Republic of Zambia

CENTRAL STATISTICAL OFFICE

POST HARVEST SURVEY

2013-2014 AGRICULTURE SEASON

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(Small and Medium Scale Farms)

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Preface

Central Statistical Office (CSO) in collaboration with the sector Ministries of Agriculture, and Livestock and Fisheries, conducts annual agricultural sample surveys covering the Small and Medium Scale Farms Sub-sector of Agriculture. Similarly, information on all Large-Scale Farms is collected during the same period when the Small and Medium Scale Farms Survey is being undertaken. The data collection activities on Small, Medium and Large Scale Farms are usually undertaken during the months of October and November of each year.

This report covers the operations 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 2013 and ended on 30th September, 2014.

An analysis of agricultural households by type of agricultural activities is presented 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 power and farm equipment.

I would like to thank the then Ministry of Agriculture and Livestock (MAL) and the Indaba Agricultural Policy Research Institute (IAPRI) for their valuable technical contribution towards the preparation and eventual undertaking of these statistical activities. In particular, I would like to thank members of staff in the Agriculture and Environment Statistics Branch for having ably executed these statistical activities.

Last, but not least, I want to pay tribute to our respondents who have been supportive over the years.

John Kalumbi
DIRECTOR CENSUS AND STATISTICS

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Abbreviations/Acronyms

ASMIS	-	Agricultural Statistics Management Information System
CSO	-	Central Statistical Office
FAO	-	Food and Agriculture Organisation
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

Below is a summary of findings from the 2013-2014 Post Harvest Survey (PHS) for the Small and Medium Scale Farmers.

DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

- *There were a total of 1,472,701 agriculture households in the 2013-2014 Agriculture Season*
- *The survey showed that there were more male -headed agricultural households (77.3 percent) than those that were female-headed (22.7 percent).*
- *The majority of agricultural household heads were in the age group 35-39 years.*
- *Over half (55.7 percent) of household heads reported to have completed their primary school.*
- *Eastern Province recorded the highest proportion of household heads with no education at 22.4 percent.*
- *Majority of the agricultural households had between 4 and 6 household members.*

CROP PRODUCTION

MAIZE

- *A total of 1,299,158 households, representing 88.2 percent of all agricultural households grew Maize during the Season.*
- *The total area planted to Maize was 1,499,327.9 hectares during the Season.*
- *Eastern Province recorded the largest area planted to maize countrywide, with 23.7 percent of total area under maize during the Season.*
- *The total quantity of maize produced was 3,250,673.8 metric tonnes, with Eastern Province accounting for the largest proportion at 24.3 percent of the total.*
- *Out of the 3,250,673.8 metric tonnes of maize produced, 49.3 percent were sold during the Season.*
- *A total of 182,925.1 metric tonnes of basal and 178,405.0 metric tonnes of top dressing fertilizer were used in maize production.*

SORGHUM

- *A total of 51,835 households, representing 3.5 percent of all agricultural households grew Sorghum during the Season.*
- *There were 24,092.4 hectares planted to Sorghum during the Season.*
- *A total of 70.7 metric tonnes of basal and 66.3 metric tonnes of top dressing fertilizer were used in Sorghum production.*

- *The total quantity of Sorghum produced during the season was 12,022.4 metric tonnes.*

- *Out of 12,022.4 metric tonnes of Sorghum produced, 1,628.6 metric tonnes were sold during the Season.*

RICE

- *A total of 75,588 households, representing 5.1 percent of all agricultural households grew Rice during the Season.*

- *The total area planted to rice was 54,075.0 hectares.*

- *Countrywide, 53,921.1 metric tonnes of rice were produced, of which 50.1 percent were sold.*

- *There were 343.1 metric tonnes basal and 231.2 metric tonnes as top dressing used in rice production.*

MILLET

- *A total of 154,619 households grew Millet during the season representing 10.5 percent of the total number of agricultural households.*

- *The total area under cultivation of Millet was 58,275.4 hectares during the Season.*

- *A total of 41,274.4 metric tonnes of Millet were produced during the season, with Northern Province accounting for 36.7 percent of the total.*

- *Out of the 41,274.4 metric tonnes of millet produced, 17.1 percent were sold during the Season.*

- *There were 291.1 metric tonnes of basal and 209.4 metric tonnes of top dressing fertilizer that were used in the production of Millet.*

SUNFLOWER

- *A total of 145,351 households grew Sunflower during the season representing 9.9 percent of the total number of agricultural households.*

- *The total area planted to Sunflower during the season was 73,825.5 hectares.*

- *There were 29,207.9 metric tonnes of Sunflower produced during the season, with Eastern Province accounting for 66.8 percent of the total production.*

- *Out of the 29,207.9 metric tonnes of Sunflower produced, 35.3 percent were sold during the Season.*

- *A total of 69.5 metric tonnes of basal and 65.0 metric tonnes of top dressing fertilizer were used in Sunflower production.*

GROUNDNUTS

- *A total of 744,648 households, representing 50.6 percent of all agricultural households grew Groundnuts during the Season.*

- *The total area under Groundnut production was 266,156.7 hectares.*
- *A total of 124,957.7 metric tonnes of Groundnuts were produced during the Season.*
- *Out of 124,957.6 metric tonnes of Groundnuts produced, 43,251.1 were sold during the Season.*

SOYA BEANS

- *A total of 100,498households, representing 6.8 percent of all agricultural households, grew Soya Beans during the Season.*
- *The total area planted to Soya Beans during the season was 55,402.1 hectares.*
- *The total quantity of Soya Beans produced was 36,824.6 metric tonnes.*
- *Out of 36,824.6 metric tonnes of Soya Beans produced, 26,153.0 were sold during the Season.*

MIXED BEANS

- *A total of 255,846 households, representing 17.4 percent of all agricultural households grew Mixed Beans during the season.*
- *The total area under cultivation of Mixed Beans was 103,382.4 hectares.*
- *The total quantity of Mixed Beans produced during the season was 47,768.1 metric tonnes.*
- *From 47,768.1metric tonnes of Mixed Beans produced countrywide, 46.1 percent were sold during the Season.*

VIRGINIA TOBACCO

- *A total of 10,842 households, representing 0.7 percent of all agricultural households grew Virginia Tobacco during the Season.*
- *The total area under cultivation of Virginia Tobacco was 9,650.7 hectares.*
- *The total quantity of Virginia Tobacco produced during the season was 11,672.1 metric tonnes.*
- *From 11,672.1 metric tonnes of Virginia Tobacco produced countrywide, 10,792.9 metric tonnes were sold during the Season.*

BURLEY TOBACCO

- *A total of 9,132 households, representing 0.6 percent of all agricultural households grew Burley Tobacco during the Season.*
- *The total area under cultivation of Burley Tobacco was 6,667.2 hectares.*
- *The total quantity of Burley Tobacco produced during the season was 7,508.2 metric tonnes.*

- *From 7,508.2 metric tonnes of Burley Tobacco produced countrywide, 7,495.4 metric tonnes were sold during the Season.*

CASSAVA PRODUCTION

- *A total of 523,543 households, representing 35.5 percent of all agricultural households grew Cassava during the Season.*

- *The total area under Cassava was reported to be 370,548.1 hectares.*

- *A total of 27,997.0 metric tonnes of dried cassava chips were sold country wide during the Agricultural Season and the largest quantity (9,463.6 metric tonnes or 33.8 percent of the total) was sold in Luapula Province.*

- *A total of 24,990 households sold cassava flour during the Season.*

- *There were 5,053.0 metric tonnes of Cassava Flour sold, of which the largest quantity (2,601.3 metric tonnes or 51.5 percent of the total) was sold in Luapula Province.*

- *A total of 135,047 households had Dry Cassava in storage.*

- *A total quantity of 26,310.0 metric tonnes of Dried Cassava Chips were in storage during the Season.*

LAND PREPARATION METHODS

- *Ploughing was the major Land Preparation Method that was used to prepare most of the land under various crops during the agriculture season representing 47.4 percent of the land under crops, followed by ridging and conventional hand hoeing at 25.4 and 20.2 percent, respectively.*

LIVESTOCK RAISING

- *At national level, the cattle population was 3,261,695 as at 30th September 2014 compared to 3,028,181 held as at 1st October, 2013. Southern Province accounted for the highest percentage of cattle population at 42.8 percent of the total national stock at the end of the Season.*

- *A total of 176,595 Cattle were sold at a total value of K379,874,067.43 during the Season.*

- *The population of Pigs as at 30th September 2014 was 1,018,438. Eastern Province accounted for the highest percentage of 48.2 percent, followed by Southern Province with 12.6 percent of the total.*

- *A total of 240,863 Pigs were sold during the season at a total cost of K85,900,904.60.*

- *The Goat population as at 30th September 2014 was 2,679,256, of which Southern Province accounted for the highest population at 34.1 percent.*

- *As at 30th September 2014, the population of Sheep was 130,303. Southern Province accounted for the highest population of sheep at 47.7 percent.*

Chapter 1: Background

1.0. Introduction

The Post-Harvest Survey covering the 2013-2014 Agricultural Season was conducted during October and November 2014. The information collected and presented in this report refers to the Agricultural Season which started on the 1st October 2013 and ended on 31st September 2014. The 2013-2014 Post Harvest Survey was the sixteenth (16th) to be conducted after the 1990-1992 National Census of Agriculture.

At the time of questionnaire design, the content was revised in such a way that information was to be collected at field level instead of crop level. The main reason for this being that it is easier to quantify inputs applied in each field.

Over the period during which the Post Harvest Surveys have been conducted, the survey questionnaire has undergone several major revisions. The purpose has been to capture relevant data, and keep abreast with the changes occurring in the agricultural sector.

1.1. Objectives of the Post-Harvest Survey (PHS)

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

(i) Provision of annual agricultural data that helps facilitate comprehensive analysis of the agricultural sector's contribution to the national economy, on annual basis;

(ii) Development of the Agricultural Statistics Management Information System (ASMIS) to a level such that it accommodates advances in information technology; and,

(iii) Provision of annual agricultural data that is useful for generation of performance indicators to facilitate interventions by Government, Donors and NGOs.

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.

(c) Development of appropriate instruments for collecting Post-Harvest Survey and other agricultural data.

Chapter 2: Concepts and Definitions

2.0. Introduction

The following concepts and definitions, as articulated by the Food and Agriculture Organization (FAO), were used during the 2013-2014 Post Harvest Survey (PHS). However, some of these concepts and definitions were modified to suit the Zambian context.

2.1. General Concepts

Qualified Respondent: A 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.

Adult Household Member: An Adult household member refers to persons who are aged 12 years or order.

Household: A 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: An 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: An 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: The head of the household is a person who is considered to be the head by the members of the household.

Field: A 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: Mixed Cropping is a cultivation practice where two or more different temporary or permanent crops are grown simultaneously in the same field.

Inter-Cropping: 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: 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.

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

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

Local Seed: Local seed refers to traditional and indigenous seed varieties.

Hybrid Seed : Hybrid seed refers to improved seed varieties.

2.2. General Definitions

Livestock: This includes cattle, goats, sheep, and donkeys.

Cattle: This includes bulls, oxen, tollies, cows, heifers, and calves.

Bulls: Bulls are uncastrated adult male cattle.

Oxen/Tollies: Oxen or Tollies are castrated male cattle.

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

Calves: 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 2013-2014 Post Harvest Survey (PHS) on sample basis. Data collection activities took place during the months of October and November, 2014. 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 2013-2014 PHS was based on a probability sample of 13,600 agricultural households selected from 680 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 74 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) 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 18,820 SEAs which made up the agricultural sampling frame.

3.1.1. 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:

   $S_{hi} = R_h + [I_h \times (i-1)]$, rounded up,
   Where i = 1, 2, 3, …,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}.

3.1.2. 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, only10 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.

3.2. 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 or 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.

3.3. Training of Field Staff

Professional 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.

3.4. Fieldwork and Field Supervision

The overall field work force was 9 Regional Statisticians, 20 Master Trainers, 66 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 Statistics Division under the Central Statistical Office (CSO) was responsible for planning and executing of the 2013-2014 Post Harvest Survey.

The Regional Statistician in each province oversaw the field work through regular communication with Master Trainers and Field Supervisors.

3.5. 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 CSPro. Data capturing was accomplished at each provincial centre. Staff in Agriculture and Environment Statistics Division 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) version 20.

3.6. Estimation Procedure

3.6.1. 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 were categorized by the agricultural strata A, B and C as earlier alluded. The probabilities of selection were calculated for each category separately. Therefore three category final weights were 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 ith SEA of hth 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:

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

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

3.6.2. 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 mj: the total number of strata in this case mj=20; (the rural/urban and the 10 provinces)

Chapter 4: Demographic Characteristics of Agricultural Households

4.0. Introduction

In this chapter, an overview of some demographic characteristics of households engaged in agricultural activities such as crop production and livestock rearing is given. Cross tabulations were done with other variables such as education, marital status as well as household size.

4.1. Household Heads by Sex

Table 4.1 shows the percentage distribution of agricultural households by sex of household head and province. An estimated 1,472,701 households were engaged in agricultural activities during the 2013-2014 Agricultural Season. Eastern Province had the highest number of agricultural households with 274,497 followed by Southern Province which had 198,379 households. Lusaka Province had the lowest number of agriculture households with 46,170.

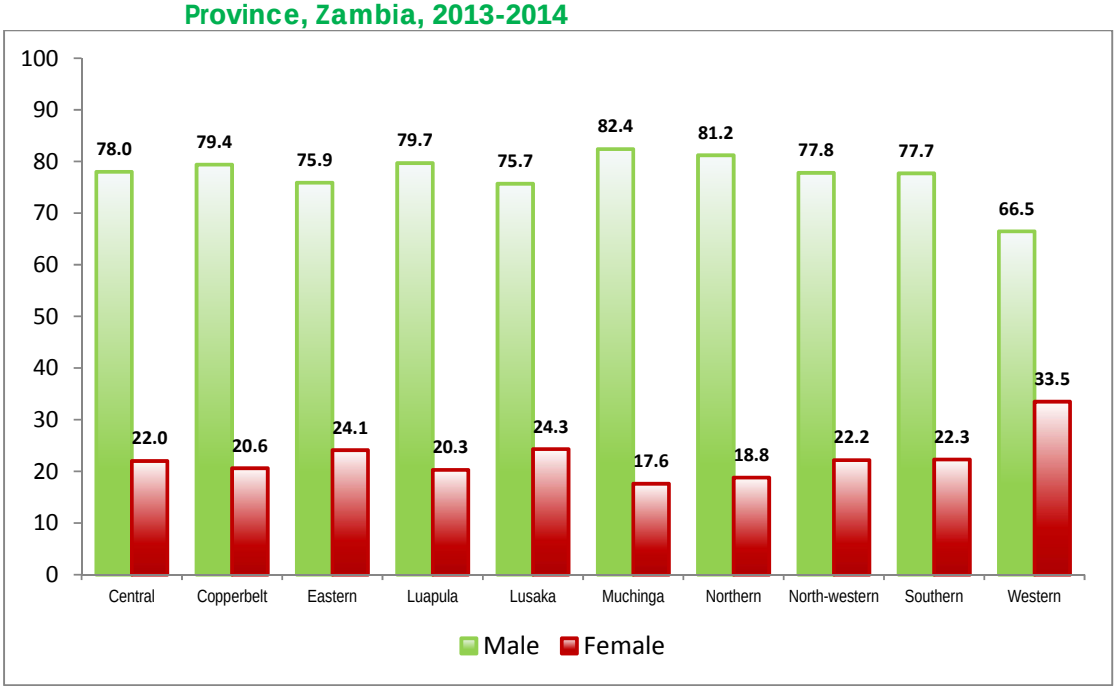
Of the total 1472,701 households engaged in agricultural activities in the 2013-2014 Agricultural Season, 77.3 percent were male-headed while female-headed households constituted 22.7 percent.

Table 4.1: Percentage Distribution of Heads of Agricultural Households by Sex of Head and Province, Zambia, 2013-2014

Province	Sex of Household Head				Zambia	
	Male		Female			
	Number	Percent	Number	Percent	Number	Percent
Central	130,941	78.0	36,955	22.0	167,896	100
Copperbelt	62,057	79.4	16,124	20.6	78,181	100
Eastern	208,294	75.9	66,203	24.1	274,497	100
Luapula	122,503	79.7	31,230	20.3	153,733	100
Lusaka	34,963	75.7	11,207	24.3	46,170	100
Muchinga	100,191	82.4	21,419	17.6	121,610	100
Northern	145,531	81.2	33,786	18.8	179,317	100
North Western	81,164	77.8	23,132	22.2	104,296	100
Southern	154,069	77.7	44,310	22.3	198,379	100
Western	98,802	66.5	49,820	33.5	148,622	100
Zambia	1,138,515	77.3	334,186	22.7	1,472,701	100

All provinces recorded a higher proportion of male-headed households (above 65 percent) compared to female-headed households (less than 35 percent).Western Province had the highest proportion of female-headed agricultural households at 33.5 percent followed by Lusaka and Eastern provinces at 24.3 and 24.1 percent, respectively. Muchinga Province reported the lowest proportion of female-headed households (17.6 percent).

Figure 4.1: Percentage Distribution of Heads of Agricultural Households by Sex and Province, Zambia, 2013-2014



4.2. Household Heads by Five Year Age Groups

Table 4.2 shows the percentage distribution of agricultural household heads by five year age groups and province. The Table shows that, at national level, majority of the household heads were in the age group 35-39 years which accounted for 13.8 percent. The lowest percentage of household heads was in the age group 75-79 years at 2.1 percent of the total number of household heads.

At provincial level, Muchinga Province had the highest percentage of household heads (16.8 percent) in the age group 35-39 years, followed by North-western Province with 15.0 percent while the lowest number of households in this age group was reported in Southern Province (10.6 percent).

Table 4.2: Percentage Distribution of Heads of Agricultural Households by Five Year Age Groups and Province, Zambia, 2013-2014

Age of Head	Zambia	Province									
		Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North-western	Southern	Western
15-19	0.3	0.1	0.1	0.3	0.1	0.7	0.7	0.1	0.5	0.3	0.4
20-24	4.3	5.4	3.1	4.5	3.0	4.0	3.8	5.2	3.4	4.7	4.5
25-29	10.3	9.8	8.3	12.2	9.2	7.4	9.2	12.2	7.7	10.8	10.4
30-34	13.3	10.8	10.8	14.6	13.0	9.7	14.4	14.3	14.2	14.9	11.7
35-39	13.8	14.9	14.1	14.1	14.3	14.7	16.8	12.6	15.0	10.6	14.1
40-44	13.4	14.1	14.8	13.3	13.6	11.9	12.3	12.0	15.4	14.5	12.7
45-49	9.7	9.2	8.6	10.3	10.6	10.5	9.2	8.0	10.2	11.9	8.0
50-54	9.9	10.7	8.0	9.2	11.1	10.7	10.5	11.3	10.5	9.1	8.2
55-59	7.0	6.7	8.8	6.4	8.2	9.3	7.9	6.5	5.2	6.2	7.9
60-64	5.1	4.6	5.8	4.1	7.2	5.9	4.2	4.9	5.7	4.7	6.2
65-69	4.4	4.8	7.2	3.8	4.3	5.8	3.7	4.1	3.8	4.5	4.9
70-74	3.4	4.3	4.4	3.3	2.1	1.8	3.0	3.1	3.9	3.1	4.2
75-79	2.1	1.9	4.0	1.6	2.1	2.9	1.2	2.5	2.4	1.9	2.8
80+	2.7	2.9	2.0	2.2	1.1	4.9	3.0	3.1	2.2	2.8	4.1
Total Percent	100	100	100	100	100	100	100	100	100	100	100
Zambia	1,476,071	167,896	78,181	274,497	153,733	46,170	121,610	179,317	104,296	198,379	148,622

4.3. Educational 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. The table shows that more than 50 percent of the heads at both national and provincial level had completed primary education. The Table further shows that at national level, 9.0 percent of the household heads had completed high school level while 12.5 percent had never been to school.

Table 4.3: Percentage Distribution of Household Heads by Province and Educational Level completed by Province, Zambia, 2013-2014

Province	Highest Education Level Completed								Total Percent	Total Number of Household Heads
	None	Primary	Basic	High School	A-Level	College/ University	Certficate/ Diploma	Bachelor's Degree and Above		
Central	9.6	61.3	17.9	7.7	-	-	2.8	0.6	100	167,896
Copperbelt	7.9	52.2	22.8	13.5	-	1.0	1.9	0.7	100	78,181
Eastern	22.4	55.1	13.4	6.6	-	0.5	1.8	0.3	100	274,497
Luapula	7.7	59.7	19.0	10.2	0.1	0.7	1.7	0.8	100	153,733
Lusaka	8.0	50.7	20.4	12.6	0.1	1.9	3.8	2.6	100	46,170
Muchinga	5.5	54.8	23.5	11.4	0.3	1.2	3.0	0.3	100	121,610
Northern	10.2	63.5	16.8	7.6	-	0.3	1.3	0.3	100	179,317
North Western	16.5	53.6	16.7	8.7	-	1.1	3.5	-	100	104,296
Southern	7.9	55.5	21.4	10.9	0.1	0.6	3.2	0.4	100	198,379
Western	18.3	58.2	14.5	7.4	0.1	0.3	1.0	0.3	100	148,622
Zambia	12.5	57.3	17.9	9.0	0.1	0.6	2.2	0.5	100	1,472,701

Note: (-) Insignificant figures

Analysis by province shows that Northern had the highest proportion of agricultural household heads that had completed primary education accounting for 63.5 percent followed by Central and Luapula provinces which accounted for 61.3 and 59.7 percent, respectively.

Copperbelt Province had the highest proportion of household heads that completed High school (13.5 percent).

4.4. Size of Agricultural Households

Table 4.4 shows the percentage distribution of agricultural households by province and household size. The Table shows that at national level, most of the agricultural households had between 4 and 6 household members, representing 43.0 percent of the total number of households.

About 8.0 percent of the households had ten or more members. Southern Province had the highest percentage of households with ten or more members.

Table 4.4: Percentage Distribution of Agricultural Households by Province and Household Size by Province, Zambia, 2013-2014						
Province	Total Agricultural Households	Household Size				
		1 - 3	4 - 6	7 - 9	10+	Total
Central	167,896	17.2	43.5	30.5	8.7	100
Copperbelt	78,181	17.8	47.0	28.7	6.6	100
Eastern	274,497	20.3	43.5	30.0	6.1	100
Luapula	153,733	16.7	43.5	31.5	8.2	100
Lusaka	46,170	25.4	42.9	24.2	7.5	100
Muchinga	121,610	16.4	42.9	33.9	6.7	100
Northern	179,317	18.9	45.1	31.1	4.9	100
North Western	104,296	14.2	36.7	38.4	10.8	100
Southern	198,379	15.8	41.5	29.1	13.6	100
Western	148,622	21.1	42.5	29.7	6.8	100
Zambia	1,472,701	18.2	43.0	30.9	8.0	100

4.5. Marital Status of Agricultural Household Heads

Table 4.5 shows the percent distribution of heads of agricultural households by province and marital status. At national level, there were more monogamously married heads representing 70.2 percent followed by household heads that were widowed (12.0 percent).

Southern Province had the largest proportion of agricultural household heads that were polygamously married with 19.5 percent while Lusaka Province had the least proportion of polygamously married agricultural household heads with 0.5 percent.

Table 4.5: Percentage Distribution of Heads of Agricultural Households by Marital Status and Province, Zambia, 2013-2014									
Province	MARITAL STATUS							Total Percent	Total Number of Household Heads
	Single (never married)	Monogamously married	Polygamously married	Divorced	Widowed	Separated	Cohabiting		
Central	2.5	70.6	7.1	7.1	11.4	1.0	0.3	100	167,896
Copperbelt	1.8	73.5	2.3	6.4	14.0	2.0	-	100	78,181
Eastern	1.9	69.4	9.3	5.0	12.4	1.8	0.2	100	274,497
Luapula	2.1	73.6	4.5	6.6	12.0	1.2	-	100	153,733
Lusaka	10.5	71.5	0.5	5.6	10.0	1.9	-	100	46,170
Muchinga	2.7	77.1	5.7	3.5	10.7	0.3	-	100	121,610
Northern	0.6	80.4	1.4	5.2	10.9	1.5	-	100	179,317
North Western	1.5	72.2	3.9	9.1	10.9	2.2	0.2	100	104,296
Southern	3.6	61.4	19.5	3.2	11.1	0.8	0.4	100	198,379
Western	5.7	58.4	5.9	11.8	15.6	2.0	0.5	100	148,622
Zambia	2.7	70.2	7.3	6.1	12.0	1.4	0.2	100	1,472,701

Note: (-) Insignificant figures

Western Province had the largest percentage of widowed and divorced household heads accounting for 15.6 and 11.8 percent, respectively.

Chapter 5: Crop Production

5.0. Introduction

During the 2013-2014 Post Harvest Survey (PHS) data was collected on crops produced, area planted, fertilizer used, quantity produced and quantity sold. This chapter covers maize, sorghum, rice, millet, sunflower, groundnuts, soya beans, mixed beans and tobacco production in all provinces. Small and medium-scale farmers carry out crop production mainly as a source of food and income.

5.1. Maize

Maize is widely grown in Zambia in a range of agro ecological zones and it is Zambia's staple food. Production and sales are recorded in dried grain form.

5.1.1. Households Growing Maize

Table 5.1 shows the percentage distribution of households growing maize by province. A total of 1,299,158 agricultural households grew maize during the season. Eastern Province had the highest number of households that grew maize accounting for 20.9 percent of the households. Southern and Central provinces accounted for 14.7 and 12.4 percent of the total number of households that grew maize, respectively. The smallest proportion of maize growing households was recorded in Lusaka Province, representing 3.5 percent.

Table 5.1: Percentage Distribution of Households growing Maize by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	161,221	12.4
Copperbelt	75,881	5.8
Eastern	271,971	20.9
Luapula	90,205	6.9
Lusaka	44,991	3.5
Muchinga	110,578	8.5
Northern	127,286	9.8
North Western	91,905	7.1
Southern	191,368	14.7
Western	133,753	10.3
Zambia	1,299,158	100.0

5.1.2. Area Planted to Maize and Fertilizer Applied

Table 5.2 shows the distribution of area planted to maize and fertilizer applied by province. The total area planted to maize in the season was 1,499,327.9 hectares. Southern Province accounted for the largest area under maize, followed by Eastern Province with 23.8 percent and 23.7 percent, respectively. Lusaka province recorded the smallest proportion of area planted to maize at 3.0 percent.

Table 5.2: Distribution of Area Planted to Maize and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	243,364.9	16.2	27,165.2	14.9	27,041.1	15.2
Copperbelt	85,262.0	5.7	9,784.5	5.3	9,574.3	5.4
Eastern	354,877.0	23.7	34,146.4	18.7	33,819.1	19.0
Luapula	51,073.4	3.4	13,889.4	7.6	13,896.6	7.8
Lusaka	44,578.4	3.0	9,312.4	5.1	6,859.9	3.8
Muchinga	89,062.4	5.9	20,631.8	11.3	20,694.3	11.6
Northern	101,165.0	6.7	27,042.6	14.8	26,913.0	15.1
North Western	73,298.8	4.9	9,999.6	5.5	9,752.8	5.5
Southern	357,272.8	23.8	27,695.6	15.1	26,553.8	14.9
Western	99,373.2	6.6	3,257.5	1.8	3,300.1	1.8
Zambia	1,499,327.9	100.0	182,925.0	100.0	178,405.0	100.0

A total of 182,925.0 metric tonnes of basal and 178,405.0 metric tonnes of top dressing fertilizer were applied to maize fields country-wide. Eastern Province accounted for the largest proportion of fertilizer applied with 18.7 percent of basal and 19.0 percent of top dressing followed by Southern Province with 15.1 percent of basal and 14.9 percent of top dressing fertilizer. Western Province had the lowest quantities of both basal (1.8 percent) and top (1.8 percent) dressing fertilizer applied to maize.

5.1.3. Maize Production and Sales

Table 5.3 shows the quantity of maize produced and sold by province. A total of 3,250,673.8 metric tonnes of maize were produced during the season. Eastern Province produced the largest quantity of maize, representing 24.3 percent of the total produced, followed by Southern and Central provinces at 20 and 18.2 percent, respectively. Western Province produced the least quantity of maize accounting for 3.1 percent of the total.

Table 5.3: Quantity of Maize Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	591,404.3	18.2	322,136.0	20.1
Copperbelt	183,093.8	5.6	97,188.1	6.1
Eastern	789,574.2	24.3	328,237.9	20.5
Luapula	143,007.9	4.4	97,928.2	6.1
Lusaka	107,239.4	3.3	51,491.5	3.2
Muchinga	249,917.2	7.7	139,387.3	8.7
Northern	270,002.5	8.3	146,889.6	9.2
North Western	165,537.8	5.1	86,293.6	5.4
Southern	651,506.2	20	302,473.1	18.9
Western	99,390.5	3.1	30,716.2	1.9
Zambia	3,250,673.8	100.0	1,602,741.5	100.0

Out of the 3,250,673.8 metric tonnes of maize produced, 1,602,741.5 metric tonnes were sold, representing 49.3 percent of the total produced. Eastern and Central provinces had the largest proportions of maize sold, accounting for 20.5 and 20.1 percent, respectively. Western Province recorded the smallest percentage sold at 1.9 percent.

5.2. Sorghum

Sorghum is a cereal crop which is mainly consumed as food. It is also used in the brewing industry. Production and sales are recorded in threshed grain form.

5.2.1. Households Growing Sorghum

Table 5.4 shows the percentage distribution of sorghum-growing households by province. A total of 51,834 households grew sorghum during the season. The majority of these were in Southern, Muchinga and Western provinces, accounting for 28.3, 22.6 and 21.9 percent, respectively. Luapula and Lusaka provinces recorded the smallest proportion, accounting for 1.4 and 1.5 percent, respectively.

Table 5.4: Percentage Distribution of Households growing Sorghum by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	3,945	7.6
Copperbelt	1,942	3.7
Eastern	1,239	2.4
Luapula	729	1.4
Lusaka	776	1.5
Muchinga	11,714	22.6
Northern	2,025	3.9
North Western	3,448	6.7
Southern	14,680	28.3
Western	11,336	21.9
Zambia	51,834	100.0

5.2.2. Area Planted to Sorghum and Fertilizer Applied

Table 5.5 shows the distribution of area planted to sorghum and fertilizer applied by province. A total of 24,092.4 hectares were planted to sorghum during the season. Southern Province had the largest area planted and accounted for 38.5 percent, followed by Western and Muchinga provinces at 21.9 and 14.7 percent, respectively. Luapula Province recorded the smallest area planted to sorghum, accounting for 1.0 percent.

Table 5.5: Distribution of Area Planted to Sorghum and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	2,707.4	11.2	42.0	59.4	42.0	63.4
Copperbelt	793.5	3.3	11.7	16.5	7.9	11.9
Eastern	255.1	1.1	-	-	-	-
Luapula	240.9	1.0	-	-	-	-
Lusaka	283.7	1.2	-	-	-	-
Muchinga	3,534.9	14.7	0.2	0.3	0.2	0.3
Northern	599.9	2.5	11.0	15.6	11.0	16.6
North Western	1,120.5	4.7	-	-	-	-
Southern	9,284.6	38.5	3.5	5.0	2.8	4.3
Western	5,271.9	21.9	2.3	3.2	2.3	3.4
Zambia	24,092.4	100.0	70.7	100.0	66.2	100.0

Note: (-) Insignificant figures

A total of 70.7 metric tonnes of basal and 66.2 metric tonnes of top dressing fertilizer were used in sorghum production. Central Province accounted for the highest amount of fertilizer used, representing 59.4 percent of basal and 63.4 percent of top dressing. Copperbelt Province accounted for 16.5 percent basal and 11.9 percent top dressing while Northern Province accounted for 15.6 percent basal and 16.6 percent top dressing.

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 12,022.4 metric tonnes. Southern and Muchinga provinces recorded the highest quantity of sorghum produced accounting for 27.0 and 26.3 percent, respectively. Luapula Province produced the smallest quantity, representing 1.5 percent.

Table 5.6: Distribution of Quantity of Sorghum Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	1,614.8	13.4	313.6	19.3
Copperbelt	629.1	5.2	2.7	0.2
Eastern	204.5	1.7	33.9	2.1
Luapula	179.2	1.5	73.5	4.5
Lusaka	276.7	2.3	183.5	11.3
Muchinga	3,158.0	26.3	55.1	3.4
Northern	492.6	4.1	63.9	3.9
North Western	678.0	5.6	134.4	8.2
Southern	3,247.1	27.0	656.9	40.3
Western	1,542.4	12.8	111.2	6.8
Zambia	12,022.4	100.0	1,628.7	100.0

A total of 1,628.7 metric tonnes of sorghum were sold during the season. Southern Province had the highest quantity of sorghum sold, accounting for 40.3 percent, while Central and Lusaka provinces accounted for 19.3 and 11.3 percent, respectively.

5.3. Rice

Rice is produced in large quantities mainly in Northern and Western provinces. It is cultivated in well-watered areas especially river valleys, swamps, plains or marshlands. Rice is produced as a source of food and income. Production and sales relate to paddy rice (rice in husks).

5.3.1. Households Growing Rice

Table 5.7 shows the distribution of rice-growing households by province. A total of 75,587 households grew rice during the season. Western Province recorded the largest number households that grew rice, accounting for 43.3 percent, while Lusaka Province recorded the smallest number, accounting for 0.2 percent.

Table 5.7: Percentage Distribution of Households growing Rice by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	179	0.2
Copperbelt	190	0.3
Eastern	4,627	6.1
Luapula	5,244	6.9
Lusaka	123	0.2
Muchinga	15,065	19.9
Northern	16,155	21.4
North Western	1,043	1.4
Southern	236	0.3
Western	32,725	43.3
Zambia	75,587	100.0

5.3.2. Area Planted to Rice and Fertilizer Applied

Table 5.8 shows the distribution of area planted to rice and fertilizer applied. The total area planted to rice was 54,075.0 hectares. Western Province accounted for the largest proportion of area planted at 48.5 percent, followed by Northern Province (26.9 percent) and Muchinga Province (16.5 percent). Lusaka and Copperbelt provinces had the smallest area planted to rice.

Table 5.8: Distribution of Area Planted to Rice and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric tonnes	Percent	Metric tonnes	Percent
Central	44.9	0.1	-	-	-	-
Copperbelt	15.8	-	3.4	1.0	3.4	1.5
Eastern	1,855.2	3.4	52.5	15.3	22.1	9.6
Luapula	1,755.9	3.2	16.6	4.8	16.6	7.2
Lusaka	20.3	-	28.8	8.4	28.8	12.5
Muchinga	8,902.0	16.5	4.4	1.3	4.4	1.9
Northern	14,540.2	26.9	19.0	5.5	19.0	8.2
North Western	493.2	0.9	29.7	8.7	16.3	7.1
Southern	226.5	0.4	5.2	1.5	5.2	2.2
Western	26,221.0	48.5	183.5	53.5	115.4	49.9
Zambia	54,075.0	100.0	343.1	100.0	231.2	100.0

Note: (-) Insignificant figures

A total of 343.1 metric tonnes of basal and 231.2 metric tonnes of top dressing fertilizer were applied in rice field. Western Province accounted for the largest amount of fertilizer used with 53.5 percent of basal and 49.9 percent of top dressing. Copperbelt Province accounted for the least percentage of fertilizer used at 1.0 percent of basal and 1.5 percent of top dressing.

5.3.3. Rice Production and Sales

Table 5.9 shows the distribution of quantity of rice produced and quantity sold by province. The total quantity of rice produced was 53,921.1 metric tonnes. Western Province had the largest proportion produced at 49.3 percent of the total rice produced. Northern and Muchinga provinces produced 28.4 and 13.7 percent of the total, respectively. The remaining provinces produced less than 5 percent of total rice production each.

Table 5.9: Distribution of Quantity of Rice Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	17.6	-	79.0	0.3
Copperbelt	20.6	-	-	-
Eastern	1,692.9	3.1	715.8	2.6
Luapula	2,246.0	4.2	1,169.5	4.3
Lusaka	5.1	-	116.3	0.4
Muchinga	7,374.8	13.7	3,212.9	11.9
Northern	15,320.8	28.4	9,705.9	35.9
North Western	583.2	1.1	325.7	1.2
Southern	65.4	0.1	57.0	0.2
Western	26,594.7	49.3	11,631.0	43.1
Zambia	53,921.1	100.0	27,013.1	100.0

Note: (-) Insignificant figures

Of the 53,921.1 metric tonnes of rice produced, 27,013.1 metric tonnes (50.1 percent) were sold. Western Province recorded the largest quantity of rice sold, at 43.1percent. Northern Province accounted for 35.9 percent and Muchinga Province accounted for 11.9 percent. The remaining provinces accounted for less than 5 percent of the total rice sold each.

5.4. Millet

Millet is widely grown throughout the country but its production is predominant in Northern and Muchinga provinces. It is used in the preparation of local brews countrywide and is also sold for income. Millet production and sales are reported in threshed grain form.

5.4.1. Households Growing Millet

Table 5.10 shows the percentage distribution of millet-growing households by province. A total of 154,619 households grew millet during the agricultural season. The majority of these were in Northern Province, accounting for 33.9 percent. Muchinga Province accounted for 27.4 percent, while Western Province accounted for 18.7 percent. The rest of the provinces recorded less than 7 percent of the total each.

Table 5.10: Percentage Distribution of Households growing Millet by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	10,273	6.6
Copperbelt	1,408	0.9
Eastern	3,211	2.1
Luapula	7,330	4.7
Lusaka	273	0.2
Muchinga	42,305	27.4
Northern	52,452	33.9
North Western	2,570	1.7
Southern	5,897	3.8
Western	28,900	18.7
Zambia	154,619	100.0

5.4.2. Area Planted to Millet and Fertilizer Applied

Table 5.11 shows the distribution of area planted to millet and fertilizer applied. The total area under millet was 58,275.4 hectares. Northern Province recorded the largest area planted at 30.8 percent, followed by Western Province at 26.0 percent. Muchinga accounted for 21.7 percent. Each of the remaining provinces accounted for less than 9 percent of the total area under millet.

Table 5.11: Distribution of Area Planted to Millet and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric tonnes	Percent	Metric tonnes	Percent
Central	5,137.8	8.8	133.4	45.8	131.2	62.7
Copperbelt	357.0	0.6	10.1	3.5	10.1	4.8
Eastern	1,126.8	1.9	-	-	-	-
Luapula	1,988.4	3.4	-	-	-	-
Lusaka	63.1	0.1	-	-	-	-
Muchinga	12,639.8	21.7	71.8	24.7	15.7	7.5
Northern	17,952.4	30.8	75.0	25.8	51.6	24.6
North Western	784.1	1.3	-	-	-	-
Southern	3,097.4	5.3	0.8	0.3	0.8	0.4
Western	15,128.6	26.0	-	-	-	-
Zambia	58,275.4	100.0	291.1	100.0	209.4	100.0

Note: (-) Insignificant figures

A total of 291.1 metric tonnes of Basal dressing and 209.4 metric tonnes of top dressing fertilizer were used in millet production during the season. Central Province accounted for the largest quantity of fertilizer used with 45.8 percent of basal and 62.7 percent of top dressing. Northern Province used 25.8 percent of basal and 24.6 percent of top dressing; while Muchinga Province used 24.7 percent of basal and 7.5 percent of top dressing.

5.4.3. Millet Production and Sales

Table 5.12 shows the distribution of quantity of millet produced and quantity sold by province. A total of 41,274.4 metric tonnes of millet were produced during the season. Northern Province accounted for the largest quantity produced at 36.7 percent followed by Muchinga province at 22.8 percent. The lowest millet production was recorded in Copperbelt and Lusaka provinces which accounted for less than 1 percent each of the total production.

Table 5.12: Distribution of Quantity of Millet Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	6,835.4	16.6	391.0	5.5
Copperbelt	369.5	0.9	103.7	1.5
Eastern	527.3	1.3	175.6	2.5
Luapula	1,907.0	4.6	486.5	6.9
Lusaka	57.0	0.1	41.1	0.6
Muchinga	9,428.0	22.8	1,634.3	23.1
Northern	15,156.7	36.7	3,667.4	51.9
North Western	605.8	1.5	148.0	2.1
Southern	1,482.5	3.6	86.9	1.2
Western	4,905.2	11.9	328.6	4.7
Zambia	41,274.4	100.0	7,063.1	100.0

Out of the total 41,274.4 metric tonnes of millet produced, 7,063.1metric tonnes (17.1 percent) were sold. Northern Province accounted for the largest quantity sold with 51.9 percent followed by Muchinga with 23.1 percent. Lusaka Province had the least percentage of millet sold with 0.6 percent.

5.5. Sunflower

Sunflower is an oil-producing seed that is widely grown in the country. It can be cultivated successfully with minimal application of fertilizer. Production and sales of sunflower are recorded in dried seed form. Sunflower is mainly produced for income and it is used in the manufacturing industry to produce cooking oil and other edible fats.

5.5.1. Households Growing Sunflower

Table 5.13 shows the distribution of sunflower-growing households by province. During the season, a total of 145,351 households grew sunflower. Eastern Province accounted for the highest percentage of sunflower-growing households with 71.5 percent, followed by Southern province with 18.6 percent. The rest of the provinces accounted for less than 4 percent of the total sunflower-growing households each.

Table 5.13: Percentage Distribution of Households growing Sunflower by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	4,213	2.9
Copperbelt	-	-
Eastern	103,966	71.5
Luapula	81	0.1
Lusaka	186	0.1
Muchinga	5,665	3.9
Northern	4,088	2.8
North Western	38	-
Southern	27,093	18.6
Western	22	-
Zambia	145,351	100.0

Note: (-) Insignificant figures

5.5.2. Area Planted to Sunflower and Fertilizer Applied

Table 5.14 shows the distribution of area planted to sunflower and fertilizer applied by province. During the 2013-2014 agricultural season the total area planted to sunflower was 73,824.5 hectares. The largest area planted to sunflower was recorded in Eastern Province at 63.0 percent followed by Southern Province which accounted for 29.5 percent. The remaining provinces collectively accounted for 7.4 percent of the total area planted to sunflower.

Table 5.14: Distribution of Area Planted to Sunflower and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	2,367.3	3.2	5.2	7.5	2.1	3.2
Copperbelt	-	-	-	-	-	-
Eastern	46,545.2	63.0	33.5	48.2	33.5	51.5
Luapula	13.4	-	-	-	-	-
Lusaka	99.8	0.1	-	-	-	-
Muchinga	1,399.7	1.9	12.2	17.6	12.3	18.9
Northern	1,549.8	2.1	-	-	-	-
North Western	2.3	-	-	-	-	-
Southern	21,782.0	29.5	18.6	26.8	17.1	26.3
Western	65.0	0.1	-	-	-	-
Zambia	73,824.5	100.0	69.5	100.0	65.0	100.0

Note: (-) Insignificant figures

A total of 69.5 metric tonnes of basal and 65.0 metric tonnes of top dressing fertilizer were applied to sunflower fields during the season. Eastern Province accounted for the largest quantity of fertilizer used, with 48.2 percent basal and 51.5 percent top dressing. Southern Province accounted for the second largest quantity of fertilizer used with 26.8 percent of basal and 26.3 percent of top dressing.

5.5.3. Sunflower Production and Sales

Table 5.15 shows the distribution of quantity of sunflower produced and quantity sold by province. A total of 29,207.9 metric tonnes of Sunflower were produced in the season. Eastern Province recorded the largest amount of sunflower produced accounting for 66.8 percent. Southern Province produced 25.7 percent of the total while the remaining provinces recorded less than 4 percent of total sunflower production each.

Table 5.15: Distribution of Quantity of Sunflower Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	1,000.6	3.4	401.0	3.9
Copperbelt	-	-	-	-
Eastern	19,508.0	66.8	6711.3	65.0
Luapula	8	-	2.5	-
Lusaka	46.8	0.2	25.0	0.2
Muchinga	614.5	2.1	219.6	2.1
Northern	465.0	1.6	176.3	1.7
North Western	0.5	-	-	-
Southern	7,500.5	25.7	2,785.7	27.0
Western	64	0.2	-	-
Zambia	29,207.9	100.0	10,321.4	100.0

Note: (-) Insignificant figures

Out of the total sunflower produced, 10,321.4 metric tonnes were sold representing 35.3 percent of the total production. Eastern Province sold the largest quantity, at 65.0 percent, followed by Southern Province at 27.0 percent. The other provinces recorded less than 4 percent each, of the total sales.

5.6. Groundnuts

Groundnuts are grown throughout the country and they are marketed in shelled as well as unshelled form. For statistical reporting, groundnuts are recorded in shelled form. Groundnuts are used in the manufacturing industry to produce cooking oil and foods such as peanut butter.

5.6.1. Households Growing Groundnuts

Table 5.16 shows the distribution of groundnut-growing households by province. A total of 744,648 households grew groundnuts during the season. Eastern Province recorded the highest number of households that grew groundnuts, accounting for 23.9 percent of the total followed by Northern Province, with 14.2 percent. Copperbelt and Lusaka provinces recorded the smallest proportion, accounting for 4.6 and 2.0 percent, respectively.

Table 5.16: Percentage Distribution of Households growing Groundnuts by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	69,328	9.3
Copperbelt	34,574	4.6
Eastern	177,675	23.9
Luapula	87,911	11.8
Lusaka	15,021	2.0
Muchinga	79,191	10.6
Northern	105,757	14.2
North Western	39,875	5.4
Southern	100,036	13.4
Western	35,279	4.7
Zambia	744,648	100.0

5.6.2. Area Planted to Groundnuts and Fertilizer Used

Table 5.17 shows the distribution of area planted to groundnuts and fertilizer applied by province. The total area planted to groundnuts during the season was 266,156.7 hectares. The largest area planted to groundnuts was recorded in Eastern Province accounting for 26.8 percent of the total followed by Southern Province with 17.4 percent. Lusaka Province accounted for the least area under groundnuts at 1.9 percent.

Table 5.17: Distribution of Area Planted to Groundnuts and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	27,076.2	10.2	140.0	14.4	2.8	0.6
Copperbelt	12,815.4	4.8	55.3	5.7	21.6	4.3
Eastern	71,243.5	26.8	242.2	24.8	140.3	27.6
Luapula	26,143.1	9.8	149.8	15.4	149.8	29.5
Lusaka	5,115.1	1.9	47.6	4.9	47.6	9.4
Muchinga	21,761.3	8.2	54.8	5.6	46.4	9.1
Northern	31,356.1	11.8	4.4	0.5	4.4	0.9
North Western	13,245.5	5.0	190.5	19.5	17.3	3.4
Southern	46,357.2	17.4	90.3	9.3	77.6	15.3
Western	11,043.3	4.2	-	-	-	-
Zambia	266,156.7	100.0	974.9	100.0	507.8	100.0

Note: (-) Insignificant figures

A total of 974.9 metric tonnes of basal and 507.8 metric tonnes of top dressing fertilizer were used in groundnut production. Eastern Province accounted for the largest quantity of fertilizer used at 24.8 percent of basal and 27.6 percent of top dressing fertilizer followed by Luapula province which accounted for 15.4 percent of basal and 29.5 percent of top dressing fertilizer.

5.6.3. Groundnut Production and Sales

A total of 124,957.7 metric tonnes of groundnuts were produced during the season. Eastern Province produced the largest quantity of groundnuts, accounting for 23.5 percent of the total produced. Central Province accounted for 12.8 percent, followed by Southern Province which accounted for 12.1 percent.

Table 5.18: Distribution of Quantity of Groundnuts Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	16,011.3	12.8	6,284.1	14.5
Copperbelt	8,262.6	6.6	4,067.2	9.4
Eastern	29,416.1	23.5	8,869.9	20.5
Luapula	14,198.6	11.4	6,103.9	14.1
Lusaka	2,507.3	2.0	652.6	1.5
Muchinga	10,283.0	8.2	2,437.1	5.6
Northern	14,499.9	11.6	3,763.2	8.7
North Western	10,160.0	8.1	6,124.9	14.2
Southern	15,175.8	12.1	3,473.3	8.0
Western	4,443.1	3.6	1,474.9	3.4
Zambia	124,957.7	100.0	43,251.1	100.0

Out of 124,957.7 metric tonnes of groundnuts produced, 43,251.1 metric tonnes were sold. Eastern province had the highest quantity sold at 20.5 percent followed by Central, North-western and Luapula provinces with 14.5, 14.2 and 14.1 percent, respectively.

5.7. Soya Beans

Soya beans are cultivated in all parts of the country. Production and sales are recorded in dried seed form. Commercial farmers account for much of the soya beans production in the country. The crop is mostly used in the manufacturing industry.

5.7.1. Households Growing Soya Beans

Table 5.19 shows the distribution of soya beans-growing households by province. A total of 100,498 households grew soya beans during the season. Eastern Province recorded the highest number of soya beans-growing households at 36.0 percent, followed by Central Province with 24.4 percent. Western Province recorded the lowest number, accounting for 0.3 percent.

Table 5.19: Percentage Distribution of Households growing Soya Beans by Province, Zambia, 2013-2014

Province	Number of Households	Percent
Central	24,491	24.4
Copperbelt	4,071	4.1
Eastern	36,183	36.0
Luapula	4,047	4.0
Lusaka	1,147	1.1
Muchinga	10,785	10.7
Northern	14,864	14.8
North Western	2,045	2.0
Southern	2,525	2.5
Western	341	0.3
Zambia	100,498	100.0

5.7.2. Area Planted to Soya Beans and Fertilizer Used

Table 5.20 shows the distribution of area planted to soya beans and fertilizer applied by province. A total of 55,402.1 hectares were planted to soya beans in the season. Central Province had the largest proportion of area planted to soya beans accounting for 38.2 percent followed by Eastern Province with 35.2 percent. Western Province had the smallest area planted to soya beans with less than one percent of the total area planted.

Table 5.20: Distribution of Area Planted to Soya Beans and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertilizer Applied			
			Basal dressing		Top dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	21, 174.9	38.2	230.6	28.9	43.36	17.6
Copperbelt	2,090.9	3.8	203.7	25.6	21.44	8.7
Eastern	19, 508.0	35.2	85.0	10.7	20.25	8.2
Luapula	719.5	1.3	57.8	7.3	-	-
Lusaka	531.8	1.0	135.9	17.1	117.35	47.6
Muchinga	3,095.3	5.6	34.1	4.3	31.18	12.6
Northern	3,851.8	7.0	13.5	1.7	9.77	4.0
North Western	706.7	1.3	20.1	2.5	1.32	0.5
Southern	3,479.0	6.3	15.9	2.0	1.99	0.8
Western	244.2	0.4	-	-	-	-
Zambia	55,402.1	100.0	796.6	100.0	246.7	100.0

Note: (-) Insignificant figures

A total of 796.6 metric tonnes of basal and 246.7 metric tonnes of top dressing fertilizer were used in soya beans production during the season. Central Province accounted for the largest amount of fertlizer used with 28.9 percent of basal and 17.6 percent of top dressing, followed by the Copperbelt province with 25.6 percent of basal and 8.7 percent of top dressing.

5.7.3. Soya Beans Production and Sales

Table 5.21 shows the distribution of soya beans produced and quantities sold by province. The table shows that a total of 36,824.6 metric tonnes of soya beans were produced in the season. Central Province produced the largest amount of soya beans accounting for 38.3 percent, followed by Eastern Province with 36.9 percent whereas Western Province recorded the smallest quantity of soya beans produced accounting for 0.8 percent of total production.

Table 5.21: Distribution of Quantity of Soya Beans Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	14 104.2	38.3	11, 688.5	44.7
Copperbelt	1,461.5	4.0	947.4	3.6
Eastern	13, 586.6	36.9	9 700.8	37.1
Luapula	495.3	1.3	363.9	1.4
Lusaka	422.1	1.1	335.2	1.3
Muchinga	1971.3	5.4	929.0	3.6
Northern	2,202.6	6.0	832.2	3.2
North Western	437.7	1.2	163.4	0.6
Southern	1,865.6	5.1	1,137.5	4.3
Western	277.7	0.8	55.1	0.2
Zambia	36, 824.6	100.0	26, 153.0	100.0

Of the 36,824.6 metric tonnes of soya beans produced in the season, 26,153.0 metric tonnes were sold. Central Province sold the largest quantity at 44.7 percent, followed by Eastern Province with 37.1 percent of the sales. Western and North Western provinces recorded the lowest quantities of soya beans sold, accounting for 0.2 and 0.6 percent, respectively.

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. Households Growing Mixed Beans

Table 5.22 shows the distribution of mixed beans-growing households by province. A total of 255,846 households grew mixed beans during the 2013-2014 season. Northern Province recorded the largest proportion of households that grew mixed beans accounting for 33.5 percent followed by Muchinga and Luapula provinces which accounted for 22.5 and 11.1percent, respectively. The rest of the provinces accounted for less than 10 percent of the total production of mixed beans each.

Table 5.22: Percentage Distribution of Households growing Mixed Beans by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	20,794	8.1
Copperbelt	10,061	3.9
Eastern	11,742	4.6
Luapula	28,392	11.1
Lusaka	3,481	1.4
Muchinga	57,613	22.5
Northern	85,611	33.5
North Western	26,364	10.3
Southern	10,836	4.2
Western	952	0.4
Total	255,846	100.0

5.8.2. Area Planted to Mixed Beans and Fertilizer Applied

Table 5.23 shows the distribution of area planted to mixed beans and fertilizer applied by province. The total area under cultivation of mixed beans was 103,382.4 hectares. Northern Province had the largest area planted to mixed beans accounting for 47.9 percent of total. Muchinga, North Western and Central provinces accounted for 17.4 percent, 8.4 percent and 8.1 percent, respectively. Lusaka and Western provinces had the smallest proportions of area planted to mixed beans accounting for 1.0 percent and 0.3 percent, respectively.

Table 5.23: Distribution of Area Planted to Mixed Beans and Fertilizer Applied by Province, Zambia, 2013-2014						
Province	Area Planted		Fertilizer Application			
			Basal Dressing		Top Dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	8,399.4	8.1	282.7	20.1	145	15.3
Copperbelt	2,143.1	2.1	115.8	8.2	93.1	9.8
Eastern	3,830.5	3.7	72.8	5.2	50.1	5.3
Luapula	7,878.7	7.6	104.8	7.5	88.1	9.3
Lusaka	1,022.6	1.0	69.9	5	49.1	5.2
Muchinga	17,954.0	17.4	411.4	29.2	380.2	40.0
Northern	49,512.7	47.9	240.8	17.1	31.1	3.3
North Western	8,648.9	8.4	89.5	6.4	96.4	10.1
Southern	3,668.0	3.5	19.0	1.4	17.3	1.8
Western	324.5	0.3	-	-	-	-
Zambia	103,382.4	100.0	1,406.7	100.0	950.4	100.0

Note: (-) Insignificant figures

The total amounts of fertilizer used in mixed beans production was 1,406.7 metric tonnes of basal dressing and 950.4 metric tonnes of top dressing. Muchinga Province had the largest quantities of fertilizer used accounting for 29.2 percent of basal dressing and 40.0 percent of top dressing. Central Province accounted for 20.1 percent of basal and 15.3 percent of top dressing.

5.8.3. Mixed Beans Production and Sales

Table 5.24 shows the distribution of quantity of mixed beans produced and quantity sold by province. A total of 47,768.1 metric tonnes of mixed beans were produced during the season. Northern Province accounted for the largest proportion produced at 47.3 percent. Muchinga and North-western provinces produced 16.8 percent and 10.2 percent, respectively.

Table 5.24: Distribution of Quantity of Mixed Beans Produced and Quantity Sold by Province, Zambia, 2013-2014				
Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	4,072.1	8.5	2,140.75	9.7
Copperbelt	825.8	1.7	267.01	1.2
Eastern	1,824.8	3.8	854.76	3.9
Luapula	3,705.0	7.8	1,699.10	7.7
Lusaka	525.0	1.1	166.65	0.8
Muchinga	8,031.6	16.8	2,476.44	11.3
Northern	22,598.7	47.3	11,494.43	52.2
North Western	4,854.8	10.2	2,572.56	11.7
Southern	1,259.9	2.6	321.06	1.5
Western	70.4	0.1	6.55	-
Zambia	47,768.1	100.0	21,999.30	100.0

Note: (-) Insignificant figures

Out of the 47,768.1 metric tonnes of mixed beans produced, 21,999.3 metric tonnes were sold. Northern Province sold the largest quantity of mixed beans at 52.2 percent. North-western and Muchinga Province accounted for 11.7 percent and 11.3 percent of the total sold respectively.

5.9. Virginia Tobacco

Tobacco is a stimulant crop used mainly for cigarette production. There are two types of tobacco which are of commercial importance in Zambia. These are Virginia and burley tobacco.

5.9.1. Households Growing Virginia Tobacco

Table 5.25 shows the percentage distribution of Virginia tobacco-growing households. A total of 10,842 households grew Virginia tobacco during the season. Eastern Province recorded the largest proportion of Virginia tobacco-growing households, accounting for 37.1 percent of the total. Southern, Western and Central provinces accounted for 31.0, 19.3 and 10.8 percent, respectively.

Table 5.25: Percentage Distribution of Households growing Virginia Tobacco by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Central	1,166	10.8
Copperbelt	38	0.4
Eastern	4,024	37.1
Luapula	19	0.2
Muchinga	138	1.3
Southern	3,365	31.0
Western	2,093	19.3
Zambia	10,842	100.0

5.9.2. Area Planted to Virginia Tobacco and Fertilizer Applied

Table 5.26 shows the distribution of area planted to Virginia tobacco and fertilizer applied. The total area under cultivation of Virginia tobacco season was 9,650.7 hectares. The largest area under Virginia tobacco production was recorded in Southern Province which accounted for 36.4 percent of total area followed by Eastern and Western provinces which accounted for 27.7 and 16.4 percent, respectively.

Table 5.26: Distribution of Area Planted to Virginia Tobacco and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertiliser Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	1,738.6	18.0	427.5	15.5	233.4	14.8
Copperbelt	19.0	0.2	11.4	0.4	3.81	0.2
Eastern	2,669.5	27.7	1,112.1	40.4	670.4	42.4
Luapula	65.5	0.7	-	-	-	-
Lusaka	-	-	-	-	-	-
Muchinga	62.9	0.7	23.1	0.8	23.1	1.5
Northern	-	-	-	-	-	-
North Western	-	-	-	-	-	-
Southern	3,514.9	36.4	750.4	27.3	371.1	23.5
Western	1,580.3	16.4	426.0	15.5	279.4	17.7
Zambia	9,650.7	100.0	2,750.5	100.0	1,581.2	100.0

Note: (-) Insignificant figures

A total of 2,750.5 metric tonnes of basal dressing and 1,581.2 metric of tonnes top dressing fertilizer were used to produce Virginia tobacco. Eastern Province accounted for the largest quantity of fertilizer used with 40.4 percent of basal and 42.4 percent top dressing, followed by Southern Province which accounted for 27.3 percent of basal and 23.5 percent top dressing fertilizer.

5.9.3. Virginia Tobacco Production and Sales

Table 5.27 shows the quantity of Virginia tobacco produced and quantity sold by province. The total quantity of Virginia tobacco produced was 11,672.1 metric tonnes. Eastern Province accounted for the largest proportion of Virginia tobacco produced with 29.2 percent, followed by Southern Province which accounted for 28.7 percent.

Table 5.27: Distribution of Quantity of Virginia Tobacco Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	2,381.2	20.4	2,381.2	22.1
Copperbelt	23.3	0.2	23.3	0.2
Eastern	3,410.9	29.2	3,125.0	29.0
Luapula	233.9	2.0	233.9	2.2
Lusaka	-	-	-	-
Muchinga	59.2	0.5	15.6	0.1
Northern	-	-	-	-
North Western	-	-	-	-
Southern	3,345.4	28.7	3,110.7	28.8
Western	2,218.2	19.0	1,903.2	17.6
Zambia	11,672.1	100.0	10,792.9	100.0

Note: (-) Insignificant figures

Of the total 11,672.1 metric tonnes of Virginia tobacco produced, 10,792.9 metric tonnes were sold. Eastern Province sold the largest quantity accounting for 29.0 percent followed by Southern Province which accounted for 28.8 percent.

5.10. Burley Tobacco

Burley tobacco is mainly air-cured and is preferred by most Zambian tobacco producers.

5.10.1. Households Growing Burley Tobacco

Table 5.28 shows the distribution of burley tobacco-growing households by province. A total of 9,132 households grew burley tobacco during the season. Eastern Province recorded the largest proportion of households that grew the crop, accounting for 93.0 percent. Southern, Muchinga and Lusaka provinces accounted for 3.2, 2.3 and 1.5 percent, respectively.

Table 5.28: Percentage Distribution of Households growing Burley Tobacco by Province, Zambia, 2013-2014

Province	Number of Households	Percent Share
Eastern	8,495	93.0
Lusaka	133	1.5
Muchinga	214	2.3
Southern	290	3.2
Zambia	9,132	100.0

5.10.2. Area Planted to Burley Tobacco and Fertilizer Applied

Table 5.29 shows the distribution of area planted to burley tobacco and fertilizer applied by province. A total area of 6,667.2 hectares was used to cultivate burley tobacco during the season. The largest area was recorded in Eastern Province which accounted for 95.7 percent, while Muchinga, Southern and Lusaka provinces accounted for 2.4, 1.4 and 0.5 percent, respectively.

Table 5.29: Distribution of Area Planted to Burley Tobacco and Fertilizer Applied by Province, Zambia, 2013-2014

Province	Area Planted		Fertiliser Applied			
			Basal Dressing		Top Dressing	
	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Eastern	6,378.9	95.7	1,762.0	95.7	1,615.9	97.9
Lusaka	33.2	0.5	-	-	-	-
Muchinga	161.4	2.4	34.0	1.8	32.8	2.0
Southern	93.7	1.4	46.1	2.5	2.3	0.1
Zambia	6,667.2	100.0	1,842.1	100.0	1,651.0	100.0

Note: (-) Insignificant figures

Approximately 1,842.1 metric tonnes of basal and 1,651.0 metric tonnes of top dressing fertilizer were used to produce burley tobacco. The largest proportions of fertilizer used were recorded in Eastern province at 95.7 percent of basal and 97.9 percent of top dressing, while Muchinga Province accounted for 1.8 percent of basal and 2.0 percent of top dressing.

5.10.3. Burley Tobacco Production and Sales

Table 5.30 shows the distribution of quantity of burley tobacco produced and quantity sold by province. The total quantity of burley tobacco produced during the season was 7,508.2 metric tonnes. Most of this was produced in Eastern Province which accounted for 97.8 percent of the total production. Muchinga and Southern provinces accounted for 1.2 and 1.0 percent, respectively.

Table 5.30: Distribution of Quantity of Burley Tobacco Produced and Quantity Sold by Province, Zambia, 2013-2014

Province	Quantity Produced		Quantity Sold	
	Metric Tonnes	Percent	Metric Tonnes	Percent
Eastern	7,339.3	97.8	7,232.0	96.5
Muchinga	90.8	1.2	73.6	1.0
Southern	78.1	1.0	189.8	2.5
Zambia	7,508.2	100	7,495.4	100

Of the 7,508.2 metric tonnes of Virginia tobacco produced, 7,495.4 metric tonnes were sold. Eastern Province sold the largest quantity accounting for 96.5 percent.

Chapter 6: Cassava Production and Marketing

6.0. Introduction

Cassava is a perennial woody shrub with an edible root, which grows in tropical and Subtropical areas of the world. It is brought to the market in several forms i.e. tubers, chips or flour.

Cassava is mostly grown in Northern, Luapula and Western provinces of Zambia. Cassava growing is being encouraged in other parts of the country for food security reasons, as it is drought-resistant and less expensive to manage compared to other crops.

6.1. Households Growing Cassava

Table 6.1 shows the percentage distribution of cassava-growing households by province. The table shows that a total of 523,543 households grew cassava during the season. Northern Province recorded the largest number of households which grew cassava, accounting for 28.0 percent of the total households. Luapula, Western and Northwestern provinces accounted for 26.2, 15.3 and 12.6 percent, respectively. Lusaka and Southern provinces recorded 0.3 percent of cassava-growing households each.

Table 6.1: Percentage Distribution of Households growing by Cassava Province, Zambia, 2013-2014

Province	Households Growing Cassava	
	Number	Percent
Central	24,686	4.7
Copperbelt	8,354	1.6
Eastern	5,639	1.1
Luapula	136,968	26.2
Lusaka	1,443	0.3
Muchinga	52,092	9.9
Northern	146,509	28.0
North Western	66,139	12.6
Southern	1,450	0.3
Western	80,263	15.3
Zambia	523,543	100.0

6.2. Total Area under Cassava

Table 6.2 shows the distribution of area under cassava by province. During the season, the total area under cassava was 370,548.1 hectares. The largest area under cassava was recorded in Luapula and Northern provinces which accounted for 29.6 and 29.2 percent, respectively. Southern Province had the smallest proportion of area planted to cassava with 0.1 percent.

Table 6.2: Distribution of Area under Cassava by Province, Zambia, 2013-2014		
Province	Area Under Cassava	
	Hectares	Percent
Central	13,983.2	3.8
Copperbelt	2,869.0	0.8
Eastern	1,567.4	0.4
Luapula	109,555.9	29.6
Lusaka	267.1	0.1
Muchinga	30,502.1	8.2
Northern	108,023.2	29.2
North Western	50,705.7	13.7
Southern	197.4	0.1
Western	52,877.1	14.3
Zambia	370,548.1	100.0

6.3. Area under Cassava by Variety

About ten different varieties of cassava were reported to have been grown in the season as shown in table 6.3. These varieties included Bangweulu, Nalumino, Kapumba, Chila, Mweru, Tanganyika, Improved variety, Local variety, Kampolombo and Manyokola. The Local variety was the widely grown variety. It was grown on 82.8 percent of the total area under cassava during the season. The Bangweulu variety was grown on 5.6 percent of the total area under cassava.

Table 6.3: Percentage Distribution of Area under Cassava by Variety and Province, Zambia, 2013-2014

Province	Cassava Variety and Area planted (Hectares)										Total Percent	Total Area Planted (Hectares)
	Bangweulu	Nalumino	Kapumba	Chila	Mweru	Tanganyika	Improved (Other)	Local variety	Kampolombo	Manyokola (Maniopola)		
Central	11.5	-	0.9	6.0	1.1	3.9	12.6	62.9	1.1	-	100	13,983.2
Copperbelt	14.8	12.7	0.8	-	1.0	0.5	4.2	55.4	2.5	7.9	100	2,869.0
Eastern	8.6	-	-	0.3	2.8	-	1.3	8.4	-	78.6	100	1,567.4
Luapula	10.2	0.4	0.3	0.1	3.0	0.2	6.2	79.1	0.6	-	100	109,555.9
Lusaka	-	-	-	6.8	-	-	68.9	19.6	-	4.6	100	267.1
Muchinga	8.7	-	0.2	-	0.3	0.8	5.1	84.8	-	0.1	100	30,502.1
Northern	1.5	0.1	-	-	0.7	0.5	1.3	95.7	-	-	100	108,023.2
North Western	5.3	4.4	0.8	1.3	7.9	0.1	0.6	79.6	0.1	-	100	50,705.7
Southern	1.4	59.5	7.8	-	-	-	6.6	24.5	-	0.2	100	197.4
Western	0.9	21.3	0.6	-	-	-	1.6	75.4	0.1	-	100	52,877.1
Zambia	5.6	3.9	0.3	0.5	2.3	0.4	3.5	82.8	0.2	0.4	100	370,548.1

Note: (-) Insignificant figures

6.4. Cassava Production and Marketing

6.4.1. Households that Sold Dried Cassava Chips and Quantity Sold

Table 6.4 shows the distribution of households that sold dried cassava chips and the quantity sold, by province. During the season, 97,975 households reported to have sold dried cassava chips. The largest proportion of these households was in Luapula Province which accounted for 29.5 percent of the total. Southern Province recorded the smallest proportion of households that sold dried cassava chips accounting for 0.2 percent

Table 6.4: Distribution of Households that Sold Dried Cassava Chips and Quantity Sold by Province, Zambia, 2013-2014

Province	Households that Sold Dried Cassava Chips		Quantity of Dried Cassava Chips Sold	
	Number	Percent	Metric Tonnes	Percent
Central	1,677	1.7	430.5	1.5
Copperbelt	922	0.9	240.4	0.9
Luapula	28,907	29.5	9,463.6	33.8
Muchinga	3,700	3.8	752.2	2.7
Northern	22,109	22.6	4,977.8	17.8
North Western	27,614	28.2	8,034.1	28.7
Southern	182	0.2	14.0	0.1
Western	12,864	13.1	4,084.4	14.6
Zambia	97,975	100.0	27,997.0	100.0

A total of 27, 997.0 metric tonnes of dried cassava chips were sold during the season. Of this, the largest quantity was sold in Luapula Province, which accounted for 33.8 percent, whereas Southern Province recorded the smallest quantity, at 0.1 percent.

6.4.2. Households that Sold Cassava Flour and Quantity Sold

Table 6.5 shows the distribution of households that sold cassava flour and the quantity sold by province. A total of 24,990 households sold cassava flour during the season. Luapula Province recorded the largest proportion of households that sold cassava flour, with 51.6 percent. Northern Province had the second largest proportion accounting for 27.3 percent.

Table 6.5: Distribution of Households that Sold Cassava Flour and Quantity Sold by Province, Zambia, 2013-2014

Province	Household that Sold Cassava Flour		Cassava Flour Sold in Tonnes	
	Number	Percent	Number	Percent
Central	713	2.9	145.0	2.9
Copperbelt	626	2.5	71.0	1.4
Luapula	12,896	51.6	2,601.3	51.5
Muchinga	1,918	7.7	454.7	9.0
Northern	6,815	27.3	1,155.1	22.9
North Western	1,641	6.6	421.0	8.3
Western	381	1.5	205.1	4.1
Zambia	24,990	100.0	5,053.0	100.0

The table further shows that Luapula Province recorded the largest quantity of cassava flour (51.5 percent) sold during the season, while Northern Province accounted for 22.9 percent. Copperbelt Province recorded the smallest quantity of cassava flour sold accounting for 1.4 percent.

6.4.3. Households that had Dried Cassava in Storage

Table 6.6 shows the distribution of households that had dried cassava in storage and the quantity in storage by province. A total of 135,047 households were reported to have dried cassava in storage. Of these households, 50,648 were recorded in Luapula Province, accounting for 37.5 percent. Eastern Province recorded the smallest number of households with dried cassava in storage, accounting for 0.1 percent.

Table 6.6: Distribution of Households that had Dried Cassava in Storage by Province, Zambia, 2013-2014

Province	Households with Dried Cassava in Storage		Tonnes of Dried Cassava Stored	
	Number	Percent	Tonnes	Percent
Central	1,854	1.4	358.7	1.4
Copperbelt	687	0.5	100.9	0.4
Eastern	69	0.1	3.0	-
Luapula	50,648	37.5	12,895.9	49.0
Muchinga	4,668	3.5	1,467.7	5.6
Northern	36,660	27.1	5,287.3	20.1
North Western	28,621	21.2	4,555.9	17.3
Western	11,840	8.8	1,640.6	6.2
Zambia	135,047	100.0	26,310.0	100.0

Note: (-) Insignificant figures

About 26,310.0 metric tonnes of dried cassava chips were reported to be in storage during the season. Luapula Province had the largest quantity of cassava chips in storage, with 12,895.9 metric tonnes (49.0 percent). Northern Province was second with 5,287.3 metric tonnes (20.1 percent), while Eastern Province recorded the lowest quantity with 3.0 metric tonnes (less than one percent).

Chapter 7: Land Preparation Methods

7.0. Introduction

Data was collected on land preparation methods used for crop production during the season. The alternative land preparation methods were; conventional hand hoeing, planting basins/potholes, chitemene ploughing, ripping, ridging, bunding, and chitemene zero tillage. This chapter discusses the number of hectares cultivated per crop and the tillage methods used throughout the country.

7.1. Area Cultivated Using Various Land Preparation Methods

A total of 2,373,931.8 hectares were planted to various crops, during the season. The largest proportion of this land was prepared by ploughing, representing 47.5 percent, followed by ridging and conventional hand hoeing at 25.4 and 20.2 percent, respectively.

Table 7.1: Distribution of Area Planted to Various Crops by Land Preparation Method and Province, Zambia, 2013-2014

Province	Land Preparation (Tillage) method used									Total Percent	Total
	Conventional hand hoe	Planting basins/ potholes	Zero tillage	Ploughing	Ripping	Ridging	Bunding	Chitemene zero tillage	Chitemene ploughing/hand hoe		
Central	19.4	1.8	0.1	73.1	2.5	2.5	0.6	-	-	100	363,050.55
Copperbel	37.8	0.7	0.2	30.4	0.3	29.0	1.6	-	-	100	107,763.20
Eastern	19.9	3.3	1.7	32.1	2.9	40.0	-	-	-	100	587,107.46
Luapula	17.3	0.4	-	0.4	0.3	49.0	30.0	1.0	1.4	100	97,958.30
Lusaka	28.8	5.5	0.5	56.7	5.7	2.3	0.5	-	-	100	54,257.32
Muchinga	44.3	1.3	3.9	1.3	-	46.6	0.2	2.2	0.2	100	175,235.99
Northern	20.3	0.8	0.5	11.2	-	61.1	0.9	4.2	1.1	100	227,140.41
North Western	38.5	1.0	0.4	5.9	0.1	53.0	0.5	0.3	0.3	100	104,981.62
Southern	2.5	1.8	0.3	93.0	1.9	0.2	0.2	-	-	100	489,691.96
Western	24.9	0.7	1.2	71.3	0.8	1.0	-	-	-	100	166,744.96
Zambia	20.2	1.9	1.0	47.5	1.7	25.4	1.6	0.6	0.2	100	2,373,931.7

Note: (-) Insignificant figures

The ploughing method was widely used in Southern, Central, Western and Lusaka provinces, where it was used to prepare 93.0 percent, 73.0 percent, 71.3 percent and 56.7 percent of the total land cultivated, respectively.

Ridging was the commonly practiced method of land preparation in Eastern, Luapula, Muchinga, Northern, and North-western provinces representing 40.0 percent, 49.0 percent, 46.6 percent, 61.1 percent and 53.0 percent of the total land cultivated, respectively.

Conventional hand hoeing was the main land preparation method used in Copperbelt, accounting for 37.8 percent of the total land cultivated within the province.

Chapter 8: Livestock Raising

8.0. Introduction

Livestock is among the major sources of income through the sale of live animals and livestock products such as meat and milk. Data collected in the 2013-2014 PHS included: type of livestock, number raised, number slaughtered, number sold and the value of sales.

8.1. Cattle

8.1.1. Households Raising Cattle

Table 8.1 shows the number of cattle-raising households, and the number of cattle held as at the opening (1st October, 2013) and as at the close of the season (30th September, 2014).A total of 342,344 households reported to be raising cattle country wide during the period. The largest number of households raising cattle was in Southern Province representing 31.2 percent of the total households, followed by Eastern Province with 30.7 percent. Luapula Province had the smallest number of cattle raising households, with a proportion of 0.4 percent.

Table 8.1: Distribution of Households raising Cattle by Number of Cattle Raised by Province, Zambia, 2013-2014

Province	Cattle Raising Households		Cattle Held on 1st October, 2013		Cattle Held on 30th September, 2014	
	Number	Percent	Number	Percent	Number	Percent
Central	52,434	15.3	402,614	13.3	426,101	13.1
Copperbelt	6,132	1.8	64,403	2.1	40,944	1.3
Eastern	105,084	30.7	577,443	19.1	608,652	18.7
Luapula	1,477	0.4	11,157	0.4	13,909	0.4
Lusaka	6,938	2.0	76,615	2.5	81,767	2.5
Muchinga	12,344	3.6	96,371	3.2	121,975	3.7
Northern	10,379	3.0	70,719	2.3	65,411	2.0
North Western	8,446	2.5	42,051	1.4	45,403	1.4
Southern	106,659	31.2	1,263,982	41.7	1,394,397	42.8
Western	32,451	9.5	422,826	14.0	463,136	14.2
Zambia	342,344	100.0	3,028,181	100.0	3,261,695	100.0

8.1.2. Number of Cattle Raised

Table 8.1 further shows that the cattle population as at 30thSeptember, 2014 was 3,261,695. This represented an increase of 7.7 percent in the number of cattle from to 3,028,181 that were held as at the start of the agricultural season (1st October, 2013). The highest number of cattle was recorded in Southern Province, accounting for 42.8 percent of the total number of cattle, while Luapula Province had the lowest number of cattle, accounting for 0.4 percent of the total.

The cattle population in Southern Province had increased by 10.3 percent, from 1,263,982 on 1st October, 2013 to 1,394,397 as at 30th September, 2014. Slight increases in the population of cattle were also recorded in all the provinces except Copperbelt and Northern provinces.

8.1.3. Number of Cattle Slaughtered

Table 8.2 shows the distribution of cattle that were slaughtered during the season by type of cattle and province. The table shows that a total of 35,368 cattle were slaughtered during the season. Cows accounted for the largest type of cattle slaughtered at 43.8 percent, followed by trained oxen with 16.9 percent. Most of the cattle that were slaughtered were in Western Province amounting to 6,627 animals. The smallest number slaughtered was in Luapula Province.

Table 8.2: Distribution of Number of Slaughtered Cattle by Type of Cattle and Province, Zambia, 2013-2014

Province	Total Cattle Slaughtered	Total Percent	Type of Cattle Slaughtered						
			Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/Steers	Calves
Central	5,177	100	40.4	5.9	10.4	19.6	19.7	4.1	-
Copperbelt	1,969	100	49.1	2.1	28.1	-	16.6	1.2	2.8
Eastern	3,773	100	31.9	11.2	22.8	10.1	13.6	1.9	8.4
Luapula	97	100	61.4	-	38.6	-	-	-	-
Lusaka	2,006	100	49.0	15.9	1.5	10.7	10.4	12.5	-
Muchinga	4,786	100	46.1	-	45.5	5.8	-	2.6	-
Northern	3,951	100	46.5	21.4	14.3	-	17.8	-	-
North Western	962	100	59.4	-	29.0	-	11.6	-	-
Southern	6,020	100	32.7	4.4	3.1	16.8	38.9	2.0	2.1
Western	6,627	100	54.2	4.0	6.6	22.1	11.1	2.0	-
Zambia	35,368	100	43.8	7.0	16.0	12.3	16.9	2.6	1.4

Note: (-) Insignificant figures

8.1.4. Number of Cattle Sold

Table 8.3 shows the distribution of cattle that were sold during the season by type of cattle and province. A total of 176,595 cattle were sold during the season. Trollies/steers accounted for the largest number of cattle sold with 33.2 percent followed by cows and trained oxen with 23.0 and 16.6 percent, respectively.

At provincial level, Southern Province recorded the largest number of cattle that were sold (128,296) while the smallest number (286) was recorded in Luapula Province.

Table 8.3: Distribution of Number of Cattle Sold by Type and Province, Zambia, 2013-2014

Province	Total Cattle Sold	Total Percent	Type of Cattle Sold						
			Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/ Steers	Calves
Central	11,465	100	37.1	7.1	11.2	6.2	27.7	8.9	1.9
Copperbelt	1,086	100	59.1	4.5	15.6	-	15.7	-	5.1
Eastern	15,364	100	23.7	7.8	11.6	9.1	36.2	10.9	0.7
Luapula	286	100	37.1	-	21.4	-	41.5	-	-
Lusaka	2,443	100	40.6	13.9	4.7	10.9	19.9	-	10
Muchinga	4,771	100	39.1	14.2	43.6	-	3.1	-	-
Northern	1,830	100	40.9	-	17.9	-	41.2	-	-
North Western	1017	100	68.2	-	14.4	-	17.4	-	-
Southern	128,296	100	18.6	7.9	3.8	13.5	12.3	43.3	0.5
Western	10,037	100	36.7	4.1	5.0	18.9	29.2	3.4	2.7
Zambia	176,595	100	23.0	7.7	6.4	12.2	16.6	33.2	0.8

Note: (-) Insignificant figures

8.1.5. Total Value of Cattle Sales

Table 8.4 shows the value of cattle sales during the season by type of cattle and province. The total value of proceeds from the sale of cattle was K379,874,067.43. The value of tollies/steers sales accounted for 33.9 percent of the total cattle sales, followed by the value of cow sales which accounted for 20.3 percent.

Table 8.4: Percentage Distribution of Value of Cattle Sales by Type of Cattle and Province, Zambia, 2013-2014

Province	Total Cattle Value (ZMW)	Type of Cattle							
		Cows	Heifers	Bulls	Untrained Oxen	Trained Oxen	Tollies/ Steers	Calves	Total
Central	25,017,766.39	38	4.1	9.6	5.7	34.5	7.1	0.9	100
Copperbelt	2,770,190.79	59.4	7.1	17.6	-	13.9	-	2	100
Eastern	18,610,575.21	28.6	3.2	7.4	8.4	44.3	7.7	0.4	100
Luapula	931,619.36	15.3	-	8.2	-	76.5	-	-	100
Lusaka	4,363,955.53	41.4	8.3	8.7	15.3	17.9	-	8.4	100
Muchinga	6,816,331.86	50.2	5.8	43.3	-	0.8	-	-	100
Northern	3,944,031.30	46.4	-	21.5	-	32.1	-	-	100
North Western	2,385,671.48	61.7	-	20.3	-	18.1	-	-	100
Southern	299,312,367.13	15.6	7.9	5.8	16.3	12.4	41.8	0.2	100
Western	15,721,558.38	34	2.9	5.9	12.4	41.8	1.6	1.3	100
Zambia	379,874,067.43	20.3	7	7.2	14.3	16.9	33.9	0.4	100

Note: (-) Insignificant figures

Table 8.4 further shows that, at provincial level, Southern Province received the highest amount (K299,312,367.13) from cattle sales, of which 41.8 percent was from sales of tollies/steers and 16.3 percent was from sale of untrained oxen. Central Province received a total value of K25,017,766.39, of which 38 percent was from the sale of cows and 34.5 percent from the sale of trained oxen while the sale of bulls accounted for 9.6 percent.

8.1.6. Average Cost of Cattle Sales

Table 8.5 shows the distribution of Number of Cattle Sold and Value of Sales by Cattle Type. Untrained oxen had the highest average cost of K2,515.02 per animal, followed by bulls with an average cost of K2,394.83 per animal. Cows had an average cost of K1,906.74 per animal, whereas calves recorded the lowest average cost per animal at K1,056.80.

Table 8.5: Distribution of Number of Cattle Sold and Value of Sales by Cattle Type, Zambia, 2013-2014

Cattle Type	Livestock Sold	Value of Sales	Mean Cost/Animal
	Number	ZMW ('000)	ZMW
Cows	40,530	77,279.8	1,906.74
Heifers	13,676	26,658.6	1,949.25
Bulls	11,347	27,173.2	2,394.83
Untrained Oxen	21,627	54,391.8	2,515.02
Trained Oxen	29,335	64,126.2	2,185.96
Tollies/Steers	58,610	128,690.3	2,195.69
Calves	1,471	1,554.2	1,056.80

8.2. Pigs

8.2.1. Households Raising Pigs

Table 8.6 shows the number of pig-raising households, and the number of pigs held as at the opening (1st October, 2013) and as at the close (30th September, 2014) of the agriculture season.

A total of 209,043 households reported to be raising pigs country-wide during the season. Eastern Province recorded the highest percentage of households, accounting for 46.3 percent of the total. Southern Province accounted for 15.4 percent while Lusaka Province had the smallest number of pig raising households accounting for 0.1 percent of the total.

Table 8.6: Percentage Distribution of Households raising Pig and Pigs Raised, by Province, Zambia, 2013-2014						
Province	Pig Raising Households		Pigs Held on 1st October, 2013		Pigs Held on 30th September, 2014	
	Number	Percent	Number	Percent	Number	Percent
Central	10,992	5.3	63,194	5.8	68,630	6.7
Copperbelt	7,637	3.7	70,046	6.4	62,383	6.1
Eastern	96,874	46.3	562,282	51.5	491,146	48.2
Luapula	8,845	4.2	21,223	1.9	27,586	2.7
Lusaka	1,805	0.1	23,222	2.1	26,023	2.6
Muchinga	17,064	8.2	52,777	4.8	67,215	6.6
Northern	19,079	9.1	61,605	5.6	59,953	5.9
Northwestern	7,816	3.7	35,543	3.3	27,555	2.7
Southern	32,222	15.4	159,811	14.6	128,637	12.6
Western	6,709	3.2	41,236	3.8	59,310	5.8
Zambia	209,043	100.0	1,090,939	100.0	1,018,438	100.0

8.2.2. Number of Pigs Held

Table 8.6 further shows that the population of Pigs as at 30th September 2014 was estimated at 1,018,438 compared to 1,090,939 that were held at 1st October 2013, indicating a decrease in the number of pigs of 6.6 percent.

Eastern Province recorded the highest number of pigs held as at 30th September, 2014 accounting for 48.2 percent of the total held, followed by Southern Province with 12.6 percent. Lusaka Province had the lowest number of pigs held as at the close of the season, accounting for 2.6 percent of the total.

8.2.3. Number of Pigs Slaughtered

Table 8.7 shows the distribution of pigs slaughtered during the season by province. The table shows that a total of 117,859 Pigs were slaughtered and the highest number of these was in Eastern Province which accounted for 43.8 percent of the total. Copperbelt Province accounted for 15.1 percent, followed by Northern Province with 12.6 percent.

Table 8.7: Distribution of Number of Slaughtered Pigs by Province, Zambia, 2013-2014		
Province	Number Slaughtered	Percent
Central	5,875	5.0
Copperbelt	17,850	15.1
Eastern	51,576	43.8
Luapula	3,766	3.2
Lusaka	1,368	1.2
Muchinga	9,957	8.4
Northern	14,888	12.6
North-western	4,495	3.8
Southern	5,764	4.9
Western	2,320	2.0
Zambia	117,859	100.0

8.2.4. Number of Pigs Sold

Table 8.8 shows the distribution of number of pigs sold by value of sales and province. A total of 240,863 pigs were sold during the season. Eastern and Southern provinces recorded the highest number of sales accounting for 27.7 percent and 27.0 percent, respectively. Luapula Province recorded the lowest number of pigs sold during the season, accounting for 1.9 percent.

Table 8.8: Distribution of Number of Pigs Sold by Value of Sales and Province, Zambia, 2013-2014

Province	Pig Sales		Value of Pig Sales	
	Number	Percent	ZMW ('000)	Percentage Share
Central	14,320	5.9	12,846.22	15
Copperbelt	29,143	12.1	14,066.57	16.4
Eastern	66,766	27.7	17,854.87	20.8
Luapula	4,567	1.9	1,182.88	1.4
Lusaka	18,805	7.8	14,853.28	17.3
Muchinga	9,545	4.0	2,242.83	2.6
Northern	11,869	4.9	3,474.85	4.0
North-western	7,384	3.1	4,896.54	5.7
Southern	64,983	27	7,931.96	9.2
Western	13,481	5.6	6,550.91	7.6
Zambia	240,863	100.0	85,900.90	100.0

8.2.5. Value of Pig Sales

Table 8.8 also shows that the value of proceeds from the sale of pigs was K85.9 million. Eastern Province accounted for 20.8 percent of this value followed by Lusaka and Copperbelt provinces with 17.3 percent and 16.4 percent respectively. Luapula Province recorded the lowest value of sales accounting for 1.4 percent of the total.

8.3. Goats

8.3.1. Households Raising Goats

Table 8.9 shows the number of goat-raising households, and the number of goats held as at1st October, 2013 and as at 30th September, 2014. A total of 396,782 households raised goats during the season. The largest proportion of these households was in Southern Province which accounted for 25.1 percent of the total.

Table 8.9: Percentage Distribution of Households raising Goat and Goats Raised, by Province, Zambia, 2013-2014						
Province	Households Raising Goats		Goats Held on 1st October, 2013		Goats Held on 30th September, 2014	
	Number	Percent	Number	Percent	Number	Percent
Central	55,545	14.0	467,842	17.4	509,018	19.0
Copperbelt	15,546	3.9	126,622	4.7	111,467	4.2
Eastern	69,387	17.5	370,317	13.8	342,731	12.8
Luapula	37,598	9.5	149,486	5.6	156,642	5.8
Lusaka	12,917	3.3	121,067	4.5	118,291	4.4
Muchinga	27,685	7.0	133,097	5.0	131,171	4.9
Northern	41,181	10.4	179,351	6.7	167,119	6.2
North-western	29,636	7.5	216,608	8.1	195,732	7.3
Southern	99,432	25.1	891,778	33.2	912,623	34.1
Western	7,855	2.0	27,765	1.0	34,462	1.3
Zambia	396,782	100.0	2,683,933	100.0	2,679,256	100.0

8.3.2. Number of Goats Raised

Tables 8.9 further shows that the Goat population as at 30th September 2014 was estimated at 2,679,256 indicating a decrease of about 0.2 percent from 2,683,933 goats that were held as at 1st October 2013. Southern Province accounted for the highest number of goats held on 30th September, 2014 accounting for 34.1 percent of the total followed by Central Province with 19.0 percent while Western Province had the lowest number with 1.3 percent.

8.3.3. Number of Goats Slaughtered

An estimated 227,757 Goats were slaughtered during the season as shown in table 8.10. The highest number of slaughtered goats was recorded in Southern and Central provinces with each accounting for about 18 percent of the total. Western Province had the smallest number of slaughtered goats accounting for 0.9 percent of the total.

Table 8.10: Distribution of Number of Slaughtered Goats by Province, Zambia, 2013-2014		
Province	Goats slaughtered	
	Number	Percent
Central	41,679	18.3
Copperbelt	16,443	7.2
Eastern	25,298	11.1
Luapula	20,558	9.0
Lusaka	7,940	3.5
Muchinga	14,846	6.5
Northern	29,061	12.8
North Western	27,514	12.1
Southern	42,439	18.6
Western	1,979	0.9
Zambia	227,757	100.0

8.3.4. Number of Goats sold

Table 8.11 shows that 481,245 Goats were sold during the season. The highest number of Goats sold was recorded in Southern Province which accounted for 40.0 percent of the total Goats sold. North-western and Eastern provinces accounted for 11.3 percent and 10.3 percent, respectively. Western Province had the smallest number of goats sold accounting for 0.5 percent.

Table 8.11: Distribution of Number of Goats Sold by Value of Sales and Province, Zambia, 2013-2014

Province	Goats Sales		Value of Goats Sales	
	Number	Percent	ZMW ('000)	Percent
Central	62,682	13.0	11,262.50	16.2
Copperbelt	35,833	7.4	5,513.31	7.9
Eastern	49,339	10.3	6,584.08	9.5
Luapula	23,483	4.9	4,260.60	6.1
Lusaka	18,781	3.9	2,912.25	4.2
Muchinga	21,676	4.5	3,255.85	4.7
Northern	20,388	4.2	3,765.74	5.4
North-Western	54,426	11.3	8,830.86	12.7
Southern	192,417	40.0	22,969.67	33.0
Western	2,220	0.5	251.18	0.4
Zambia	481,245	100.0	69,606.04	100.0

8.3.5. Value of Goat Sales

Table 8.11 further shows that the value of proceeds from sales of Goats sold was at K69.6 million. At the end of the season, Southern Province accounted for 33.0 percent of the total followed by Central Province with 16.2 percent.

8.4. Sheep

8.4.1. Households Raising Sheep

The distribution of sheep raising households and the number of sheep held on 1st October 2013 and 30th September 2014 is shown in Table 8.12. The table shows that 17,204 households raised sheep during the season. The largest percentage of households was recorded in Southern Province, which accounted for 32.7 percent of the total. Eastern Province accounted for 26.2 percent while Western Province had the smallest number of sheep raising households, accounting for 0.5 percent of the total.

Table 8.12: Percentage Distribution of Households raising Sheep and Sheep Raised by Province, Zambia, 2013-2014						
Province	Households Raising Sheep		Sheep held on 1st October, 2013		Sheep held on 30th September, 2014	
	Number	Percent	Number	Percent	Number	Percent
Central	1,316	7.6	12,680	9.2	11,541	8.9
Copperbelt	721	4.2	5,347	3.9	5,118	3.9
Eastern	4,505	26.2	26,337	19.1	22,825	17.5
Luapula	801	4.7	6,271	4.5	3,850	3.0
Lusaka	641	3.7	9,637	7.0	7,669	5.9
Muchinga	1,028	6.0	3,501	2.5	3,567	2.7
Northern	1,822	10.6	7,258	5.3	7,550	5.8
North-western	663	3.9	7,655	5.6	5,807	4.5
Southern	5,628	32.7	58,999	42.8	62,193	47.7
Western	79	0.5	313	0.2	183	0.1
Zambia	17,204	100.0	137,998	100.0	130,303	100.0

8.4.2. Number of Sheep Held

Table 8.12 also shows that the population of sheep held on 30th September 2014 was 130,303 compared to 137,998 held on 1st October 2013. This indicates a decrease of about 5.6 percent in the number of sheep held by the end of the season.

The table further shows that at the end of the season (30th September, 2014),Southern Province accounted for the highest proportion of sheep held, at 47.7 percent followed by Eastern Province with 17.5 percent. Western Province recorded the lowest proportion of sheep held, accounting for 0.1 percent.

8.4.3. Number of Sheep Slaughtered

Table 8.13 shows the distribution of sheep slaughtered by province. Of the total of 9,476 Sheep that were slaughtered during season, the highest number was recorded in Eastern Province which accounted for 21.9 percent followed by North-western Province with 16.9 percent. The lowest number was recorded in Western Province which accounted for 0.3 percent.

Table 8.13: Distribution of Number of Sheep Slaughtered by Province, Zambia, 2013-2014		
Province	Number	Percent
Central	1,001	10.6
Copperbelt	370	3.9
Eastern	2,071	21.9
Luapula	1,416	14.9
Lusaka	465	4.9
Muchinga	398	4.2
Northern	1,016	10.7
North-western	1,605	16.9
Southern	1,107	11.7
Western	27	0.3
Zambia	9,476	100.0

8.4.4. Number of Sheep Sold

Table 8.14 shows that 14,014 sheep were sold during the season. The highest number of sheep sales was recorded in Southern Province which accounted for 52.6 percent of the total sales.

Table 8.14: Distribution of Number of Sheep Sold by Value of Sales and Province, Zambia, 2013-2014

Province	Sheep Sales		Value of Sheep Sales	
	Number	Percent	ZMW ('000)	Percentage Share
Central	295	2.1	85.50	2.1
Copperbelt	357	2.5	155.51	3.8
Eastern	1,139	8.1	142.95	3.5
Luapula	1,080	7.7	325.38	8.0
Lusaka	1,321	9.4	810.41	19.8
Muchinga	845	6.0	167.25	4.1
North Western	1,609	11.5	587.06	14.4
Southern	7,367	52.6	1,814.16	44.4
Zambia	14,014	100.0	4,088.22	100.0

8.4.5. Value of Sheep Sales

Table 8.14 further shows that the total value of sales of Sheep was K4.1 million. Southern Province accounted for 44.4 percent of the total value of sales, while the lowest value was recorded in Central Province which accounted for 2.1 percent.

Chapter 9: Household Agricultural Assets

9.0. Introduction

This chapter presents information on the types of assets and number of households owning them, number of assets in working condition as at the opening of the season (1st October 2013) and at the close of the season (30th September, 2014) and the average re-sale value of the assets as determined by the main respondent.

9.1. Type of Assets and Number of Households owning Assets

Table 9.1 shows the distribution of agricultural households that own assets by type and number of asset sowned, condition of the assets, and re-sell value of the assets. The table shows that most households owned hoes, bicycles, radios, solar panels, ploughs, television sets and sprayers.

Table 9.1: Distribution of Agricultural Households Owning Assets by Type of Asset, Number Owned and Resell Value of the Assets

Assets	Number of Households Reporting	Number of Assets in Working Condition as of 1st October 2013	Number of Assets in Working Condition as of 30th September 2014	Average Price if Sold (ZMW)
Ploughs	312,108	440,524	474,605	529.42
Harrows	52,829	58,329	57,852	644.93
Cultivators	42,926	49,771	50,572	647.16
Rippers	24,986	30,030	28,618	653.90
Tractors	2,330	2,609	2,854	39,410.19
Hand driven tractor	2,318	2,393	2,359	6,001.42
Scotch carts	120,544	129,763	133,918	1,812.32
Water pumps	20,570	22,248	23,280	4,927.48
Trucks/Lorries	6,574	8,052	6,971	48,765.41
Pick-ups/ Vans/Cars	29,529	36,487	36,984	22,879.24
Motorcycles	45,067	54,479	57,682	3,348.94
Bicycles	858,587	1,113,151	1,090,517	322.35
Hammer mills	21,625	28,460	23,462	6,533.73
Hand hammer mills	18,974	21,437	19,752	1,384.05
Rump press/ Oil expeller	3,849	5,145	5,050	678.17
Sprayers	238,806	293,911	295,592	243.38
Sheller	12,540	15,936	16,598	1,148.78
Radio	803,261	978,074	965,892	238.18
Television	274,178	333,296	318,926	599.62
Treadle pump	18,858	29,613	23,121	674.82
Solar panel	394,472	617,913	624,932	279.97
Hoe	1,407,371	5,552,627	5,640,595	20.51

Table 9.1: Distribution of Agricultural Households Owning Assets by Type of Asset, Number Owned and Resell Value of the Assets

Assets	Number of Households Reporting	Number of Assets in Working Condition as of 1st October 2013	Number of Assets in Working Condition as of 30th September 2014	Average Price if Sold (ZMW)
Castration equipment	17,274	45,497	43,869	74.07
Feed mixer	1,436	2,594	2,796	75.07
Milking equipment	1,945	3,849	1,957	106.12
Branding equipment	36,082	40,386	42,066	168.39
Vet related tools and equipment	20,602	60,257	67,915	70.55

9.1.1. Households Owning Ploughs

The total number of households owning ploughs was 312,108. The number of ploughs that households had in working condition as at 1st October 2013 were 440,524 and by 30th September, 2014, households reported that 474,605 ploughs were in working condition. The average re-sale value of ploughs was K529.42.

9.1.2. Households Owning Hoes

The number of households that reported owning hoes during the season was 1,407,371. As at the beginning of the season, 5,552,627 hoes were in working condition, while 5,640,595 hoes were reported to be in working condition by the end of the season. The average re-sale value of a hoe was K20.51.

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