



Republic of Zambia

CENTRAL STATISTICAL OFFICE

POST HARVEST SURVEY



2011-2012 AGRICULTURE SEASON

Available at Central Statistical Office



POST HARVEST SURVEY

REPORT FOR THE 2011/2012

AGRICULTURAL SEASON

(Small and Medium Scale Farmers)

Published by

Central Statistical Office
P. O. Box 31908, Lusaka- Zambia

Tel: 251377/251370/253468/256520 Fax: 253468/256520

E-mail: info@zamstats.gov.zm

Website: www.zamstats.gov.zm

November 2014

COPYRIGHT RESERVED

*Extracts may be published if
Sources are duly acknowledged*

PREFACE

The Central Statistical Office (CSO) conducts on annual basis, agriculture sample surveys covering the Small and Medium Scale Farmers. Information on all Large-Scale Farms is collected during the same period. The data collection is undertaken during the months of October and November of each year.

This report covers the activities of the Small and Medium Scale Farmers in the country. Information contained in this report relates to the Agricultural Season which commenced on 1st October 2011 and ended on 30th September, 2012.

The analysis of agricultural households by type of agricultural activities is done in this report. The information presented includes, among other statistics: number of rural households and type of agricultural activity they are engaged in; crop production and input use; livestock and poultry rearing and use of draught animals and farm equipment.

I would like to thank the Ministry of Agriculture and Livestock (MAL) for financial contribution and the Indaba Agricultural Policy Research Institute (IAPRI) for their valuable technical contribution towards the preparation and eventual undertaking of this survey.

Special tribute goes to our respondents who have continued to be supportive over the years.



John Kalumbi
DIRECTOR CENSUS AND STATISTICS

November, 2014

TABLE OF CONTENTS

Preface	(i)
Table of Content	(ii)
List of Tables	(v)
Abbreviations/Acrymns	(ix)
Executive Summary	(x)

CHAPTER 1: BACKGROUND

1.0 Introduction.....	1
1.1 Objective of Post-Harvest Survey (PHS).....	1

CHAPTER 2: CONCEPTS AND DEFINATION

2.0 Introduction.....	2
2.1 General Concepts.....	2
2.2 General Definitions.....	3

CHAPTER 3: SURVEY METHODOGY AND ORGANISATION

3.0 Introduction.....	4
3.1 Sample Design	4
3.2 Household Sample	4
3.3 Field Supervision	4
3.3.1 Training.....	4
3.4. Data Processing and Analysis.....	4

CHAPTER 4: GENERAL CHARACTERISTICS OF AGRICULTURAL HOUSEHOLD

4.0 Introduction.....	5
4.1 Household Heads by Sex	5
4.2 Household Heads by Five Year Age Group	5
4.3 Education Status of Heads of Agricultural Households	6
4.4 Size of Agricultural Households.....	7
4.5 Marital Status of Heads of Agricultural Households.....	7

CHAPTER 5: CROP PRODUCTION

5.0 Introduction.....	9
5.1 Maize	9
5.1.1 Households Growing Maize.....	9
5.1.2 Total Area Planted to Maize and Fertilizer Applied	9
5.1.3 Total Maize Production and Sales.....	10

5.2 Sorghum.....	11
5.2.1 Households Growing Sorghum	11
5.2.2 Total Area Planted to Sorghum and Fertilizer Applied.....	11
5.2.3 Sorghum Production and Sales.....	12
5.3 Rice.....	13
5.3.1 Households Growing Rice	13
5.3.2 Total Area Planted to Rice and Fertilizer Applied.....	13
5.3.3 Rice Production and Sales.....	14
5.4 Millet.....	15
5.4.1 Households Growing Millet	15
5.4.2 Total Area Planted to Millet and Fertilizer Applied.....	15
5.4.3 Millet Production and Sales	16
5.5 Sunflower.....	16
5.5.1 Households Growing Sunflower	16
5.5.2 Total Area Planted to Sunflower and Fertilizer Applied.....	17
5.5.3 Sunflower Production.....	17
5.6 Groundnuts	18
5.6.1 Households Growing Groundnuts	18
5.6.2 Total Area Planted to Groundnuts and Fertilizer Applied.....	18
5.6.3 Groundnuts Production	19
5.7 Soya Beans.....	19
5.7.1 Households Growing Soya Beans	19
5.7.2 Total Area Planted to Soya Beans and Fertilizer Applied.....	20
5.7.3 Soya Beans Production.....	20
5.8 Mixed Beans	21
5.8.1 Households Growing Mixed Beans.....	21
5.8.2 Total Area Planted to Mixed Beans and Fertilizer Applied	21
5.8.3 Mixed Beans Production and Sales	22
5.9 Seed Cotton.....	22
5.9.1 Households Growing Seed Cotton	22
5.9.2 Total Area Planted to Seed Cottons and Fertilizer Applied	23
5.9.3 Seed Cotton Production.....	23
5.10 Irish Potato.....	24
5.10.1 Households Growing Irish Potatoes	24
5.10.2 Total Area Planted to Irish Potatoes and Fertilizer Applied.....	24
5.10.3 Irish Potatoes Production.....	25
5.11 Virginia Tobacco	26
5.11.1 Households Growing Virginia Tobacco	26
5.11.2 Total Area Planted to Virginia Tobacco and Fertilizer Applied.....	26
5.11.3 Virginia Tobacco Production.....	27
5.12 Burley Tobacco.....	27
5.12.1 Households Growing Burley Tobacco.....	27
5.12.2 Total Area Planted to Burley Tobacco and Fertilizer Applied	28
5.12.3 Burley Tobacco Production	28

5.13	Velvet Beans	29
5.13.1	Households Growing Velvet Beans	29
5.13.2	Total Area Planted to Velvet Beans and Fertilizer Applied	29
5.13.3	Velvet Beans Production	30
5.14	Bambara Nuts	31
5.14.1	Households Growing Bambara Nuts	31
5.14.2	Total Area Planted to Bambara Nuts and Fertilizer Applied	31
5.14.3	Bambara Nuts Production.....	32
5.15	Cow Peas	32
5.15.1	Households Growing Cow Peas	32
5.15.2	Total Area Planted to Cow Peas and Fertilizer Applied	33
5.15.3	Cow Peas Production	33
5.16	Sweet Potatoes	34
5.16.1	Households Growing Sweet Potatoes	34
5.16.2	Total Area Planted to Sweet Ptatoes and Fertilizer Applied.....	34
5.16.3	Sweet Potato Production.....	35

CHAPTER 6: LAND PREPARATION METHODS

6.0	Introduction.....	36
-----	-------------------	----

CHAPTER 7: LIVESTOCK AND POULTRY

7.0	Introduction.....	38
7.1	Cattle.....	38
7.1.1	Number of Cattle Raised	38
7.1.2	Number of Cattle Slaughtered	39
7.1.3	Number of Cattle Sold.....	40
7.1.4	Value of Cattle Sales	40
7.2	Pigs	41
7.2.1	Number of Pigs Raised.....	41
7.2.2	Number of Pigs Slaughtered	42
7.2.3	Number of Pigs Sold	42
7.2.4	Value of Pigs Sales.....	42
7.3	Goats	43
7.3.1	Number of Goats Raised	43
7.3.2	Number of Goats Slaughtered	43
7.3.3	Value of Goat Sold.....	44
7.4	Village Chickens.....	44
7.4.1	Number of Village Chickens Raised	44
7.4.2	Number of Village Chickens Slaughtered.....	45
7.4.3	Number of Village Chickens Sold.....	45
7.4.4	Value of Vllage Chicken Sales.....	45

APPENDIX

KEY PERSONS INVOLVED IN THE PRODUCTION OF THIS PUBLICATION.....	55
---	----

LIST OF TABLES

CHAPTER 4: GENERAL CHARACTERISTICS OF AGRICULTURAL HOUSEHOLD

Table 4.1: Percentage Distribution of Household Heads by Sex and Province, Zambia 2011/2012.....	5
Table 4.2: Percentage Distribution of Heads of Agricultural Households by Five Year Age Group and Province, Zambia 2011/2012	6
Table 4.3: Percentage Distribution of Heads of Agricultural Households and Highest Level of Education Completed by Province, Zambia 2011/2012	6
Table 4.4: Percentage Distribution of Agricultural Households by Household Size and Province, Zambia 2011/2012	7
Table 4.5: Percentage Distribution of Sex of Household Headsby Marital Status and Province, Zambia 2011/2012	8

CHAPTER 5: CROP PRODUCTION

Table 5.1: Percentage Distribution of Households Growing Maize by Province, Zambia 2011/2012.....	9
Table 5.2: Total Area Planted to Maize (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	10
Table 5.3: Distribution of Quantity of Maize Produced and Quantity of Maize Sold in Metric Tonnes by Province, Zambia 2011/2012	10
Table 5.4: Percentage Distribution of Households Growing Sorghum by Province, Zambia 2011/2012	11
Table 5.5: Total Area Planted to Sorghum (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	12
Table 5.6: Distribution of Quantity of Sorghum Produced and Quantity of Sorghum Sold in Metric Tonnes by Province, Zambia 2011/2012	12
Table 5.7: Percentage Distribution of Households Growing Rice by Province, Zambia 2011/2012	13
Table 5.8: Total Area Planted to Rice (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	14
Table 5.9: Distribution of Quantity of Rice Produced and Quantity of Rice Sold in Metric Tonnes by Province, Zambia 2011/2012	14
Table 5.10: Percentage Distribution of Households Growing Millet by Province, Zambia 2011/2012	15
Table 5.11: Total Area Planted to Millet (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	15
Table 5.12: Distribution of Quantity of Millet Produced and Quantity of Millet Sold in Metric Tonnes by Province, Zambia 2011/2012	16
Table 5.13: Percentage Distribution of Households Growing Sunflower by Province, Zambia 2011/2012	16

Table 5.14: Total Area Planted to Sunflower (Hectares) and Fertilizer Applied (Metric Tonnes) by, Province, Zambia 2011/2012	17
Table 5.15: Distribution of Quantity of Sunflower Produced and Quantity of Sunflower Sold in Metric Tonnes by Province, Zambia 2011/2012.....	17
Table 5.16: Percentage Distribution of Households Growing Groundnuts by Province, Zambia 2011/2012.....	18
Table 5.17: Total Area Planted to Groundnuts (Hectares) and Fertilizer Applied (Metric Tonnes) by, Province, Zambia 2011/2012	18
Table 5.18: Distribution of Quantity of Groundnuts Produced and Quantity of Groundnuts Sold in Metric Tonnes by Province, Zambia 2011/2012.....	19
Table 5.19: Percentage Distribution of Households Growing Soya Beans by Province, Zambia 2011/2012	19
Table 5.20: Total Area Planted to Soya Beans (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	20
Table 5.21: Distribution of Quantity of Soya Beans Produced and Quantity of Soya Beans Sold in Metric Tonnes by Province, Zambia 2011/2012.....	20
Table 5.22: Percentage Distribution of Households Growing Mixed Beans by Province, Zambia 2011/2012....	21
Table 5.23: Total Area Planted to Mixed Beans (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	22
Table 5.24: Distribution of Quantity of Mixed Beans Produced and Quantity of Mixed Beans Sold in Metric Tonnes by Province, Zambia 2011/2012.....	22
Table 5.25: Percentage Distribution of Households Growing Seed Cotton by Province, Zambia 2011/2012	23
Table 5.26: Total Area Planted to Seed Cotton (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	23
Table 5.27: Distribution of Quantity of Seed Cotton Produced and Quantity of Seed Cotton Sold in Metric Tonnes by Province, Zambia 2011/2012.....	24
Table 5.28: Percentage Distribution of Households Growing Irish Patatoesby Province, Zambia 2011/2012 ...	24
Table 5.29: Total Area Planted to Irish Potatoes (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	25
Table 5.30: Distribution of Quantity of Irish Potatoes Produced and Quantity of Irish Potatoes Sold in Metric Tonnes by Province, Zambia 2011/2012.....	25
Table 5.31: Percentage Distribution of Households Growing Virginiaia Tobacco by Province, Zambia 2011/2012.....	26
Table 5.31: Total Area Planted to Virginia Tobacco (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	26
Table 5.33: Distribution of Quantity of Virginia Tobacco Produced and Quantity of Virginia Tobacco Sold in Metric Tonnes by Province, Zambia 2011/2012.....	27

Table 5.34: Percentage Distribution of Households Growing Burley Tobacco by Province, Zambia 2011/2012.....	27
Table 5.35: Total Area Planted to Burley Tobacco (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	28
Table 5.36: Distribution of Quantity of Burley Tobacco Produced and Quantity of Burley Tobacco Sold in Metric Tonnes by Province, Zambia 2011/2012.....	28
Table 5.37: Percentage Distribution of Households Growing Velvet Beans by Province, Zambia 2011/2012.....	29
Table 5.38: Total Area Planted to Velvet Beans (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	30
Table 5.39: Distribution of Quantity of Velvet Beans Produced and Quantity of Velvet Beans Sold in Metric Tonnes by Province, Zambia 2011/2012	30
Table 5.40: Percentage Distribution of Households Growing Bambara Nuts by Province, Zambia 2011/2012.....	31
Table 5.41: Total Area Planted to Bambara Nuts (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	31
Table 5.42: Distribution of Quantity of Bambara Nuts Produced and Quantity of Bambara Nuts Sold in Metric Tonnes by Province, Zambia 2011/2012	32
Table 5.43: Percentage Distribution of Households Growing Cow Peas by Province, Zambia, 2011/2012.....	32
Table 5.44: Total Area Planted to Cow Peas (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	33
Table 5.45: Distribution of Quantity of Cow Peas Produced and Quantity of Cow Peas Sold in Metric Tonnes by Province, Zambia 2011/2012.....	33
Table 5.46: Percentage Distribution of Households Growing Sweet Potatoes by Province, Zambia 2011/2012.....	34
Table 5.47: Total Area Planted to Sweet Potatoes (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012	34
Table 5.48: Distribution of Quantity of Sweet Potatoes Produced and Quantity of Sweet Potatoes Sold in Metric Tonnes by Province, Zambia 2011/2012.....	35

CHAPTER 6: LAND PREPARATION METHODS

Table 6.1: Percentage Distribution of Area Prepared using Various Land Preparation Methods by Province, Zambia 2011/2012	36
Table 6.2: Percentage Distribution of Households using Different Land Preparation Methods by Province, Zambia 2011/2012	37

CHAPTER 7: LIVESTOCK AND POULTRY RAISING

Table 7.1a: Distribution of Number of of Households Raising Cattle between 1 st October 2011 and 30 th September 2012, by Province	38
Table 7.1b: Number of Cattle Raised on 1 st October 2011 and 30 th September 2012, by Province	39
Table 7.1c: Percentage Distribution of Cattle Raised as at 1 st October 2011 by Cattle Type and Province	39
Table 7.1d: Percentage Distribution of Cattle Raised as at 30 th September 2012 by Cattle Type and Province...40	
Table 7.2: Percentage Distribution of Cattle Slaughtered by Type and Province, Zambia 2011/2012	40
Table 7.3: Percentage Distribution of Cattle Sold by Type and Province, Zambia 2011/2012	40
Table 7.4: Percentage Distribution of Value of Cattle Sales by Type of Cattle and Province, Zambia 2011/2012	41
Table 7.5: Percentage Change in the Number of Pigs Raised byProvince, Zambia 2011/2012	42
Table 7.6: Percentage Distribution of Pigs Slaughtered by Type and Province, Zambia 2011/2012	42
Table 7.7: Percentage Distribution of Cattle Sold by Type and Province, Zambia 2011/2012	42
Table 7.8: Percentage Change in the Number of Goats Raised byProvince, Zambia 2011/2012.....	43
Table 7.9: Percentage Distribution of Goats Slaughtered by Type and Province, Zambia 2011/2012	43
Table 7.10: Percentage Distribution of Goats Sold by Type and Province, Zambia 2011/2012	44
Table 7.11: Percentage Distribution of Village Chickens Raised byProvince, Zambia 2011/2012.....	44
Table 7.12: Percentage Distribution of Village Chickens Slaughtered by Type and Province, Zambia, 2011/2012	45
Table 7.13: Percentage Distribution of Village Chicken Sold by Type and Province, Zambia 2011/2012	45

ABBREVIATIONS/ACRONYMS

ASMIS	-	Agricultural Statistics Management information System
CSO	-	Central Statistical Office
FAO	-	Food and Agriculture Origination
IAPRI	-	Indaba Agricultural Policy Research Institute
MACO	-	Ministry of Agriculture and Cooperatives
MAL	-	Ministry of Agriculture and Livestock
NGOs	-	Non-Government Organisations
PHS	-	Post Harvest Survey
PPS	-	Probability Proportional to Size
RS	-	Regional Statistician
SEAs	-	Standard Enumeration Area

EXECUTIVE SUMMARY

The following is a summary of findings from the 2011/2012 Post Harvest Survey (PHS) on Demographic characteristics, Crop production and Livestock and Poultry production.

Demographic Characteristics of Surveyed Agricultural Households

- *The survey results show that there were more male-headed agricultural households than female headed households. The majority of household heads were in age group 30-34 years.*
- *In terms of education status, there were more household heads who reported to have completed primary school education, with 56.9 percent at national level compared to those who completed other levels of education.*
- *There were a total of 1,409,659 agricultural households under small and medium-scale farming during the 2011/2012 agricultural season. Most agricultural households had 4-6 and 7-9 household members, representing 44.4 and 28.7 percent of all agricultural households, respectively. Households which had more than ten members (10+) accounted for 9.4 percent of the total.*
- *The majority of male household heads were in monogamous marriages, accounting for 88.1 percent of all male household heads. Northern Province had the largest proportion of males in monogamous marriages at 93.1 percent.*

Crop Production

Maize

- *The total area under maize production during the 2011/2012 agricultural season was estimated at 1,570,281.8 hectares, compared to 1,328,444 hectares during the 2010/2011 agricultural season, indicating 18.2 percent increase. An estimated 113,153 metric tonnes of basal fertilizer and 114,132 metric tonnes of top dressing fertilizer were used country wide on maize only. Approximately 2,938,295 metric tonnes of maize were produced during the season.*

Sorghum

- *An estimated 33,896.7 hectares were under sorghum production during the 2011/2012 agricultural season. About 226 metric tonnes of basal and 141 metric tonnes of top dressing fertilizer were used to produce sorghum countrywide. Approximately 17,505 metric tonnes of sorghum were produced during the season.*

Rice

- *Approximately 55,415.8 hectares were planted to rice during the 2011/2012 agricultural season. An estimated 157 metric tonnes of basal and 196 metric tonnes of top dressing fertilizer was used to produce 52,782 metric tonnes of rice during the 2011/2012 agricultural season.*

Millet

- *The total area planted to millet during the 2011/2012 agricultural season was estimated at 59,561.4 hectares. About 559 metric tonnes basal and 605 metric tonnes top dressing fertilizer was applied to millet. An estimated 41,732 metric tonnes of millet were produced country wide during the season.*

Irish Potatoes

- *About 2,132 hectares were planted to irish potato during the 2011/2012 agricultural season.*
- *Northwestern Province accounted for the largest area planted to irish potato with 46.6 percent of total area under Irish potato production.*
- *The total quantity of irish potato harvested by small and medium scale farmers in the 2011/2012 agricultural season was estimated at 3,803 metric tonnes.*
- *Northwestern Province produced the largest proportion of irish potato estimated at 62.5 percent of the entire production countrywide.*
- *Irish potato used about 115 metric tonnes of basal and 30 metric tonnes top dressing.*

Sweet Potatoes

- *An estimated 48, 841.4 hectares were planted to sweet potatoes in the 2011/2012 agricultural season.*
- *The total amount of basal and top dressing fertilizer applied to sweet potatoes during the 2011/2012 agricultural season was estimated at 111 metric tonnes and 132 metric tonnes respectively and about 117,081 metric tonnes of sweet potatoes were produced.*

Livestock and Poultry Raising

Cattle

- *The cattle population as at 30th September 2012 was estimated at 3,932,269 compared to 3,837,880 that were held as at 1st October 2011, indicating a percentage increase of about 2.5. An estimated 142,323 cattle were sold live. Approximately 317,355 animals were lost due to diseases and accidents while 27,710 animals were lost due to theft.*

Pigs

- *The number of pigs as at 30th September, 2012 was estimated at 1,517,492 compared to 1,616,869 that were held as at 1st October, 2011 representing a decrease of 6.1 percent. About 217,209 pigs were slaughtered during the 2011/2012 agricultural season. The highest number of pigs slaughtered was in Eastern Province with a proportion of 33.3 percent followed by Lusaka Province with 28.6 percent. An estimated 403, 091 pigs were sold during the 2011/2012 agricultural season at a total value of K90.1 billion.*

Goats

- *At national level, Goat population was estimated to be 3,023,585 as at 30th September 2012. Southern Province accounted for the highest percentage of about 34.4 percent of the total national stock. An estimated 470,629 goats were sold during the 2011/2012 Agricultural Season.*

CHAPTER 1: BACKGROUND

1.0 Introduction

The Post-Harvest Survey (PHS) covering the 2011/2012 Agricultural Season was conducted during the months October and November of 2012. The information collected and presented in this report refers to the agricultural season which started on 1stOctober 2011 and ended on 30thSeptember 2012.

Over the period during which the PHS have been conducted, the survey questionnaire has undergone several major revisions. The purpose has been to keep abreast with the changes occurring in the agricultural sector by capturing relevant data.

The PHS provides actual production data as opposed to production estimates provided by the Annual Crop Forecasting Survey.

1.1 Objectives of the Post-Harvest Survey (PHS)

The general objectives of the Post-Harvest Survey (PHS) include:

- *Provision of annual agricultural data that helps facilitate comprehensive analysis of the agricultural sector's contribution to the national economy.*
- *Provision of annual agricultural data that is useful for generation of performance indicators to facilitate interventions in the agriculture sector by government and other stakeholders.*

Specifically, the objectives of the survey include:

- (a) Provision of actual figures pertaining to:
 - *Area planted to individual crops;*
 - *Production quantities;*
 - *Sales of produce and income realized;*
 - *Purchase and use of agricultural inputs;*
 - *Capital formation and other operational expenses;*
 - *Demographic characteristics of agricultural households;*
 - *Farming practices and soil conservation methods used;*
 - *Access to agricultural loans; and,*
 - *Access to market prices information and agricultural extension services in general.*
- (b) To enhance the capacities to analyse agricultural data in the Central Statistical Office (CSO) and Ministry of Agriculture and Livestock (MAL). This is done through training and involvement of staff, at various levels, in survey data management.

CHAPTER 2: CONCEPTS AND DEFINITIONS

2.0 Introduction

The following concepts and definitions were used in collection of the data for the Post Harvest Survey (PHS) for the 2011/2012 Agricultural Season. Generally, standard concepts and definitions that are articulated by the Food and Agriculture Organization (FAO) have been used in the agriculture surveys. However some of these concepts and definitions have been modified to suit the Zambian conditions.

2.1 General Concepts

Qualified Respondent; is an adult member of the household, who is knowledgeable about its crops, livestock, and poultry. The qualified respondent may however consult any other member of the household on different items in the questionnaire.

Household; consists of a group of people who normally live and eat together. These may or may not be related by blood, but make common provision for food or other essentials for living and they have only one person whom they all regard as head of the household. It may also consist of one member. A household normally occupies the whole of a housing unit or live in closely related premises.

Agricultural Household; is a household in which at least one member is carrying out some agricultural activity (defined below) on the holding belonging to the household.

Agricultural Activity; is the growing of any crop and/or raising of livestock and/or raising of poultry and /or fish farming.

Head of Household; is a person who makes day to day decisions and is considered to be the head by the members of the household.

Holding; is all land wholly or partly operated for agricultural purposes under a single technical management. A holding may consist of one or more parcels (defined below) in one or separate areas. The parcels share the same means of production e.g. labour.

Holder; is a person who exercises management control over the operations of the holding. Usually there is one holder in a household that is engaged in an agricultural activity, who may or may not be the head of the household.

Parcel; is an individual block of land in the holding, which is entirely surrounded by land and/or water that does not belong to the same holding. It may contain one or several fields growing one or different crops, or it may be left idle or fallow, or may be under pasture.

Field; is a piece of land usually cultivated with one crop at a time. In some cases, a number of different crops (mixture) may be grown in a single field at the same time.

Mixed Cropping; is a cultivation practice where two or more different temporary or permanent crops (but not temporary and permanent crops) are grown simultaneously in the same field.

Inter-Cropping; is a cultivation practice whereby a crop is planted between the rows of another crop e.g. sorghum between cotton rows, or sorghum between groundnut rows, or groundnuts between maize rows.

Area under Mixed Crops; is the area of the field in which two or more crops are grown together.

Agricultural Season; Zambia's Agricultural Season extends from 1st October of one year to 30th September of the following year.

Adult Household Member; refers to persons who are aged 12 years and above

Land Preparation; refers to all activities undertaken to prepare the land for crop cultivation such as clearing the land, tree stumping, ploughing, etc.

Animal Draught Power; refers to the use of animals such as oxen and donkeys in any agricultural activity such as land preparation, planting, weeding and transportation.

Mechanical Power; refers to the use of tractors, bulldozers, hand tractors, etc., in any agricultural activity.

Bunding; is a method of land preparation where mounds are made in the fields i.e. piling up masses of earth over the whole field in order to reduce the rate of flow of rain water.

Fallowing; is a soil conservation method in which a piece of land is not cultivated for a number of year(s) to improve its fertility.

Recycled Seed; refers to the seed obtained from a hybrid seed which was planted in the previous season(s).

Local Seed; refers to traditional and indigenous seed varieties.

Hybrid Seed; refers to improved seed varieties.

2.2 General Definitions

Livestock; includes cattle, goats, sheep, and donkeys.

Cattle; includes bulls, oxen, tollies, cows, heifers, and calves.

Bulls; are uncastrated adult male cattle.

Oxen/Tollies; are castrated male cattle. These are either trained or untained cattle.

Cows; are female cattle that have given birth at least once. This includes female cattle that have not yet given birth but are beyond the stage of being termed heifers i.e. they are infertile.

Heifers; are female cattle that have not yet given birth and have not reached the stage of being termed cows.

Calves; are both male and female cattle that are not yet weaned.

CHAPTER 3: SURVEY METHODOLOGY & ORGANISATION

3.0 Introduction

Post-Harvest Surveys (PHSs) cover households engaged in crop and livestock production and other agricultural activities in order to provide data on agricultural production and practices. This chapter covers issues pertaining to sample design, questionnaire content, Training, field work, supervision and data processing. Like in all previous surveys, all districts in the country were covered during the 2011/2012 Post Harvest Survey (PHS) on sample basis. Data collection activities took place during the month of October 2012. The information was solicited using personal interviews with qualified respondents within the selected households in the sampled Standard Enumeration Areas (SEAs).

3.1 Sample Design

The sample design for the 2011/2012 PHS called for a probability sample of 20 agricultural households selected from 640 SEAs or clusters in which small and medium scale farming households were interviewed. The sample was selected country-wide from every district to produce nationally representative results.

The sampling frame of Standard Enumeration Areas (SEAs) for the PHS was constructed using the 2010

Census of Population and Housing data. Within each district, the SEAs were stratified by predominant crop in order to ensure a representative sample of each crop. The SEAs were then sorted by geographic codes to ensure that geographic distribution of the SEAs is also representative. The sampling frame included all rural SEAs. In addition, urban SEAs, which had 70 percent or more agricultural households

according to the Census, were included in the frame. Thus all the 72 districts in the 2010 census frame were included in the sample.

A two stage random stratified cluster sampling method was used. The primary sampling units (PSUs) defined for the PHS sample, were individual SEAs. Therefore, at the first stage, a proportionally allocated number of PSUs which are standard enumeration areas, in each province and district was selected using Probability Proportional to Size (PPS) selection procedure. The measure of size for the selection of SEAs with PPS within each stratum was the number of agricultural households enumerated in the 2010 Census of Population and Housing. A sample of 680 SEAs or clusters was drawn from about 25, 632 SEAs which made up the agricultural sampling frame.

3.2 Selection of Primary Sampling Units

The procedure for selecting the Primary Sampling Units is outlined as follows:

1. Cumulating the measures of size (agricultural households enumerated in 2010 census) down the ordered list of SEAs within the stratum. The final cumulated measure of size is the total number of agricultural households enumerated in the frame for the stratum (M_h).
2. Calculating the sampling interval for stratum h (I_h), by dividing M_h by the total number of SEAs to be selected in stratum h (n_h), based on the sample allocation $I_h = M_h/n_h$.
3. Selecting a random number (R_h) between 0 and I_h .
4. Identifying the sample SEAs in stratum h by the following selection numbers:

$$S_{hi} = R_h + [I_h \times (i - 1)], \text{ rounded up,}$$

where $i = 1, 2, 3, \dots, n_h$

The i -th selected SEA is the one with a cumulated measure of size closest to S_{hi} but not less than S_{hi} .

3.3 Household Sample

The sampling frame for selecting the secondary sampling units (SSUs) which are households was constructed by listing all the households in the sampled SEAs. In order to identify agricultural households which were eligible for participation in the PHS, the households were asked questions relating to crop production, livestock and poultry production. If the household was not engaged in any of the agricultural activities mentioned, the household was excluded from the listing frame for the selection of sample households for the PHS. The reason for excluding the non-agricultural households is to improve the efficiency of the sampling frame for crop and livestock production and other agricultural characteristics.

To improve the precision of the survey estimates, the agricultural households were stratified in three (3) categories- A, B and C, based on total area under crops, presence of some specified crops and on numbers of cattle, goats, and chickens raised.

The selection procedure was specified using the following defined terms:

$N =$ total number of households listed in the sample SEA

$N_A =$ number of households listed in category A within the sample SEA

$N_B =$ number of households listed in category B within the sample SEA

$N_C =$ number of households listed in category C within the sample SEA

$n_A =$ number of sample households selected in category A within the sample SEA

$n_B =$ number of sample households selected in category B within the sample SEA

$n_C =$ number of sample households selected in category C within the sample SEA

The following steps were used to allocate the 20 sample households by category within each sample SEA:

(1) If N_C was less than or equal to 10, all the N_C households in Category C were selected with certainty at the second sampling stage (that is, $n_C = N_C$).

(2) If N_C was greater than 10, only 10 households in Category C were selected (systematically with a random start) at the second sampling stage (that is, $n_C = 10$).

(3) After determining the number of sample households in Category C (n_C), the remaining number of sample households in the SEA ($20 - n_C$) was divided by 2, and rounded up. This was the number of sample households to be selected in Category B (n_B) if it was less than or equal to N_B ; otherwise, $n_B = N_B$.

(4) The number of sample households in Category A (n_A) was determined as the remainder: $n_A = 20 - n_B - n_C$

Using this procedure, a minimum of 5 sample households was selected in Category B when there are 5 or more households listed in this category. In cases where there were 10 households selected in Category C, there would be 5 sample households in Category B and 5 sample households in Category A.

A number of households were selected from each category using the systematic random sampling method, coming up with a total of twenty sample households in each Sample SEA.

3.4 PHS Questionnaire Content

The PHS questionnaire is designed to collect data on demographic characteristics of members of the household and various agricultural themes. All usual members of the household and their characteristics such as age, sex, marital status and education are listed under the Demographic Characteristics of members of households section. Screening of members who were 12 years and older whether they participated in crop, livestock or poultry production in the agricultural season is included in the same section.

Included in the agricultural sections of the questionnaire are topics such as farmland use, crop management, own crop stocks and sales, income and remittances, cost of production, storage facilities for grains, cassava production and marketing, fruits, vegetables and sugarcane production and sales, dry season irrigation and wetland production, livestock poultry and fish production, milk and eggs production and sales, access to extension services and farmer training, household production and assets/implements and distance to selected services and infrastructure.

3.5 Training of Field Staff

Officers from both Central Statistical Office (CSO) and Ministry of Agriculture and Livestock (MAL) conducted training of supervisors and enumerators. Regional Statisticians/Provincial Statistical Officers assisted them in the task. Training of field staff involved use of instructions manual which guided participants on interviewing techniques and field procedures. Mock interviews were conducted between participants within the training venue and later field practices were conducted with real respondents outside sampled areas prior to implementation of PHS field work. The master trainers played a major role in the training of staff.

3.6 Fieldwork and Field Supervision

The overall field work force was 9 Regional Statisticians, 20 Master Trainers, 60 supervisors and 340 enumerators. Master trainers travelled to all provinces to observe initial implementation of the fieldwork. The objective was to ensure that all the field procedures and that survey instruments were being administered correctly. The trainers checked samples of completed questionnaires for errors, and discussed any problems with field teams.

Field supervisors collaborated with the Provincial staff in order to deal with any logistical problems arising in the field. They also maintained regular communication with their survey Master trainers. Master Trainers also assisted in the supervision of fieldwork. These were drawn from CSO and the Ministry of Agriculture and Livestock (MAL).

The Agriculture and Environment Division under the Central Statistical Office (CSO) was responsible for planning and executing of the 2011/2012 Post Harvest Survey. The Regional Statistician in each province oversaw the field work through regular communication with Master Trainers and Field Supervisors.

3.7 Data Processing and Analysis

Supervisors and some enumerators based at provincial headquarters edited the questionnaires. The edited questionnaires were entered on micro computers using the software package CPro®. Data capturing was accomplished at each provincial centre. Staff in Agriculture and Environment Division based at CSO headquarters did further data processing. Consistency checks on the output of the raw data, with reference to the source documents, were applied before weighted tables at district and provincial levels were produced. The software used for analysis was statistical Package for Social Sciences, SPSS®.

3.8 Estimation Procedure

3.8.1 Sample Weights

Sampling weights were required to ensure actual representation of the sample at national level. The general procedure for calculating the weights made use of sampling probabilities at first-stage selection of SEAs and probabilities of selecting the households. The weights of the sample are equal to the inverse of the probabilities of selection.

$$P_{hi}^1 = \frac{a_h M_{hi}}{\sum_i M_{hi}}$$

Where:

P_{hi}^1 = the first selection probability of SEAs

a_h = is the number of SEAs selected in stratum h (*district*)

M_{hi} = is the size of the i^{th} SEA in stratum h (agricultural households according to the Census frame)

$\sum_i M_{hi}$ = The total size of the stratum h

At household selection level which is the second stage of selection, households are categorized by the agricultural strata A, B and C as earlier alluded. The probabilities of selection are calculated for each category separately. Therefore three category final weights are calculated by multiplying each one with the first stage weights.

The selection probability of the household in each category was calculated as follows:

$$P_{hi}^2 = \frac{n_{hi}}{N_{hi}}$$

Where:

P_{hi}^2 = the second selection probability of the household

n_{hi} = the number of households selected from the i^{th} SEA of h^{th} stratum

N_{hi} = Total number of households listed in a given category in an SEA

Therefore, the SEA specific sample weight was calculated as follows:

$$W_i = \frac{1}{P_{hi}^1 \times P_{hi}^2}$$

W_i , which is the inverse of the product of the 2 selection probabilities, is called the PPS sample weight.

3.9. Estimation Process

In order to correct for differential representation, all estimates generated from the PHS survey data were weighted expressions. Therefore, if y_{hij} is an observation on variable Y for the h^{th} household in the i^{th} SEA of the j^{th} stratum, then the estimated total for the j^{th} stratum is expressed as follows:

$$Y_{jT} = \sum_{i=1}^{a_j} w_{ij} \sum_{h=1}^{n_j} y_{hij}$$

Where:

Y_{jT} = the estimated total for the j^{th} stratum

$i = 1$ to a_j : the number of selected clusters in the stratum

$h = 1$ to n_j : the number of sample households in the stratum

The national estimate is given by:

$$Y_T = \sum_{j=1}^{mj} Y_{jT}$$

Where:

Y_T = the provincial total estimate

$j = 1$ to m_j : the total number of strata. In this case $m_j=20$; (the rural/urban and the 10 provinces)

CHAPTER 4: DEMOGRAPHIC CHARACTERISTICS OF AGRICULTURAL HOUSEHOLDS

4.0 Introduction

This chapter highlights general characteristics of households engaged in agricultural activities such as crop production, livestock rearing and poultry raising. Cross tabulations were done with other variables such as education, as well as marital status.

4.1 Household Heads by Sex

Table 4.1 shows that an estimated 1,410,189 households were engaged in agricultural activities during the 2011/2012 agricultural season. Out of these, 1,100,970 were male headed while 309,219 were female headed,

representing 78.1 and 21.9 percent, respectively.

At provincial level, all the provinces recorded a proportion of more male headed households (above 70 percent) compared to female headed households (less than 30.0 percent). Muchinga Province recorded the largest proportion of male headed households (82.0 percent) followed by Luapula with 82.0 percent while the smallest proportion was recorded in Western Province (70.1 percent). In terms of female headed households, Western Province recorded the largest proportion (29.9 percent), followed by Eastern Province with 24.4 percent and the smallest proportion was recorded in Muchinga Province at 17.8 percent.

Table 4.1: Percentage Distribution of Household Heads by Sex and Province, Zambia 2011/2012

Province	Sex of Household Head					
	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Central	122,471	77.3	36,058	22.7	158,529	100.0
Copperbelt	61,379	77.7	17,665	22.3	79,044	100.0
Eastern	199,492	75.6	64,463	24.4	263,955	100.0
Luapula	122,477	82.0	26,811	18.0	149,288	100.0
Lusaka	34,091	79.7	8,678	20.3	42,769	100.0
Muchinga	95,160	82.2	20,546	17.8	115,706	100.0
Northern	139,519	81.4	31,872	18.6	171,390	100.0
North Western	77,714	77.9	22,034	22.1	99,749	100.0
Southern	146,761	79.6	37,607	20.4	184,368	100.0
Western	101,906	70.1	43,485	29.9	145,391	100.0
Total	1,100,970	78.1	309,219	21.9	1,410,189	100.0

4.2 Household Heads by Five Year Age Group

Table 4.2 shows the distribution of agricultural household heads by five year age groups and province. The majority of the household heads were found to be in the age group 30-34 years (200,105) followed by the age group 40-44 years (190,132) and the age group 35-39 years (185,769). The lowest number of household

heads (179) was reported in the age group 10-14 years.

In the age group 30-34 years, Eastern Province had the highest percentage distribution of household heads (17.7 percent), followed by Southern Province with 16.0 percent while the lowest distribution of households was reported in Lusaka Province (1.9 percent).

Table 4.2: Percentage Distribution of Heads of Agricultural Households by Five Year Age Group and Province, Zambia 2011/2012

Age of Head	Zambia	Province										Percent
		Central	Copper/belt	Eastern	Luapula	Lusaka	Muchinga	Northern	North Western	Southern	Western	
10-14	179	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100
15-19	2,994	10.4	2.1	11.7	8.1	0.0	13.4	18.4	17.3	5.1	13.5	100
20-24	61,151	7.4	2.7	29.2	9.6	1.2	10.0	12.1	6.8	10.4	10.6	100
25-29	147,569	9.0	3.5	20.3	11.8	1.7	9.2	13.0	5.8	14.6	11.1	100
30-34	200,105	10.3	5.1	17.7	10.6	1.9	7.9	12.5	7.3	16.0	10.8	100
35-39	185,769	13.0	5.3	17.3	11.5	2.6	8.5	10.8	7.7	14.2	9.2	100
40-44	190,132	11.4	5.0	18.9	10.6	3.0	8.1	12.5	8.1	12.6	9.9	100
45-49	142,625	10.2	5.3	17.3	12.5	3.8	8.4	14.0	5.9	13.8	8.8	100
50-54	128,199	10.4	5.4	20.2	9.9	4.3	9.0	11.9	7.2	11.5	10.3	100
55-59	87,941	12.9	6.7	16.1	12.0	3.7	6.4	11.0	7.5	11.7	12.0	100
60-64	81,890	15.2	9.3	19.8	8.9	4.9	7.1	9.7	5.5	10.0	9.7	100
65-69	53,702	9.8	8.9	16.5	9.6	3.3	9.8	14.1	6.8	9.5	11.8	100
70-74	51,328	10.1	7.4	18.9	9.5	3.6	6.6	11.3	8.2	12.5	11.9	100
75-79	29,632	18.1	9.9	17.3	4.7	3.6	9.5	10.4	3.1	14.0	9.5	100
80+	33,788	16.4	7.7	15.2	8.2	3.0	5.5	9.3	9.6	12.8	12.3	100
Total	1,397,004	11.3	5.6	18.7	10.6	3.0	8.3	12.0	7.1	13.1	10.3	100

4.3 Education Status of Heads of Agricultural Households

Table 4.3 shows the percentage distribution of heads of agricultural households by the highest level of education completed. About 57.2 percent of the household heads had attained primary education while 8.8 percent and 14.4 percent of the household heads attained high school and never attended school, respectively. Furthermore, the table shows that

only 0.4 percent of the total household heads had attained bachelors degree and higher.

Eastern and Western provinces had the highest number of agricultural household heads with no education accounting for 24.3 and 19.4 percent, respectively while Lusaka and Copperbelt provinces recorded the highest proportions of household heads with High school level of education.

Table 4.3: Percentage Distribution of Heads of Agricultural Households and Highest Level of Education Completed by Province, Zambia 2011/2012

Province	Number of Household Heads	Highest Education Level Completed									Total Percent
		None	Primary	Basic	High School	A-level	College/ University	Certificate/ Diploma	Bachelors Degree and Above		
Central	157,159	11.4	58.6	16.4	11.3	0.0	0.7	1.1	0.4	100.0	
Copperbelt	78,661	9.3	53.0	19.7	14.3	0.1	0.3	2.6	0.7	100.0	
Eastern	262,359	24.3	54.1	13.3	6.2	0.1	0.2	1.7	0.2	100.0	
Luapula	148,436	7.3	62.3	19.3	8.2	0.0	0.7	2.1	0.1	100.0	
Lusaka	41,630	11.9	43.8	16.1	19.2	0.1	2.0	4.3	2.6	100.0	
Muchinga	115,169	10.6	56.6	19.6	9.4	0.0	0.5	2.5	0.8	100.0	
Northern	169,426	13.1	60.1	16.9	7.7	0.3	0.5	1.5	0.0	100.0	
North Western	98,601	14.6	55.2	17.3	9.7	0.0	0.5	2.3	0.5	100.0	
Southern	182,200	10.6	60.2	17.7	8.0	0.0	1.4	1.4	0.5	100.0	
Western	144,354	19.4	56.7	15.7	6.3	0.0	0.4	1.3	0.1	100.0	
Total	1,397,995	14.4	57.2	16.8	8.8	0.1	0.6	1.8	0.4	100.0	

4.4 Size of Agricultural Households

Table 4.4 shows the percentage distribution of agricultural household by household size and province. There were a total of 1,409,659 agricultural households under small and medium-scale farming during the 2011/2012

Agricultural Season. Most agricultural households had between 4 and 6 household members, representing 44.4 percent of all agricultural households. Households which had more than ten members (10+) accounted for 9.4 percent of the total.

Province	Household Size					Total Percent
	Total	1 – 3	4 - 6	7 - 9	10+	
Central	158,529	15.7	44.1	28.8	11.4	100.0
Copperbelt	79,044	17.7	47.3	26.3	8.7	100.0
Eastern	263,955	18.9	46.9	26.2	8.0	100.0
Luapula	149,735	17.5	41.4	30.7	10.3	100.0
Lusaka	42,871	16.0	43.5	29.6	10.8	100.0
Muchinga	115,706	17.0	46.0	30.3	6.7	100.0
Northern	171,360	17.6	44.4	31.8	6.2	100.0
North Western	99,749	16.1	38.8	32.8	12.3	100.0
Southern	184,368	15.4	41.9	29.2	13.4	100.0
Western	144,343	20.1	48.1	23.6	8.2	100.0
Total	1,409,659	17.4	44.4	28.7	9.4	100.0

4.5 Marital Status of Heads of Agricultural Households

Table 4.5 shows the percentage distribution of household heads by marital status and province. Western Province had the largest proportion of single (never married) agricultural households in the country with 23 percent followed by Southern and Central provinces with 15.1 and 13.0 percent respectively. Lusaka Province had the smallest proportion of single (never married) agricultural household heads with 2.2 percent.

Southern Province had the largest proportion of agricultural household heads that were

polygamously married with 29.2 percent followed by Eastern and Muchinga provinces with 24.4 percent and 12.2 percent respectively. Lusaka Province had the smallest proportion of polygamously married agricultural household heads with 0.5 percent.

Eastern Province had the largest proportion of agricultural household heads that were widowed with 19.9 percent followed by Central and Western provinces with 13.8 percent and 11.7 percent respectively. Lusaka province had the smallest proportion of widowed agricultural household heads with 3.7 percent.

Table 4.5: Percentage Distribution of Household heads by Marital Status and Province, Zambia 2011/2012

Province	Total Number	Marital Status						
		Single (Never Married)	Monogamously Married	Polygamously Married	Divorced	Widowed	Separated	Cohabiting
Central	158,418	13.0	11.4	8.3	8.4	13.8	7.5	-
Copperbelt	78,953	6.2	5.7	1.2	6.5	6.9	9.5	-
Eastern	263,687	11.2	18.1	24.4	21.2	19.9	13.8	-
Luapula	149,055	9.3	11.5	5.9	8.9	9.3	8.6	-
Lusaka	42,729	2.2	3.2	0.5	3.7	3.7	0.9	-
Muchinga	115,480	3.6	8.5	12.2	3.1	7.1	9.7	-
Northern	170,794	6.7	13.3	8.8	8.4	10.9	7.1	-
North Western	99,749	9.9	7.5	3.7	8.3	5.3	10.9	-
Southern	184,096	15.1	11.7	29.2	11.2	11.2	11.5	-
Western	145,353	23.0	9.1	6.0	20.3	11.7	20.5	-
Total	1,408,313	100.0	100.0	100.0	100.0	100.0	100.0	-

CHAPTER 5: CROP PRODUCTION

5.0 Introduction

During the 2011/2012 Post-Harvest Survey (PHS), data was collected on crop production, area planted, fertilizer used, quantities produced, etc. This chapter covers crop production in Zambia which is carried out at small and medium scale for two main reasons; as a source of livelihood, and as a source of income by selling surplus produce. Information was collected on all crops that were grown by farmers, which include the following; maize, sorghum, millet, rice, groundnuts, sunflower, mixed beans, soyabeans and tobacco.

5.1 Maize

Maize is considered to be the most important staple food in Zambia and hence it is produced in large quantities. The surplus produce is sold and provides income for agricultural households.

5.1.1 Households Growing Maize

Table 5.1 presents households growing maize. The table shows that a total of 1,232,355 households grew maize during the 2011/2012 Agricultural Season. Eastern Province had the largest number of maize-growing households, accounting for 21 percent. Lusaka Province had the smallest proportion, representing 3.2 percent.

Table 5.1: Percentage Distribution of Households Growing Maize by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	149,187	12.1
Copperbelt	76,150	6.2
Eastern	258,278	21.0
Luapula	88,054	7.1
Lusaka	39,116	3.2
Muchinga	101,214	8.2
Northern	125,563	10.2
North Western	89,117	7.2
Southern	173,369	14.1
Western	132,306	10.7
Total	1,232,355	100.0

5.1.2 Total Area Planted to Maize and Fertilizer Applied

Table 5.2 shows the total area planted to maize and quantity of fertilizer applied by province during the season. A total of 1,570,282 hectares was planted to maize. Southern Province had the largest area under maize with 24.5 percent followed by Eastern Province with 22.1 percent. Luapula and Lusaka provinces recorded the smallest proportions of 2.9 percent and 3.0 percent, respectively.

There were 113,152.8 metric tonnes of basal fertilizer and 114,131.9 metric tonnes of top dressing fertilizer used to produce maize countrywide. Eastern Province recorded the largest quantities used, accounting for 20.6 percent basal and 20.7 percent top dressing. Southern Province recorded 20.1 percent basal and 20.3 percent top dressing. Western Province recorded the smallest quantities used with 2.2 percent basal and 2.2 percent top dressing fertilizer.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	245,816.5	15.7	16,846.3	14.9	16,932.5	14.8
Copperbelt	90,339.7	5.8	7,742.2	6.8	8,316.8	7.3
Eastern	346,435.2	22.1	23,303.0	20.6	23,610.0	20.7
Luapula	46,036.8	2.9	5,587.5	4.9	5,458.4	4.8
Lusaka	47,431.6	3.0	4,136.7	3.7	4,196.4	3.7
Muchinga	84,164.4	5.4	10,244.1	9.1	10,059.3	8.8
Northern	113,353.1	7.2	13,891.3	12.3	13,690.9	12.0
North Western	78,474.8	5.0	6,119.7	5.4	6,277.0	5.5
Southern	385,037.3	24.5	22,772.2	20.1	23,120.3	20.3
Western	133,192.3	8.5	2,509.8	2.2	2,470.4	2.2
Total	1,570,281.8	100.0	113,152.8	100.0	114,131.9	100.0

5.1.3 Total Maize Production and Sales

Table 5.3 shows that a total of 2,938,295.3 metric tonnes of maize were produced during the season. Eastern and Southern provinces recorded the highest production, accounting for 21.9 percent and 20.1 percent of the total respectively. Lusaka Province recorded the lowest production at 3.6 percent of the total.

A total of 20,992.3 metric tonnes of maize were sold during the season. Central Province recorded the largest quantity sold, accounting for 26.4 percent of the total. Eastern Province accounted for 15.5 percent while Western Province recorded the smallest amount sold, representing 2.9 percent.

Province	Quantity Produced		Total Quality Sold	
	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	533,324.9	18.2	5,531.9	26.4
Copperbelt	184,011.8	6.3	1,984.8	9.5
Eastern	643,657.3	21.9	3,263.2	15.5
Luapula	119,962.0	4.1	1,427.4	6.8
Lusaka	105,792.0	3.6	744.7	3.5
Muchinga	200,554.5	6.8	1,474.2	7.0
Northern	256,023.8	8.7	1,878.9	9.0
North Western	158,371.1	5.4	1,119.9	5.3
Southern	591,965.7	20.1	2,949.6	14.1
Western	144,632.1	4.9	617.6	2.9
Total	2,938,295.3	100.0	20,992.3	100.0

5.2 Sorghum

Sorghum is grown in all parts of the country. It has the advantage of withstanding pests during storage compared to other crops. Sorghum is also known to be drought tolerant and hence can be grown in areas experiencing drought and less rain. It is consumed as food and is used in the beer brewing industry.

5.1.1 Households Growing Sorghum

Table 5.4 shows the distribution of households growing sorghum by province. There were 55,126 households which grew sorghum during the agricultural season. Western Province had the largest number of households growing sorghum at 23.9 percent of the total. Southern and Muchinga provinces accounted for 21.6 and 21.4 percent of the total, respectively. The rest of the provinces recorded less than 9 percent of the sorghum growing households each.

Province	Number of Households	Percentage Share
Central	3,944	7.2
Copperbelt	1,484	2.7
Eastern	398	0.7
Luapula	1,788	3.2
Lusaka	2,313	4.2
Muchinga	11,793	21.4
Northern	3,430	6.2
North Western	4,909	8.9
Southern	11,895	21.6
Western	13,171	23.9
Total	55,126	100.0

5.2.2 Total Area Planted to Sorghum and Fertilizer Applied

The total area planted and fertilizer applied to sorghum is shown in table 5.5. The total area used to produce sorghum during the season was 33,896.7 hectares. Southern Province recorded the largest area planted, accounting for 34.7 percent of the total, followed by Western Province with 27.6 percent. Eastern Province

had the smallest area under sorghum, accounting for 0.4 percent.

During the season, a total of 226.2 metric tonnes of basal and 140.7 metric tonnes of top dressing fertilizer were used for sorghum production countrywide. Southern Province recorded the highest use of both basal and top dressing fertilizer with 60.6 percent and 36.9 percent, respectively

Province	Area Planted		Fertilizer Applied			
	Hectares	Percentage Share	Basal Dressing		Top Dressing	
			Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	1,711.4	5.0	10.6	4.7	7.9	5.6
Copperbelt	1,134.6	3.3	0.1	0.1	1.9	1.3
Eastern	119.9	0.4	6.0	2.6	6.0	4.2
Luapula	832.0	2.5	0.3	0.1	0.3	0.2
Lusaka	1,738.3	5.1	24.2	10.7	24.2	17.2
Muchinga	3,901.2	11.5	10.2	4.5	10.2	7.3
Northern	823.1	2.4	36.2	16.0	36.4	25.9
North Western	2,513.3	7.4	-	-	-	-
Southern	11,768.2	34.7	136.9	60.5	52.1	37.0
Western	9,354.8	27.6	1.8	0.8	1.8	1.3
Total	33,896.7	100.0	226.2	100.0	140.7	100.0

5.2.3 Sorghum Production and Sales

Table 5.6 shows the distribution of quantity of sorghum produced and quantity sold by province. The total quantity of sorghum produced was 17, 505 metric tonnes. Southern Province recorded highest production accounting for 27.8 percent of the total, followed by Muchinga Province with 21.7 percent. Eastern Province recorded the lowest

production, accounting for 0.3 percent of the total.

A total of 41.3 metric tonnes of sorghum were sold during the season. Southern Province registered the largest quantity sold, accounting for 45.1 percent of the total, followed by Northwestern Province at 14.9 percent. Luapula Province recorded the least quantity sold with 1.8 percent of the total.

Province	Quantity Produced		Total Quantity Sold	
	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	1,615.7	9.2	5.7	13.7
Copperbelt	492.7	2.8	1.1	2.7
Eastern	46.0	0.3	0.8	1.8
Luapula	542.9	3.1	0.8	2.0
Lusaka	947.6	5.4	1.1	2.7
Muchinga	3,797.8	21.7	1.9	4.7
Northern	931.4	5.3	2.0	4.8
North Western	2,099.6	12.0	6.2	14.9
Southern	4,866.2	27.8	18.7	45.1
Western	2,165.2	12.4	3.1	7.6
Total	17,505.0	100.0	41.3	100.0

5.3 Rice

Rice is mainly produced in Northern and Western provinces. It is cultivated in watery areas such as swamps, plains or marshlands. Households produce rice for food and to generate income through sales.

5.3.1 Households Growing Rice

Table 5.7 shows that a total of 72,916 households grew rice during the season. Western Province had the highest number of such households, accounting for 43.5 percent of the total followed by Muchinga and Northern provinces with 18.3 and 19.1 percent, respectively. The smallest number of households were recorded in Central, Copperbelt, Lusaka and Southern provinces which accounted for 0.3 percent each.

Table 5.7: Percentage Distribution of Households Growing Rice by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	193	0.3
Copperbelt	205	0.3
Eastern	6,373	8.7
Luapula	5,389	7.4
Lusaka	221	0.3
Muchinga	13,368	18.3
Northern	13,946	19.1
North Western	1,300	1.8
Southern	200	0.3
Western	31,722	43.5
Total	72,916	100

5.3.2 Total Area Planted to Rice and Fertilizer Applied

Table 5.8 shows the percentage distribution of total area planted to rice and fertilizer applied by province. The total area planted to rice was 55,415.8 hectares. Western Province accounted for the largest area planted to rice at 52.7 percent of the total, followed by Northern Province at 24.8 percent. Copperbelt Province recorded the smallest area at 0.1 percent of the area under rice.

During the season, 156.8 metric tonnes of basal, and 195.6 metric tonnes of top dressing fertilizer were used to produce rice. Western Province recorded the largest quantity of both basal and top dressing fertilizer used for rice production, accounting for 74.9 percent and 66.4 percent, respectively. Results show that Central, Copperbelt, and Southern provinces are not likely to use fertilizer during rice production.

Table 5.8: Total Area Planted to Rice (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	193.7	0.3	-	-	-	-
Copperbelt	53.0	0.1	-	-	-	-
Eastern	2265.7	4.1	-	-	49.4	25.3
Luapula	2617.2	4.7	2.7	1.7	1.8	0.9
Lusaka	115.3	0.2	-	0.0	-	0.0
Muchinga	6642.7	12.0	0.1	0.1	0.1	0.1
Northern	13766.9	24.8	35.5	22.6	14.3	7.3
North Western	474.3	0.9	1.1	0.7	-	-
Southern	94.0	0.2	-	-	-	-
Western	29193.1	52.7	117.4	74.9	130.0	66.4
Total	55415.8	100.0	156.8	100.0	195.6	100.0

5.3.3 Rice Production and Sales

Table 5.9 shows the quantity of rice produced and sold by province. There were 52,782.1 metric tonnes of rice produced during the season. Western Province accounted for 53.9 percent of total production, followed by Northern Province (20.8 percent) and Muchinga Province (11.1 percent). Each of the remaining provinces accounted for less than 8 percent of the total.

Western Province recorded the highest quantity of rice sold with 41.4 percent of the total sold, followed by Northern Province which accounted for 34.5 percent. Luapula and Muchinga provinces recorded 8.7 and 8.1 percent respectively. The remaining provinces recorded less than 5.0 percent each.

Table 5.9: Distribution of Quantity of Rice Produced and Quantity of Rice Sold in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Produced		Total Quantity Sold	
	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	250.9	0.5	0.1	0.0
Copperbelt	53.2	0.1	0.2	0.1
Eastern	2,739.4	5.2	11.1	4.6
Luapula	3,888.7	7.4	21.3	8.7
Lusaka	65.2	0.1	0.5	0.2
Muchinga	5,864.7	11.1	19.6	8.1
Northern	10,965.8	20.8	84.1	34.5
North Western	478.3	0.9	4.0	1.6
Southern	11.7	0.0	1.9	0.8
Western	28,464.3	53.9	100.8	41.4
Total	52,782.1	100.0	243.7	100.0

5.4 Millet

Millet is grown throughout the country and is a staple food in Northern and Western provinces. It is used in the preparation of local brews countrywide and is also sold for income.

5.4.1 Households Growing Millet

Table 5.10 shows the percentage distribution of millet-growing households by province. A total of 123,297 households grew millet. The largest proportion of these households was in Northern Province which accounted for 35.3 percent of the total followed by Muchinga Province with 21.7 percent. Lusaka Province recorded the lowest with 1.1 percent of the total.

Province	Number of Households	Percentage Share
Central	8,853	7.2
Copperbelt	2,192	1.8
Eastern	2,867	2.3
Luapula	6,598	5.4
Lusaka	1,355	1.1
Muchinga	26,778	21.7
Northern	43,529	35.3
North Western	2,161	1.8
Southern	10,428	8.5
Western	18,536	15.0
Total	123,297	100.0

5.4.2 Total Area Planted to Millet and Fertilizer Applied

The total area planted to millet during the season was 59,561.4 hectares (Table 5.11). Northern Province accounted for the largest area planted to millet representing 26.4 percent of the total, followed by Western Province with 23.0 percent. North Western Province recorded the smallest area planted to millet at 1.3 percent of the total.

There was total of 559.5 metric tonnes basal dressing and 604.9 metric tonnes top dressing fertilizer used in millet production. Southern Province used the largest quantity of both basal and top dressing fertilizer representing 47.6 percent and 42.6 percent of the total used, respectively.

Table 5.11: Total Area Planted to Millet (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Fertilizer Applied (Metric Tonnes)			
	Hectares	Percentage Share	Basal dressing		Top dressing	
			Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	5,248.1	8.8	43.2	7.7	43.2	7.1
Copperbelt	937.1	1.6	23.3	4.2	23.3	3.9
Eastern	1,848.8	3.1	32.9	5.9	32.9	5.4
Luapula	2,002.6	3.4	-	-	-	-
Lusaka	890.0	1.5	87.7	15.7	88.7	14.7
Muchinga	8,717.5	14.6	22.7	4.1	15.9	2.6
Northern	15,708.2	26.4	68.9	12.3	128.1	21.2
North Western	745.9	1.3	11.0	2.0	13.2	2.2
Southern	9,775.4	16.4	266.1	47.6	257.7	42.6
Western	13,687.7	23.0	3.8	0.7	1.9	0.3
Total	59,561.4	100.0	559.5	100.0	604.9	100.0

5.4.3 Millet Production and Sales

The total quantity of millet produced was 41,732.4 metric tonnes (Table 5.12). Northern Province produced most of the millet, accounting for 29.5 percent of the total, followed by Muchinga Province with 17.5 percent. Eastern Province recorded the lowest quantity with 1.7 percent of the total produced.

Northern Province sold the largest quantity of millet, representing 45.5 percent of the total sold, followed by Muchinga and Luapula provinces at 32.4 and 7.5 percent, respectively. Lusaka Province recorded the lowest proportion at 0.2 percent of total millet sales.

Table 5.12: Distribution of Quantity of Millet Produced and Quantity of Millet Sold in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	4,402.3	10.5	2.8	3.8
Copperbelt	10,57.8	2.5	3.2	4.4
Eastern	690.1	1.7	0.5	0.6
Luapula	2,308.5	5.5	5.5	7.5
Lusaka	17,36.2	4.2	0.1	0.2
Muchinga	7,298.0	17.5	23.7	32.4
Northern	12,297.0	29.5	33.3	45.5
North Western	1,350.0	3.2	1.1	1.6
Southern	6,004.3	14.4	0.8	1.1
Western	4,588.3	11.0	2.1	2.8
Total	41,732.4	100.0	73.2	100.0

5.5 Sunflower

Sunflower is an oil-producing seed widely grown in the country. The crop can be cultivated successfully with minimal application of fertilizer. It is used in the manufacturing industry to produce cooking oil and other edible fats. Sunflower is mainly produced for income.

5.5.1 Households Growing Sunflower

A total of 115,921 households planted sunflower during the 2011/2012 Agricultural Season (Table 5.13). Eastern Province accounted for 73.1 percent of the sunflower-growing households. Southern Province accounted for 13.8 percent of the total, whereas the remaining provinces recorded less than 4 percent of the total each.

Table 5.13: Percentage Distribution of Households Growing Sunflower by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	3,462	3.0
Copperbelt	799	0.7
Eastern	84,759	73.1
Luapula	376	0.3
Lusaka	450	0.4
Muchinga	4,518	3.9
Northern	4,294	3.7
North Western	789	0.7
Southern	16,037	13.8
Western	437	0.4
Total	115,921	100.0

5.5.2 Area Planted to Sunflower and Fertilizer Applied

Table 5.14 shows that there were 64, 810.3 hectares planted to sunflower during the season. Eastern and Southern provinces recorded the largest areas planted to sunflower accounting for 64.3 and 23.3 percent of the total, respectively. Copperbelt, Luapula, Lusaka, North-western, and Western provinces recorded less than 5.0 percent of the total area each.

Nationwide, 43.0 metric tonnes basal and 46.2 metric tonnes top dressing were used to produce sunflower. Eastern Province used the largest quantity of fertilizer for sunflower production with 39.1 percent basal and 67.9 percent top dressing. Copperbelt, Luapula and Western provinces recorded no use of fertilizer in sunflower production.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage share
Central	3,180.8	4.9	3.8	8.9	3.83	8.3
Copperbelt	213.5	0.3	0	0	0	0
Eastern	41,655.7	64.3	16.8	39.1	31.38	67.9
Luapula	118.0	0.2	0	0	0	0
Lusaka	158.8	0.2	8.8	20.5	0	0
Muchinga	1,544.2	2.4	1	2.4	1.03	2.2
Northern	2,467.5	3.8	2.9	6.7	2.65	5.7
North Western	169.9	0.3	3.5	8	3.46	7.5
Southern	15,082.0	23.3	6.2	14.3	3.85	8.3
Western	219.9	0.3	0	0	0	0
Total	64,810.3	100.0	43	100	46.2	100

5.5.3 Sunflower Production

Table 5.15 shows the percentage distribution of sunflower produced by province. The table shows that sunflower production during the season was 26,704 metric tonnes. Eastern Province recorded the largest amount of

sunflower produced, accounting for 70.0 percent followed by Southern Province at 17.3 percent.

Western Province recorded the lowest quantity of sunflower produced with 0.1 percent.

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	895.2	3.4
Copperbelt	112.4	0.4
Eastern	18,701.0	70.0
Luapula	196.3	0.7
Lusaka	114.8	0.4
Muchinga	1,086.9	4.1
Northern	878.4	3.3
North Western	66.8	0.3
Southern	4,622.1	17.3
Western	30.1	0.1
Total	26,704.0	100.0

5.6 Groundnuts

Groundnuts are grown in most parts of the country. They can be prepared for consumption in a number of ways and can be combined with other foods such as vegetables for relish. Manufacturing industries also use groundnuts to make peanut butter and to produce cooking oil.

5.6.1 Households Growing Groundnuts

Table 5.16 shows that there were a total of 615,693 households that grew groundnuts. Out of this total 25.2 percent were in Eastern Province which accounted for the largest number of households growing groundnuts. Northern and Southern provinces accounted for 16.4 and 11.3 percent, respectively. Western and Lusaka had the lowest percentage of households growing groundnuts with 4.2 and 2.1 percent, respectively.

Table 5.16: Percentage Distribution of Households Growing Groundnuts by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	55,624	9.0
Copperbelt	29,785	4.8
Eastern	155,113	25.2
Luapula	68,559	11.1
Lusaka	13,003	2.1
Muchinga	63,772	10.4
Northern	101,033	16.4
North Western	33,187	5.4
Southern	69,464	11.3
Western	26,153	4.2
Total	615,693	100.0

5.6.2 Total Area Planted to Groundnuts and Fertilizer Applied

Table 5.17 shows the distribution of area planted to groundnuts and fertilizer applied by province. A total of 253,061.6 hectares was planted to groundnuts during the 2011/2012 Agricultural Season. Eastern Province recorded the largest area planted to groundnuts, accounting for 29.8 percent of the total, followed by Southern Province with 16.9 percent. Lusaka Province recorded the smallest

area planted to groundnuts, accounting for 1.4 percent of the total.

A total of 677.2 metric tonnes basal and 733.0 metric tonnes top dressing fertilizer were used in groundnut production during the season. Luapula Province used the largest quantity of fertilizer, representing 26.4 percent basal and 24.6 metric tonnes top dressing fertilizer. Western Province used the smallest quantity of fertilizer accounting for 0.1 percent for both basal and top dressing.

Table 5.17: Total Area Planted to Groundnuts (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	29,369.4	11.6	43.5	6.4	43.5	5.9
Copperbelt	10,191.8	4.0	37.5	5.5	49.9	6.8
Eastern	75,318.2	29.8	40.5	6.0	96.6	13.2
Luapula	20,868.1	8.2	178.7	26.4	180.1	24.6
Lusaka	3,628.9	1.4	64.0	9.4	52.3	7.1
Muchinga	17,244.8	6.8	47.9	7.1	25.5	3.5
Northern	32,301.7	12.8	114.1	16.9	131.5	17.9
North Western	12,350.2	4.9	45.4	6.7	33.5	4.6
Southern	4,276.5	16.9	106.0	15.6	119.2	16.3
Western	90,23.6	3.6	0.4	0.1	0.9	0.1
Total	253,061.6	100	677.2	100.0	733.0	100.0

5.6.3 Groundnut Production

Table 5.18 shows the percentage distribution of quantity of groundnuts produced by province. It shows that 120,047 metric tonnes of groundnuts

were produced during the season. The largest quantities were produced in Eastern Province which accounted for 25.2 percent of the total produce. Lusaka Province recorded the lowest production of 2.5 percent.

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	13,878.2	11.6
Copperbelt	5,681.9	4.7
Eastern	30,275.4	25.2
Luapula	13,769.1	11.5
Lusaka	3,031.7	2.5
Muchinga	9,030.8	7.5
Northern	15,484.0	12.9
North Western	8,173.5	6.8
Southern	16,764.7	14.0
Western	3,957.6	3.3
Total	120,047.0	100.0

5.7 Soya beans

Soya beans are produced throughout the country. Soya beans is considered to be highly nutritious and recommended for infant feeding. This crop is mainly produced as a source of income as it is widely used by industries to produce oil.

5.7.1 Households Growing Soya Beans

Table 5.19 shows the percentage distribution of households growing soya beans by province. A total of 64,316 households produced soya beans during the season. The largest number of these households was recorded in Eastern Province, accounting for 32.6 percent of the total, followed by Central Province with 18.3 percent. Lusaka Province had the lowest number of households which grew soya beans, accounting for 1.0 percent.

Province	Number of Households	Percentage Share
Central	11,760	18.3
Copperbelt	3,072	4.8
Eastern	20,955	32.6
Luapula	1,959	3.0
Lusaka	647	1.0
Muchinga	7,362	11.4
Northern	8,950	13.9
North Western	4,474	7.0
Southern	2,755	4.3
Western	2,383	3.7
Total	64,316	100.0

5.7.2 Total Area Planted to Soya Beans and Fertilizer Applied

Table 5.20 shows that a total of 34,450.8 hectares were planted to soya beans during the 2011/2012 agricultural season. Eastern

Province recorded the largest area planted to soya beans, accounting for 38.5 percent of the total. Central Province accounted for 29.7 percent, whereas each of the remaining provinces recorded less than 8 percent of the total area planted to soya beans.

A total of 154.7 metric tonnes of basal and 103.8 metric tonnes of top dressing fertilizer were used to grow soya beans during the season. The largest proportions of fertilizer were used in Central Province with 34.3 percent basal and 47.5 percent top dressing. Muchinga,

North Western, and Western provinces indicated no usage of both basal and top dressing fertilizer in soya beans production.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	10,241.5	29.7	53.0	34.3	49.3	47.5
Copperbelt	1,308.6	3.8	15.4	9.9	14.1	13.6
Eastern	13,264.5	38.5	18.6	12.0	12.1	11.7
Luapula	223.7	0.6	12.7	8.2	12.7	12.2
Lusaka	304.2	0.9	31.0	20.0	9.2	8.9
Muchinga	1,981.8	5.8	-	-	-	-
Northern	2,457.1	7.1	2.8	1.8	2.8	2.7
North Western	1,506.4	4.4	-	-	-	-
Southern	1,506.8	4.4	21.2	13.7	3.5	3.4
Western	1,656.2	4.8	-	-	-	-
Total	34,450.8	100.0	154.7	100.0	103.8	100.0

5.7.3 Soya Beans Production

Table 5.21 shows the percentage distribution of quantity of fertilizer produced by province. The table shows that during the season, a total of 21,529.2 metric tonnes of soya beans were

produced countrywide. Eastern Province produced the largest quantity, representing 34.4 percent of the total produced. Luapula Province produced the smallest quantity, accounting for 1.3 percent of total soya beans production.

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	4,914.6	22.8
Copperbelt	1,948.6	9.1
Eastern	7,414.2	34.4
Luapula	269.4	1.3
Lusaka	469.4	2.2
Muchinga	1,896.2	8.8
Northern	2,842.3	13.2
North Western	651.5	3.0
Southern	634.6	2.9
Western	488.4	2.3
Total	21,529.2	100.0

5.8 Mixed Beans

Mixed beans include all kinds of beans except soya beans and ground (round) beans.

Households produce mixed beans for food and income.

5.8.1 Number of Households Growing Mixed Beans

Table 5.22 shows the percentage distribution of households growing mixed beans by province. A total of 227,882 households grew mixed beans during the 2011/2012 Agricultural Season. Northern Province recorded the highest

number of households that grew mixed beans, accounting for 37.3 percent of the total, followed by Muchinga Province with 18.0 percent. Lusaka Province had the smallest number of mixed beans-growing households, accounting for 1.2 percent.

Table 5.22: Percentage Distribution of Households Growing Mixed Beans by Province, Zambia 2011/2012

Province	Number of Households	
	Number	Percentage Share
Central	15,357	6.7
Copperbelt	9,179	4.0
Eastern	14,843	6.5
Luapula	24,506	10.8
Lusaka	2,741	1.2
Muchinga	40,999	18.0
Northern	85,054	37.3
North Western	23,970	10.5
Southern	6,682	2.9
Western	4,551	2.0
Total	227,882	100.0

5.8.2 Total Area Planted to Mixed Beans and Fertilizer Applied

The total area used to produce mixed beans countrywide was 102,470.4 hectares (Table 5.23). Northern Province accounted for more than half of the total area planted with 51.9 percent. Lusaka Province on the other hand had the smallest area under mixed beans, accounting for 0.8 percent of the total.

There were 264 metric tonnes of basal and 237.4 metric tonnes of top dressing fertilizer used on mixed beans during the season. The largest quantities of fertilizer used were recorded in Northern Province, accounting for 27.8 percent basal and 56.6 percent top dressing. Copperbelt Province used 13.4 percent basal and 9.5 percent top dressing. Western Province had the smallest quantity of fertilizer used with 2.0 percent basal and no top dressing.

Table 5.23: Total Area Planted to Mixed Beans (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Top Dressing		Basal Dressing	
	Hectares	Percentage Share	MetricTonnes	Percentage share	MetricTonnes	Percentage share
Central	4,978.9	4.9	21.5	8.2	21.5	9.1
Copperbelt	2,841.7	2.8	35.4	13.4	22.5	9.5
Eastern	6,486.6	6.3	31.8	12.1	1.1	0.4
Luapula	7,673.5	7.5	6.4	2.4	4.9	2.1
Lusaka	814.4	0.8	24.0	9.1	21.2	8.9
Muchinga	13,157.7	12.8	34.0	12.9	16.6	7.0
Northern	53,218.6	51.9	73.5	27.8	134.3	56.5
North Western	7,662.7	7.5	11.3	4.3	- 0.1	- 0.0
Southern	3,722.5	3.6	20.7	7.8	5.5	6.5
Western	1,914.0	1.9	5.4	2.0		-
Total	102,470.4	100.0	264.0	100.0	237.4	100.0

5.8.3 Mixed Beans Production and Sales

Table 5.24 shows the percentage distribution of mixed beans produced by province. The table shows that a total of 48,761 metric tonnes of mixed beans were produced during the season.

Northern Province accounted for 56.1 percent of the total produced. Muchinga Province produced 10.8 percent, while Western and Lusaka provinces recorded the smallest quantities with 1.0 percent of total mixed beans production each.

Table 5.24: Distribution of Quantity of Mixed Beans Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Harvested	
	Metric Tonnes	Percentage Share
Central	2,168.0	4.4
Copperbelt	1,149.5	2.4
Eastern	3,068.8	6.3
Luapula	3,651.8	7.5
Lusaka	471.8	1.0
Muchinga	5,273.0	10.8
Northern	27,347.6	56.1
North Western	3,938.7	8.1
Southern	1,203.1	2.5
Western	488.8	1.0
Total	48,761.1	100.0

5.9 Seed Cotton

The growing of seed cotton is common in Eastern, Central and Southern provinces. Seed cotton is both an oil and fiber crop.

5.9.1 Households Growing Seed Cotton

Table 5.25 shows that a total of 273,163 households planted seed cotton during the

2011/2012 Agricultural Season. Eastern Province accounted for 60.5 percent of the seed cotton-growing households. Central and Southern provinces accounted for 18.4 and 13.9 percent, respectively. Western and Copperbelt provinces had the lowest numbers of households growing seed cotton with 0.3 and 0.1 percent, respectively. The remaining provinces did not record households growing the crop during the season under review.

Table 5.25: Percentage Distribution of Households Growing Seed Cotton by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	50,350	18.4
Copper belt	172	0.1
Eastern	165,309	60.5
Lusaka	2,537	0.9
Muchinga	15,788	5.8
Southern	38,103	13.9
Western	904	0.3
Total	273,163	100.0

5.9.2 Total Area Planted to Seed Cotton and Fertilizer Applied

The total area planted to seed cotton during the season was 310,731.6 hectares (Table 5.26). Eastern Province accounted for 55.2 percent of the area under seed cotton, followed by Central and Southern provinces with 25.2 and 15.6 percent, respectively. Production of seed cotton was not recorded in Luapula, Northern, and Northwestern provinces.

A total of 733.8 metric tonnes of basal and 601.9 metric tonnes of top dressing fertilizer were used on cotton production countrywide. The largest quantities of basal and top dressing fertilizers were used in Eastern Province, accounting for 55.3 and 49.7 percent of the total respectively. Southern Province used 31.9 percent basal and 33.0 percent top dressing fertilizers followed by Central Province with 9.5 percent basal and 13.8 percent top dressing of the total amount of fertilizers applied.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	78,202.6	25.2	69.8	9.5	83.1	13.8
Copperbelt	266.1	0.1	4.7	0.6	-	-
Eastern	171,574.9	55.2	406.0	55.3	298.9	49.7
Lusaka	2,140.6	0.7	6.8	0.9	6.8	1.1
Muchinga	9,481.0	3.1	-	-	-	-
Southern	48,415.2	15.6	234.0	31.9	200.4	33.3
Western	651.2	0.2	12.6	1.7	12.6	2.1
Total	310,731.6	100.0	733.8	100.0	601.9	100.0

5.9.3 Seed Cotton Production

Table 5.2 shows percentage distribution of seed cotton produced by province. The total amount of seed cotton produced during the 2011/2012 Agricultural Season was 236,552.9 metric tonnes. Eastern Province accounted for 59.0 percent of total seed cotton production, followed by Central Province with 20.7 percent. Southern and Muchinga provinces

accounted for 13.7 and 5.6 percent of the total, respectively. Copperbelt, Lusaka, and Western provinces accounted for less than 1 percent of total seed cotton production each.

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	49,064.0	20.7
Copperbelt	143.1	0.1
Eastern	139,524.5	59.0
Lusaka	1,834.2	0.8
Muchinga	13,147.4	5.6
Southern	32,430.8	13.7
Western	409.0	0.2
Total	236,552.9	100.0

5.10 Irish Potato

Irish Potatoes are a major source of carbohydrates in Zambia. The production of the crop is common in North Western, Eastern, Southern and Northern provinces.

5.10.1 Households Growing Irish Potatoes

Table 5.28 shows the distribution of households growing irish potatoes by province. A total of 7,854 households planted Irish potatoes during the season. Northwestern Province had the largest number of Irish potato growing households accounting for 54.2 percent of the total. Muchinga Province had the lowest number of households growing irish potatoes with 2.5 percent.

Province	Number of Households	Percentage Share
Central	323	4.1
Copperbelt	217	2.8
Eastern	1,490	19.0
Luapula	276	3.5
Lusaka	234	3.0
Muchinga	199	2.5
Northern	346	4.4
North Western	4,253	54.2
Southern	515	6.6
Total	7,854	100.0

5.10.2 Total Area Planted to Irish Potatoes and Fertilizer Applied

Table 5.29 shows that the total area planted to Irish potatoes during the 2011/2012 Agricultural Season was 2,132.6 hectares. The largest area planted to Irish potatoes was recorded in North Western province, accounting for 46.6 percent of the total area, followed by Eastern and Southern provinces with 23 percent and 11.2 percent, respectively. Central Province recorded 6.9 percent, while Copperbelt, Northern, Lusaka, Muchinga, and Luapula provinces recorded less than 5 percent of the total area under Irish potato each.

A total of 115.0 metric tonnes basal and 30.5 metric tonnes top dressing fertilizer were used to produce Irish potato countrywide. North-Western Province used 67.6 percent of the 115 metric tonnes of basal dressing used on Irish potato production countrywide

However, the quantity of Top dressing fertilizer used in the province was 8.9 percent of the 30.5 metric tonnes applied to Irish potato countrywide. Copperbelt Province had the lowest amount of basal and top dressing fertilizer used on Irish potato accounting for 0.3 and 0.1 percent, respectively

Table 5.29: Total Area Planted to Irish Potato (Hectares) and Fertilizer Applied (Metric tonnes) by Province, Zambia, 2011/2012

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percentage Share	Metric Tonnes	Percentage Share	Metric Tonnes	Percentage Share
Central	147.7	6.9	4.5	3.9	4.5	14.8
Copperbelt	85.4	4.0	0.3	0.3	0.3	1.0
Eastern	508.8	23.9	13.9	12.1	7.2	23.6
Luapula	17.2	0.8	12.9	11.2	12.9	42.3
Lusaka	43.3	2.0	2.8	2.4	-	-
Muchinga	28.4	1.3	-	-	-	-
Northern	70.0	3.3	2.7	2.5	2.9	9.4
North Western	993.7	46.6	77.7	67.6	2.7	8.9
Southern	238.1	11.2	-	-	-	-
Total	2,132.6	100.0	115.0	100.0	30.5	100.0

5.10.3 Irish Potato Production

The total amount of Irish potatoes produced during the season was estimated at 3,803.0 metric tonnes (Table 5.30). The largest proportion of Irish potato produced was recorded in North-Western Province with 62.5

percent. Eastern Provinces produced the second largest proportion of Irish potatoes at 20.1 percent. Luapula and Southern province recorded the lowest proportions of Irish potato production at 0.7 and 0.6 percent, respectively.

Table 5.30: Distribution of Quantity of Irish Potatoes Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	54.1	1.4
Copperbelt	242.2	6.4
Eastern	765.2	20.1
Luapula	23.0	0.7
Lusaka	135.6	3.6
Muchinga	38.9	1.0
Northern	141.8	3.7
North Western	2,376.2	62.5
Southern	22.2	0.6
Total	3,803.0	100.0

5.11 Virginia Tobacco

Tobacco is a stimulant crop used mainly for cigarette production. In Zambia we have two types of tobacco which are of commercial importance, namely Virginia and Burley tobacco.

5.11.1 Households Growing Virginia Tobacco

Table 5.31 shows the percentage distribution of households growing Virginia tobacco by province. There were a total of 4,133 households which grew Virginia tobacco.

The majority of households which grew Virginia tobacco were in Eastern Province, representing 49.6 percent of the total. Southern and Western provinces accounted for 28.8 and 16.7 percent of the total, respectively.

Province	Number of Households	Percentage Share
Central	78	1.9
Eastern	2,050	49.6
Luapula	31	0.7
Muchinga	746	1.8
North Western	17	0.4
Southern	1,191	28.8
Western	692	16.7
Total	4,133	100.0

5.11.2 Total Area Planted to Virginia Tobacco and Fertilizer Applied

The total area planted to Virginia tobacco during the 2011/2012 Agricultural Season was approximately 4,989 hectares (Table 5.32). The largest area under Virginia tobacco production was recorded in Southern Province, accounting for 56.9 percent of total area followed by Eastern and Western provinces with 29.6 percent and 10.2 percent, respectively.

During the 2011/2012 Agricultural Season 787.3 metric tonnes basal and 486.9 metric tonnes top dressing fertilizer were used to produce Virginia tobacco. Southern Province accounted for the largest quantity of basal and top dressing fertilizer used with 45.5 percent and 48.2 percent respectively. Eastern Province recorded 26.8 percent basal and 35.8 percent top dressing. Western Province accounted for 24.6 percent basal and 11.6 percent top dressing fertilizer.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	MetricTonnes	Percentage Share	MetricTonnes	Percentage Share
Central	116.9	2.3	15.6	2.0	15.6	3.2
Eastern	1,477.8	29.6	211.2	26.8	174.2	35.8
Luapula	11.5	0.2	3.1	0.4	1.5	0.3
Muchinga	30.2	0.6	5.6	0.7	4.7	1.0
North Western	2.2	0.0	0.0	0.0	0.1	0.0
Southern	2,840.0	56.9	358.0	45.5	234.5	48.2
Western	510.4	10.2	193.8	24.6	56.5	11.6
Total	4,989.0	100.0	787.3	100.0	486.9	100.0

5.11.3 Virginia Tobacco Production

Table 5.33 shows that the total quantity of Virginia tobacco produced during the 2011/2012 Agricultural Season was estimated at 4,287.6 metric tonnes. Southern Province

accounted for the largest proportion of Virginia tobacco produced with 47.9 percent of the total, followed by Eastern and Western provinces with 31.0 percent and 16.6 percent, respectively.

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	159.7	3.7
Eastern	1,331.0	31.0
Luapula	10.8	0.3
Muchinga	18.7	0.4
North Western	3.9	0.1
Southern	2,052.9	47.9
Western	710.7	16.6
Total	4,287.6	100.0

5.12 Burley Tobacco

Burley Tobacco is mainly air-cured and is preferred by most Zambian tobacco producers. Results from the 2011/2012 Post Harvest Survey showed that most of burley tobacco was produced in Eastern province. (Table 5.34)

5.12.1 Households Growing Burley Tobacco

There were a total of 7,998 households which grew burley tobacco during the 2011/2012 Agricultural Season (Table 5.34). The majority of households which grew burley tobacco were in Eastern Province, representing 60.7 percent. Southern and Western provinces accounted for 14.3 and 9.6 percent of the total, respectively. Lusaka and Northern provinces did not record any households growing burley tobacco.

Province	Number of Households	Percentage Share
Central	1,061	13.3
Copperbelt	30	0.4
Eastern	4,855	60.7
Muchinga	140	1.8
Southern	1,144	14.3
Western	768	9.6
Total	7,998	100.0

5.12.2 Total Area Planted to Burley Tobacco and Fertilizer Applied

Table 5.35 shows that an estimated 7,350.4 hectares were planted to burley tobacco during the 2011/2012 Agricultural Season. The largest area was recorded in Eastern Province accounting for 64.4 percent of the total followed by Western and Southern provinces at 13.4 and 11.7 percent, respectively.

Approximately 866.4 metric tonnes basal and 742.8 metric tonnes top dressing fertilizer were used to produce burley tobacco during the season. The largest proportions of fertilizer used were recorded in Eastern Province accounting for 55.2 percent basal and 51.1 percent top dressing, followed by Western Province with 30.9 percent basal and 33.4 percent top dressing. Southern Province accounted for about 8 percent and 9.3 percent of basal and top dressing fertilizer, respectively.

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	MetricTonnes	Percentage Share	MetricTonnes	Percentage Share
Central	612.8	8.3	26.5	3.1	26.5	3.6
Copperbelt	7.6	0.1	-	-	-	-
Eastern	4,733.6	64.4	478.3	55.2	379.4	51.1
Muchinga	157.7	2.1	24.8	2.9	19.3	2.6
Southern	856.8	11.7	69.2	8	69.2	9.3
Western	981.9	13.4	267.6	30.9	248.5	33.4
Total	7,350.4	100	866.4	100	742.8	100

5.12.3 Burley Tobacco Production

The total quantity of burley tobacco produced by small and medium scale farmers was estimated at 7,936.9 metric tonnes (Table 5.36).

Eastern Province accounted 71.3 percent of the total followed by Western Province at 18.8 percent and Central Province at 6.7 percent.

Province	Quantity Produced	
	MetricTonne	Percentage Share
Central	532.5	6.7
Copperbelt	11.5	0.1
Eastern	5,660.8	71.3
Muchinga	128.7	1.6
Southern	114.2	1.4
Western	1,489.1	18.8
Total	7,936.9	100.0

5.13 Velvet Beans

The velvet bean is a legume with slender climbing vines. It produces long clusters of purplish flowers and dense hairy pods.

5.13.1 Households Growing Velvet Beans

Table 5.37 shows the percentage distribution of households growing velvet beans by province. The table shows that there were a total of 6,005 households that grew velvet beans. The majority of households were in Southern Province, representing 38.6 percent of the total. Eastern and Western provinces accounted for 15.1 and 13.7 percent of the total, respectively. Muchinga Province had the lowest number of households that grew velvet beans at 2.0 percent.

Table 5.37: Percentage Distribution of Households Growing Velvet Beans by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	27	4.4
Copperbelt	166	2.8
Eastern	908	15.1
Luapula	36	0.6
Lusaka	477	7.9
Muchinga	119	2.0
Northern	563	9.4
Northwestern	336	5.6
Southern	2,315	38.6
Western	822	13.7
Total	6,005	100.0

5.13.2 Total Area Planted to Velvet Beans and Fertilizer Applied

Table 5.38 shows total area planted to velvet beans and fertilizer applied by province. The total area planted to velvet beans was approximately 3,585.3 hectares. Southern Province recorded the largest area planted to velvet beans accounting for 48.2 percent of total, followed by Eastern province at 25.9 percent.

A total of 17.4 metric tonnes basal and 13.0 metric tonnes top dressing fertilizers were used for velvet beans production. Southern Province accounted for the largest quantity of fertilizer used with 63.4 metric tonnes basal and 53.1 metric tonnes top dressing fertilizers. Central Province accounted for 35.0 percent basal and 46.9 percent top dressing fertilizer.

Table 5.38: Total Area Planted to Velvet Beans (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percentage Share	Metric Tonne	Percentage Share	Metric Tonne	Percentage Share
Central	68.5	1.9	6.1	35.0	6.1	46.9
Copperbelt	3.0	0.1	0.3	1.6	-	0.0
Eastern	929.9	25.9	-	0.0	-	0.0
Luapula	4.5	0.1	-	0.0	-	0.0
Lusaka	119.2	3.3	-	0.0	-	0.0
Muchinga	96.7	2.7	-	0.0	-	0.0
Northern	110.3	3.1	-	0.0	-	0.0
North Western	319.8	8.9	-	0.0	-	0.0
Southern	1,728.7	48.2	11.1	63.4	6.9	53.1
Western	204.7	5.7	-	0.0	-	0.0
Total	3,585.3	100.0	17.4	100.0	13.0	100.0

5.13.3 Velvet Beans Production

The total quantity of velvet beans produced during the 2011/2012 Agricultural Season was estimated at 1,278.8 metric tonnes (Table 5.39). Southern Province recorded the largest quantity of velvet beans produced, accounting for 55.1

percent of total production. North-western Province recorded the second largest quantity, accounting for 14.5 percent followed by Eastern and Western provinces with 11.5 and 6.6 percent respectively. The remaining provinces accounted for less than 6.0 percent each.

Table 5.39: Distribution of Quantity of Velvet Beans Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Produced	
	Metric Tonnes	Percentage Share
Central	18.2	1.4
Copperbelt	4.1	0.3
Eastern	147.5	11.5
Luapula	3.3	0.3
Lusaka	56.0	4.4
Muchinga	10.9	0.8
Northern	64.6	5.1
North Western	184.8	14.5
Southern	704.4	55.1
Western	85.0	6.6
Total	1,278.8	100.0

5.14 Bambara Nuts

Bambara nut is a highly nutritious legume crop grown in all parts of the country. It is usually grown on small plots mostly by rural households and is consumed as a supplement to diets that are primarily based on sorghum, millet, maize and groundnuts.

5.14.1 Households Growing Bambara Nuts

Table 5.40 shows that an estimated 43,960 households grew bambara nuts. Luapula Province accounted for 31.0 percent of the total. Northern and Muchinga provinces accounted for 21.9 and 11.4 percent of the total, respectively. North Western Province had the lowest number of households that grew bambara nuts at 2.2 percent.

Table 5.40: Percentage Distribution of Households Growing Bambara Nuts by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	2,341	5.3
Copperbelt	2,986	6.8
Eastern	2,649	6.0
Luapula	13,632	31.0
Lusaka	654	1.5
Muchinga	5,012	11.4
Northern	9,610	21.9
North Western	947	2.2
Southern	2,659	6.0
Western	3,471	7.9
Total	43,960	100.0

5.14.2 Total Area Planted to Bambara Nuts and Fertilizer Applied

A total of about 9206.3 hectares were planted to Bambara nuts. Northern and Luapula provinces recorded the largest area planted to Bambara nuts accounting for 27.6 percent and 23.9 percent of the total area respectively, while

Lusaka and North Western provinces recorded the smallest proportion with 1.4 percent and 1.3 percent, respectively.

An estimated 2.0 metric tonnes of basal fertiliser and 4.9 metric tonnes of top dressing fertiliser were used in the production of Bambara nuts. Table 5.41).

Table 5.41: Total Area Planted to Bambara Nuts (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Basal Dressing		Top Dressing	
	Heatares	Percentage Share	Metric Tonne	Percentage Share	Metric Tonne	Percentage Share
Central	561.5	6.1	-	-	-	-
Copperbelt	524.8	5.7	-	-	3.0	61.2
Eastern	843.8	9.2	-	-	-	-
Luapula	2,195.8	23.9	1.9	90.5	1.9	38.8
Lusaka	126.9	1.4	0.2	9.5	-	-
Muchinga	624.3	6.8	-	-	-	-
Northern	2,537.3	27.6	-	-	-	-
North Western	121.8	1.3	-	-	-	-
Southern	855.5	9.3	-	-	-	-
Western	814.7	8.8	-	-	-	-
Total	9,206.3	100.0	2.1	100.0	4.9	100.0

5.14.3 Bambara Nuts Production

A total of 4,977 metric tonnes of Bambara nuts were produced (Table 5.42). Luapula Province recorded the largest proportion of Bambara nuts produced, accounting for 29.0 percent of the

total production. This was followed by Northern and Western provinces with 16.2 percent and 13.6 percent respectively. The lowest proportion was recorded in North Western Province, accounting for 2.0 percent of the total production.

Table 5.42: Distribution of Quantity of Bambara Nuts Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Quantity Produced	
	Metric Tonne	Percentage Share
Central	344.8	6.9
Copperbelt	241.1	4.8
Eastern	471.3	9.5
Luapula	1,443.1	29.0
Lusaka	123.5	2.5
Muchinga	340.0	6.8
Northern	804.9	16.2
Northwestern	101.3	2.0
Southern	430.7	8.7
Western	675.8	13.6
Total	4,976.5	100.0

5.15 Cowpeas

Cowpeas are an important food legume crop grown throughout the country often intercropped with maize, millet, sorghum and groundnuts.

5.15.1 Households Growing Cowpeas

Table 5.43 shows that a total of 40,231 households grew Cowpeas. Southern Province recorded the largest proportion, accounting for 33.6 percent followed by Western and Eastern provinces with 23.1 percent and 10.2 percent, respectively. Copperbelt Province recorded the smallest proportion, at 0.7 percent.

Province	Number of Households	Percentage Share
Central	3,274	8.1
Copperbelt	270	0.7
Eastern	4,098	10.2
Luapula	1,494	3.7
Lusaka	1,258	3.1
Muchinga	2,061	5.1
Northern	2,627	6.5
Northwestern	2,366	5.9
Southern	13,511	33.6
Western	9,273	23.1
Total	40,231	100.0

5.15.2 Total Area Planted to Cowpeas and Fertilizer Applied

A total of 12,073.9 hectares were planted to cowpeas (Table 5.44). Southern Province accounted for 45.3 percent of the total area planted to cowpeas followed by Western Province 21.5 percent. The smallest area was recorded in the Copperbelt Province at 0.3 percent.

A total of 74.7 metric tonnes of basal dressing fertiliser and 71.1 metric tonnes of top dressing fertiliser were used in the production of cowpeas. Southern Province recorded the largest quantities of both basal and top dressing fertilizer use accounting for about 59.5 percent and 59.1 percent, respectively.

Province	Area Planted		Fertilizer applied			
			Basal dressing		Top dressing	
	Hectare	Percentage Share	Metric Tonne	Percentage Share	Metric Tonne	Percentage share
Central	1,408.7	11.7	-	-	-	-
Copperbelt	41.0	0.3	-	-	-	-
Eastern	969.5	8.0	-	-	-	-
Luapula	169.6	1.4	1.1	1.5	-	-
Lusaka	237.2	2.0	-	-	-	-
Muchinga	411.9	3.4	-	-	-	-
Northern	405.1	3.4	4.1	5.5	4.1	5.8
NorthWestern	359.4	3.0	22.8	30.6	22.8	32.1
Southern	5,471.6	45.3	44.5	59.5	42.0	59.1
Western	2,599.9	21.5	2.2	2.9	2.2	3.0
Total	12,073.9	100.0	74.7	100.0	71.1	100.0

5.15.3 Cowpeas Production

Table 5.45 shows that Cowpeas production was estimated at 5,544 metric tonnes. Southern Province recorded the largest proportion of

total production, accounting for 50.6 percent of the total. Western Province was second with 16.8 percent, while the smallest proportion was recorded in Copperbelt Province at 0.2 percent.

Table 5.45: Distribution of Quantity of Cowpeas Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Total Quantity Produced	
	Metric Tonne	Percentage Share
Central	426	7.7
Copperbelt	9	0.2
Eastern	426	7.7
Luapula	114	2.1
Lusaka	111	2.0
Muchinga	199	3.6
Northern	110	2.0
North Western	412	7.4
Southern	2,807	50.6
Western	931	16.8
Total	5,544	100.0

5.16 Sweet Potatoes

Growing of sweet potatoes is common in all the provinces of the country. It is an important food and cash crop in Copperbelt, Central, and North Western provinces.

5.16.1 Households Growing Sweet Potatoes

Table 5.46 shows that a total of 162,138 households grew sweet potatoes. Southern Province recorded the largest proportion, accounting for 16.6 percent of the total, whereas Lusaka Province recorded the smallest proportion at 2.9 percent.

Table 5.46: Percentage Distribution of Households Growing Sweet Potatoes by Province, Zambia 2011/2012

Province	Number of Households	Percentage Share
Central	24,830	15.3
Copperbelt	18,864	11.6
Eastern	6,903	4.3
Luapula	17,579	10.8
Lusaka	4,765	2.9
Muchinga	14,637	9.0
Northern	21,728	13.4
Northwestern	19,577	12.1
Southern	25,938	16.0
Western	7,316	4.5
Total	162,138	100.0

5.16.2 Total Area Planted to Sweet Potatoes and Fertilizer Applied

An estimated 48,841.4 hectares were planted to sweet potatoes (Tables 5.47). The largest of this area was recorded in southern province, accounting for 27.3 percent. This was followed by Central and Northern provinces with 18.5 percent and 11.5 percent, respectively. Lusaka

Province recorded the smallest area planted to sweet potatoes, accounting for 2.2 percent of the total. The total amount of basal and top dressing fertilizer applied to sweet potatoes was estimated at 111 metric tonnes and 132.9 metric tonnes respectively. Southern Province recorded the largest proportion of fertiliser used with 65.6 percent basal and 75.7 percent top dressing.

Table 5.47: Total Area Planted to Sweet Potatoes (Hectares) and Fertilizer Applied (Metric Tonnes) by Province, Zambia 2011/2012

Province	Area Planted		Fertilizer applied			
			Basal Dressing		Top Dressing	
	Hectare	Percentage Share	Metric Tonne	Percentage Share	Metric Tonne	Percentage Share
Central	9,038.6	18.5	10.2	9.2	10.2	7.7
Copperbelt	4,415.9	9.0	7.1	6.4	13.1	9.9
Eastern	2,371.4	4.9	10.6	9.5	-	-
Luapula	3,708.1	7.6	-	-	0.7	0.5
Lusaka	1,076.6	2.2	10.2	9.2	8.2	6.2
Muchinga	3,635.7	7.4	-	-	-	-
Northern	5,614.1	11.5	-	-	-	-
North Western	3,307.8	6.8	-	-	-	-
Southern	13,313.7	27.3	72.8	65.6	100.6	75.7
Western	2,359.5	4.8	-	-	-	-
Total	48,841.4	100.0	111.0	100.0	132.9	100.0

5.16.3 Sweet Potato Production

An estimated 117,081.7 metric tonnes of sweet potatoes were produced (Table 5.48). Central Province recorded the largest proportion of 23.8

percent of the total production followed Southern Province with 16.7 percent. The lowest production was recorded in Lusaka Province with 2.0 percent.

Table 5.48: Distribution of Quantity of Sweet Potatoes Produced in Metric Tonnes by Province, Zambia 2011/2012

Province	Total Quantity Produced	
	Metric Tonne	Percentage Share
Central	27,879.0	23.8
Copperbelt	14,550.2	12.4
Eastern	3,857.0	3.3
Luapula	12,979.0	11.1
Lusaka	2,315.7	2.0
Muchinga	6,176.3	5.3
Northern	14,220.4	12.1
Northwestern	11,455.6	9.8
Southern	19,530.4	16.7
Western	4,117.2	3.5
Total	117,080.7	100.0

CHAPTER 6: LAND PREPARATION METHODS

6.0 Introduction

Data was collected on land preparation methods used for crop production. The alternative land preparation methods were; conventional hand hoeing, planting basins/potholes, chitemene ploughing, ripping, ridging, bunding, and chitemene zero tillage.

Table 6.1 shows that a total of 2,577,818.2 hectares were planted to various crops. The largest proportion of this land was prepared by ploughing, representing 50.3 percent, followed

by conventional hand-hoeing and ridging at 26.1 and 15.9 percent, respectively.

The ploughing method was most widely used in Southern, Central and Western provinces, to prepare 89.2, 73.7 and 71.8 percent of the total land cultivated within the provinces, respectively. Conventional hand hoeing was common in Copperbelt, Muchinga, Luapula, Northern, and North Western provinces representing 52.1 percent, 50.0 percent, 44.2 percent, 44.5 percent and 45.7 percent of the total land cultivated within the provinces, respectively.

Table 6.1: Percentage Distribution of Area Prepared using Various Land Preparation Methods by Province, Zambia 2011/2012

Province	Percentage of Area prepared using various Land Preparation Methods									Per cent	Area (Hectares)
	Conventional hand hoe	Planting basins/potholes	Zero tillage	Ploughing	Ripping	Ridging	Bunding	Chitemene zero tillage	Chitemene loughing/hand hoe		
Central	17.5	1.9	1.6	73.7	2.8	1.3	0.1	0.4	0.8	100	394,319.70
Copperbelt	52.1	1.5	1.7	20.4	0.1	20.9	2.1	-	1.3	100	112,885.80
Eastern	26.2	3.2	3	41	2.3	23	0.1	0.1	0.9	100	668,766.10
Luapula	44.2	3.6	0.1	0.2	0.7	40.4	9.6	0.5	0.8	100	87,141.90
Lusaka	37.8	8.2	1.7	47.4	3.5	1	0.2	0.2	0	100	59,145.60
Muchinga	50	1.6	0.6	2.2	0.5	42.8	0.9	1.1	0.4	100	151,937.40
Northern	44.5	2.3	0.9	13.2	0.1	33.1	2	1.6	2.2	100	242,994.20
North Western	45.7	2.5	0.2	9.5	0.1	40.5	1.1	0.3	0	100	109,996.90
Southern	4.6	1.8	1.8	89.2	1.7	0.3	0.1	0.2	0.3	100	544,143.80
Western	24.5	2.7	0.2	71.8	0.2	0.4	0.2	-	0	100	206,486.90
Total	26.1	2.5	1.7	50.3	1.5	15.9	0.8	0.4	0.7	100	2,577,818.20

Table 6.2 shows the percentage distribution of households using different land preparation methods by province. Countrywide, a total of 625,887.1 households used conventional hand hoeing as the main land preparation method. Conventional hand hoeing was mostly used in Northern Province, which accounted for 17.1 percent of the total, followed by Eastern and Muchinga provinces at 15.3 and 13.4 percent, respectively.

The ridging method was used by a total of 347,679.9 household in the country. Ridging was widely used by households in Eastern and

Northern provinces, accounting for 21.9 and 21.3 percent of the total, respectively.

Ripping was the least practiced method at 20,604.4 of the total crop growing household in the country. Eastern and Southern provinces recorded the largest number of household practicing ripping at 44.4 and 24.5 percent of the total, respectively.

Table 6.2: Percentage Distribution of Household using Different Land Preparation Methods by Province, Zambia 2011/2012

Province	Conventional Hand Hoe	Planting Basins/Potholes	Zero tillage	Ploughing	Ripping	Ridging	Bunding	Chitemene zero tillage	Chitemene ploughing/hand hoe
Central	9.5	10.4	8.7	19.1	11.6	2.4	2.7	1.7	5.7
Copperbelt	8.2	3.6	4.2	1.8	1.4	7.2	9.3	0	5.8
Eastern	15.3	31.3	48.2	21.5	44.4	21.9	1.6	1.6	14.1
Luapula	11	8	1.8	0.1	6.4	15.2	43.3	8.2	9.9
Lusaka	3.7	8.3	3.7	3.4	3.8	0.5	0.8	1	0.4
Muchinga	13.4	5.5	2.6	0.3	3.5	18.6	6.2	23.3	7.1
Northern	17.1	8.8	15.9	2.3	1.1	21.3	19	57	52.5
Northwestern	8.9	6.1	2.4	1.3	1.3	11.7	10.7	3	0.6
Southern	2.8	9.9	11.3	33	24.5	0.8	5.9	4.1	3.7
Western	10.1	8.1	1.4	17.5	2.1	0.4	0.5	0	0.3
Total	100	100	100	100	100	100	100	100	100
Zambia Total	625,887.10	620,98.1	29,580.10	29,580.10	20,604.40	347,679.90	51,578.70	22,393.60	22,567.60

CHAPTER 7: LIVESTOCK & POULTRY RAISING

7.0 Introduction

The 2011/2012 Post Harvest Survey collected data on livestock and poultry in all the 10 provinces of the country. Data was collected on the number of animals raised, slaughtered, sold, and value of sales.

7.1 Cattle

7.1.1 Number of Households Raising Cattle

Table 7.1a shows the number of households that were raising livestock on 1st October 2011

(Opening Stock) and on 30th September 2012 (Closing Stock).

The table shows that the total number of households raising livestock in the country increased by 3.6 percent. Northwestern Province had the highest increase in the number of households raising livestock during the 2011/2012 Agricultural Season followed by Muchinga and Luapula provinces with 7.3 and 6.8 percent respectively. Western Province had the lowest increase in the number of households raising livestock with 1.7 percent while the number of households raising livestock in Copperbelt Province decreased by 1.2 percent.

Province	Number of Households Raising Cattle on 1st October 2011	Number of Households Raising Cattle on 30th September 2012	Percentage Change
Central	44,888	46,447	3.5
Copperbelt	5,834	5,763	-1.2
Eastern	85,157	89,164	4.7
Luapula	2,180	2,327	6.8
Lusaka	6,234	6,551	5.1
Muchinga	12,762	13,688	7.3
Northern	11,224	11,701	4.2
Northwestern	7,631	8,324	9.1
Southern	93,220	95,521	2.5
Western	41,040	41,747	1.7
Total	310,170	321,233	3.6

7.1.2 Number of Cattle Raised

Table 7.1b shows that the number of cattle in the country increased by 2.7 percent. Luapula Province recorded the highest increase with 40.6 percent. All provinces in the country

recorded increases apart from Central and Northern provinces which recorded decreases of 6.0 percent and 0.9 percent, respectively.

Province	Number of Cattle held on 1st October 2011	Number of Cattle held on 30th September 2012	Percentage Change
Central	542,871	510,515	-6.0
Copperbelt	52,141	53,453	2.5
Eastern	592,903	637,096	7.5
Luapula	8,788	12,354	40.6
Lusaka	91,998	93,491	1.6
Muchinga	126,496	133,793	5.8
Northern	70,133	69,484	-0.9
Northwestern	63,251	67,631	6.9
Southern	1,564,793	1,629,547	4.1
Western	704,406	714,744	1.5
Total	3,817,781	3,922,107	2.7

As at 1st October, 2011 (Table 7.1b), Southern Province recorded the largest number of cattle (1,564,793 heads). Cows represented 39.6 percent while bulls accounted for 5.2 percent. Luapula Province recorded the smallest number of cattle, with 8,788 heads of which 44.7 percent were cows and 26.8 percent were bulls.

Southern Province still had the largest number of cattle (1, 629, 547 heads) compared to the

other provinces at the end of the agricultural season on 30th September, 2012 (Table 7.1c). A large number of the cattle in Southern Province were cows, representing 39.1 percent, while only 5.0 percent were bulls. Luapula Province recorded the smallest number of cattle (12, 354 heads) of which 47.2 percent were cows and 23.2 percent were bulls.

Province	Total Number of Cattle	Total Percent	Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/Steers	Calves
Central	542,871	100	37.7	12.3	9.0	8.6	20.1	4.5	7.8
Copperbel	52,141	100	39.9	8.8	13.9	4.4	17.4	4.3	11.3
Eastern	592,903	100	34.2	12.2	7.3	4.9	25.9	6.8	8.7
Luapula	8,788	100	44.7	14.5	26.8	0.3	1.7	1.1	10.8
Lusaka	91,998	100	36.3	17.0	9.9	7.4	11.5	5.0	12.9
Muchinga	126,496	100	50.1	14.2	13.4	3.9	5.5	3.4	9.5
Northern	70,133	100	37.3	14.0	14.5	6.4	16.4	5.9	5.5
North Western	63,251	100	39.5	10.6	16.4	7.5	12.8	5.8	7.4
Southern	1,564,79	100	39.6	14.1	5.2	6.9	17.3	6.4	10.4
Western	704,406	100	38.1	13.0	5.5	6.5	16.4	7.1	13.4
Zambia	3,817,78	100	38.5	13.3	7.0	6.6	18.2	6.1	10.2

As at 30th September 2012 (Table 7.1d), Southern Province recorded the largest number of cattle (1,629,547 heads). Of these, 39.1 percent were cows while only 5.0 percent were bulls. Luapula Province recorded the smallest

number of cattle estimated at 12,354 heads of which 47.2 percent were cows and 23.2 percent were bulls.

Table 7.1d: Percentage Distribution of Cattle Raised as at 30th September, 2012 by Cattle Type and Province, Zambia 2011/2012

Province	Total Number of Cattle	Total Percent	Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/ Steers	Calves
Central	510,515	100	36.1	11.5	8.4	8.7	19.7	5.1	10.4
Copperbelt	53,453	100	39.0	9.1	11.6	3.2	19.9	4.9	12.2
Eastern	637,096	100	33.1	11.2	6.7	4.4	25.3	7.1	12.2
Luapula	12,354	100	47.2	14.1	23.2	0.2	0.6	4.2	10.5
Lusaka	93,491	100	34.7	19.4	9.7	6.2	10.2	6.2	13.6
Muchinga	133,793	100	50.2	14.7	11.5	3.2	5.5	4.2	10.7
Northern	69,484	100	36.4	17.9	13.0	4.3	16.0	6.2	6.2
North Western	67,631	100	35.4	11.4	13.6	8.3	13.1	7.9	10.4
Southern	1,629,547	100	39.1	13.9	5.0	7.1	16.9	6.1	11.9
Western	714,744	100	37.1	13.1	5.1	6.8	15.9	7.2	14.8
Zambia	3,922,107	100	37.6	13.1	6.5	6.5	17.8	6.3	12.1

7.1.2 Number of Cattle Slaughtered

An estimated 48,235 cattle were slaughtered during the 2011/2012 Agricultural Season. Out of all the cattle slaughtered throughout the country, cows accounted for the largest number at 45.4 percent.

Most of the cattle were slaughtered in Southern Province (13,211), while Eastern and Central provinces followed with 8,489 and 8,122 cattle, respectively. Luapula Province recorded the lowest number of cattle slaughtered (665).

Table 7.2: Percentage Distribution of Cattle Slaughtered by Type and Province, Zambia 2011/2012

Province	Total Number of Cattle	Total percent	Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/ Steers	Calves
Central	8,122	100	44.8	16.2	8.1	8.7	16.2	5.2	0.9
Copperbelt	865	100	77.6	0.0	2.0	10.2	10.2	0.0	0.0
Eastern	8,489	100	48.9	6.7	12.8	2.1	19.3	6.6	3.7
Luapula	665	100	59.0	10.1	30.9	0.0	0.0	0.0	0.0
Lusaka	1,257	100	60.5	19.9	6.8	12.9	0.0	0.0	0.0
Muchinga	4,653	100	46.7	5.6	35.2	5.3	1.3	5.8	0.0
Northern	3,790	100	51.0	9.9	28.7	2.5	2.6	3.2	2.2
North Western	1,601	100	53.9	2.7	5.5	13.7	10.5	0.0	13.7
Southern	13,211	100	35.6	14.6	8.1	11.1	27.4	2.6	0.6
Western	5,582	100	46.7	6.6	16.0	1.7	26.2	1.3	1.5
Total	48,235	100	45.4	10.7	14.2	6.8	17.5	3.7	1.8

7.1.3 Number of Cattle Sold

Countywide, about 140,986 cattle were sold during the 2011/2012 Agricultural Season (Table 7.3). Cows accounted for the largest proportion of cattle sold at 36.2 percent of the total. Calve sales at 2.9 percent were the least of all cattle sales.

The highest numbers of cattle sales were recorded in Southern Province with 59,484 and Eastern Province with 21,412 sales. The smallest number of cattle sales was recorded in Luapula Province with 322 sales.

Province	Total Number of Cattle	Total Percent	Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/Steers	Calves
Central	20,112	100	33.9	12.6	14.6	4.6	22.9	3.4	8.0
Copperbelt	2,359	100	59.1	7.8	12.3	0.0	14.5	1.9	4.5
Eastern	21,412	100	32.2	9.3	13.4	9.3	28.6	5.6	1.6
Luapula	322	100	51.4	20.8	18.7	9.1	0.0	0.0	0.0
Lusaka	3,829	100	68.1	9.3	10.1	1.0	5.7	5.0	1.0
Muchinga	7,619	100	37.2	14.3	39.6	1.1	0.6	2.0	5.2
Northern	4,466	100	29.2	5.7	26.5	0.9	21.3	16.3	0.0
North Western	4,457	100	11.3	6.5	40.9	12.3	3.5	25.5	0.0
Southern	59,484	100	34.6	16.2	8.5	13.0	21.5	3.7	2.5
Western	16,927	100	46.7	9.4	7.3	4.3	27.3	4.7	0.3
Total	140,986	100	36.2	12.8	13.4	8.6	21.2	5.1	2.9

7.1.4 Value of Cattle Sales

The total value of proceeds from cattle sales was estimated at K215.3 billion. Southern Province recorded the highest value of cattle

sales at K83.4 billion followed by Central Province with K43.6 billion. (Refer to Table 7.4).

Province	Total Value of Cattle Sold (ZMK)	Total Percent	Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/Steers	Calves
Central	43,590,024,785	100	37.1	14.4	15.1	3.7	24.5	3.4	1.7
Copperbelt	4,071,110,579	100	45.7	8.2	31.4	0.0	7.6	1.9	5.3
Eastern	33,374,848,417	100	28.1	7.0	12.9	16.1	29.2	5.3	1.3
Luapula	738,228,157	100	57.4	31.7	4.9	6.0	0.0	0.0	0.0
Lusaka	6,573,320,712	100	55.2	6.2	16.6	0.6	16.6	4.4	0.6
Muchinga	10,500,554,663	100	36.4	8.3	50.8	1.0	0.5	1.1	2.0
Northern	5,279,851,062	100	31.1	4.2	33.9	1.4	16.4	13.0	0.0
North Western	10,063,348,231	100	9.8	0.2	51.1	20.0	4.7	14.1	0.0
Southern	83,427,545,453	100	39.5	10.3	12.8	6.8	26.7	2.6	1.3
Western	17,687,042,850	100	37.9	10.8	7.7	3.1	34.4	5.9	0.1
Total	215,305,874,909	100	36.0	9.8	17.5	7.2	23.9	4.2	1.3

7.2 Pigs

7.2.1 Number of Pigs Raised

The number of pigs as at 30th September, 2012 was estimated at 1,517,492. Compared to 1,616,869 held on 1st October, 2011, a decrease of 6.1 percent was recorded. The raising of pigs was reported in all the ten provinces of Zambia as shown in table 7.5.

Southern Province recorded the highest increase in the number of pigs raised with 31.5 percent while Luapula Province recorded an increase of 25.9 percent. Other provinces which recorded increases in number of pigs raised were Central, North Western and Western provinces. Lusaka and Muchinga provinces recorded the highest decrease in the number of pigs raised with 45.6 and 16.3 percent respectively. Other provinces that recorded decreases in number of pigs raised were Copperbelt, Eastern and Northern provinces.

Province	Number Held on 1st October 2011	Number Held on 30th September 2012	Percentage Change
Central	133,383	135,590	1.7
Copperbelt	77,953	77,271	-0.9
Eastern	596,776	574,710	-3.7
Luapula	29,854	37,572	25.9
Lusaka	331,098	180,103	-45.6
Muchinga	59,005	49,374	-16.3
Northern	74,321	71,185	-4.2
North Western	33,355	35,113	5.3
Southern	188,939	248,510	31.5
Western	92,185	108,065	17.2
Total	1,616,869	1,517,492	-6.1

7.2.2 Number of Pigs Slaughtered

Table 7.6 shows that 217,209 pigs were slaughtered during the season. The highest proportion of slaughtered pigs was in Eastern

Province with 33.3 percent followed by Lusaka Province with 28.6 percent. The lowest was recorded in North-western Province accounting for 1.8 percent.

Percent	Pigs slaughtered	
	Number	Percentage Share
Central	18,319	8.4
Copperbelt	9,372	4.3
Eastern	72,345	33.3
Luapula	7,430	3.4
Lusaka	62,209	28.6
Muchinga	14,012	6.5
Northern	12,192	5.6
Northwestern	3,814	1.8
Southern	9,378	4.3
Western	8,137	3.7
Total	217,209	100.0

7.2.3 Number of Pigs Sold

A total of 403,091 pigs were sold during the season, with the highest number of sales being recorded in Lusaka Province at 40.5 percent.

This was followed by Eastern and Southern provinces with 17.5 percent and 13.9 percent, respectively. (Table 7.7).

Province	Pig Sales		Value of Pig sales	
	Number	Percent	ZMK	Percentage Share
Central	42,006	10.4	11,285,225	12.5
Copperbelt	25,136	6.2	15,209,172	16.9
Eastern	70,660	17.5	12,650,202	14.0
Luapula	8,100	2.0	1,430,837	1.6
Lusaka	163,121	40.5	27,349,957	30.3
Muchinga	10,163	2.5	2,728,678	3.0
Northern	13,318	3.3	2,724,996	3.0
North Western	8,248	2.0	3,617,477	4.0
Southern	55,884	13.9	12,089,006	13.4
Western	6,455	1.6	1,054,782	1.2
Total	403,091	100.0	90,140,332	100.0

7.2.4 Value of Pig Sales

A total of 90.1 million kwacha was realized from the sale of 403,091 pigs during the season. (Table 7.7). Lusaka Province accounted for the largest proportion of this value with 30.3 percent followed by Copperbelt Province with 16.9 percent.

7.3 Goats

7.3.1 Number of Goats Raised

The total number of goats raised on 1st October, 2011 was 3,050,408. Compared to 3,023,585

that were reported on 30th September 2012, this represented a 0.9 percent decrease.

Western Province recorded the highest increase in the proportion of goats raised between 1st October 2011 and 30th September 2012 with 17.2 percent. Other provinces which recorded increases in the number of goats raised were Luapula and Southern provinces with 6.0 and 1.1 percent respectively. The rest of the provinces recorded decreases in the number of goats raised with Muchinga Province recording the highest decrease of 10.1 percent.

Province	Number held on 1 October, 2011	Number held on 30th September 2012	Percentage Change
Central	594,323	585,200	-1.5
Copperbelt	132,080	129,715	-1.8
Eastern	397,179	381,930	-3.8
Luapula	148,192	157,108	6.0
Lusaka	137,101	131,475	-4.1
Muchinga	144,437	129,798	-10.1
Northern	215,537	208,005	-3.5
North Western	188,844	185,766	-1.6
Southern	1,029,715	1,040,732	1.1
Western	62,998	73,857	17.2
Total	3,050,408	3,023,585	-0.9

7.3.2 Number of Goats Slaughtered

The total number of goats slaughtered during the season was 301,213. Southern Province recorded the highest number, (63,025) of goats slaughtered, representing 20.9 percent of the total, followed by Central and Eastern

provinces with 19.4 and 16.0 percent, respectively. The lowest number of goats slaughtered was registered in Western Province with 1.0 percent of the total number of goats slaughtered.

Table 7.9: Percentage Distribution of Goats Slaughtered by Province, Zambia 2011/2012

Province	Goats Slaughtered	
	Number	Percentage Share
Central	58,386	19.4
Copperbelt	11,206	3.7
Eastern	48,157	16.0
Luapula	26,928	8.9
Lusaka	11,532	3.8
Muchinga	23,146	7.7
Northern	37,630	12.5
North Western	18,236	6.1
Southern	63,025	20.9
Western	2,967	1.0
Total	301,213	100.0

7.3.3 Number and Value of Goats Sold

The total number of goats sold was 470,629. Southern Province had the highest number of goats sold with 152,250, representing 32.4 percent. Central and North-western provinces had the second and third largest number of goats sold representing 20.4 and 8.8 percent, respectively. Western Province had the lowest proportion with 3.5 percent of all goats sold countrywide.

The total value of goat sales countrywide was K62, 300,035 (Table 7.10). Southern Province had the largest value of sales, K15, 258,257 representing the largest proportion with 24.5 percent. This was followed by Central and North Western provinces with 17.4 percent and 11.9 percent of the total amount sold countrywide. Northern Province had the lowest proportion with 4.0 percent.

Table 7.10: Percentage Distribution of Goats Sold by Province, Zambia 2011/2012

Province	Goat Sales		Value of Goat sales	
	Number	Percent	ZMK	Percentage Share
Central	96,087	20.4	10,835,346	17.4
Copperbelt	20,786	4.4	3,252,757	5.2
Eastern	41,326	8.8	5,302,186	8.5
Muchinga	27,088	5.8	3,381,253	5.4
Luapula	26,558	5.6	7,130,942	11.4
Lusaka	25,289	5.4	2,707,146	4.3
Northern	23,422	5.0	2,508,885	4.0
North Western	41,552	8.8	7,408,161	11.9
Southern	152,250	32.4	15,258,257	24.5
Western	16,270	3.5	4,515,101	7.2
Total	470,629	100.0	62,300,035	100.0

7.4 Village Chickens

7.4.1 Number of Village Chickens Raised

Table 7.11 shows the number and percentage distribution of village chicken by province. The estimated number of village chickens raised

was 13,534,955. The highest percentage of chickens raised was recorded in Southern Province estimated at 21.6 percent of the total, followed by Central and Eastern provinces with 17.4 and 14.8 percent, respectively. The lowest number was recorded in Copperbelt and Western provinces with 6.4 percent of the total each.

Province	Village chickens held on 30th September 2012	
	Number	Percentage Share
Central	2,349,997	17.4
Copperbelt	861,176	6.4
Eastern	1,996,885	14.8
Luapula	787,200	5.8
Lusaka	547,014	4.0
Muchinga	1,114,596	8.2
Northern	1,469,489	10.9
North Western	619,527	4.6
Southern	2,928,567	21.6
Western	860,504	6.4
Total	13,534,955	100.0

7.4.2 Number of Village Chickens Slaughtered

Table 7.12 shows that 4,939,707 village chickens were slaughtered during the season. The highest number of those slaughtered was

reported in Central Province with 17.2 percent. This was followed by Eastern and Southern provinces accounting for 16.7 and 15.4 percent, respectively. Lusaka Province was lowest at 4.2 percent.

Province	Village Chickens Slaughtered	
	Number	Percentage Share
Central	850,071	17.2
Copperbelt	280,115	5.7
Eastern	825,406	16.7
Luapula	415,966	8.4
Lusaka	205,358	4.2
Muchinga	516,723	10.5
Northern	636,788	12.9
North Western	224,662	4.5
Southern	761,744	15.4
Western	222,873	4.5
Total	4,939,707	100.0

7.4.3 Number of Village Chickens Sold

The total number of village chickens that were reported to have been sold during the season was 2,438,922 (Table 7.13).

Southern Province accounted for the highest percentage with 20.0 percent of the total. Northern and Central Provinces followed with 17.3 percent for the former and 14.6 percent for the later. Lusaka province had the lowest number of village chickens sold with 3.6 percent.

7.4.4 Value of Village Chicken Sales

The total proceeds recorded from the sale of village chickens countrywide were K59,413,040 (Table 7.13). Southern Province accounted for 40.2 percent of chickens sold followed by Central and Copperbelt provinces with 13.2 and 8.6 percent, respectively. Lusaka Province, with 2.8 percent of the total proceeds, represented the lowest amount received from the sale of village chickens.

Table 7.13: Percentage Distribution of Village Chicken Sold by Province, Zambia 2011/2012

Province	Village Chicken Sales		Value of Village Chicken Sales	
	Number	Percentage Share	Value (ZMK)	Percentage Share
Central	356,260	14.6	7,865,014	13.2
Copperbelt	201,782	8.3	5,091,101	8.6
Eastern	266,754	10.9	4,699,911	7.9
Luapula	124,208	5.1	1,960,669	3.3
Lusaka	88,141	3.6	1,680,565	2.8
Muchinga	170,479	7.0	3,237,972	5.4
Northern	420,858	17.3	4,098,984	6.9
North Western	164,840	6.8	4,481,412	7.5
Southern	487,935	20.0	23,867,653	40.2
Western	157,666	6.5	2,429,758	4.1
Total	2,438,922	100.0	59,413,040	100.0

APPENDIX

KEY PERSONS INVOLVED IN THE PRODUCTION OF THIS PUBLICATION

EDITORS

John Kalumbi	:	Director, Census and Statistics
Sheila Mudenda:		Assistant Director, Information, Research and Dissemination Division
Goodson Sinyenga	:	Assistant Director, Economic Statistics Division
Daniel Daka	:	Assistant Director, Agriculture and Environment Statistics Division
IvenSikanyiti	:	Assistant Director, Social Statistics Division
Frank Kakungu		IT Manager
Patrick Chuni	:	Head – Agriculture Statistics Branch
MasilisoSooka	:	Senior Statistician, Agriculture Statistics Branch

ANALYSTS

Patrick Chuni	:	Head - Agriculture Statistics Branch
Brenda Nakamba	:	CSO Intern
Dennis Bwalya	:	CSO Intern
Pasco Mumba	:	CSO Intern
Chanda Bwalya	:	CSO Intern

REPORT FORMATTING AND ILLUSTRATIONS

Perry Musenge	:	Desktop Publishing Officer
---------------	---	----------------------------