household
	Number	%	Number	%	
5 - 9	61	40	395	13.1	7
15 - 19	30	20	578	19.2	19
30 - 39	62	40	2,042	67.7	33
Total	153	100	3,015	100.0	20

9.5.3 PIG PRODUCTION: Total Number of Pigs by Type of Pigs and District as of 1st October 2008

District	Pig Type					
	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	Total
North 'A'	0	0	0	0	0	0
North 'B'	0	0	0	0	0	0
Central	122	182	608	638	334	1,885
South	0	0	0	0	0	0
West	0	0	126	0	1,005	1,130
Wete	0	0	0	0	0	0
Micheweni	0	0	0	0	0	0
Chakechake	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0
Total	122	182	734	638	1,339	3,015

9.6.1 CHICKEN PRODUCTION: Number of Chicken by Type and District as of 1st October 2008

District	Indigineous chicken			Layers			Broilers			Total	
	Number of Households	Number of Indigineous Chicken	%	Number of Households	Number of Layers	%	Number of Households	Number of Broilers	%	Households Rearing Chicken	Number of Chicken
North 'A'	7,718	76,455	92	63	6,584	8	32	189	0.2	7,812	83,228
North 'B'	7,355	100,476	83	254	15,703	13	25	5,090	4.2	7,635	121,269
Central	7,478	99,918	97	30	3,040	3	30	213	0.2	7,539	103,171
South	3,428	48,025	93	65	3,867	7	0	0	0.0	3,493	51,892
West	10,770	139,445	61	471	80,508	35	63	9,420	4.1	11,304	229,373
Wete	11,403	135,501	91	179	13,760	9	0	0	0.0	11,582	149,261
Micheweni	10,746	97,851	98	117	934	1	117	1,548	1.5	10,979	100,333
Chakechake	9,100	101,893	95	93	5,023	5	0	0	0.0	9,193	106,915
Mkoani	10,425	132,905	100	107	616	0	0	0	0.0	10,532	133,521
Total	78,422	932,469	86	1,380	130,034	12	267	16,459	1.5	80,069	1,078,962

9.6.2 CHICKEN PRODUCTION : Number of Households Keeping Chickens and Average Number of Chickens per Household by Flock Size as of 1st October 2008

Flock Size	Indigineous chicken				Layers				Broilers			
	Number of Households	Number of Indigenous Chicken	%	Number of Chicken Per Household	Number of Households	Number of Layers	%	Number of Chicken Per Household	Number of Households	Number of Broilers	%	Number of Chicken Per Household
1-49	76,731	795,432	95	10	721	7,345	1	10	179	1,949	0.2	11
50-99	1,306	76,320	85	58	145	9,925	11	68	0	0	0.0	0
100-299	359	50,537	39	141	394	59,600	46	151	88	14,510	11.2	164
300-499	25	10,180	27	400	88	28,045	73	318	0	0	0.0	0
700+	0	0	0	0	31	25,120	100	800	0	0	0.0	0
Total	78,422	932,469	86	12	1,380	130,034	12	94	267	16,459	1.5	62

9.6.3 CHICKEN PRODUCTION: Number of Other Livestock by Type of livestock by District as of 1st October 2008

District	Ducks	Guine pigs	Turkeys	Rabbits	Donkeys	Horses	Dogs
North 'A'	6,332	0	0	0	63	0	189
North 'B'	4,556	331	305	0	0	0	585
Central	2,097	213	122	0	30	0	547
South	1,803	81	244	97	0	0	162
West	16,077	0	157	722	0	0	1,758
Wete	1,589	0	0	256	51	0	410
Micheweni	555	175	0	0	0	0	175
Chakechake	922	23	0	186	155	0	279
Mkoani	348	0	54	0	54	0	107
Total	34,279	823	881	1,262	353	0	4,214

9.6.4 CHICKEN PRODUCTION: Number of Households Keeping Other Livestock and Average Number per Household by Flock Size as of 1st October 2008

Flock Size	Ducks				Guine pigs				Turkeys			
	Number of Households	Number of Ducks	%	Number of Duck Per Household	Number of Households	Number of Guine pigs	%	Number of Guine pigs Per Household	Number of Households	Number of Turkeys	%	Number of Turkeys Per Household
1-49	3,233	26,244	3	8	150	823	0.1	5	229	881	0.1	4
50-99	57	3,309	4	58	0	0	0.0	0	0	0	0.0	0
100-299	32	4,725	4	150	0	0	0.0	0	0	0	0.0	0
300-499	0	0	0	0	0	0	0.0	0	0	0	0.0	0
700+	0	0	0	0	0	0	0.0	0	0	0	0.0	0
Total	3,321	34,279	3	10	150	823	0.1	5	229	881	0.1	4

9.65 : THER LIVESTOCK : Total Number of Other Livestock by Type as of 1st October 2008

Type	Chicken		Others	
	Number	%	Type	Number
Indigenous Chicken	932,469	86.422751	Ducks	34,279
Layer	130,034	12.05178	Guine pigs	823
Broiler	16,459	1.5254694	Turkeys	881
		0	Rabbits	1,262
		0	Donkeys	353
		0	Horses	0
		0	Dogs	4,214
TOTAL	1,078,962	100		

9.7.1: PEST AND PARASITES: Number of Livestock Rearing households deworming Livestock by District during 2007/08 Agriculture Year

District	Deworming Livestock		Not Deworm Livestock		Total	
	Number	%	Number	%	Number of Livestock Rearing households	%
North 'A'	2,583	29	6,426	71	9,010	100
North 'B'	2,672	31	5,828	69	8,500	100
Central	4,742	52	4,408	48	9,150	100
South	1,121	27	2,989	73	4,110	100
West	5,778	45	6,971	55	12,748	100
Wete	2,998	24	9,686	76	12,684	100
Micheweni	3,037	24	9,870	76	12,907	100
Chakechake	2,907	28	7,557	72	10,464	100
Mkoani	2,276	19	9,532	81	11,808	100
Total	28,113	30	63,267	70	91,380	100

9.7.2: PEST AND PARASITES: Number of Livestock Rearing households that dewormed Livestock by type of livestock and District, 2007/08 Agricultural Year

District	Cattles				Goats/sheeps				Dewormed Pig				Dewormed Chicken			
	Households that dewormed	Households that DID NOT deworm	Not Applicable	Total	Households that dewormed	Households that DID NOT deworm	Not Applicable	Total	Households that dewormed	Households that DID NOT deworm	Not Applicable	Total	Households that dewormed	Households that DID NOT deworm	Not Applicable	Total
North 'A'	977	378	1,260	2,615	347	410	1,890	2,646	0	0	2,615	2,615	1,481	945	567	2,993
North 'B'	1,400	153	1,222	2,774	534	102	2,112	2,749	0	0	2,749	2,749	1,222	942	611	2,774
Central	3,313	334	1,186	4,833	912	912	3,009	4,833	91	31	4,529	4,651	1,885	2,067	1,094	5,046
South	617	130	504	1,251	341	211	666	1,218	0	0	1,170	1,170	487	699	260	1,446
West	2,857	471	2,638	5,966	691	502	4,773	5,966	31	0	5,621	5,652	3,360	1,915	1,068	6,343
Wete	2,076	846	589	3,511	231	359	2,486	3,075	0	0	2,998	2,998	1,281	2,332	333	3,946
Micheweni	2,278	701	584	3,562	409	555	2,394	3,358	0	0	3,037	3,037	934	2,570	526	4,030
Chakechake	1,907	248	783	2,938	457	186	2,325	2,969	0	0	2,938	2,938	806	1,635	496	2,938
Mkoani	1,660	241	509	2,410	187	402	1,740	2,329	0	0	2,276	2,276	1,151	1,205	295	2,651
Total	17,084	3,501	9,273	29,859	4,109	3,638	21,396	29,143	122	31	27,120	28,084	12,607	14,310	5,249	32,166

9.7.3 PEST AND PARASITES: Number of Livestock Rearing Households Normally Encountering Tick Problems by District during 2007/08 Agriculture Year

District	Tick Problem			No Tick Problem		Not Applicable		Total	
	Number		%	Number	%	Number	%	Number	%
North 'A'	1,418	5	16	1,670	18	6,017	66	9,104	100
North 'B'	2,672	9	32	1,196	14	4,606	54	8,475	100
Central	4,377	15	48	1,581	17	3,192	35	9,150	100
South	1,024	3	25	991	24	2,096	51	4,110	100
West	3,611	12	27	2,418	18	7,316	55	13,345	100
Wete	4,254	14	33	2,357	18	6,150	48	12,761	100
Micheweni	4,585	15	36	3,329	26	4,993	39	12,907	100
Chakechake	4,201	14	39	977	9	5,472	51	10,650	100
Mkoani	3,981	13	34	2,651	22	5,177	44	11,808	100
Total	30,121	100	33	17,169	19	45,019	49	92,309	100

9.7.4 PEST AND PARASITES: Number of Livestock Rearing Households by Method of Tick Control and District during 2007/08 Agriculture Year

District	Dipping		Spraying		Smearing		None		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
North 'A'	410	4	819	9	410	4	7,371	81	95	1	9,104	100
North 'B'	254	3	1,451	17	585	7	6,108	72	76	1	8,475	100
Central	426	5	2,128	23	1,763	19	4,742	52	91	1	9,150	100
South	65	2	845	21	244	6	2,941	72	16	0	4,110	100
West	408	3	2,512	19	1,978	15	8,289	62	157	1	13,345	100
Wete	820	6	2,101	16	974	8	8,430	66	436	3	12,761	100
Micheweni	759	6	2,307	18	701	5	8,760	68	380	3	12,907	100
Chakechake	186	2	2,821	26	488	5	6,759	63	395	4	10,650	100
Mkoani	696	6	2,321	20	464	4	7,979	68	348	3	11,808	100
Total	4,024	4	17,304	19	7,607	8	61,380	66	1,994	2	92,309	100

9.7.5: PEST AND PARASITES: Number of Livestock Rearing Households normally Encountering Newcastle Disease Problems by District during 2007/08 Agriculture Year

District	Households Encountering Newcastle Disease problems		Households NOT Encountering Newcastle Disease problems		Not Applicable		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	4,442	49	3,623	40	1,040	11	9,104	100
North 'B'	5,650	67	1,832	22	993	12	8,475	100
Central	5,289	58	2,432	27	1,429	16	9,150	100
South	1,950	47	1,608	39	552	13	4,110	100
West	8,446	63	3,266	24	1,633	12	13,345	100
Wete	8,072	63	3,511	28	1,179	9	12,761	100
Micheweni	6,220	48	4,497	35	2,190	17	12,907	100
Chakechake	7,875	74	1,907	18	868	8	10,650	100
Mkoani	5,587	47	4,936	42	1,285	11	11,808	100
Total	53,530	58	27,611	30	11,168	12	92,309	100

9.7.6: PEST AND PARASITES: Number of Livestock Rearing Households by Method of Newcastle Disease Control by District during 2007/08 Agriculture Year

District	Vaccination		Local Herbs		None		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	851	9	1,953	21	6,300	69	9,104	100
North 'B'	611	7	993	12	6,871	81	8,475	100
Central	1,186	13	1,733	19	6,232	68	9,150	100
South	276	7	877	21	2,957	72	4,110	100
West	2,386	18	2,512	19	8,446	63	13,345	100
Wete	948	7	1,589	12	10,224	80	12,761	100
Micheweni	1,372	11	1,606	12	9,928	77	12,907	100
Chakechake	760	7	992	9	8,898	84	10,650	100
Mkoani	1,205	10	1,205	10	9,398	80	11,808	100
Total	9,594	10	13,459	15	69,255	75	92,309	100

9.7.7 PEST AND PARASITES: Number of Livestock Rearing Households normally Encountering Fowl Typhoid Disease Problems by District during 2007/08 Agriculture Year

District	Households Encountering Fowl Typhoid Disease problems		Households NOT Encountering Fowl Typhoid Disease problems		Not Applicable		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	1,103	12	6,395	70	1,607	18	9,104	100
North 'B'	1,807	21	5,523	65	1,145	14	8,475	100
Central	1,307	14	6,414	70	1,429	16	9,150	100
South	504	12	3,022	74	585	14	4,110	100
West	4,019	30	7,473	56	1,853	14	13,345	100
Wete	3,895	31	7,534	59	1,332	10	12,761	100
Micheweni	3,037	24	7,446	58	2,424	19	12,907	100
Chakechake	2,473	23	7,092	67	1,085	10	10,650	100
Mkoani	1,892	16	8,497	72	1,419	12	11,808	100
Total	20,036	22	59,395	64	12,878	14	92,309	100

9.7.8 PEST AND PARASITES: Number of Livestock Rearing Households by Method of Fowl Typhoid Disease Control by District during 2007/08 Agriculture Year

District	Vaccination		Local Herbs		None		Total	
	Number	%	Number	%	Number	%	Number	%
North 'A'	347	4	945	10	7,812	86	9,104	100
North 'B'	153	2	484	6	7,839	92	8,475	100
Central	274	3	699	8	8,207	89	9,180	100
South	81	2	390	9	3,639	89	4,110	100
West	848	6	1,664	12	10,833	81	13,345	100
Wete	461	4	1,461	11	10,839	85	12,761	100
Micheweni	292	2	1,431	11	11,184	87	12,907	100
Chakechake	248	2	496	5	9,906	93	10,650	100
Mkoani	268	2	991	8	10,550	89	11,808	100
Total	2,971	3	8,560	9	80,809	88	92,339	100

9.7.9: PEST AND PARASITES: Number of Livestock Rearing Households normally Encountering Foot and Mouth Disease Problems by District during 2007/08 Agriculture Year

District	Yes			No		Not Applicable		Total	
	Number		%	Number	%	Number	%	Number	%
North 'A'	221	5	3	1,764	20	6,804	77	8,789	100
North 'B'	560	12	7	2,570	30	5,344	63	8,475	100
Central	1,216	27	14	4,043	45	3,709	41	8,967	100
South	227	5	6	1,218	31	2,453	63	3,899	100
West	1,507	33	12	3,360	26	8,101	62	12,968	100
Wete	179	4	1	6,688	54	5,407	44	12,274	100
Micheweni	234	5	2	7,154	58	4,964	40	12,352	100
Chakechake	155	3	1	4,705	44	5,790	54	10,650	100
Mkoani	214	5	2	5,766	50	5,560	48	11,540	100
Total	4,513	100	5	37,268	41	48,133	54	89,914	100

9.7.10: PEST AND PARASITES: Number of Livestock Rearing Households normally Encountering Lymphskin Disease Problems by District during 2007/08 Agriculture Year

District	Yes			No		Not Applicable		Total	
	Number		%	Number	%	Number	%	Number	%
North 'A'	284	4	3	1,827	21	6,678	76	8,789	100
North 'B'	840	11	10	2,341	28	5,294	62	8,475	100
Central	1,763	23	20	3,617	40	3,648	40	9,028	100
South	227	3	6	1,251	32	2,421	62	3,899	100
West	1,664	21	13	3,077	24	8,227	63	12,968	100
Wete	1,127	14	9	5,714	47	5,432	44	12,274	100
Micheweni	701	9	6	6,658	54	4,964	40	12,323	100
Chakechake	558	7	5	4,147	39	5,976	56	10,681	100
Mkoani	669	9	6	5,284	46	5,587	48	11,540	100
Total	7,834	100	9	33,916	38	48,227	54	89,977	100

9.8.1 LIVESTOCK EXTENSION: Number of households Receiving Extension advice by District during the 2007/08 Agriculture year

District	Receiving Livestock services		Not Receiving Livestock Extension services		Livestock keeper
	Number	%	Number	%	
North 'A'	2,268	9.7	6,741	75	9,010
North 'B'	3,258	14.0	5,243	62	8,500
Central	3,921	16.8	5,228	57	9,150
South	1,072	4.6	3,038	74	4,110
West	5,212	22.3	7,536	59	12,748
Wete	2,306	9.9	10,378	82	12,684
Micheweni	1,606	6.9	11,301	88	12,907
Chakechake	1,318	5.6	9,146	87	10,464
Mkoani	2,374	10.2	9,434	80	11,808
Total	23,336	100.0	68,045	74	91,380

9.8.2 LIVESTOCK EXTENSION: Number of Households receiving Livestock advice (overall) By Source of Extension and District during the 2007/08 agriculture year

District	Source of Livestock Extension												Number of Household Receiving Extension
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
North 'A'	1,260	55.6	347	15.3	32	1.4	315	13.9	252	11.1	504	22.2	2,268
North 'B'	2,138	65.6	127	3.9	382	11.7	458	14.1	1,171	35.9	1,171	35.9	3,258
Central	2,097	53.5	942	24.0	274	7.0	1,064	27.1	547	14.0	882	22.5	3,921
South	796	74.2	81	7.6	65	6.1	97	9.1	97	9.1	390	36.4	1,072
West	2,041	39.2	1,444	27.7	314	6.0	1,036	19.9	1,413	27.1	1,444	27.7	5,212
Wete	1,666	72.2	359	15.6	0	0.0	0	0.0	307	13.3	154	6.7	2,306
Micheweni	1,168	72.7	58	3.6	0	0.0	204	12.7	29	1.8	350	21.8	1,606
Chakechake	791	60.0	217	16.5	0	0.0	0	0.0	302	22.9	178	13.5	1,318
Mkoani	1,830	77.1	116	4.9	0	0.0	89	3.8	375	15.8	161	6.8	2,374
Total	13,786	59.1	3,692	15.8	1,066	4.6	3,264	14.0	4,494	19.3	5,234	22.4	23,336

9.8.3 LIVESTOCK EXTENSION: Number of Agriculture Households Receiving Advice on Feeds and Proper Feeding by Source and District During 2007/08 agriculture Year

District	Source of Livestock Extension												Number of Household
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
North 'A'	599	59.375	63	6.25	0	0	95	9.375	63	6.25	189	18.75	1,008
North 'B'	1,171	63.889	0	0	76	4.1667	102	5.556	153	8.33333	331	18.0556	1,832
Central	608	40	334	22	0	0	213	14	182	12	182	12	1,520
South	114	70	32	20	0	0	16	10	0	0	0	0	162
West	973	31.959	283	9.2784	94	3.0928	377	12.37	722	23.7113	597	19.5876	3,046
Wete	436	73.913	102	17.391	0	0	0	0	51	8.69565	0	0	589
Micheweni	175	54.545	29	9.0909	0	0	88	27.27	0	0	29	9.09091	321
Chakechake	109	31.818	124	36.364	0	0	0	0	23	6.81818	85	25	341
Mkoani	669	84.27	36	4.4944	0	0	36	4.494	54	6.74157	0	0	794
Total	4,853	50.48	1,004	10.44	171	1.774	925	9.625	1,248	12.984	1,413	14.7	9,615

9.8.4 LIVESTOCK EXTENSION: Number of households receiving Extension Advice on Proper Livestock Housing by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	630	64.5	95	9.7	32	3.2	95	9.7	63	6.5	63	6.5	0	0.0	977
North 'B'	942	46.8	25	1.3	127	6.3	229	11.4	280	13.9	382	19.0	25	1.3	2,011
Central	669	36.7	334	18.3	91	5.0	243	13.3	213	11.7	274	15.0	0	0.0	1,824
South	179	84.6	16	7.7	0	0.0	16	7.7	0	0.0	0	0.0	0	0.0	211
West	848	33.3	345	13.6	63	2.5	440	17.3	565	22.2	283	11.1	0	0.0	2,543
Wete	461	64.3	231	32.1	0	0.0	0	0.0	26	3.6	0	0.0	0	0.0	717
Micheweni	58	28.6	0	0.0	0	0.0	58	28.6	0	0.0	88	42.9	0	0.0	204
Chakechake	209	52.9	155	39.2	0	0.0	0	0.0	31	7.8	0	0.0	0	0.0	395
Mkoani	214	63.2	36	10.5	0	0.0	36	10.5	54	15.8	0	0.0	0	0.0	339
Total	4,210	45.7	1,237	13.4	313	3.4	1,117	12.1	1,231	13.3	1,089	11.8	25	0.3	9,222

9.8.5 LIVESTOCK EXTENSION: Number of households Receiving Extension advice on Proper Milking and Milk Hygiene by District during the 2007/08 Agriculture year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	95	60	0	0	0	0	63	40	0	0	0	0	0	0	158
North 'B'	611	48	0	0	76	6	102	8	280	22	204	16	0	0	1,272
Central	669	47	334	23	61	4	304	21	30	2	30	2	0	0	1,429
South	97	50	16	8	0	0	16	8	16	8	49	25	0	0	195
West	565	33	94	6	63	4	157	9	471	28	314	19	31	2	1,696
Wete	307	71	102	24	0	0	0	0	26	6	0	0	0	0	436
Micheweni	29	25	0	0	0	0	29	25	29	25	29	25	0	0	117
Chakechake	85	41	124	59	0	0	0	0	0	0	0	0	0	0	209
Mkoani	241	51	89	19	0	0	36	8	80	17	27	6	0	0	473
Total	2,700	45	761	13	200	3	707	12	933	16	653	11	31	1	5,984

9.8.6 LIVESTOCK EXTENSION: Number of households Receiving Extension advice on Livestock fattening by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	126	66.7	32	16.7	0	0.0	0	0.0	0	0.0	32	16.7	0	0.0	189
North 'B'	484	46.3	0	0.0	76	7.3	102	9.8	280	26.8	102	9.8	0	0.0	1,043
Central	365	46.2	182	23.1	61	7.7	91	11.5	30	3.8	61	7.7	0	0.0	790
South	32	50.0	0	0.0	0	0.0	16	25.0	0	0.0	16	25.0	0	0.0	65
West	628	40.0	126	8.0	63	4.0	157	10.0	345	22.0	251	16.0	0	0.0	1,570
Wete	102	57.1	77	42.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	179
Micheweni	146	41.7	0	0.0	0	0.0	175	50.0	0	0.0	29	8.3	0	0.0	350
Chakechake	31	25.0	62	50.0	0	0.0	0	0.0	0	0.0	0	0.0	31	25.0	124
Mkoani	107	48.0	36	16.0	0	0.0	0	0.0	80	36.0	0	0.0	0	0.0	223
Total	2,021	44.6	514	11.3	200	4.4	541	11.9	736	16.2	491	10.8	31	0.7	4,535

9.8.7 LIVESTOCK EXTENSION: Number of households receiving extension advice on Disease control (dipping/spraying) by District during the 2007/08 Agriculture year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	630	43.5	126	8.7	0	0.0	221	15.2	126	8.7	347	23.9	0	0.0	1,449
North 'B'	1,374	68.4	0	0.0	76	3.8	102	5.1	280	13.9	178	8.9	0	0.0	2,011
Central	1,489	48.5	426	13.9	122	4.0	334	10.9	213	6.9	486	15.8	0	0.0	3,070
South	666	77.4	32	3.8	49	5.7	16	1.9	49	5.7	49	5.7	0	0.0	861
West	1,413	41.7	314	9.3	94	2.8	314	9.3	691	20.4	502	14.8	63	1.9	3,391
Wete	1,307	72.9	154	8.6	0	0.0	0	0.0	205	11.4	102	5.7	26	1.4	1,794
Micheweni	876	85.7	0	0.0	0	0.0	0	0.0	0	0.0	117	11.4	29	2.9	1,022
Chakechake	574	64.9	124	14.0	0	0.0	0	0.0	155	17.5	31	3.5	0	0.0	884
Mkoani	1,419	85.0	62	3.7	0	0.0	0	0.0	134	8.0	54	3.2	0	0.0	1,669
Total	9,748	60.4	1,238	7.7	341	2.1	987	6.1	1,852	11.5	1,866	11.6	118	0.7	16,150

9.8.8 LIVESTOCK EXTENSION: Number of households Receiving Extension Advice on Herd/Flock size and Selection by District during the 2007/08 Agriculture Year

DISTRICT	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	189	75.0	63	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	252
North 'B'	433	58.6	0	0.0	76	10.3	102	13.8	102	13.8	25	3.4	0	0.0	738
Central	456	44.1	243	23.5	0	0.0	213	20.6	91	8.8	30	2.9	0	0.0	1,034
South	49	42.9	16	14.3	0	0.0	32	28.6	16	14.3	0	0.0	0	0.0	114
West	471	34.1	157	11.4	94	6.8	31	2.3	534	38.6	94	6.8	0	0.0	1,382
Wete	179	87.5	0	0.0	0	0.0	0	0.0	26	12.5	0	0.0	0	0.0	205
Micheweni	58	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	58
Chakechake	109	46.7	124	53.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	233
Mkoani	268	57.7	62	13.5	0	0.0	54	11.5	80	17.3	0	0.0	0	0.0	464
Total	2,211	49.4	666	14.9	171	3.8	432	9.6	849	19.0	150	3.4	0	0.0	4,479

9.8.9 LIVESTOCK EXTENSION: Number of households Receiving Extension Advice on Pasture Establishment by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	63	66.7	0	0.0	0	0.0	0	0.0	32	33.3	0	0.0	0	0.0	95
North 'B'	229	40.9	25	4.5	76	13.6	127	22.7	102	18.2	0	0.0	0	0.0	560
Central	365	63.2	152	26.3	0	0.0	61	10.5	0	0.0	0	0.0	0	0.0	578
South	16	20.0	0	0.0	0	0.0	16	20.0	0	0.0	49	60.0	0	0.0	81
West	345	32.4	94	8.8	94	8.8	31	2.9	471	44.1	31	2.9	0	0.0	1,068
Chakechake	54	63.6	31	36.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	85
Mkoani	214	60.0	36	10.0	0	0.0	0	0.0	80	22.5	27	7.5	0	0.0	357
Total	1,287	45.6	338	12.0	171	6.0	236	8.3	685	24.3	107	3.8	0	0.0	2,823

9.8.10 LIVESTOCK EXTENSION: Number of Households Receiving Extension Advice on Group formation and Strengthening by District during the 2007/08 Agriculture year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	284	69.2	95	23.1	0	0.0	0	0.0	0	0.0	32	7.7	0	0.0	410
North 'B'	636	41.0	25	1.6	254	16.4	178	11.5	254	16.4	204	13.1	0	0.0	1,552
Central	395	40.6	365	37.5	91	9.4	30	3.1	61	6.3	30	3.1	0	0.0	973
South	146	52.9	49	17.6	16	5.9	0	0.0	0	0.0	65	23.5	0	0.0	276
West	408	20.0	911	44.6	157	7.7	63	3.1	471	23.1	31	1.5	0	0.0	2,041
Wete	256	55.6	154	33.3	0	0.0	0	0.0	51	11.1	0	0.0	0	0.0	461
Micheweni	88	75.0	29	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	117
Chakechake	395	76.1	93	17.9	0	0.0	0	0.0	0	0.0	31	6.0	0	0.0	519
Mkoani	589	77.6	36	4.7	0	0.0	0	0.0	134	17.6	0	0.0	0	0.0	759
Total	3,198	45.0	1,756	24.7	519	7.3	271	3.8	971	13.7	393	5.5	0	0.0	7,108

9.8.11 LIVESTOCK EXTENSION: Number of Households Receiving Extension Advice on Calf Rearing by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	221	77.8	0	0.0	0	0.0	32	11.1	32	11.1	0	0.0	0	0.0	284
North 'B'	840	51.6	25	1.6	102	6.3	153	9.4	204	12.5	305	18.8	0	0.0	1,629
Central	699	44.2	334	21.2	30	1.9	274	17.3	91	5.8	152	9.6	0	0.0	1,581
South	227	70.0	0	0.0	0	0.0	16	5.0	0	0.0	81	25.0	0	0.0	325
West	565	30.0	345	18.3	126	6.7	126	6.7	534	28.3	157	8.3	31	1.7	1,884
Wete	231	60.0	77	20.0	0	0.0	0	0.0	26	6.7	51	13.3	0	0.0	384
Micheweni	117	44.4	0	0.0	0	0.0	58	22.2	0	0.0	88	33.3	0	0.0	263
Chakechake	295	57.6	124	24.2	0	0.0	0	0.0	62	12.1	31	6.1	0	0.0	512
Mkoani	384	66.2	62	10.8	0	0.0	0	0.0	80	13.8	54	9.2	0	0.0	580
Total	3,578	48.1	969	13.0	258	3.5	658	8.8	1,028	13.8	919	12.4	31	0.4	7,441

9.8.12 LIVESTOCK EXTENSION: Number of Households Receiving Extension Advice on Use of Improved Bulls by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	63	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	63
North 'B'	484	47.5	0	0.0	102	10.0	76	7.5	178	17.5	178	17.5	0	0.0	1,018
Central	517	44.7	334	28.9	0	0.0	213	18.4	61	5.3	30	2.6	0	0.0	1,155
South	65	23.5	0	0.0	0	0.0	0	0.0	0	0.0	211	76.5	0	0.0	276
West	534	40.5	251	19.0	94	7.1	0	0.0	314	23.8	126	9.5	0	0.0	1,319
Wete	102	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	102
Micheweni	29	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	29
Chakechake	186	54.5	93	27.3	0	0.0	0	0.0	31	9.1	31	9.1	0	0.0	341
Mkoani	268	65.2	36	8.7	0	0.0	0	0.0	107	26.1	0	0.0	0	0.0	411
Total	2,248	47.7	714	15.2	196	4.2	289	6.1	691	14.7	576	12.2	0	0.0	4,714

9.8.13 LIVESTOCK EXTENSION: Number of Households Receiving Extension Advice on Livestock Feeds Processing by District during the 2007/08 Agriculture Year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
North 'A'	221	63.6	63	18.2	0	0.0	63	18.2	0	0.0	0	0.0	0	0.0	347
North 'B'	560	41.5	51	3.8	51	3.8	204	15.1	382	28.3	102	7.5	0	0.0	1,349
Central	365	32.4	365	32.4	30	2.7	122	10.8	122	10.8	122	10.8	0	0.0	1,125
South	81	62.5	16	12.5	0	0.0	16	12.5	16	12.5	0	0.0	0	0.0	130
West	471	30.0	220	14.0	94	6.0	63	4.0	565	36.0	157	10.0	0	0.0	1,570
Wete	154	66.7	77	33.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	231
Micheweni	0	0.0	0	0.0	0	0.0	29	100.0	0	0.0	0	0.0	0	0.0	29
Chakechake	132	58.6	62	27.6	0	0.0	0	0.0	31	13.8	0	0.0	0	0.0	225
Mkoani	303	68.0	36	8.0	0	0.0	0	0.0	107	24.0	0	0.0	0	0.0	446
Total	2,286	41.9	889	16.3	175	3.2	496	9.1	1,223	22.4	380	7.0	0	0.0	5,451

9.9.1 FISH FARMING: Number of Agriculture Households Practising Fish Farming by District during the 2007/08 Agriculture Year					
District	Was Fish farming carried out by this household during 2007/08				
	Yes	%	No	%	Total
North 'A'	0	0.0	18,901	100.0	18,901
North 'B'	0	0.0	11,452	100.0	11,452
Central	0	0.0	13,679	100.0	13,679
South	0	0.0	6,580	100.0	6,580
West	0	0.0	18,651	100.0	18,651
Wete	26	0.2	15,349	99.8	15,374
Micheweni	0	0.0	17,520	100.0	17,520
Chakechake	0	0.0	13,835	100.0	13,835
Mkoani	0	0.0	16,199	100.0	16,199
Total	26	0.0	132,168	100.0	132,193

9.9.2 FISH FARMING: Number of Agriculture Households by System of Fish Farming and District during the 2007/08 Agriculture Year

District	System of fish farming			
	Natural Pond	Dug out Pond	Water Reservoir	Other
North 'A'	0	0	0	0
North 'B'	0	0	0	0
Central	0	0	0	0
South	0	0	0	0
West	0	0	0	0
Wete	0	26	0	0
Micheweni	0	0	0	0
Chakechake	0	0	0	0
Mkoani	0	0	0	0
Total	0	26	0	0

9.9.3 FISH FARMING: Number of Agriculture Households by Source of Fingerling by Districts during the 2007/08 Agriculture Year

District	Source of fingerlings						Total
	Own Pond	Government Institution	NGOs / Project	Neighbour	Private Trader	Other	
North 'A'	0	0	0	0	0	0	0
North 'B'	0	0	0	0	0	0	0
Central	0	0	0	0	0	0	0
South	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0
Wete	26	0	0	0	0	0	26
Micheweni	0	0	0	0	0	0	0
Chakechake	0	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0	0
Total	26	0	0	0	0	0	26

9.9.4 FISH FARMING: Number of Agriculture Households by Location of Selling Fish and District during the 2007/08 Agriculture Year

District	Where sold							Total
	Neighbour	Local Market	Secondary Market	Processing Industry	Large Scale Farm	Did not Sell	Other	
North 'A'	0	0	0	0	0	0	0	0
North 'B'	0	0	0	0	0	0	0	0
Central	0	0	0	0	0	0	0	0
South	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0
Wete	0	0	0	0	0	26	0	26
Micheweni	0	0	0	0	0	0	0	0
Chakechake	0	0	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	26	0	26

9.9.6 FISH FARMING: Total Number of Stocked Fish by Type and District during 2007/08 agriculture year

District	Mean Size of Pond (Sq.metre)	Type of Fish								Total
		Tilapia		Milkfish		Prawns/Crabs		Lulu		
		Number	%	Number	%	Number	%	Number	%	
North 'A'	0	0	0	0	0	0	0	0	0	0
North 'B'	0	0	0	0	0	0	0	0	0	0
Central	0	0	0	0	0	0	0	0	0	0
South	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0
Wete	10	0	0	0	0	12	0	0	0	12
Micheweni	0	0	0	0	0	0	0	0	0	0
Chakechake	0	0	0	0	0	0	0	0	0	0
Mkoani	0	0	0	0	0	0	0	0	0	0
Total	10	0	0	0	0	12	0	0	0	12

9.9.7 FISH FARMING: Number of Agricultural Households By frequency of stocking of Fingerings in fish ponds and District, 2007/08 Agricultural Year

District	Frequency of stocking				Total
	1	2	3	8	
North 'A'	0	0	0	0	0
North 'B'	0	0	0	0	0
Central	0	0	0	0	0
South	0	0	0	0	0
West	0	0	0	0	0
Wete	0	26	0	0	26
Micheweni	0	0	0	0	0
Chakechake	0	0	0	0	0
Mkoani	0	0	0	0	0
Total	0	26	0	0	26

9.9.8 FISH FARMING: Number of Agricultural Households By level of Care of fish Ponds by District, 2007/08 Agricultural Year

District	Level of care of Fish pond				Total
	High	Meadium/Average	Low	8	
North 'A'	0	0	0	0	0
North 'B'	0	0	0	0	0
Central	0	0	0	0	0
South	0	0	0	0	0
West	0	0	0	0	0
Wete	0	26	0	0	26
Micheweni	0	0	0	0	0
Chakechake	0	0	0	0	0
Mkoani	0	0	0	0	0
Total	0	26	0	0	26

9.10.1 BEE KEEPING: Number of Agricultural Households involved in Honey Production/Collection and District, 2007/08 Agricultural Year

District	Agricultural Households Involved in Honey Production/Collection		Agricultural Households NOT Involved in Honey Production/Collection		Total	
	Number	%	Number	%	Number	%
North 'A'	0	0.00	18,901	100.0	18,901	100.0
North 'B'	25	0.22	11,427	99.8	11,452	100.0
Central	91	0.67	13,588	99.3	13,679	100.0
South	244	3.70	6,336	96.3	6,580	100.0
West	31	0.17	18,620	99.8	18,651	100.0
Wete	179	1.17	15,195	98.8	15,374	100.0
Micheweni	350	2.00	17,170	98.0	17,520	100.0
Chakechake	93	0.67	13,742	99.3	13,835	100.0
Mkoani	268	1.65	15,931	98.3	16,199	100.0
Total	1,282	0.97	130,911	99.0	132,193	100.0

9.10.2 BEE KEEPING: Number of Agricultural Households By Honey production/Collection and District , 2007/08 Agricultural Year

District	Was Honey Harvested?								
	Number of Agricultural Households that Poduced/Collected Honey			Number of Agricultural Households that did NOT Poduce/Collect Honey			Total		
	Stingless Bee	Sting Bee	Total	Stingless Bee	Sting Bee	Total	Stingless Bee	Sting Bee	Total
North 'B'	0	25	25	0	0	0	0	25	25
Central	61	30	91	0	0	0	61	30	91
South	49	211	260	0	0	0	49	211	260
West	0	31	31	0	0	0	0	31	31
Wete	0	179	179	26	0	26	26	179	205
Micheweni	146	234	380	0	0	0	146	234	380
Chakechake	31	31	62	31	62	93	62	93	155
Mkoani	161	134	295	0	0	0	161	134	295
Total	447	876	1,324	57	62	119	504	938	1,442

**9.10.3 BEE KEEPING: Number of Agricultural Households, type of bee Hives and Type of Bees by District , 2007/08
Agricultural Year**

District	Number of Improved Bee Hives						Number of Local Bee Hives					
	Stingless Bee		Sting Bee		Total		Stingless Bee		Sting Bee		Total	
	No hhds	No Hives	No hhds	No Hives	No hhds	No Hives	No hhds	No Hives	No hhds	No Hives	No hhds	No Hives
North 'B'	0	0	25	0	25	0	0	0	25	0	25	0
Central	61	152	30	0	91	152	61	456	30	152	91	608
South	49	0	211	0	260	0	49	12,055	211	3,249	260	15,304
West	0	0	31	0	31	0	0	0	31	628	31	628
Wete	26	0	179	0	205	0	26	0	179	1,230	205	1,230
Micheweni	146	263	234	0	380	263	146	905	234	2,599	380	3,504
Chakechake	62	62,007	93	0	155	62,007	62	0	93	1,860	155	1,860
Mkoani	161	375	134	0	295	375	161	428	134	1,366	295	1,794
Total	504	62,797	938	0	1,442	62,797	504	13,845	938	11,084	1,442	24,929

**9.10.4 BEE KEEPING: Quantity of Honey Harvested and Sold by Size of Bees and District during the 2007/08 Agriculture
Year**

District	Stingless Bee				Sting Bee				Total	
	Honey Harvested		Honey Sold		Honey Harvested		Honey Sold		Honey Sold	Honey Harvested
	Quantity (lts)	%	Quantity (lts)	%	Quantity (lts)	%	Quantity (lts)	%		
North 'B'	0	0	0	0	0	0	0	0	0	0
Central	608	71	608	71	243	29	243	29	851	851
South	12,672	53	12,640	55	11,161	47	10,495	45	23,135	23,834
West	0	0	0	0	1,884	100	0	0	0	1,884
Wete	51	4	0	0	1,230	96	922	100	922	1,281
Micheweni	3,533	55	1,694	48	2,862	45	1,840	52	3,533	6,395
Chakechake	0	0	0	0	1,240	0	1,240	0	1,240	1,240
Mkoani	2,222	38	2,142	43	3,641	62	2,811	57	4,953	5,864
Total	19,087	46	17,084	49	22,262	54	17,807	51	34,890	41,349

9.10.5 BEE KEEPING: Average price of Honey (Tshs/litre) by Size of Bees and District during the 2007/08 Agriculture Year

Districts	Stingless Bee (Price per Litre)	Bee (Price per Litre)	Average Price Per Litre
North-B	0	3,000	3,000
Central	5,000	1,000	3,500
South	2,033	5,635	6,651
West	0	8,000	8,000
Wete	0	4,429	4,429
Micheweni	5,400	4,912	7,612
Chakechake	0	9,999	9,999
Mkoani	7,500	3,760	7,510

9.10.6 BEE KEEPING: Number of Agriculture Households by Location of Selling Honey and District during the 2007/08 Agriculture Year

Districts	Neighbour		Local market		Secondary market		Processing industry		Large scale farm	Trade at farm		Did not sell		Other		Total	
	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee
North-B	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
Central	30	0	0	61	0	0	0	0	0	0	0	0	0	0	0	30	61
South	162	16	0	0	16	16	0	0	0	32	16	0	0	0	0	211	49
West	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	31	0
Wete	102	0	0	0	0	0	0	0	0	0	0	77	26	0	0	179	26
Micheweni	146	117	29	0	0	0	0	0	0	29	0	29	29	0	0	234	146
Chakechake	0	0	0	31	31	0	0	0	0	0	0	0	0	0	0	31	31
Mkoani	134	161	0	0	0	0	0	0	0	0	0	0	0	0	0	134	161
Total	601	294	29	92	47	16	0	0	0	93	16	106	55	0	0	876	473

APPENDIX III: CENSUS DATA COLLECTION INSTRUMENTS

Smallholder Questionnaire

Community Questionnaire

Village Listing Forms

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Page Number..... out of.....

Agriculture Sample Census 2007/08



Sub-village /ward leader listing from

Region _____ Code Ward _____ Code

District _____ Code Village _____ Code

Sub village leader Number	Name of Ward village leader	Number of Households		Comments
		Form Office Register	After enumeration	
(1)	(2)	(3)	(4)	(5)
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Page Number.....out of.....

Agriculture Sample Census 2007/08



Household listing from-for listing hh heads and agriculture activities

Region _____ Code

District _____ Code

Ward _____ Code

Village _____ Code

Name of sub village leader _____

Name of sub village _____

Household number	Household head name	Number of										If the Respondent is X	Farmer Serial Number
		Fields a	Cattle			Goats	Sheep	Pigs	Kuku/Bata		Rabbits		
			Total	Bulls	Cows				Cattle				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<input type="checkbox"/>													
<input type="checkbox"/>													
<input type="checkbox"/>													
<input type="checkbox"/>													

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Household listing for 15 selected farmers




Region _____ Code ward : _____ code Namba Sawia

District _____ Code village _____ code Hatua

S/N	Sub-village leader Number	Name of sub-village leader	Name of selected head of household	Name of Household Head	Number of					
					Field	Cattle	Goat	Sheep	Pigs	Poultry
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

United Republic of Tanzania							
ACQI	CONFIDENTIAL						
							
Small holder/Small Scale Farmer questionnaire							
Identification <input type="text"/>							
Agricultural Sample Census 2007/2008							
							
							
Enumerator Signaller Date of Enumeration <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
Start Time End Time	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Hour</th> <th>Minute</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>	Hour	Minute	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Field level checking by: District Supervisor Name Signaller Date / / Regional Supervisor Name Signaller Date / / National Supervisor Name Signaller Date / /							
(To be filled by the supervisor ONLY after District level checking of the enumeration process. This should be countersigned by the Supervisor in form of the enumerator)							
District checking in Office District Supervisor Name Signaller Date / /							
All questionnaires must be checked at the district office.							
For Use at Regional Level Only Data entered by: Name Signaller Date / / Checked Name Signaller Date / /							
See the back page for details of parts							
Ministry of Agriculture and Food Security, Ministry of Livestock and Fisheries Development, Ministry of Agriculture and Environmental Resources, Ministry of Water and Irrigation, Prime Minister's Office, Regional Administration and Local Government, Ministry of Industry, Trade and Marketing, National Bureau of Statistics, and the UNICEF in the Government							

1.0 IDENTIFICATION DETAILS		
1.1 Location		Identification <input type="text"/>
Na.	Location Name	Codes
1.1.1	Region	<input type="text"/> <input type="text"/>
1.1.2	District	<input type="text"/>
1.1.3	Ward	<input type="text"/> <input type="text"/> <input type="text"/>
1.1.4	Village	<input type="text"/> <input type="text"/> <input type="text"/>
1.2 Details of the respondent or household head		
Na.		Codes
1.2.1	Name and number of local leader	<input type="text"/> <input type="text"/> <input type="text"/>
1.2.2	Name and number of household head	<input type="text"/> <input type="text"/>
1.2.3	Sex of household head	<input type="text"/>
1.2.4	Name of respondent	
1.2.5	Relationship of Respondent to household head	<input type="text"/>
<p><i>Relationship to household head codes (Q 1.2.5)</i></p> <p>Head of Household1 Son/Daughter.....3 Grandson/Granddaughter.....5 No relationship.....7</p> <p>Spouse.....2 Father/Mother.....4 Other relatives.....6</p>		
2.0 ACTIVITIES OF THE HOUSEHOLD		
2.1	Type of Agriculture Household	<input type="text"/>
<p><i>Household agricultural activities codes (Q 2.1)</i></p> <p>Crops only.....1 Livestock only2 Pastoralist.....3 Crops and Livestock4</p>		

Definition and working page for page 1

General Definitions

Who is a Smallholder /Small Scale farmer?

Should have one or more of the following: in the 2007/08 farming season had one or more cultivated and planted farms. The farm land may either be owned, rented, borrowed. The farmer may also be raising 1 and 50 head of cattle, and/or between 5 and 100 head of sheep/Goats/Pigs, and/or between 50 and 1000

Household: A group of people who occupy the whole of part one or more housing units and makes joint provision for food and/or other household items. Usually such a group comprises a husband, wife, and their children. Other relatives may be members of the household if they happen to live and get food provisions from the same household. People who live together and eat from the same pot may be considered as members of the same household even if they stay in separate dwellings. An individual who lives and eat alone is considered as an independent household.

Household Head: A person who is acknowledged by all other members of the household either by virtue of his age or standing in the household as the head. He/she should be a permanent resident of the house and he/she is the main person responsible for decision making regarding use of household resources..

Agricultural Holding: This is an economic unit of agricultural production under single management. This unit may have been grown various crops. For the purpose of the survey, the agricultural holdings are restricted to those which meet one of the following conditions:

- Having or operated at least 25 sq meter of arable land
- Own or keep at least one head of cattle or five goats/sheep/five pigs or fifty chicken/ducks/turkeys during the agricultural year 2007/08 (from October 2007 to September 2008).

Question Specific Definitions:

Type of Agriculture holding Codes (Q2.1):

Crops only: A holding is referred to be a crop only holding if it has cultivated at least one piece of land. This also applies to all households owning or have kept livestock whose number does not qualify such households to be an agricultural holding (No cattle, less than 5 goats/sheep/pigs, less than 50 chickens/turkeys/rabbits).

Livestock only: A holding is referred to be a livestock only holding if it has exercised livestock husbandry only during the 2007/08 agricultural year.

NOTE

For agricultural holding only and pastoralist holding only; the number of livestock should be at least one head of cattle, not less than five goats/sheep/pigs, not less than 50 chickens /turkeys /rabbits. This also applies to households having or operated less than 25 sq meter of cultivated land (which does not qualify the household to be considered as agricultural holding) but has the number of livestock that makes the holding qualifies to be considered as livestock holding.

Pastoralist holding: This refers to a household which practices livestock production as its major income generating activity and a means of subsistence, but moves from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they have no permanent place of residence.

Both crops and livestock: A holding is referred to be a both crops and livestock if it has cultivated a piece of land equal or exceeding 25 sq meter and if such households have own or kept livestock whose number qualify such household be considered as an agricultural holding.

Procedures for questions:

Q 2.1 Type of agriculture household/holding

Using the options under the question classify the type of agriculture household/holding

Note: If the household had an acre of crops and raised 40 chickens during 2007/08, it is classified as 'Crops only' as the number of chickens does not qualify the household as a livestock holding.

HOUSEHOLD INFORMATION

Give details of personal particulars of all household members beginning with.....												
No.	Sex of household member	Age with household head	Sex M-1 F-2	Marital status (single, married, widowed, divorced)	Parental Survival		Education					Off farm income
					Father	Mother	Read and Write	Education attained	On farm occupation	Main activity	Off farm income	
01												
02												
03												
04												
05												
06												
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33												

CODES FOR Q3: HOUSEHOLD INFORMATION

<p>Relationship to household head (Col 2)</p> <p>Head of household.....1</p> <p>Female/Male.....2</p> <p>Son/Daughter.....3</p> <p>Father/Mother.....4</p> <p>Grandson/daughter...5</p> <p>Other Relatives.....6</p>	<p>Marital Status (Col 4)</p> <p>Married.....1</p> <p>Single.....2</p> <p>Co-habiting.....3</p> <p>Divorced</p> <p>Separated.....4</p> <p>Widow/widower.....5</p>	<p>Survival of Parents (Col 6 & 7)</p> <p>Yes.....1 No.....2</p> <p>Don't know.....3</p>	<p>Reading and writing (Col 8)</p> <p>Kiswahili.....1</p> <p>English.....2</p> <p>Kiswahili and English.....3</p> <p>Lugha nyingine.....4</p> <p>Cannot read or write.....5</p>																							
<p>Education Level (Col 10)</p> <table border="0"> <thead> <tr> <th>Primary education</th> <th>Secondary Education</th> </tr> </thead> <tbody> <tr> <td>Below Standard One.....00</td> <td>Form One.....11</td> </tr> <tr> <td>Standard One.....01</td> <td>Form Two.....12</td> </tr> <tr> <td>Standard Two.....02</td> <td>Form Three.....13</td> </tr> <tr> <td>Standard Three.....03</td> <td>Form Four.....14</td> </tr> <tr> <td>Standard Four.....04</td> <td>Form Five.....15</td> </tr> <tr> <td>Standard Five.....05</td> <td>Form Six.....16</td> </tr> <tr> <td>Standard Six.....06</td> <td>Training after Secondary Ed....17</td> </tr> <tr> <td>Standard Seven.....07</td> <td>University and other Tertiary Ed...8</td> </tr> <tr> <td>Standard Eight.....08</td> <td>Adult Education.....19</td> </tr> <tr> <td>Training after Primary Ed...09</td> <td>Not applicable.....99</td> </tr> <tr> <td>Pre Form One.....10</td> <td></td> </tr> </tbody> </table>	Primary education	Secondary Education	Below Standard One.....00	Form One.....11	Standard One.....01	Form Two.....12	Standard Two.....02	Form Three.....13	Standard Three.....03	Form Four.....14	Standard Four.....04	Form Five.....15	Standard Five.....05	Form Six.....16	Standard Six.....06	Training after Secondary Ed....17	Standard Seven.....07	University and other Tertiary Ed...8	Standard Eight.....08	Adult Education.....19	Training after Primary Ed...09	Not applicable.....99	Pre Form One.....10		<p>Involvement in farming activities (Col 11)</p> <p>Works on farm full time.....1</p> <p>Works on farm part time.....2</p> <p>Rarely works on farm.....3</p> <p>Never works on farm.....4</p>	<p>Main activity (Col 12)</p> <p>Crop farming:01.</p> <p>Livestock farming/herding:02.</p> <p>Pastoralist03</p> <p>Fishing04</p> <p>Fish farming05</p> <p>Paid employment /</p> <p>Government/parastatal.....06</p> <p>Private/NGOs07</p> <p>Self employee (Off-farm activities)</p> <p>- With employees08</p> <p>- Without employees09</p> <p>Non paid household member (off-farm activities)10.</p> <p>Unemployed but available for work11</p> <p>Unemployed but unavailable for work..12</p> <p>House mother13</p> <p>Student14</p> <p>Unable to work too old, too young, retired, disabled, child 15</p> <p>Others (specify)98</p>
Primary education	Secondary Education																									
Below Standard One.....00	Form One.....11																									
Standard One.....01	Form Two.....12																									
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Training after Primary Ed...09	Not applicable.....99																									
Pre Form One.....10																										
<p>Off-farm Income (Col 13)</p> <p>These are income made from activities NOT on the HH's farming activities. This can be from formal employment (e.g. in government etc.), temporary jobs, casual labourers and income generation activity and includes working for cash on other people's farms.</p> <p>Indicate whether each member was involved in an off farm income generating activity during 2007/08</p>																										

Definition and working page for page 2

Question Specific Definitions:

Relation to head (Col2):

Household Head: A person who is acknowledged by all other members of the household either by virtue of their age or standing as the household head.

Read and Write (Col8)

Any other language: Must be a written language.

For someone who can read and write in Kiswahili and any other language apart from English, the correct code is 1. For one who can read and write in English and any other language apart from Kiswahili the the correct code is 2. Code 4 should only be used for any other language which is not English or Kiswahili.

Education Level Reached (Col10):

Ask the respondent the highest educational level reached. This aims at establishing whether at the time of enumeration the member of the household is studying has completed or has never studied. Make further enquiry for the level of education reached for those who have completed studies. Establish if the member had attained any training after graduation for the purposes for completing column number 9. For those who still continue attending studies during the period of this survey, establish their learning stage. For instance for a household member who studied up to Standard Three but did not complete his/her education at this level, then his/her highest education level reached is Standard Two. For those indicated under code 3 (not studied) in column 8 should be marked code 99 (Not applicable) in column 9.

Section 3.0 Note

Make sure that you define the hh proper to ensure that all the members of the hh are included. Ensure that you stress that the hh is not just the hh heads direct family and that it includes other people living and eating together with the family.

If you notice that the hh is large or you see many people around the hh and you have been given a smaller number of the hh members, make further enquiries until you are sure that you have captured all the hh members.

Section 3.0 Household information.

- ii) For each household member complete columns 1, 2, 3 and 3
- After completing columns 1, 2, 3 and 3 for each household member, go back to the first household member and complete the remaining columns for that member.
- iii) Repeat step 2 for the rest of the household members.

4.0 LAND ACCESS/OWNERSHIP/TENURE			
4.1 LAND ACCESS/OWNERSHIP/TENURE		Identification	
Give details on Area owned by the household during 2007/08 agricultural season.			
Give area as reported by the respondent		Area in Acre	
			4.1.1 Was the whole household area used during the 2007/08 agricultural season? (Yes-1, No-2) <input type="checkbox"/>
4.1.1	Area under certificate of ownership	<input type="text"/> - <input type="text"/>	
4.1.2	Area owned under customary law	<input type="text"/> - <input type="text"/>	
4.1.3	Area bought	<input type="text"/> - <input type="text"/>	4.1.3 Do you consider to have enough land for your household? (Yes-1, No-2) <input type="checkbox"/>
4.1.4	Area rented from others	<input type="text"/> - <input type="text"/>	
4.1.5	Area borrowed from others	<input type="text"/> - <input type="text"/>	
4.1.6	Area share cropped from others	<input type="text"/> - <input type="text"/>	4.1.4 Is there any female who owns land or has customary rights to land ownership in this household? (Yes-1, No-2) <input type="checkbox"/>
4.1.7	Area under other forms of tenure	<input type="text"/> - <input type="text"/>	
Total area		<input type="text"/> - <input type="text"/>	
4.2 LAND USE			
Area used by the household for various agricultural activities during 2007/08 agricultural season			
Enter area as reported by the respondent in acres		Area in acre	Use area for school
4.2.1	Area planted temporary monocrops	<input type="text"/> - <input type="text"/>	
4.2.2	Area planted temporary mixed crops (e.g. maize and beans)	<input type="text"/> - <input type="text"/>	
4.2.3	Area planted permanent monocrops	<input type="text"/> - <input type="text"/>	
4.2.4	Area planted permanent mixed crops (e.g. banana, coffee, trees)	<input type="text"/> - <input type="text"/>	
4.2.5	Area planted permanent and temporary mixed crops (e.g. maize and banana)	<input type="text"/> - <input type="text"/>	
4.2.6	Area under pasture	<input type="text"/> - <input type="text"/>	
4.2.7	Area under fallow	<input type="text"/> - <input type="text"/>	
4.2.8	Area under natural forest	<input type="text"/> - <input type="text"/>	
4.2.9	Area planted trees	<input type="text"/> - <input type="text"/>	
4.2.10	Area rented to others	<input type="text"/> - <input type="text"/>	
4.2.11	Area unsuitable for agriculture	<input type="text"/> - <input type="text"/>	
4.2.12	Uncultivated arable land (minus area under fallow)	<input type="text"/> - <input type="text"/>	
Total area		<input type="text"/> - <input type="text"/>	

Definitions and working page for page 3

Definitions for Key Specific Questions**Section 4.1 – Land Access/Ownership**

These are areas that were used by the households for the 2007/08 farming season

Lease/Certificate of Ownership: Area under lease/certificate of ownership refers to the areas which were issued by the government. The household possesses government issued leasehold title or certificate of ownership. The land will normally be officially surveyed and boundaries marked. This includes leased land bought from others where the lease/certificate of ownership has been transferred.

Customary Law: This refers to the land which the household does not have an official government but its right of use is granted by the traditional leaders.

Bought: This refers to the areas of customary land that has been bought from others. This land does not have an official title and therefore is not leasehold.

Rented from others: Land rented from others for cash or for a fixed amount in crop produce (e.g. fixed number of bags at harvest).

Borrowed: use granted by land owner free of charge. Land owner can either be a lease holder or has right of access through customary law.

Share cropping: where the household is permitted to use land which is then paid for from a percentage of the harvested crop

Section 4.2 Land Use

Temporary crops: are sown and harvested during the same agricultural year

Permanent crops: are crops once sown or planted last for some years and need not to be replanted after each annual harvest.

Permanent crops /mixed crops: This is a mixture of permanent and seasonal crops. The two crops can either be randomly planted together or in a particular pattern e; for example intercropping (1 row of maize and 1 row of beans). A field that has been divided into plots for different crops is not mixed).

This is further subdivided into:

Mixture of Permanent crops – two or more permanent crops grown together

Mixture of Permanent and Temporary crops – permanent crop and annual crop together

Mixture of Temporary crops–two or more temporary, annual crops grown together

Pasture land: this is an area of owned/allocated land which is set aside for livestock grazing. It can be improved pasture where the farmer has planted grass, applied fertilizer or where other means have been applied to improve the pasture. Or it can be natural pasture.

Natural Bush: Land which has naturally grown shrubs and trees and is considered productive but is not utilized for farming or livestock production.

Fallow: This is the area of land that is normally used for crop production, but is not used for crop production for a year or a number of years to allow for self generation of fertility/soil structure.

Planted trees: Land which is used for planting trees for poles or timber

Unusable: Land that is known to be unsuitable for agricultural production.

Uncultivated Usable: This is land that was not used for reasons other than fallow. The reasons could be lack of inputs/money/rainfall/etc

Overview to section 4

Overview to section 4

Section 4.0: Preliminary note**Land Access/Ownership**

Land access/ownership refers to the area utilized by the members of the household. This does not include communal land where the resources are shared between household members. It does not include official communal land that the household has sole access to for example a plot for crop farming in the communal area.

Procedures for questions

Section 4.0 – Land Ownership

1. Ask the respondent if he knows the total areas of land the household has sole access to. If he knows make a note in the calculation space
2. Ask the respondent the area of the different land ownership categories the household has sole access to (Q4.1, 1 to 4.1.7) and record in the appropriate spaces.
3. Add up the area of the different categories of land and compare it with the total area obtained in step 1 (if the respondent provided the information)
4. If the total area is different find out which one is correct and make amendments where appropriate.

Section 4.2: Land Use

1. Ask the respondent the area of the different land use categories the household has sole access to (Q4.2.1 to 4.2.12) and record in the appropriate spaces.
2. Add up the area of the different categories of land and compare it with the total area obtained in section 4.0. The total area should be the same.
3. If the total area is different find out which one is correct and make amendments where appropriate.

5.0 PERMANENT AND TEMPORARY CROP PRODUCTION																		Identification <input type="text"/>					
5.1 ANNUAL CROPS AND VEGETABLE PRODUCTION-SHORT RAINY SEASON																							
Did your household planted any crop during short rainy season for 2007/08 agricultural year? Yes = 1, No = 2, (If the answer is yes proceed to Section 5.3)																		<input type="checkbox"/>					
5.1.1 Provide the following details for each crop planted during the short rainy season for 2007/08 agricultural year																							
Name of Crop	Planting		Main crop number = Enter the number of the hh member from	Use of Seeds						Irrigated area	Use of fertilisers (If 6 is the answer in col 11 proceed to col 16)					Use of chemicals against weeds (If 6 is the answer in col 11 proceed to col 20)							
	Crop code	Actual area planted (acre)		Type of seeds	Use of seeds	Quantity		Cost (Tshs)	Cultiva ted area		Type of fertili se rs	Quantity of fertilisers		Coist (Tsh)	Cultiva ted area	Quantity of agrochemicals		Cost					
						Quantity	Quantity used					M ea su	Quantity used			Qu an tit y	Quantity used						
Total area planted <input type="text"/>																							
Type of seeds planted (Col 1) Local seeds...1 Improved seeds...2			Use of agricultural seeds (Col 2) For the whole crop...1 2/4 of the whole crop...2 1/2 of the whole crop...3 1/4 of the whole crop...4 Under 1/4 of the whole crop...5			Quantity/Col 7 Kg...1 Seedlings...2 Gram...3			Use of fertilisers (Col 11 & 12) For the whole crop...1 2/4 of the whole crop...2 1/2 of the whole crop...3 1/4 of the whole crop...4 Under 1/4 of the whole crop...5 Not used...6			Use of fertilisers/Col 13 Organic/Inorganic...1 Inorganic/Inorganic...2			Costs/Col 14 Kg...1 Litre...2 ML...3								
Main crop number (Col 3) Enter number of hh member from page 2 or details on hh members in Q. 2																							

Definitions and working page for page 4

Working table for the calculation of the annual crop area

Mixed crops 1	Crop Name	Total area of field (acre)	Area for plants (acre)	Total number of plants	Total area of plants (acre)
<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>
Permanent crop 1					
Permanent crop 2					
Permanent crop 3					
Permanent crop 4					
Total Area for mixed crops					
The remaining area for temp. ci					
			% of temporary	Area for permanent	
Name of the crop temp/permanent 1					
Name of the crop temp/permanent 2					
Name of the crop temp/permanent 3					
Check total area					
Check total area for temporary					

Mixed crops 2	Name of plant	Total area of field (acre)	Area for the plant (acre)	Total of plants	Total area for plants (acre)
<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>	<i>tot</i>
Permanent crop 1					
Permanent crop 2					
Permanent crop 3					
Permanent crop 4					
Total area for mixed crops					
The remaining area for temp. ci					
			% of temporary	Area for temporary	
Name of the crop temp/permanent 1					
Name of the crop temp/permanent 2					
Name of the crop temp/permanent 3					
Check total area					
Check total area for temporary					

Planted Area: Area in acre the household was able to plant
Harvested Area: Area in acre the household was able to harvest a large portion of harvest. This is the same as the area planted minus the area that was destroyed by floods/pets/animals.

Temporary/Annual Crops
Crops planted and harvested within 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.

Cash crop codes:

Code	Crop
50	Cotton
51	Tobacco
52	Raynathum
53	Jow
54	Sesuvium

Crop Codes (Cash/Tubers/Roots):

Code	Crop
11	Milae
12	Paddy
13	Sorghum
14	Sorghum Millet
15	Finger Millet
16	Wheat
17	Barley
18	Green Potatoes
19	Yam
20	Yam
21	Cassava
22	Onio
23	Ginger

Vegetable Codes:

Code	Crop
24	Cabbage
25	Tomatoes
26	Spinach
27	Carrot
28	Chilies
29	Amaranth
30	Pumpkin
31	Cucumber
32	Egg plant
33	Water melon
34	Cauliflower
35	Melion
36	Onion
37	Onion
38	Onion
39	Onion
40	Onion
41	Onion
42	Onion
43	Onion
44	Onion
45	Onion

Crop Codes Legumes and Oil

Code	Crop
31	Beans
32	Common
33	Green Gram
34	Chick Peas
35	Chick Peas
36	Bambara nuts
37	Nyanga
38	Sunflower
39	Soybean
40	Soybean
41	Soybean
42	Soybean
43	Soybean
44	Soybean
45	Soybean

Instructions for calculating the area of mixed crops in a mixture

A. If the mixed crop is mixed annual only enter the total area of the field in the remaining area under temporary crop and go to step one of these instructions.

B. If the mixed crop is mixed permanent and annual try to work by the percent age taken by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix.

C. Number of trees method to calculate annual crop areas in a permanent-annual crop mix:

- (i) List each of the permanent crop in column band enter the ground area per acre for each permanent crop (from instructions for page 5) in column d.
- (ii) Enter the number of permanent trees in the mix in column e as will be provided to you by the respondent.
- (iii) Calculate the area occupied by each crop by multiplying column d and column e and sum up these to obtain the total area of permanent crop in the mix.
- (iv) To obtain the area for temporary crops subtract (-) the area for permanent crops from the total area of crop mix and enter the result in the total area under temporary crops.
- (v) Proceed to step 1 to calculate the area under each temporary crop.

1. Enter the name of each temporary crop in the crop mix and estimate percentages of each crop.
2. Using the percentage for each crop, calculate the area for each crop from the remaining area under temporary crop.
3. After completing the scores for all the fields, sum the area of each crop in the mix plus any monocrops and enter the totals in section 5.1.1 Column 2.
4. Once the quantity harvested is obtained, calculate the yield (metric tonnes/acre) and compare the figures with the norms given in the crop code box. If there is a significant difference, check the area and the amount harvested.

Definitions and working page for page 5

Storage (Col. 30, Q 5.1.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology.

Marketing Challenges Q 5.1.1 Col. 33:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulating transportation and selling of crops.

Inputs (Q 5.1.1)

Farm Yard Manure: An organics fertliser made on farm from animal dung.

Compost: An organic fertiliser made on farm from decomposed plant materials.

Insecticides: This is the chemical usde in protecting plants or killing pests.

Fungicides: Protects plants from fungi attack.

Herbicide: Chemicals used to control or kills weeds.

Improved seeds: Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.1.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Crops storage is keeping/reserving crops in a container or a special place for future use.

Q 5.1.1 Col 31

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 8

Working table for the calculations
www for mixed annual crops

Mixed crops 1	Crop Name	Total area of mixed (acre)	Area for plants (acre)	Total number of plants	Total area of plants (acre)	Planted Area: Area in acre the household was able to plant		Harvested Area: Area in acre the household was able to harvest a large portion of harvest. This is the same as the area planted minus the area that was destroyed by floods / pests / animals.	
						0	1	0	1
Permanent crop 1									
Permanent crop 2									
Permanent crop 3									
Permanent crop 4									
Total Area for mixed crops			Total area for permanent crops			The remaining area for temp			
								% of temp	Area for permanent
Name of the crop temp/permanent 1									
Name of the crop temp/permanent 2									
Name of the crop temp/permanent 3									
Check total area			Check total area for temp						

Mixed crops 1	Name of plant	Total area of mixed (acre)	Area for the plant (acre)	Total of plants	Total area for plants (acre)	Planted Area: Area in acre the household was able to plant		Harvested Area: Area in acre the household was able to harvest a large portion of harvest. This is the same as the area planted minus the area that was destroyed by floods / pests / animals.	
						0	1	0	1
Permanent crop 1									
Permanent crop 2									
Permanent crop 3									
Permanent crop 4									
Total area for mixed crops			Total area for permanent crops			The remaining area for temp			
								% of temp	Area for temporary
Name of the crop temp/permanent 1									
Name of the crop temp/permanent 2									
Name of the crop temp/permanent 3									
Check total area			Check total area for temp						

Planted Area: Area in acre the household was able to plant
Harvested Area: Area in acre the household was able to harvest a large portion of harvest. This is the same as the area planted minus the area that was destroyed by floods / pests / animals.

Temporary/Annual Crops
Crops planted and harvested within 12 months, after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.

Cash crop codes:
Code Crop
20 Cocoa
21 Tobacco
22 Rayvathum
23 Jute
24 Sesameed

Crop Codes/Cereal /
Tubers/Roots:
Code Crop
01 Ubi
10 Paddy
13 Gogon
14 Sorghum
15 Finger Millet
16 Wheat
17 Kaffir
18 Sweet Potatoes
19 M/P Potatoes
20 Yams
21 Coconut
22 Onions
23 Ginger

Vegetable Codes:
Code Crop
24 Cabbage
25 Tomato
26 Spinach
27 Cans
28 Chilies
29 Beans
30 Pumpkin
31 Cucumber
32 Egg plant
33 Cauliflower
34 Melon
35 Onions
36 Radish
37 Green Beans
38 Sweet

Crop Codes/Legumes and Oil
Code Crop
39 Beans
40 Cowpeas
41 Green Gram
42 Chick Peas
43 Dango
44 Bantana nut
45 Njogu
46 Sun flower
47 Sesam
48 Ground nut
49 Soy beans
50 Castor Seed

Instructions for calculating the area of mixed crops in a mixture
A. If the mixed crop is mixed annually only enter the total area of the field. In the remaining area under temporary crop and go to step one of these instructions.
B. If the mixed crop is mixed permanent and annual try to work by the percentage taken by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix.
C. Number of trees method to calculate annual crop areas in a permanent-annual crop mix:
(i) List each of the permanent crop in column b and enter the ground area per acre for each permanent crop (from instructions for page 6) in column d.
(ii) Enter the number of permanent trees in the mix in column e as will be provided to you by the respondent.
(iii) Calculate the area occupied by each crop by multiplying column d and column e and sum up these to obtain the total area of permanent crops in the mix.
(iv) To obtain the area for temporary crops, subtract (-) the area for permanent crops from the total area of crop mix and enter the result in the total area under temporary crops.
(v) Proceed to step 1 to calculate the area under each temporary crop.
1. Enter the name of each temporary crop in the crop mix and estimate percentages of each crop.
2. Using the percentage for each crop, calculate the area for each crop from the remaining area under temporary crop.
3. After completing the exercise for all the fields, sum the area of each crop in the mix plus any monocrops and enter the totals in section 2.1.1 Column 2.
4. Once the quantity harvested is obtained, calculate the yields (metric tonnes/acre) and compare the figures with the norms given in the crops code box. If there is significantly difference, check the area and the amount harvested.

Definitions and working page for page 7

Storage (Col. 30, Q 5.2.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storage structures improved through modern technology.

Marketing Challenges Q 5.2.1 Col. 33:

- **Farmers' Association:** Village farmers who came together and started an association for the purposes of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulating transportation and selling of crops.

Inputs (Q 5.2.1)

Farm Yard Manure: An organic fertiliser made on farm from animal dung.

Compost: An organic fertiliser made on farm from decomposed plant materials.

Insecticides: This is the chemical used in protecting plants or killing pests.

Fungicides: Protects plants from fungi attack.

Herbicide: Chemicals used to control or kill weeds.

Improved seeds: Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.2.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Crops storage is keeping/reserving crops in a container or a special place for future use.

Q 5.2.1 Col 33

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 8

Permanent Crops:

These are crops once planted last longer in the farm and need not be replanted after each annual harvest. Most of the permanent plants include tress such as coconut tress, apple trees, grape trees, banana trees, pineapple trees etc.

Number of Trees:

These include manure trees and premature trees.

Number of mature plants:

A total of fruit bearing tress (e.g. mango trees, orange trees, avocado trees e.t.c).

Instructions for permanent monocrops and crop mix:

- A.** For a field with permanent monocrop enter farm size in collumn. 3.
B. For a field with a permanent crop mix or a temporary crop mix, enter the number of trees only in collumn 4.
C. For a field with a permanent crop mix /temporary annual crops, either:
 -Enter the area in collumn 4, if the total arae for permanent crops was obtained through calcaulion of percentages of each crop
 OR
 Enter the number of tree in collumn 5, if the number of plants/ seedlings of permanent crops was excluded.

21 Cassava: Cassava is a temporary crop, in order to simplify data collection on areas of production, data on cassava will be collected from areas under permanent crops.

Permanent crops:(crop oils)

Code	Crop	Area per crop
44	Palm Trees	0.00049
45	Coconuttree	0.00037
46	Cashewnuttress	0.00062

Permanent crops (Cash crops)

Code	Crop	Area per crop
53	Sisal	0.00012
54	Coffee	0.00049
55	Tea	0.00037
56	Cocoa	0.00049
57	Rubber	0.00099
58	Wattle	0.00099
59	Kapok	0.00124
60	Sugar-cane	0.00012
61	Cardamon	0.00049
63	Tamarin	0.00099
64	Cinarmon	0.00124
65	Nutmeg	0.00099
66	Clove	0.00074
18	Black pepper	0.00037
34	Pigeon Peas	0.00025
21	Cassava	0.00019
75	Pineapple	0.00006
86	Lemon Grass	

Permanent crops:

Code	Crop	Area per crop
70	Passion Fruit	0.00074
71	Bananas	0.00037
72	Avocado	0.00099
73	Mango	0.00099
74	Pawpaw	0.00037
76	Orange	0.00074
77	Grape fruit	0.00074
78	Grape	0.00012
79	Mandarin	0.00074
80	Guava	0.00074
81	Plums	0.00074
82	Apples	0.00074
83	Peaches	0.00074
84	Mifyoksi	0.00074
85	Lime/lemon	0.00074
68	Pomelo	0.00099
69	Jack Fruit	0.00074
97	Durian	0.00074
98	Bilimbi	0.00074
99	Rambutan	0.00074
67	Bread Fruit	0.00099
38	Malay apple	0.00074
39	Star Fruit (Sakua)	0.00074

E.1 FARM INVESTMENT

E.1.1 FARM INPUTS
Give details on farm implements used and owned by the household during 2007/08 agricultural year

No.	Name of implement/engines	2007/08		Quantity used	
		Year-1, No-2	Year-2		
		07	08		
E.1.1	Haulage/Chale				
E.1.2	Hand hoe				
E.1.3	Hand sprayer				
E.1.4	Milling machine (Grater, Chipper, Oil Press and Oil Mill)				
E.1.5	Oxen plough				
E.1.6	Animal pulled ploughing machine				
E.1.7	Animal Cart				
E.1.8	Tractor				
E.1.9	Tractor tiller				
E.1.10	Tractor harrow				
E.1.11	Controlled balls				
E.1.12	Uncontrolled balls				
E.1.13	Cows				
E.1.14	Dungheys				
E.1.15	Machine gashabababab				
E.1.16	Power Tiller				
E.1.17	Oxen pulled plough for making terraces				

E.1.2 USE OF TRACTOR AND DRAFT ANIMALS
Did you use tractor/draft animal during 2007/08 agricultural year (Year-1, No-2) (If the answer is No Proceed to Q.5.3)

No.	Type	2007/08		Area cultivated (Hect)
		Number Owned	Number used	
		07	08	07
E.1.2.1	Controlled balls			
E.1.2.2	Uncontrolled balls			
E.1.2.3	Cows			
E.1.2.4	Dungheys			
E.1.2.5	Tractor			
E.1.2.6	Power Tiller			

E.1.3 USE OF ORGANIC FERTILISERS
Give details on the use of organic fertilizers during 2007/08 agricultural year

Type of	No. of	2007/08		Area used (Hect)
		Year-1, No-2	Year-2	
		(1)	(2)	(3)
E.1.3.1	Manure			
E.1.3.2	Compost			

E.1.4 ACCESS TO INPUTS
Give details on inputs used during 2007/08 agricultural year

SPN	Name of inputs	Used		Source	Notes
		Year-1, No-2	Year-2		
		07	08	07	08
E.1.4.1	Inorganic fertilizers				
E.1.4.2	Farm yard manure				
E.1.4.3	Compost				
E.1.4.4	Wattle				
E.1.4.5	Manure/liquid/Plant/Animal				
E.1.4.6	Plant and seeds control chemicals				
E.1.4.7	Improved seeds				

Source (Code)

Government.....01
Cooperative Union.....02
Farm input store/merch.....03
Auction.....04
Development project.....05
Crop buyers.....06
Large Scale farms.....07
Made by the household.....08
From neighbour.....09
Cooperative Union.....10
Others.....99
Not applicable.....99

Where from (Code)

Over 10 hectares.....1
Between 5 and 10 hectares.....2
Between 1 and 5 hectares.....3
Between 0.5 and 1 hectares.....4
Over 0.5 hectares.....5
All vegetables.....6

E.1.5 IRRIGATED FARMING

E.1.5.1 Did the household use irrigated farming during 2007/08 agricultural year? -1, No-2
If the answer is yes proceed to Section 5.6

No.	Main source of water for irrigation	Main source of electricity	Area that was irrigated (Hect)		Area irrigated during 2007/08 agricultural year (Hect)	
			Year-1, No-2	Year-2	Year-1, No-2	Year-2
		07	08	07	08	07
E.1.5.2						

Source of electricity (Code)

State.....1
Line.....2
Solar.....3
Other.....4

Source of irrigation water (Code)

Canal.....1
River.....2
Lake.....3
Dug wells.....4
Boreholes.....5
Other.....6

Source of irrigation water (Code)

Hand pump.....1
Electric pump.....2
Other (Specify).....3

Definitions and working page for page 9

Storage (Col. 33, Q 5.3.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology.

Marketing Challenges Q 5.3.1 Col. 35:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulating transportation and selling of crops.

Inputs (Q 5.3.1)

Farm Yard Manure: An organics fertliser made on farm from animal dung.

Compost: An organic fertiliser made on farm from decomposed plant materials.

Insecticides: This is the chemical usde in protecting plants or killing pests.

Fungicides: Protects plants from fungi attack.

Herbicide: Chemicals used to control or kills weeds.

Improved seeds: Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.3.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Q 5.3.1 Col 35

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 10

Investment in agriculture

Investment activities:

Investment activities refer to medium to long term farm development structures and projects. This can be irrigation structures, erosion control and water harvesting structures or other permanent or semi-permanent investment made on the land that the household owns.

Irrigated farming: Section 6.5:

Source of irrigation water (Col 1): The main source of the water used for irrigation.

Method of obtaining water (Col 2): The mechanism by which the water is extracted from the source

Irrigatable area (Col 3): The area the irrigation system is designed to cover in acreage

Area of irrigated land during the 2007/08 (Col 5): Area of land under irrigation during the 2007/08 agricultural year. This is the actual area and NOT the cumulative areas recultivated in 2 or more cropping seasons.

Q 6.5 Irrigation.

1. If a household uses irrigated farming give explanations on source and method of obtaining water.

2. See Col 10, Q. 5.1.1 and 5.2.1 and Col 12, Q 5.3.1 to see if irrigation was applied to any crop.

Farm implements, Q 6.1:

1. Column 2 Indicate whether or not inputs were used

2. Complete column 3 by entering the number of inputs used.

Farm Implements (Col. 1):

Machette: Include all implements use in tree cutting namely cicle, et.c.

Sprinkler: The pump carried on the back or a hand used water pump

Handused small tractor: A small tractor used in cultivation while the user walks on foot (see photo).



Farm inputs: Sections 6.3 and 6.4

1. Column 2 Indicate whether or not inputs were used.

2. Complete column 3 by indicating where the inputs were obtained and column 4 by indicating the distance from where the inputs were obtained

Compost: An organic fertiliser made on farm from decomposed plant materials.

Insecticides: This is the chemical used in protecting plants or killing pests.

Fungicides: Protects plants from fungi attack.

Herbicide: Chemicals used to control or kills weeds.

Improved seeds: Scientifically attested to be suitable for agricultural use.

Section 6.2 Use of draft animals

Animals used in agricultural activities by the household during 2007/08 agricultural season.

Castrated Bulls: Castrated oxen meant for use in agricultural production.

Uncastrated Bulls: mature bulls used for agricultural activities but are not castrated.

Cow: Farmers also use mature female cattle in agricultural activities due to shortage of bulls

Donkey: Mature Male or female donkeys are also used for agricultural production.

6. SOIL EROSION		Identification		<input type="text"/>																																			
6.1 Did the household experience soil erosion during 2007/08 agricultural year? <i>(Year-1, Ha-1)</i>		<input type="checkbox"/>																																					
6.2 Did the household apply any methods for erosion control/water harvesting during 2007/08 agricultural year? <i>(Year-1, Ha-2) [If the answer is Ha, Proceed to Section 7.1]</i>		<input type="checkbox"/>																																					
<table border="1"> <thead> <tr> <th>Mechanisms of controlling erosion/ Water harvesting</th> <th>Number of males</th> <th>Year of erosion line</th> </tr> <tr> <th><i>(Y)</i></th> <th><i>(Y)</i></th> <th><i>(Y)</i></th> </tr> </thead> <tbody> <tr> <td>6.1 Terraces</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.2 Banks for erosion control</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.3 Gabions/ sand bags</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.4 Velina leaves</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		Mechanisms of controlling erosion/ Water harvesting	Number of males	Year of erosion line	<i>(Y)</i>	<i>(Y)</i>	<i>(Y)</i>	6.1 Terraces	<input type="text"/>	<input type="text"/>	6.2 Banks for erosion control	<input type="text"/>	<input type="text"/>	6.3 Gabions/ sand bags	<input type="text"/>	<input type="text"/>	6.4 Velina leaves	<input type="text"/>	<input type="text"/>	<table border="1"> <thead> <tr> <th>Type of erosion control/water harvesting</th> <th>Number of males</th> <th>Year of erosion line</th> </tr> <tr> <th><i>(Y)</i></th> <th><i>(Y)</i></th> <th><i>(Y)</i></th> </tr> </thead> <tbody> <tr> <td>6.1 Tree belt</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.2 Soil banks of water harvesting</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.3 Terraces</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>6.4 Other</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		Type of erosion control/water harvesting	Number of males	Year of erosion line	<i>(Y)</i>	<i>(Y)</i>	<i>(Y)</i>	6.1 Tree belt	<input type="text"/>	<input type="text"/>	6.2 Soil banks of water harvesting	<input type="text"/>	<input type="text"/>	6.3 Terraces	<input type="text"/>	<input type="text"/>	6.4 Other	<input type="text"/>	<input type="text"/>
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6.3 Terraces	<input type="text"/>	<input type="text"/>																																					
6.4 Other	<input type="text"/>	<input type="text"/>																																					
7. ACCESS TO ON FARM CREDITS																																							
7.1 In there any household member who secured on farm credit during 2007/08 agricultural year? <i>Year-1, Ha-2 [If answer is NO, Proceed to Section 7.2]</i>		<input type="checkbox"/>																																					
SELECT UP TO THREE SOURCES AND PROCEED TO QUESTION 7.1 <i>Reason for non-accessing credit (If any)</i> Required _____ 1. Denied to be included _____ 2. Did not know how to access credit _____ 3. Credit delayed _____ 4. Did not credit allowed _____ 5 Inavailable _____ 6. High interest rate _____ 7. Insolvency _____ 8. Other (Specify) _____ 9		Credit provided to (Male, Year-2)			7.1.1 <input type="checkbox"/>			7.1.2 <input type="checkbox"/>																															
7.2 IF THE ANSWER TO QUESTION 7.1 IS NO Give reasons for not accessing credit <i>Reason for non-accessing credit (If any)</i> Required _____ 1. Denied to be included _____ 2. Did not know how to access credit _____ 3. Credit delayed _____ 4. Did not credit allowed _____ 5 Inavailable _____ 6. High interest rate _____ 7. Insolvency _____ 8. Other (Specify) _____ 9		<input type="checkbox"/>																																					
8. ADVISORY SERVICES IN AGRICULTURE																																							
8.1 Did the household participate in subsequence scheme during 2007/08 agricultural year? <i>(Year-1, Ha-2)</i>		<input type="checkbox"/>																																					
8.2 Did the household participate in the national Farming during 2007/08 agricultural year? <i>(Year-1, Ha-2)</i>		<input type="checkbox"/>																																					
8.3 Did your household receive agricultural advice on the following: <i>(IF THE ANSWER IS YES, GO TO QUESTION 8.3.1)</i>																																							
8.3.1		Received advice <i>(Year-1, Ha-2)</i>		Source of advice																																			
8.3.1.1		[2]		[3]																																			
8.3.1.2 Spacing		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.3 Use of agrochemicals		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.4 Soil erosion control		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.5 Use of organic manure		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.6 Malunziya mbumba ya simandani		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.7 Use of improved seeds		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.8 Use of modern farm implements		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.9 Irrigation		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.10 Crop Storage		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.11 Fertilizer		<input type="checkbox"/>		<input type="checkbox"/>																																			
8.3.1.12 Other (Specify)		<input type="checkbox"/>		<input type="checkbox"/>																																			
<i>Source of receiving advice (If any)</i> Government _____ 1. NGO/Community group _____ 2. Cooperative _____ 3. Local Government _____ 4. Radio/Television _____ 5. Neighbor _____ 6. Others (Specify) _____ 7																																							

Definitions and working page for page 11

Q 6.6

The type of erosion control/Water harvesting (Col 1)

Terraces: Structures constructed on mountain slopes to provide flat terrain for crop planting.

Erosion control bunds: these are bunks of earth/stones built perpendicular to the slope to slow down the speed of water and thus preventing soil erosion. Its differs from terraces in that the soils on these banks are not at ground level .

Gabions: A box like structure made of wire and filled with large stones to prevent gully erosion.

Sand bags: Are used in controlling and preventing gully erosion
Tree belt/wind breaks: Trees planted against the wind direction for breaking wind speed..

Section 7.0 Acces to credit for crop or livestock production

Credit refers to something provided in cash or in kind (such as farm inputs, machines, livestock and other things) for crop or livestock production. The value of the credit must be repaid back to the lender. An Interest may or may not be attached to the value of the credit

The credit may be repaid either in cash or through farm produce to be harvested .

In this question the enumerator is at liberty to inquire up to three sources of credit where the farmer accessed credit from more than one source.

Section 8.0 Agricultural Extension Services

Agricultural Extension Services: Refers to educational services provided to farmers by extension officers for the purposes of increasing crop and livestock production.

Share-cropping: Refers to farming where smallholder / Smallscale farmer enters into an agreement with large scale farmer where the former sells produce to the latter in exchange of provisions of farm inputs and the like. .

Contract farming Farming: Farming agreement entered between smallscale and large scale farmers with regards to markets of farm produce and provision of farm inputs

Q 6.6 Number of water harvesting structures and year of construction

1. The number water harvesting structures refers to the number of working / maintained structures and does not include derelict or irreparable structures.

2. Year of construction refers to the year in which the structures were built, and not the year the structures were last repaired. The year should be written in figures e.g. 1998, 2006.

Section 7.0 Source of agriculture credit

If the farmer obtained credit from more than one source the use the code from the list provided. Start with the main source of credit in Section "7.1.1" a

Section 8.0 Agricultural extension services

1. Ask if the household did receive agricultural extension services during 2007/08 agricultural season from the respondents listed in column 1, then enter column 2.

2. Complete all columns for every extension officer.

9.1 LIVESTOCK (LIVESTOCK AND FISH) <small>Classification</small> <input type="text"/>						
9.1 CATTLE						
Did your household keep or raise cattle during 2007/08 agriculture year? Yes-1, No-2 (If the answer is No proceed to Section 9.3) <input type="checkbox"/>						
Number of cattle as of 1.10.2008						
No.	Type of cattle	Number of indigenous cattle	Number of improved cattle		Total	
		<i>IS</i>	For meat <i>IS</i>	Dairy <i>IS</i>	<i>IS</i>	
9.1.1	Cartrated bull	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.2	uncartrated bull	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.3	Cow	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.4	Steers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.5	Heifer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.6	Male calver	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.1.7	Female calver	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Grand total						<input type="text"/>
9.1.8 What main methods do you use to identify your cattle? <input type="checkbox"/>						
Cattle identification methods by using (tags, marks) ... 1 ... Throat ... 2 ... Cattle collars ... 3 ... Colour ... 4 ... Gait ... 5 ... Other ... 6 ...						
9.2 Milk production: CATTLE						
No.	Season	Type of cattle	Number of milked cows	Receipt of prices per litre (Rs)	Receipts of total milk (litres) per cow	Average price per litre per season
	<i>IS</i>	<i>IS</i>	<i>IS</i>	<i>IS</i>	<i>IS</i>	<i>IS</i>
9.2.1	Rainy	Improved	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.2		Indigenous	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.3	Dry	Improved	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.4		Indigenous	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3 GOAT						
Did your household keep or raise cattle during 2007/08 agriculture year? Yes-1, No-2 (If the answer is No proceed to Section 9.3) <input type="checkbox"/>						
Number of goats as of 1.10.2008						
No.	Type of goat	Number of indigenous	Number of improved		Total	
		<i>IS</i>	For meat <i>IS</i>	Dairy <i>IS</i>	<i>IS</i>	
9.3.1	Male uncartrated goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3.2	Male cartrated goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3.3	She goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3.4	Male kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3.5	She kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Grand total						<input type="text"/>
Milk Production: GOAT						
No.	Season	Number of milked goats	Receipt of prices per litre (Rs)	Receipts of total milk (litres) per goat	Average price per litre per season	
	<i>IS</i>	<i>IS</i>	<i>IS</i>	<i>IS</i>	<i>IS</i>	
9.3.6	Rainy	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.3.7	Dry	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

Definitions and working page for page 12

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.1.1 to 9.1.7 Cattle

Note:

Q 9.1 is for the actual number of cattle owned or kept by the household (as of 1st October 2008). This number does not include herds of cattle kept on behalf by relatives or neighbours; that is, the cattle outside the residential area of the household under survey.

1. If the the household keep mature fecund female cattle, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of cattle (section 9.1.1 to 9.1.7)

Bull: Mature uncastrated male cattle used for breeding

Cow: Mature female cattle that has given birth at least once

Ox: Castrated male cattle used for farm work

Steer: Castrated male cattle used for meat

Heifer: Female cattle of 1 year up to the first calving

Calves: Young cattle under 1 year of age

Section 9.3 Goat

Note:

Question 9.3 is for the actual number of owned or raised by the household (as of 1st October 2008) This number does not include goats kept on behalf by relatives or neighbours, that is the goat outside the residential area of the household under survey.

1. If the household has she goats, you would normally expect them to have kids

Type of Goat (Qs 9.3.1 to 9.3.5)

Billy Goat (he-goat): Mature Uncastrated male goat used for breeding

Castrated goat: Male goat that has been castrated

She Goat: Mature female goat over 9 months of age

Identification <input type="text"/>					
9.4 SHEEP				9.5 PIGS	
Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No= 2 (If the answer is No proceed to Section 9.5) <input type="checkbox"/>				Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No= 2 (If the answer is No proceed to Section 9.6) <input type="checkbox"/>	
Number of sheep as of 1.10.2008				Number of pigsp as of 1.10.2008	
Na.	Type of sheep	Number of indigenous sheep	Number of improved	Total	
	(1)	(2)	(3)	(5)	
9.4.1	Ram	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.4.2	Castrated sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.4.3	She sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.4.4	Male lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.4.5	Female lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Grand total				<input type="text"/>	
Na.	Type Pigs	Number of pigs			
	(1)	(2)			
9.5.1	Boar	<input type="text"/>			
9.5.2	Castrated male	<input type="text"/>			
9.5.3	Sow/Gilt	<input type="text"/>			
9.5.4	Male piglet	<input type="text"/>			
9.5.5	Female piglet	<input type="text"/>			
Grand total				<input type="text"/>	
9.6 OTHER LIVESTOCK					
Aina ya mnyama		Number as of 1 October 2008	Idadi ya Magai 07/08 agriculture ye	Type of animal	Number of Eggs
(1)		(2)	(3)	1	(3)
9.6.1	Local chicken	<input type="text"/>	<input type="text"/>	9.6.6	Turkeys <input type="text"/>
9.6.2	Layers	<input type="text"/>	<input type="text"/>	9.6.7	Rabbit <input type="text"/>
9.6.3	Broilers	<input type="text"/>	<input type="text"/>	9.6.8	Donkeys <input type="text"/>
9.6.4	Ducks	<input type="text"/>	<input type="text"/>	9.6.9	Horses <input type="text"/>
9.6.5	Guinea pigs	<input type="text"/>	<input type="text"/>	9.6.10	Dogs <input type="text"/>

Definitions and working page for page 13

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.4 Sheep

Note:

Q 9.4 is for the actual number of sheep owned or kept by the household (as of 1st October 2008). This number does not include sheep kept on behalf by relatives or neighbours; that is, the sheep outside the residential area of the household under survey.

1. If the the household keep ewes, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of Sheepe (Section 9.4.1 to 9.4.5)

Ram: Mature Uncastrated male sheept used for breeding

Castrated sheep: Male sheep that has been castrated

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Section 9.5 Pigs

Note:

Question 9.3 is for the actual number of pigs owned or raised by the household (as of 1st October 2008). This number does not include pigs kept on behalf by relatives or neighbours, that is the cattle outside the residential area of the household under survey. .

1. If the household has she goats, you would normally expect them to have kids in column

Type of Pigs (Qs 9.5.1 to 9.5.5)

Boar: Mature Uncastrated male pig used for breeing

Sow: Mature female pig that has given birth to at least one ltter of pigs.

Gilt; Female pig of over 3 months up to the first farrowing

Definitions and working page for page 14**Control of livestock diseases causing bugs**

Livestock worm control medicine: Medicine used to kill or control livestock on livestock. It is often used for cattle, goats, sheep and pigs.

Tiick: Is a dangerous bug that sucks blood from livestock and transmits animals diseases from one to the other animal.

Tsetse fly: A fly like bug that sucks blood from livestock and transmits diseases sleewping sickness from one to the other animal.

Livestock advice (Section 9.8)

IA service provided by extension officers to livestock keepers for increasing livestock

9.9 FISH FARMING														Identification <input type="text"/>			
Did your household practice fish farming? Yes=1, No=2 (If the answer is no proceed to section 9.10) <input type="checkbox"/>																	
Give details on the fish farming during 2007/08 agriculture year																	
No.	Number of Ponds	Area of water surface (m ²)	Source of fingerlings	What is the frequency of stocking	Time taken to harvest	Total number of stoked fish				Total number of fish harvested	Total weight of all fish		What is the main fish sold to?				
						Tilapia	Musitika	Crab	Lala		usulinusius (kg)	usulinuzus (kg)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)				
9.9.1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				
9.9.2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				
9.9.3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				
Type of Ponds (Col 2)		Source of fingerlings (Col 4)			mainly sold to? (Col 14)												
Natural pond.....1		From the pond.....1 Neighbour.....4			Neighbour.....1 Auction.....3 Large Scale farmers.....5												
Small earth pond.....2		Government.....2 Business man.....5			Open market.....2 Fish processing industry.....4 Private business people.....6												
Large pond.....3		NGO/Development Project.....3 Natural Pond.....6			Did not sell.....7 Other.....8												
Other.....4		Other.....8															
9.10 HONEY PRODUCTION																	
Is there honey production/harvesting in your household? Yes=1, No=2 (If answer is no PROCEED to Section 9.11) <input type="checkbox"/>																	
Give details on honey harvesting during 2007/08 agriculture year																	
Number	Type of honey	Harvesting year? (Yes=1, No=2)	Number of improved bee hives	Number of local bee hives	Amount sold per year (litre)	Amount of honey sold (litre)	Price per litre	Main market									
									(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
9.10.1	Small beehive	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
9.10.2	Large beehive	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
Honey outlet (Col 8)																	
Neighbour.....1 Auction.....3																	
Large Scale farmers.....5																	
Open market.....2 Fish processing industry.....4																	
Private business people.....6																	
Did not sell.....7																	
9.11 AGRICULTURAL CHALLENGES																	
From the list of challenges in farming on the right of the page, SELECT FIVE MAIN CHALLENGES WHICH constrain your development in agriculture																	
No	With first five priorities	Code	No	Important for	Code												
	(1)	(2)		(1)	(2)												
9.11.1	Priority 1	<input type="text"/>	9.11.4	Priority 4	<input type="text"/>												
9.11.2	Priority 2	<input type="text"/>	9.11.5	Priority 5	<input type="text"/>												
9.11.3	Priority 3	<input type="text"/>															

LIST OF CHALLENGES

01 Land availability 02 Land ownership 03 Poor farm implements 04 Soil fertility 05 Availability of improved seeds 06 Irrigation services 07 Availability of agrochemicals 08 Clots of farm inputs 09 Extension services 10 Availability of forest resources 11 Harsh and collection problems 12 Water availability 13 Access to credits 14 Lack of off farm incomes 15 Harvesting problems 16 Kupukudus 17 Crop storage 18 Crop processing 19 Market information 20 High transportation costs 21 Destructive animals 22 Crop theft 23 Pests and diseases 24 Advice from Local government 25 Long dry spells 26 Conflicts between livestock keepers and pastoralists

Definitions and working page for page 15

General definitions

Fish farming: Refers to the rearing/production of fish. It is different from fishing in that in fish farming the fish have to be reared. While in fishing, fishing nets or traps are used to catch fish from rivers, lakes and the sea; thus fishing should not be included in this section

I

Question Specific Definitions (Q9.9)

Production unit number (Col 1): A production unit is a pond river/lake which is treated as a separate entity for the production of fish eg it may be by virtue of manageable size, maturity of fish, tye of fish etc. eg. a farmer may have 3 fish ponds (each one is a separate production unit).

Frequency of stocking (Col. 5): What is the number of time the farmer puts new fingerlings into the pond each year.

Fingerlings: These are young immature fish used for stocking ponds.

Sols: (Col 10 & 11)

If no fish were sold enter "0" in column 10 and 11`

Fish sold (Col.12)

Kama hakuna samaki waliouzwa jaza "0" katika safuwima 12

Working space for page 15

Definitions and working page for page 16**10.0 Household poverty indicators****Number of rooms used for sleeping in the household (Q 10.1.4)**

Include sitting room, dining room, kitchen, etc if used for sleeping.

It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building / house that is not divided into rooms is considered to have one room.

Household assets (Q 10.2):

These assets must be functional. Do not include if broken.

Access to drinking water (Q 10.4):

If there is more than one source use the one, which the hh uses most frequently.

Main source of hh cash income: (Q 10.7):

Activity that provides the hh with the most cash during 2007/08 agricultural season.

Average maximum yields per area

Use this table to compare the yields calculated in Sections 5.1, 5.2 and 5.3.

These stats are strictly to be used as a guide for the purpose of assisting to get the correct area at

No	Name of Crop	Kilogram/ha		Kilogram/acre		No	Name of Crop	Kilogram/ha		Kilogram/acre	
		Average	Max	Average	Max			Average	Max	Average	Max
11	Maize	1,150	6,250	466	2,530	86	Cabbage	20,000	50,000	8,097	20,243
12	Paddy	700	4,000	283	1,619	87	Tomatoes	25,000	60,000	10,121	24,291
13	Sorghum	750	3,500	304	1,417	88	Spinach	15,000	17,000	6,073	6,883
14	Bulrush Mill	350	3,000	142	1,215	89	Carrot	25,000	30,000	10,121	12,146
15	Funger Mill	300	2,500	121	1,012	90	Pepper	3,500		1,417	0
16	Wheat	1,150	4,500	466	1,822	91	Amaranthus	20,000	40,000	8,097	16,194
17	Barley	1,400	1,800	567	729	92	Pumpkin	35,000	40,000	14,170	16,194
16	Cassava	3,000	7,000	1,215	2,834	93	Cucumber	5,000	10,000	2,024	4,049
17	Sweet potato	600	8,000	243	3,239	94	Egg plant	30,000	60,000	12,146	24,291
18	Irish potato	750	8,500	304	3,441	95	Water melon	10,000	20,000	4,049	8,097
19	Yams	4,000	10,000	466	1,822	96	Caouliflowe	17,000	20,000	8,097	16,194
25	Coco yams	2,500	5,000	567	729	52	Cotton	800	25,000	14,170	16,194
26	Onions	30,000	50,000	1,215	2,834	54	Coffee	500	100	2,024	4,049
27	Ginger	20,000	30,000	243	3,239	55	Tea	2,500	10,000	12,146	24,291
31	Mah Bean	400	1,300	304	3,441	56	Cocoa	150	1,000	4,049	8,097
32	Cow peas	300	1,750	121	709	57	Rubber	400	1,400	6,883	8,097
33	Green gram	1,500	1,800	1,012	2,024	58	Wattle			324	10,121
34	Pigeon peas	600	1,500	243	607	59	Kapok			0	0
35	Chick peas	500	1,500	202	607	60	Sugar cane	60,000	150,000	24,291	60,729
36	Bambara nu	600	4,000	243	1,619	61	Cardamon	3,000		1,215	0
41	Sun flower	600	1,700	243	688	71	Banana	10,000	50,000	4,049	20,243
42	Simsim	300	1,000	121	405	72	Avocado			0	0
43	Gound nuts	600	4,000	243	1,619	73	Mango	10,000	25,000	4,049	10,121
47	Soyabeans	1,300	2,500	526	1,012	74	Pawpaw	50,000	70,000	20,243	28,340
48	Caster seed	300	750	121	304	76	Orrage	15,000	40,000	6,073	16,194
75	Pineapple	25,000	60,000	10,121	24,291	77	Grape fruit	30,000	50,000	12,146	20,243
50	Cotton	300	1,500	121	607	78	Grapes	5,000	30,000	2,024	12,146
51	Tobacco	500	1,500	202	607	79	Mandarin	15,000	40,000	6,073	16,194
53	Pyrethrum			0	0	80	Guava	7,000	35,000	2,834	14,170
62	Jute	800	3,500	324	1,417	81	Plums			0	0
44	Palm oil	1,150	5,000	466	2,024	82	Tufaha		20,000	0	8,097
45	Cononut	1,500	8,000	607	3,239	83	Pea	15,000	27,000	6,073	10,931
46	Cashw nut	9	60/tree	4	24	84	Pitches	14,000	57,000	5,668	23,077
						66	Clove	4,500	5,000	1,772	1,969
							Black pepp	2,000	3,750		
							Mung'unye				
							Ocra	1,000	1,500		

Appendix V

Village Community Level formats

ACQ 3	United Republic of Tanzania				CONFIDENTIAL																						
																											
 Village/Community Level Formats 																											
Access to and Use of Community Resources Farm Gate Prices of commodities produced by the village																											
																											
Agricultural Sample Census 2007/2008																											
Region				Ward																							
District				Village																							
NUMBER OF FARMERS/HH IN THE VILLAGE To be filled by the enumerator after completing item 3.0.0.0																											
NUMBER OF HH MEMBERS To be filled by the enumerator after completing item 3.0.0.0																											
Enumerator Name																											
Date of Enumeration																											
<table style="width:100%; text-align:center;"> <tr> <td style="border:1px solid black; width:20px; height:20px;"></td> </tr> <tr> <td>dd</td> <td>mm</td> <td>yy</td> <td>yy</td> <td>yy</td> <td>yy</td> <td>Hour</td> <td>Minutes</td> </tr> </table>												dd	mm	yy	yy	yy	yy	Hour	Minutes	<table border="1" style="width:100%; text-align:center;"> <tr> <th style="width:50%;">Hour</th> <th style="width:50%;">Minutes</th> </tr> <tr> <td style="border:1px solid black; width:20px; height:20px;"></td> <td style="border:1px solid black; width:20px; height:20px;"></td> </tr> <tr> <td style="border:1px solid black; width:20px; height:20px;"></td> <td style="border:1px solid black; width:20px; height:20px;"></td> </tr> </table>		Hour	Minutes				
dd	mm	yy	yy	yy	yy	Hour	Minutes																				
Hour	Minutes																										
Field level checking by:																											
District Supervisor	Name	Signature	Date	To be filled by the supervisor ONLY after field level checking of the enumeration process. This should be countersigned by the Supervisor/In-charge of the enumerator.																							
Regional Supervisor	Name	Signature	Date																								
National Supervisor	Name	Signature	Date																								
District checking in office																											
District Supervisor	Name	Signature	Date	All questionnaires must be checked in the district office.																							
For Use at Regional Level Only																											
Date received by:	Name	Signature	Date	See the back page for details of queries.																							
Guard	Name	Signature	Date																								
Ministry of Agriculture and Food Security, Ministry of Livestock and Fisheries Development, Ministry of Agriculture and Development of Livestock, Ministry of Water and Irrigation, Private Ministries, Village Extension, Horticulture and Small Businesses, Ministry of Industrial Trade and Handicrafts, National Bureau of Statistics, and the Union of the...																											

Definitions and working page for page 3

Question Specific Definitions:

Obtain answers to the following questions from the meeting between the enumerator and influential farmers in the village. Influential people can be Village Chairman, Village Government Executive Officer, Councillor, Ward Chairman, Extension Officer in the village or any other person in the village and who is well informed about village matters. It is important to not that these questions must be asked in groups (of more than one people) to obtain answers discussed and approved by many people.

Definitions of some specific terms

Access to community resources. Section 1.0

Community Resources: Resources in which the hh members have no individual claim to and which are shared together by all the village

Community Land: The area official demarcated by the village as shared/public land.

Squatting farmers Land: Communal land where individual hhs make sole claim to (for crop farming or fenced livestock) without official rights to ownership.

Available remaining Land: Official area of communal land minus areas of squatting farmers.

Government Land Reserve: Area set aside by the government as national reserve

Community tree planting scheme (Section 14.3)

Community Forest: A forest planted on the communal land which is planted, replanted or spt planted by the members of the village.

Plant Planting: An area designated by the village for planting a block of trees.

Spot Planted: Replanting an area where selective logging has been carried out. A tree is planted to replace the one that has been cut.

Indigenous Trees: Trees that are native to Tanzania

Exotic Trees: Trees that are not native to Tanzania

Non Government Organisation: Is managed by people from outside the village and it normally covers more than one village/District/Region. Its function is to provide development assistance to the farmer and is free from direct government links.

Village level organization: is managed by members of the village. Its purpose is normally to access/provide development assistance to the village

ACCESS TO COMMUNAL RESOURCES

1.1. How many of the following communal resources are available in your village? (Yes=1, No=2)		<input type="checkbox"/>					
1.2. Total area of communal land		<input type="text"/>					
1.3. Area of available forest in communal		<input type="text"/>					
1.4. Grazing available communal land		<input type="text"/>					
1.5. Communal water point		<input type="text"/>					
2. PARTICIPATION IN NATURAL RESOURCES MANAGEMENT ACTIVITIES							
2.1. Community resources		2.2. Distance from the resource (km)					
2.3. Water for household use		<input type="text"/>					
2.4. Water for livestock		<input type="text"/>					
2.5. Communal grazing land		<input type="text"/>					
2.6. Communal forestland		<input type="text"/>					
2.7. Wood for charcoal burning		<input type="text"/>					
2.8. Wood for building poles		<input type="text"/>					
2.9. Fodder for keeping bees		<input type="text"/>					
2.10. Beeskeeping		<input type="text"/>					
2.11. Fencing		<input type="text"/>					
3. COMMUNITY PLANTED TREES							
3.1. Did your village have a committee for planting trees during 2007/08 period? (Yes=1, No=2)							
3.2. Details of the community tree planting scheme							
No.	Number of trees planted	Type of trees	Type of trees	Number of trees planted	Number of trees planted	Number of trees planted	Number of trees planted
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.3. How successful was the tree planting scheme?		3.4. Community based organizations		3.5. Did the village have any CBO during the 2007/08 period? (Yes=1, No=2)		3.6. Type of CBO	
3.7. Did the village have field crop schools during 2007/08 period? (Yes=1, No=2)		3.8. Did the village have local committees during 2007/08 period? (Yes=1, No=2) (If the answer is 2 proceed to q. 5.5)		3.9. Did the village participate in any research or survey/extension/training during the 2007/08 period? (Yes=1, No=2)		3.10. Did the village have any training systems or adult schools during 2007/08 period? (Yes=1, No=2) (If the answer is 2 proceed to q. 5.5)	
3.11. Number of local committees		<input type="text"/>		3.12. Number of training systems for local animals		<input type="text"/>	