REPUBLIC OF ZAMBIA
MINISTRY OF AGRICULTURE

ZAMBIA STATISTICS AGENCY
"Quality Statistics for Development"

POST HARVEST SURVEY REPORT

2021/2022 AGRICULTURAL SEASON






OFFICIAL STATISTICS OF ZAMBIA
Republic of Zambia

Republic of Zambia
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FOREWORD

The Ministry of Agriculture in collaboration with the Zambia Statistics Agency conducted the Post-Harvest Survey (PHS) for the 2021/2022 agricultural season, which started from 1st October 2021 to 30th September 2022. The PHS was conducted to generate actual crop production estimates and other agricultural statistics that support and serve as a basis for monitoring and evaluating development policies and programmes for the agricultural sector in Zambia.

The PHS covered the small and medium-scale farming households and large-scale farms in all the provinces of Zambia. The large-scale farms were captured on a 100 percent enumeration basis while small and medium- scale farming households were covered on a sample basis.

This report presents information for the 2021/2022 agricultural season and provides actual figures on area planted to individual crops, production quantities, sales of produce, grain stocks held by households and farmers, and purchase and use of agricultural inputs among others.

Rueben R. Phiri Mtolo, MP
Minister of Agriculture

February 2023

ACKNOWLEDGEMENTS

The Post-Harvest Survey was made possible through the concerted efforts of the Ministry of Finance and National Planning, Zambia Statistics Agency and the Ministry of Agriculture. I therefore, take this opportunity to thank these institutions for the financial, material and technical support rendered to ensure the successful implementation of the 2021/2022 Post-Harvest Survey. I appreciate the commitment of members of staff in the Ministry of Agriculture and Zambia Statistics Agency, in particular the Agricultural Statistics and Early Warning Unit and Agriculture and Environment Division who worked tirelessly to ensure that the survey was a success.

The Ministry of Agriculture also sincerely appreciates the farmers and institutions selected to participate in the survey and the agriculture community for their patience and tolerance in providing the required data, without whom conducting of the survey would not be possible.

Green Mbozi
Permanent Secretary
Ministry of Agriculture

February 2023

STATEMENT BY THE STATISTICIAN GENERAL

The Zambia Statistics Agency (ZamStats) was established in 2018 under the Statistics Act, 2018 as the sole designated entity responsible for the publication of official statistics. The Agency is also responsible for the development and coordination of an Integrated National Statistical System.

It is against the above background that the Ministry of Agriculture collaborated with ZamStats in conducting the 2021/2022 Post Harvest Survey. The Post-Harvest Survey for the 2021/2022 agricultural season used sound methodology and internationally accepted fundamental principles for the production of official statistics. The survey collected information on farmland and use, crop production, fertiliser application, seed type and source, crop sales and crop stocks. The information in this report is useful to policy makers, researchers and other data users for the development of the agriculture sector. Any other data concerning the 2021/2022 Post-Harvest Survey not provided in this report will be made available to users upon request.

Mulenga J.J. Musepa
Statistician General
ZAMBIA STATISTICS AGENCY

February 2023

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ACRONYMS

CFS	Crop Forecasting Survey
CSAs	Census Supervisory Areas
EAs	Enumeration Areas
FISP	Farmer Input Support Programme
FRA	Food Reserve Agency
GDP	Gross domestic Product
Ha	Hectares
HHs	Households
LSS	Linear Systematic Sampling procedure
MCDSS	Ministry of Community Development and Social Services
MoA	Ministry of Agriculture
Mt	Metric tonnes
Mt/Ha	Metric tonnes per Hectare
NFBS	National Food Balance Sheet
PPS	Probability Proportional to Size
PSUs	Primary Sampling Units
ZamStats	Zambia Statistics Agency

EXECUTIVE SUMMARY

BACKGROUND

The Ministry of Agriculture (MoA) in collaboration with the Zambia Statistics Agency (ZamStats) conducted the Post-Harvest Survey (PHS) within the framework of the Statistics Act, 2018. The survey was undertaken during the 3rd and 4th quarter of 2022. The main objective of the PHS was to generate actual crop production estimates and other statistics for the 2021/2022 agricultural season.

METHODOLOGY

The PHS covered small and medium scale agricultural households and large-scale farms. The large-scale farms were captured on a 100 percent enumeration basis while small and medium scale farming households were covered on a sample basis in 680 Enumeration Areas (EAs) drawn from an estimated 16,000 EAs which made up the agricultural sampling frame. At household level, 20 households were covered out of an average of 100-150 households per Enumeration Area. Therefore, 13,600 (680 x 20) agricultural households were covered for the small and medium scale. The frame for the PHS was based on the mapping and data of the 2010 Census of Population and Housing.

The Post-Harvest Survey covered the same households that were listed a8nd selected during the 2021/2022 Crop Forecasting Survey. Data was captured through household interviews with the aid of a tablet-based application called Survey Solutions.

FINDINGS
DEMOGRAPHIC CHARACTERISTICS

- Small and medium scale agricultural households were 1,756,340 out of which 75 percent were male headed while 25 percent were female headed.
- The lowest number of about 4,920 household heads were in the youngest age group 15-19 and the highest number (245,535) were falling in the age group of 40-44.
- The highest number of about 356,689 of agricultural household heads attained primary education (Standard 6, Grade 7) and 196,343 had no education.
- A total of 1,212,141 head of households were monogamously married, 216,621 were widowed, 119,394 were divorced, 110,956 were polygamously married and 59,600 were single. In addition, 35,105 head of households were separated and 2,524 were cohabiting.
- At national level, 47.3 percent of the households had four to six members and 7.8 percent of the households had 10 or more members.

TILLAGE METHODS AND SOURCES OF POWER

- A total of 3,015,922 hectares (Ha) was planted to various crops during the 2021/2022 agricultural season by small and medium scale farming households. The largest proportion of land was prepared by ploughing at 51.1 percent followed by ridging at 25.5 percent and conventional hand hoeing at 18.6 percent.
- An estimated 61.4 percent of the 3,015,922 Ha planted was prepared using animal draught power and 36.5 percent was prepared manually. Only 2.1 percent of the land was prepared using mechanical power.
- At the beginning of the 2021/2022 agricultural season, there were 1,237,984 cattle and 9,209 donkeys raised for draught power. As at 30th November 2022, a total of 1,253,062 cattle and 9,492 donkeys were raised for draught power.

FIELD MANAGEMENT PRACTICES

- A total of 1,638,602 small and medium scale farming households weeded their maize fields, out of which, 1,474,132 weeded manually, 88,211 weeded chemically and 76,260 weeded mechanically.
- The use of animal manure, plant compost and agricultural lime was very low. The least of all was agricultural lime which was applied to the maize, soya beans, groundnuts, mixed beans, tobacco and Bambara nuts fields only. Most households applied animal manure (95,104), plant compost (69,870) and agricultural lime (1,261) in the maize field. For soya beans fields,

10,114 households applied plant composite/ residue, 8,908 households applied animal manure and 209 that applied agricultural lime. Further, 23,620 households applied plant compost/residue to their groundnuts fields followed by 8,706 households that applied animal manure and 104 that applied agricultural lime.

CROP PRODUCTION

Maize

- A total of 1,619,694 small and medium scale households and 936 large-scale farms grew maize in the 2021/2022 agricultural season.
- The total area planted to maize was 1,564,349 Ha out of which 1,367,563 Ha was harvested.
- A total of 147,148 Mt of top-dressing fertilizer and 148,942 Mt of basal dressing fertilizer were applied to the maize fields.
- A total of 2,648,203 Mt of maize was produced out of which 1,058,254 Mt was sold for cash and/or bartered for goods and/or labour by the time of the survey.
- The national average yield for maize was 1.7 Mt/Ha.
- The small and medium households contributed 95 percent while the large-scale farms accounted for five percent of the total maize produced.

Sorghum

- A total of 66,990 small and medium scale households and 21 large-scale farms grew sorghum in the 2021/2022 agricultural season.
- The total area planted to sorghum was at 44,460 Ha out of which 35,925 Ha were harvested.
- A total of 82 Mt of basal and 74 Mt of top-dressing fertilisers were applied to sorghum.
- A total of 14,184 Mt of sorghum was produced out of which 1,874 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for sorghum was 0.32 Mt/Ha.
- The contribution of the small and medium farming households to the total sorghum production was 97 percent and that of large-scale farms was three percent.

Rice

- A total of 98,313 small and medium scale households and 32 large-scale farms grew rice in the 2021/2022 agricultural season.
- A total of 67,601 Ha was planted to rice out of which 59,601 Ha was harvested.
- A total of 781 Mt of basal and 423 Mt of top-dressing fertilizers were applied to the rice fields.
- A total of 62,918 Mt of rice was produced out of 27,532 Mt was sold for cash and/or bartered for goods and/or labour by the time of the survey.
- The national average yield for rice was 0.93 Mt/Ha.
- The small and medium farming households contributed 96 percent to the total rice output and large-scale farms accounted for four percent.

Millet

- A total of 149,547 small and medium households and large-scale farms grew millet in the 2021/2022 agricultural season.
- The total area planted to millet was 57,663 Ha out of which 52,552 Ha was harvested.
- A total of 126 Mt of basal and 123 Mt of top-dressing fertilizers were applied to the millet fields.
- A total of 31,962 Mt of millet were produced out of which 6,353 Mt was sold for cash and/or bartered for goods and/or labour by survey date.
- The national average yield for millet was 0.56 Mt/Ha.
- The small and medium farming households contributed 99.96 percent to the total millet output and large-scale farms accounted for 0.04 percent.

Sunflower

- A total of 384,443 small and medium scale households and 195 large-scale farms grew sunflower in the 2021/2022 agricultural season.
- A total of 273,776 Ha was planted to sunflower out of which 238,315 Ha was harvested.
- A total of 212 Mt of basal and 147 Mt of top-dressing fertilizers were applied to the sunflower fields.

- A total of 82,861 Mt of sunflower was produced out of which 24,706 Mt of sunflower was sold for cash and/or bartered for goods and/or labour by the time of the survey.
- The national average yield for sunflower was 0.3 Mt/Ha.
- The small and medium farming households contributed 95.74 percent to the total sunflower output and large-scale farms accounted for 4.26 percent.

Groundnuts

- A total of 899,853 small and medium scale households and 350 large-scale farms grew groundnuts in the 2021/2022 agricultural season.
- The total area planted to groundnuts was 348,980 Ha out of which 322,408 Ha was harvested.
- A total of 435 Mt of basal fertilizer and 249 Mt of top-dressing fertilizer were applied to the groundnut fields.
- A total of 180,256 Mt of groundnuts was produced out of which 46,908 Mt was sold for cash and/or bartered for goods and/or labour by the time of the survey.
- The national average yield for groundnuts was 0.52 Mt/Ha.
- The small and medium farming households contributed 98.18 percent to the total groundnuts harvest while large-scale farms accounted for 1.82 percent.

Soya Beans

- A total of 442,353 small and medium scale households and 600 large-scale farms grew soya beans in the 2021/2022 agricultural season.
- A total of 436,354 Ha was planted to soya beans out of which 415,831 Ha was harvested.
- A total of 12,363 Mt of basal and 2,788 Mt of top-dressing fertilizers were applied to the soya beans fields.
- A total of 438,679 Mt of soya beans were produced out of which 328,525 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for soya beans was 1.01 Mt/Ha.
- The small and medium farming households contributed 64.27 percent to the total soya beans harvest and large-scale farms accounted for 35.73 percent.

Seed Cotton

- A total of 40,926 small and medium scale households and 14 large-scale farms grew seed cotton in the 2021/2022 agricultural season.
- The total area planted to seed cotton was 37,229 Ha out of which 33,384 Ha was harvested.
- A total of 50 Mt of basal and 89 Mt of top-dressing fertilizers were applied to the seed cotton fields.
- A total of 19,375 Mt was produced out of which 14,643 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for seed cotton was 0.52 Mt/Ha.
- The small and medium farming households contributed 99.55 percent to the total seed cotton output and large-scale farms accounted for 0.45 percent.

Irish Potatoes

- A total of 10,319 small and medium scale households and 21 large-scale farms grew Irish potatoes in the 2021/22 agricultural season.
- A total of 4,018 Ha was planted to Irish potatoes out of which 3,408 Ha was harvested.
- A total of 458 Mt of basal and 334 Mt of top-dressing fertilizers were applied to Irish potatoes fields.
- A total of 43,939 Mt of Irish potatoes were produced out of which 33,845 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for Irish Potatoes was 10.93 Mt/Ha.
- The small and medium households accounted for 14.81 percent of the total Irish potatoes and the large-scale accounted for 85.19 percent.

Virginia Tobacco

- A total of 9,279 small and medium scale households and 100 large scale farms that grew Virginia tobacco in the 2021/22 agricultural season.

- A total of 8,749 Ha was planted to Virginia tobacco out of which 8,238 Ha was harvested.
- A total of 1,879 Mt of basal and 854 Mt of top-dressing fertilizers were applied to the Virginia tobacco fields.
- The country produced a total of 16,447 Mt of Virginia tobacco out of which 13,194 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for Virginia tobacco was 1.88 Mt/Ha.
- The small and medium households accounted for 47.18 percent to the total production and large-scale farms contributed 52.82 percent.

Burley Tobacco

- A total of 6,774 small and medium scale households and six large-scale farms grew Burley tobacco in the 2021/2022 agricultural season.
- The total area planted to Burley tobacco was 5,303 Ha out of which 5,153 Ha was harvested.
- A total of 836 Mt of basal and 633 Mt of top-dressing fertilizers were applied to the Burley tobacco fields.
- A total of 7,893 Mt of Burley tobacco was produced out of which 6,940 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for Burley tobacco was 1.49 Mt/Ha.
- The small and medium farming households contributed 11.45 percent to the total output and large-scale farms accounted for 88.55 percent.

Mixed Beans

- A total of 305,462 small and medium scale households and 66 large-scale farms grew mixed beans in the 2021/2022 agricultural season.
- A total of 121,969 Ha was planted to mixed beans out of which 115,878 Ha was harvested.
- A total of 998 Mt of basal and 534 Mt of top-dressing fertilizers were applied to the mixed beans fields.
- A total of 56,683 Mt of mixed beans were produced out of which 21,230 Mt was sold for cash and/or bartered for goods and/or labour by survey date.
- The national average yield for mixed beans was 0.46 Mt/Ha.
- The small and medium households accounted for 93.54 percent to the total mixed beans harvest and large-scale farms contributed 6.46 percent.

Bambara Nuts

- A total of 67,423 small and medium scale households grew Bambara nuts in the 2021/2022 agricultural season.
- A total of 12,647 Ha was planted to Bambara nuts out of which 11,878 Ha were harvested.
- A total of 58 Mt of basal and 58 Mt of top-dressing fertilisers were applied to the Bambara nuts fields.
- A total of 10,167 Mt of Bambara nuts were produced out of which 2,213 Mt was sold for cash and/or bartered for goods and/or labour by survey date.
- The national average yield for Bambara nuts was 0.8 Mt/Ha.

Cowpeas

- A total of 109,262 small and medium scale households and 43 large-scale farms grew cowpeas in the 2021/2022 agricultural season.
- A total of 36,621 Ha was planted to cowpeas out of which 29,398 Ha were harvested.
- A total of 10,638 Mt of cowpeas were produced out of which 2,151 Mt was sold for cash and/or bartered for goods and/or labour by survey date.
- A total of 67 Mt of basal and 48 Mt of top-dressing fertilizers were applied to the cowpeas fields.
- The national average yield for cowpeas was 0.29 Mt/Ha.
- The small and medium scale farmers produced 96 percent of cowpeas and four percent was produced by large-scale farms.

Sweet Potatoes

- A total of 245,896 small and medium scale households and 61 large-scale farms grew sweet potatoes in the 2021/2022 agricultural season.
- The total area planted to sweet potatoes was 76,945 Ha out of which 72,605 Ha was harvested.

- A total of 140 Mt of basal and 88 Mt of top-dressing fertilizers were applied to the sweet potato fields.
- A total of 162,614 Mt was produced out of which 79,666 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for sweet potatoes was 2.11 Mt/Ha.
- The small and medium households accounted for 97.81 percent to the total sweet potatoes production and large-scale farms contributed 2.19 percent.

Wheat

- A total of 155 large-scale farms grew wheat in the 2021/2022 agricultural season.
- A total of 29,329 Ha was planted to wheat out of which 29,321 Ha was harvested.
- A total of 5,793 Mt of basal and 5,759 Mt of top-dressing fertilisers were applied to the wheat fields.
- A total of 278,433 Mt of wheat was produced out of which 242,587 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for wheat was 9.49 Mt/Ha.

Barley

- A total of 26 large-scale farms grew Barley in the 2021/2022 agricultural season.
- A total of 2,531 Ha was planted to barley out of which 2,521 Ha was harvested.
- A total of 500 Mt of basal and 477 Mt of top-dressing fertilisers were applied to the barley fields.
- A total of 19,759 Mt of barley was produced out of which 18,919 Mt was sold for cash and/or bartered for goods and/or labour by date of the survey.
- The national average yield for barley was 7.81 Mt/Ha.

Cassava

- A total of 473,251 small and medium scale households grew cassava in the 2021/2022 agricultural season. The area under cassava was 283,386 Ha out of which 191,190 Ha were under mature cassava. The production of cassava root tuber was 3,315,611 Mt. The total quantity of cassava flour was 828,903 Mt.

FERTILIZER APPLICATION

- A total of 605,455 Mt of basal fertiliser and 564,408 Mt of top-dressing fertilizer were applied to all crops including field crops, vegetables and fruits across the country.
- Central, Eastern and Southern provinces accounted for 21.7 percent, 20 percent and 15 percent of the total basal dressing fertilizer applied, respectively. Western province recorded the lowest application of basal fertilizer at 1.4 percent of the national total.
- Central province recorded the largest application of top-dressing fertiliser at 22.4 percent of the total followed by Eastern province with 19 percent. Western province recorded the lowest application of top-dressing fertilizer at 1.1 percent of the national total.

CROP STORAGE AND MARKETING

Storage Facilities

- A total of 1,281,748 households had different types of storage facilities. Most households (892,305) stored their produce in the house, in sacks and 113,899 households kept the produce loose in an open crib.

Crop Stocks from Own Harvest

- The total maize and rice stocks in storage were 511,259 Mt and 9,851 Mt respectively.
- The quantities of sorghum and millet in storage were 8,689 Mt and wheat stocks were 57,642 Mt.

Marketing Channels

Crop Marketing Channels

- Generally, most households sold their produce to private traders followed by other households and the Food Reserve Agency (FRA).
- A total of 374,021 households sold maize to private traders and 107,289 households sold to the Food Reserve Agency.

- Majority (3,872) of the households sold sorghum to other households and 2,989 households sold to private traders.

Cassava Marketing

- On average, 61.16 percent of the households sold raw cassava to private traders.
- The second largest market for raw cassava was other households at 38.22 percent market share. Approximately, 0.62 percent of the households sold to other channels.
- The largest markets for dried cassava chips were private traders and other households which accounted for 56.81 percent and 40.94 percent market shares.
- The largest market for cassava flour were other households with 52.79 percent market share followed by private traders with 41.74 percent shares.

IRRIGATION METHODS AND SOURCES OF WATER AND ENERGY

Irrigated Crops

- Rape and tomato were the most irrigated crops by 78,153 and 49,950 small and medium households respectively.
- Wheat and tomatoes were the most irrigated crops by 155 and 155 large-scale farms respectively.

Main method of irrigation

- An estimated 79.86 percent of the small and medium scale households used buckets for irrigation and one percent of the households used drip irrigation.
- Approximately 28.59 percent and 22 percent of the 850 large-scale farms used center pivots and sprinkler/rain-gun/horse for irrigation during the 2021/2022 agricultural season respectively.

Sources of Water for Irrigation

- A total of 105,923 small and medium households used the well as the main source of water for irrigation. In addition, 102,100 households used the river/stream. The lake was the least source of water for irrigation by 397 households.
- Approximately, 400 large-scale farms used the borehole as the main source of water for irrigation. In addition, 222 large-scale farms used the river/stream. The dambo/wetland was the least source of water for irrigation by 36 large-scale farms.

Sources of Energy for Drawing Water for Irrigation

- A total of 210,133 small and medium households used manual labor for drawing water for irrigation and 1,512 households used solar energy.
- A total of 537 large-scale farms used electricity for drawing water for irrigation and 159 farms drew water manually.

LABOUR AND HIRED SERVICES

- A total of 1,320,042 households used unpaid family labour and 226,545 households used hired labour to undertake land preparation.
- The main type of power used by small and medium scale households to prepare land, plant, and weed the largest maize field was animals. A total of 241,276 households used own animals, 133,070 households used borrowed animals and 117,262 households used hired animals to prepare land for the largest maize field.
- A total of 193,932 households used own animals, 98,453 households used borrowed animals and 47,975 households used hired animals to plant the largest maize field.
- A total of 464 households and 215 households used own tractor to apply basal and top-dressing fertilisers respectively.
- A total of 299,710 households used own animals, 192,941 households used borrowed animals and 131,046 households used hired animals to transport maize from the field to the homestead.
- A total of 4,299 households used own sheller while 5,234 households used borrowed sheller.

FOOD SECURITY SITUATION

The updated National Food Balance sheet reveals that the country has a net surplus of 1,162,526 Mt of maize, net deficit of 45,000 Mt of /paddy rice, net deficit of 94,398 Mt of wheat for the 2022/2023 agricultural marketing season. In addition, the country has a net deficit of 293,038 Mt of cassava flour. Overall, the National Food Balance sheet reveals that the country is food secure with a surplus of 753,997 Mt of maize equivalent.

CHAPTER 1: BACKROUND

1.1 Introduction

The Ministry of Agriculture (MoA) in collaboration with the Zambia Statistics Agency (ZamStats) conducted the 2021/2022 Post-Harvest Survey (PHS) within the framework of the Statistics Act, 2018. The 2021 /2022, Post-Harvest Survey was undertaken during the 3rd and 4th quarter of 2022. This document is a report of the PHS, which was conducted for the 2021/2022 agricultural season, which started on 1st October 2021 and ended on 30th September 2022. The report provides the concepts and definitions used, outlines the survey methodology, and the characteristics of the households. The report further provides information on tillage methods and sources of power, crop production and sales, fertiliser application, storage facilities, crop marketing channels, irrigation methods and sources of water and energy for irrigation. The report ends with the updated food security position for the 2022/2023 agricultural marketing season.

1.2 Objectives of the Post-Harvest Survey

The objective of the PHS is to generate actual crop production estimates and other agricultural statistics for the particular agricultural season. The production statistics are used as input in producing the Gross Domestic Product and deriving other key economic indicators concerning the performance of the agriculture sector. The results of the survey are meant to inform policy and decisions on food security, agriculture trade and investments.

CHAPTER 2: CONCEPTS AND DEFINITIONS

2.1 Introduction

The general concepts and definitions outlined below were used during the Post-Harvest Survey for the 2021/2022 agricultural season.

2.2 General Concepts

Adult Household Member	Refers to a person who is aged 12 years or older.
Qualified Respondent	Is an adult member of the household, who is knowledgeable about agricultural and other activities of the household. A qualified respondent was, however, allowed to consult any other member of the household on different items in the questionnaire.
Household	Is a group of persons who normally live and eat together; these people 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. Such people are called members of the household if they normally live and eat together even if they do not sleep under one roof. It may also consist of one member.
Agricultural Household	Is a household in which at least one member is carrying out some agricultural activity (defined below) on the holding belonging to the household.
Agricultural Activity	Is the growing of any crop and/or raising of livestock and/or raising of poultry and/or fish farming.
Head of Household:	Is a person all members of the household regard as the head. She/he is the one who normally makes day-to-day decisions governing the running of the household.
Agricultural Season	Zambia's agricultural season extends from 1st October of one year to 30th September of the following year.
Agricultural Marketing Season	Zambia's agricultural marketing season extends from 1st May of one year to 30th April of the following year.
Holding	Is all land wholly or partly operated for agricultural purposes such as growing crops and/or raising livestock and/or raising poultry and/or fish farming for production under a single technical management. A holding may consist of one or more fields (defined below) located in one or separate areas. The fields share the same means of production e.g., labour.
Field	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. A field can also be a piece of land under fallow.
Fallow field	Fallow field includes land that has been cropped before but is not being cropped now. This could be intentional to allow the land to regain its fertility.

Adult Household Member	Refers to a person who is aged 12 years or older.
Virgin Land	This is land that the household has never cultivated but belongs to the household. This land is often not cleared.
Garden	This is land where vegetables e.g., cabbage, rape, carrots, green maize, tomatoes etc. are grown.
Orchard	This is land designated or allocated for growing fruit trees only. If the trees are scattered around in some undefined area, they do not constitute an orchard.
Rented-out Land	This is land that a household owns and gives out, in exchange for a payment (in cash or in kind), for use temporarily to another household for a specified period (for one or more seasons) without claiming usage of the land over the specified period.
Rented-in Land	This is land that a household rents at a cost (in cash or in kind) for use temporarily from another household for a specified period (for one or more seasons) without the owner of the land claiming usage of the land over the rented period.
Borrowed-in Land	This is land that a household borrows at no cost for use temporarily from another household for a specified period (for one or more seasons) without the owner of the land claiming usage of the land over the specified period.
Mixed Cropping	Is a cultivation practice whereby two or more different crops are grown simultaneously in the same field.
Inter- cropping	Is a cultivation practice whereby a crop is planted between the rows of another crop, e.g., sorghum between cotton rows, or sorghum between groundnut rows, or groundnuts between maize rows.
Land Preparation	Refers to all activities such as clearing the land, tree stumping, ploughing, etc.
Tillage Method	Refers to land preparation activities just before planting such as ploughing, ridging (by hand or plough), pot-holing, zero tillage etc.
Bunding	A form of land preparation that involves making mounds, with hand-hoes.
Conventional hand-hoeing	
	A tillage method where a hand hoe is used to turn the soil in the field.
Pot-holing	A land preparation method of digging holes for water harvesting. These holes serve as a water collecting device.
Planting basins	A land preparation practice where the crop is planted in planting holes or basins. This practice does not involve use of plough or conventional plough.
Zero tillage	A land preparation method with minimal land disturbance, with the exception of planting stations.
Ploughing	A land preparation method that involves turning the soil with a plough.
Ripping	A form of minimum tillage where land is left undisturbed, with the exception of planting lines, which are ripped with a ripper.
Ridging	A form of land preparation that involves making ridges with a ridger or hand-hoe.
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.

Adult Household Member	Refers to a person who is aged 12 years or older.
Mechanical Power	Energy to do work which is derived from machinery driven by either an engine or electricity, e.g., Tractor and bulldozer.
Manual Labour	Physical work done by human beings.
Seed	Any plant or plant part which is used for plant propagation.
Local Seed	Refers to seed or plant groupings that are selected in long periods of time by one or more farmers due to their characteristics and are utilised for the purpose of production and are considered public properties. Local seed are not products of formal breeding methods, and are under continuous management by farmers. They include indigenous and landraces.
Recycled Seed	Refer to seeds that are recycled season after season. Open Pollinated Varieties (OPVs) that have been recycled become local seed varieties if they do not remain true to type.
Hybrid Seed	Refer to seed that is produced as a result of a controlled cross between two or more genetically unlike parents. Therefore, it is an improved type of seed whose progeny is not recommended to be used as seed.
Improved seed	Refers to any seed variety bred using formal breeding methods. It includes OPVs and hybrids.

2.3 General Guidelines

Mixed beans	Include all kinds of beans except soya-beans and ground (round) beans (Bambara nuts). The quantities of production and sales relate to dried beans.
Seed-cotton	Production and sales are recorded in kilograms. Where the quantity is reported in bales/woolsacks, it is converted to kilograms before recording.
Groundnuts	Production and sales of groundnuts relate to shelled (where the shells have been removed) as well as unshelled (shells have not been removed) form. For statistical reporting, the concept of shelled groundnuts is adopted.
Rice	Production and sales relate to paddy, (i.e., rice in husks).
Maize	Production and sales are recorded in dried grain form.
Sorghum	Production and sales are recorded in threshed grain form.
Millet	Includes bulrush and finger millet. Their production and sales are recorded in threshed dried grain form.
Soya-beans	Production and sales are recorded in dried seed form.
Sunflower	Production and sales are recorded in dried seed form.
Cowpeas	Production and sales are recorded in dried seed form.
Burley and Virginia Tobacco	Production and sales relate to cured tobacco.
Irish Potatoes/Sweet Potatoes	Production and sales related to tubers.

CHAPTER 3: SURVEY METHODOLOGY AND ORGANISATION

3.1 Introduction

This chapter outlines the methodology employed for the 2021/2022 Post-Harvest Survey. It includes the scope and coverage, sample selection and design, data collection, data processing and analysis, and measurement methodology. The survey covered small and medium scale agricultural households and large-scale farms.

3.2 Scope and Coverage

The PHS covered the whole country and was conducted in 680 Enumeration Areas (EA) drawn from the 2010 Census of Population and Housing frame.

Zambia is divided into the following administrative units: Province, District, Constituency and Ward. The Ward is the lowest administrative unit in the country. The sample for the PHS was drawn from the 74 districts, which existed before the end of 2011. For sampling purposes, the Zambia Statistics Agency (ZamStats) further subdivided each ward into Census Supervisory Areas (CSAs) and Enumeration Areas (EAs). The EA is the smallest area with well-defined boundaries identified on a census map. Each EA contains approximately between 100 and 150 households (HHs).

The CSA is a grouping of enumeration areas and is meant to be assigned to one supervisor during census enumeration. A total sample of 680 CSAs was allocated nationally to all the districts proportional to the number of households. Twenty households were randomly selected from each of the 680 EAs in the sample. The distribution of the 680 CSAs and EAs by province is shown in Table 3.1 below.

Table 3.1: Distribution of Census Supervisory Areas and Enumeration Areas for the PHS by Province, 2021/2022 Agricultural Season

Province	Number of CSAs Selected	Number of EAs Selected
Central	74	74
Copperbelt	60	60
Eastern	100	100
Luapula	66	66
Lusaka	32	32
Muchinga	54	54
Northern	80	80
North-Western	52	52
Southern	94	94
Western	68	68
Total	**680**	**680**

3.3 Sample Selection and Design

The Kish Square Root allocation method was used to allocate the sample, based on the 2010 population on the sampling frame. This method is a compromise between the equal and proportional allocation methods. In this case, the probability proportional to size sampling method was used. Therefore, each province had different numbers of clusters depending on the total number of clusters for each province.

The Primary Sampling Units (PSUs) were defined as the CSAs delineated for the census. The CSAs were stratified by district within each province. A master sample of CSAs was selected systematically by employing probability proportional to size (PPS) within each district at the first sampling stage; the measure of size for each PSU was based on the number of households listed in the 2010 Census. The secondary sampling unit was the Enumeration Area.

One EA was selected within each sample CSA with PPS for the survey. Once an EA was selected, an enumerator visited all the households within the EA and collected basic information about the total area cultivated by the household as well as the number of livestock and poultry raised. This information formed the basis for stratifying a household as being agricultural or non-agricultural. The agricultural households were further stratified into categories A, B and C.

Category A included households with cultivated land of less than two hectares, and raised less than 50 cattle, less than 30 goats, less than 20 pigs and less than 50 chickens.

Category B included households with 2.0 to 4.99 Ha of cultivated land. This category also included households reporting any of the rarely grown crops, when three to five households in the EA report the specified crop(s), even if they do not qualify based on area under crops.

Category C included households with 5.0 to 19.99 Ha of cultivated land. This category also included:

i) Households reporting any of the rarely grown crops when only one or two households in the EA report the rarely grown crop(s), even if they do not qualify based on area under crops; and
ii) Households raising either, 50 or more cattle, and/or 20 or more pigs, and/or 30 or more goats, and/or 50 or more chickens, even if they do not qualify based on area under crops.

A three-stage sampling procedure was used to select work areas and households for data collection purposes. At the first stage, CSAs were selected using PPS with agricultural households as a measure of selection.

At the second stage, EAs were selected using the same procedure described above for the selection of CSAs. At the third stage, a count of households in selected work areas was conducted by listing all households resident in these areas before the selection of sample households for the data collection exercise. A Linear Systematic Sampling procedure (LSS) was used to select the required number of households in each EA.

The first stage of field data collection involved a complete listing of basic demographic and agricultural information from all the households in the sampled EAs. Information was collected on village name, name of household head, sex of household head, household size, whether the household planted any crops in the reference period, total land under cultivation, whether the household planted any of a list of specified special crops and the number of cattle, goats, pigs and chickens raised by the household. After a process of stratification, twenty households were sampled from each EA for the detailed household interview. A stratified multi-stage sample design was used for the PHS.

3.4 Sampling Frame

Prior to the 2010 Census of Population and Housing, ZamStats conducted a mapping exercise covering the whole country to generate a national frame. The national sampling frame has a list of 25,631 EAs and 2,815,897 households as of 2010 Census.

The frame for the PHS was based on the mapping and data of the 2010 Census of Population and Housing. The frame was constructed by creating crop clusters in each district using CSAs and EAs as geographical boundaries of the crop zones.

3.5 Sample Size

A sample size of 680 EAs was drawn from an estimated 16,000 EAs which made up the agricultural sampling frame. This represents approximately 4.3 percent of the total number of EAs. At the household level, 20 households were covered out of an average of 100-150 households per EA. This represents approximately 20 percent of the total number of households in an EA. Therefore, 13,600 (680 x 20) agricultural households were covered for the small and medium scale enumeration.

3.6 Data Collection

Data Collection took place in November 2022 with a few areas completing the first week of December 2022.

The survey covered three categories of agricultural households and farms namely, small-scale, medium-scale and large-scale. Small and medium scale farming households were covered on a sample basis. The large-scale farms were captured on a 100 percent enumeration basis.

The large-scale farms included all households and institutions cultivating 20 Ha or more of land. If they raised livestock, the following criteria was applied:

i) Raise 20 or more dairy cows per annum;
ii) Raise 50 or more heads of beef cattle;
iii) Rear 6,000 or more broilers per annum;
iv) Raise 1,000 or more layers per annum;
v) Produce parent stock of poultry; and
vi) Raise 10 or more sow units.

3.7 Data Processing and Analysis

Data was captured with the aid of a tablet-based application called Survey Solutions. Therefore, the data was collected using a tablet-based questionnaire and was immediately synchronized with the central server when connected to the internet. After enumeration, data was downloaded and exported to the Statistical Package for Social Sciences (SPSS) software. The software was used when performing consistency checks on the raw data before the final weighted district estimates were produced. The survey period, from questionnaire design to data collection and analysis took approximately five months.

3.8 Measurement Methodology

The PHS collects information on the area planted for each crop, expected production and sales, seed type, tillage method used, acquisition and usage of fertiliser etc. This information is based purely on farmer recall and estimation. The survey does not involve area measurement or direct field observation by the enumerator. One of the reasons for relying on farmer recall and estimation is to reduce measurement bias and error by the enumerator.

Direct field observation by the enumerator also has significant cost implications, which have generally not been commensurate with improvements in data quality. Loss of efficiency is avoided when the farmer recall method is used. The area harvested is also collected but is not used in the computation of yield. Only the area planted is used in yield computation. Yield is not calculated by the farmer but by the analysts at the data analysis stage. Yield is derived from the quantity produced divided by the estimated area planted for each crop. The farmer provides all estimates.

CHAPTER 4: CHARACTERISTICS OF AGRICULTURAL HOUSEHOLDS

CHAPTER 4: CHARACTERISTICS OF AGRICULTURAL HOUSEHOLDS

4.1 Introduction

This chapter presents the category and demographic characteristics of the small and medium scale households involved in agricultural activities during the 2021/2022 agricultural season. Demographic characteristics presented in this chapter are age, sex, education and marital status of agricultural household heads. It also includes size of agricultural households.

4.2 Categorization of Agricultural Households

Table 4.1 presents the distribution of agricultural households in categories A, B and C defined in chapter three above. The table shows that at the national level, 1,195,063 agricultural households were classified in category A, 398,986 in B and 162,291 in C. Eastern province reported the highest number of agricultural households in both Category A and B with 204,428 and 93,986 respectively. Lusaka province had the lowest number of agricultural households in category A at 33,610 while Copperbelt province had the lowest number in category B at 11, 470.

Southern province recorded the highest number of agricultural households in category C with 43,622 followed by Central province with 28,717 agricultural households. Luapula province had the lowest number of agricultural households in category C at 5,843.

Table 4.1 Distribution of Agricultural Households by Category and Province, 2021/2022 agricultural season

Province	Category - A	Category - B	Category - C	Total
Central	120,652	60,829	28,717	210,197
Copperbelt	59,047	11,740	7,061	77,847
Eastern	204,428	93,986	20,147	318,562
Luapula	145,514	21,147	5,843	172,504
Lusaka	33,610	15,252	13,948	62,809
Muchinga	113,598	22,987	10,812	147,397
Northern	153,249	45,877	14,374	213,500
North Western	97,866	18,683	6,875	123,423
Southern	142,426	76,240	43,622	262,288
Western	124,673	32,246	10,892	167,812
Total	**1,195,063**	**398,986**	**162,291**	**1,756,340**

4.3 Demographic Characteristics

4.3.1 Sex of Household Heads

Table 2 shows the provincial distribution of agricultural household heads by sex. From the estimated 1,756,340 households engaged in agricultural activities, 1,316,232 were male headed and 440,109 were female headed. Eastern province had the highest number of male-headed agricultural households at 246,737 followed by Southern and Central provinces with 187,853 and 163,102 household heads respectively.

Southern province had the highest number of female-headed agricultural households at 74,435, followed by Eastern and Western provinces with 71,825 and 64,641 household heads respectively.

Table 4.2: Provincial Distribution of Agricultural Households by Sex of Head, 2021/2022 agricultural season

Province	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Central	163,102	77.6	47,095	22.4	210,197	100
Copperbelt	55,257	71	22,590	29.0	77,847	100
Eastern	246,737	77.5	71,825	22.5	318,562	100
Luapula	138,996	80.6	33,508	19.4	172,504	100
Lusaka	49,146	78.2	13,663	21.8	62,809	100
Muchinga	118,723	80.5	28,674	19.5	147,397	100
Northern	162,877	76.3	50,623	23.7	213,500	100
North Western	90,369	73.2	33,055	26.8	123,423	100
Southern	187,853	71.6	74,435	28.4	262,288	100
Western	103,171	61.5	64,641	38.5	167,812	100
Total	**1,316,232**	**74.9**	**440,109**	**25.1**	**1,756,340**	**100**

4.3.2 Age of Household Heads

Table 4.3 shows the distribution of agricultural household heads by five-year age groups. The table reveals that 4,920 agricultural household heads were in the youngest age group 15 to 19 years. The highest number of agricultural household heads (245,535) were in the age group 40 to 44 years.

In terms of sex distribution, there were more male and female agricultural household heads in the age group 40 to 44 years at 189,395 and 56,140 respectively.

Table 4.3: Distribution of Agricultural Household Heads by five-year age group, 2021/2022 agricultural season

Age Group	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
15-19	3,238	65.8	1,682	34.2	4,920	100
20-24	66,335	85.9	10,923	14.1	77,258	100
25-29	140,699	85	24,837	15	165,536	100
30-34	163,195	82.8	33,837	17.2	197,032	100
35-39	180,707	81.8	40,286	18.2	220,993	100
40-44	189,395	77.1	56,140	22.9	245,535	100
45-49	151,094	75	50,360	25	201,454	100
50-54	137,331	74.4	47,304	25.6	184,635	100
55-59	90,461	68.1	42,348	31.9	132,809	100
60-64	73,855	65.7	38,591	34.3	112,445	100
65-69	47,187	57.1	35,409	42.9	82,596	100
70-74	32,889	60.8	21,205	39.2	54,094	100
75-79	18,459	48.9	19,289	51.1	37,748	100
80 and older	21,387	54.4	17,897	45.6	39,284	100
Total	**1,316,232**	**74.9**	**440,109**	**25.1**	**1,756,340**	**100**

4.3.3 Educational Level of Household Heads

Table 4 shows the provincial distribution of agricultural household heads by highest level of education attained. A total of 356,689 of agricultural household heads attained primary education (Standard 6 Grade 7) while 196,343 had no education.

Eastern province had the highest number of agricultural household heads with no education at 57,011 followed by Northern province with 24,010 agricultural household heads. Southern province recorded the highest number of agricultural household heads that completed primary education (Standard 6 Grade 7) with 58,732 followed by Eastern province with 55,461 agricultural household heads.

Table 4.4: Provincial Distribution of Household Heads by Highest Educational Level attained, 2021/2022 agricultural season

Educational Level	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North Western	Southern	Western	Total
None	17,173	6,950	57,011	9,289	3,928	18,215	24,010	16,115	22,479	21,173	196,343
Sub-standard A,B Grade 1	2,955	1,232	10,226	2,907	924	1,820	4,202	3,646	4,413	2,745	35,072
Standard 1 Grade 2	5,488	1,516	15,132	4,579	1,214	3,352	6,487	3,580	6,244	6,050	53,642
Standard 2 Grade 3	5,901	2,240	21,363	9,862	1,625	6,768	12,115	6,200	13,597	11,284	90,955
Standard 3 Grade 4	10,787	3,352	23,138	11,903	2,438	11,448	14,708	9,139	14,330	12,803	114,046
Standard 4 Grade 5	13,182	3,706	23,050	16,267	2,263	12,501	15,675	8,341	16,498	10,031	121,514
Standard 5 Grade 6	18,130	5,736	28,885	17,762	4,699	12,008	26,257	11,012	30,700	13,931	169,119
Standard 6 Grade 7	49,873	17,574	55,461	38,485	12,083	28,999	35,631	17,412	58,732	42,437	356,689
Form 1 Grade 8	13,691	5,692	21,163	12,217	4,284	11,205	22,287	9,529	23,699	7,720	131,487
Form 2 Grade 9	36,079	13,974	28,832	23,411	10,722	17,068	22,919	14,327	33,545	21,854	222,731
Form 3 Grade 10	8,220	3,428	5,323	5,112	1,941	6,777	6,793	6,167	9,009	5,147	57,916
Form 4 Grade 11	4,389	2,413	4,013	2,579	1,426	1,938	4,489	4,468	4,230	855	30,802
Form 5 Grade 12	19,829	7,098	16,126	9,493	6,650	8,247	11,540	10,905	13,990	8,177	112,055
Form 6 Lower	0	0	584	0	0	51	0	293	32	0	960
Form 6 Upper	59	51	277	0	0	0	0	0	0	0	387
College Student	552	24	78	469	105	548	0	335	1,015	26	3,153
Undergraduate Student	358	52	84	0	212	51	0	35	527	14	1,333
Tertiary/Certificate/Diploma	2,235	2,108	5,456	4,445	4,527	4,213	5,316	1,362	5,690	2,561	37,913
Bachelor's Degree	1,180	536	2,326	3,575	1,960	2,139	764	555	2,899	922	16,857
Master's Degree and Above	115	164	34	148	1,810	51	306	0	657	80	3,366
Total	**210,197**	**77,847**	**318,562**	**172,504**	**62,809**	**147,397**	**213,500**	**123,423**	**262,288**	**167,812**	**1,756,340**

4.3.4 Marital Status of Household Heads

Table 4.5 shows the provincial distribution of heads of agricultural households by marital status. A total of 1,212,141 agricultural household heads were monogamously married and 216,621 were widowed. The table also shows that 119,394 agricultural household heads were divorced and 110,956 were polygamously married. The detailed information on marital status is shown in table 4.5 below.

Table 4.5: Provincial Distribution of Heads of Agricultural Households by Marital Status, 2021/2022 agricultural season

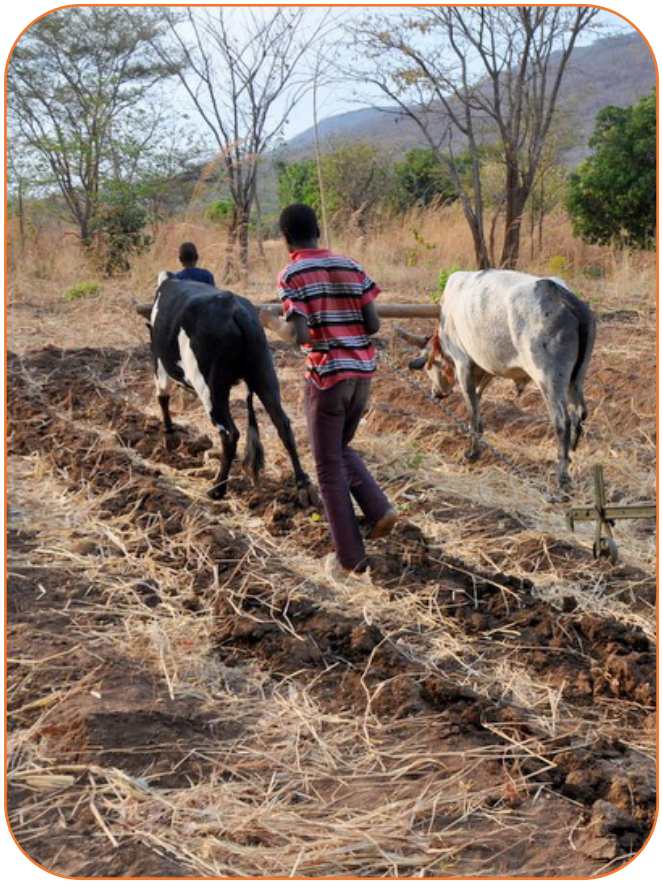
Province	Single (Never Married)	Monogamously Married	Polygamously Married	Divorced	Widowed	Separated	Cohabiting	Total
Central	8,021	152,544	9,535	10,948	26,579	2,571	-	210,197
Copperbelt	2,541	55,033	691	5,888	11,495	2,199	-	77,847
Eastern	5,988	224,989	23,929	23,526	33,220	6,320	590	318,562
Luapula	2,642	130,937	6,571	11,108	17,387	3,860	-	172,504
Lusaka	2,829	43,473	1,925	3,500	9,794	1,121	166	62,809
Muchinga	4,197	109,322	4,663	3,051	20,440	5,331	393	147,397
Northern	6,016	154,569	9,441	12,238	28,294	2,942	-	213,500
North Western	6,926	84,146	5,054	12,326	12,356	2,615	-	123,423
Southern	5,840	157,921	43,186	15,855	35,867	3,565	54	262,288
Western	14,599	99,207	5,960	20,953	21,191	4,582	1,321	167,812
Total	**59,600**	**1,212,141**	**110,956**	**119,394**	**216,621**	**35,105**	**2,524**	**1,756,340**

4.3.5 Size of Agricultural Households

Table 4.6 shows the provincial distribution of agricultural households by size. At national level, 47.3 percent of the households had four to six members and 7.8 percent of the households had 10 or more members. Southern, Eastern and Central provinces had the highest number of households with 10 or more members at 30,426, 17,906 and 17,504, respectively.

Table 4.6: Provincial Distribution of Agricultural Households by Size, 2021/2022 agricultural season

Province	Number of Persons in the Households								Total Number of Agricultural Households	
	1 to 3		4 to 6		7 to 9		10 +			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Central	40,964	19.5	94,568	45	57,161	27.2	17,504	8.3	210,197	100
Copperbelt	14,435	18.5	37,785	48.5	18,625	23.9	7,003	9	77,847	100
Eastern	67,146	21.1	159,232	50	74,278	23.3	17,906	5.6	318,562	100
Luapula	24,239	14.1	84,313	48.9	51,338	29.8	12,615	7.3	172,504	100
Lusaka	12,848	20.5	28,883	46	14,820	23.6	6,257	10	62,809	100
Muchinga	39,206	26.6	80,412	54.6	23,751	16.1	4,029	2.7	147,397	100
Northern	45,050	21.1	103,024	48.3	54,141	25.4	11,285	5.3	213,500	100
North Western	18,864	15.3	51,080	41.4	40,327	32.7	13,153	10.7	123,423	100
Southern	41,253	15.7	117,500	44.8	73,109	27.9	30,426	11.6	262,288	100
Western	28,423	16.9	74,008	44.1	49,349	29.4	16,031	9.6	167,812	100
Total	**332,428**	**18.9**	**830,805**	**47.3**	**456,898**	**26**	**136,210**	**7.8**	**1,756,340**	**100**



CHAPTER 5:
TILLAGE METHODS, SOURCE OF POWER AND CROP MANAGEMENT PRACTICES

CHAPTER 5: TILLAGE METHODS, SOURCE OF POWER AND CROP MANAGEMENT PRACTICES

5.1 Introduction

This chapter covers tillage methods, sources of power and crop management practices among small and medium scale farming households during the 2021/2022 agricultural season.

5.2 Tillage Methods

Table 5.1 shows the distribution of area under tillage methods used by small and medium scale farming households. A total of 3,015,922 hectares (Ha) was planted to various crops during the 2021/2022 agricultural season. The largest proportion of land was prepared by ploughing at 51.10 percent followed by ridging at 25.50 percent and conventional hand hoeing at 18.60 percent.

Ploughing was widely used in Southern, Western, Central, Lusaka and Copperbelt provinces. In Southern and Western provinces, 96.5 percent and 76.4 percent of the land was prepared by ploughing respectively. In Central, Lusaka and Copperbelt provinces, ploughing was used to prepare 64.4 percent, 59.6 percent and 41.3 percent of the total land cultivated within the provinces, respectively.

Ridging was widely practiced in Luapula, Northern and Eastern provinces accounting for 76.3 percent, 60.5 percent and 53.5 percent of the total land cultivated within the provinces, respectively. Conventional hand hoeing was the main tillage method used in Muchinga, North-Western and Copperbelt provinces accounting for 59.2 percent, 54.1 percent and 32.1 of the total land cultivated within the provinces, respectively.

Table 5.1 Provincial Distribution of Area Planted (Ha) by Type of Tillage Method Used, 2021/2022 Agricultural Season

Province	Conventional hand hoeing	Planting basins (pot-holes)	Zero tillage	Ploughing	Ripping	Ridging	Bunding	Chitemene zero tillage	Chitemene ploughing/ hand hoe	Mounding	Total	Total Hectares Planted
Central	28.50%	0.30%	0.10%	64.40%	1.50%	4.20%	0.00%	0.10%	0.00%	0.80%	100%	496,581
Copperbelt	32.10%	1.30%	0.60%	41.30%	2.30%	22.10%	0.00%	0.00%	0.00%	0.40%	100%	114,254
Eastern	10.50%	0.70%	2.30%	26.80%	5.90%	53.50%	0.00%	0.10%	0.20%	0.10%	100%	646,681
Luapula	19.00%	0.00%	0.50%	0.00%	0.20%	76.30%	0.60%	0.50%	0.30%	2.60%	100%	105,682
Lusaka	16.90%	12.80%	1.00%	59.60%	4.20%	5.00%	0.00%	0.00%	0.40%	0.10%	100%	91,786
Muchinga	59.20%	0.80%	0.00%	0.60%	0.60%	35.80%	0.20%	1.40%	0.90%	0.60%	100%	156,529
Northern	16.80%	0.20%	0.10%	17.50%	0.70%	60.50%	0.10%	2.20%	1.30%	0.70%	100%	304,992
North-Western	54.10%	0.00%	0.10%	8.90%	0.10%	32.90%	0.00%	0.20%	0.00%	3.50%	100%	139,221
Southern	1.40%	0.00%	0.40%	96.50%	0.50%	0.80%	0.00%	0.00%	0.20%	0.20%	100%	732,073
Western	22.30%	0.20%	0.00%	76.40%	0.00%	0.50%	0.00%	0.10%	0.40%	0.20%	100%	228,123
Total	**18.60%**	**0.70%**	**0.70%**	**51.10%**	**2.00%**	**25.50%**	**0.00%**	**0.40%**	**0.30%**	**0.60%**	**100%**	**3,015,922**

5.3 Source of Power for the Main Tillage Method used

Table 5.2 shows the distribution of area planted by sources of power for the main tillage method used by province. A total of 3,015,922 hectares were planted to various crops during the season under review. The largest proportion (61.4%) of this land was prepared using animal draught power and 36.5 percent was prepared manually. Only 2.1 percent of the land was prepared using mechanical power. Within provinces, Southern, Western and Eastern provinces had the highest rates of animal draught power use at 94.7 percent, 76.2 percent and 73.5 percent respectively. Still within provinces, Luapula, Muchinga and North Western provinces had the largest proportion of land prepared manually at 98.7 percent, 96.3 percent and 87.2 percent respectively.

Table 5.2: Provincial Distribution of Area Planted by source of the main type of Power used for Tillage, 2021/2022 Agricultural Season

Province	Animal		Mechanical		Manual		Total	
	Hectares planted	Percent	Hectares planted	Percent	Hectares planted	Percent	Hectares planted	Percent
Central	328,379	66.1	17,154	3.5	151,048	30.4	496,581	100
Copperbelt	53,055	46.4	1,805	1.6	59,394	52	114,254	100
Eastern	475,598	73.5	6,295	1	164,789	25.5	646,681	100
Luapula	1,229	1.2	115	0.1	104,339	98.7	105,682	100
Lusaka	46,085	50.2	12,507	13.6	33,194	36.2	91,786	100
Muchinga	4,805	3.1	996	0.6	150,727	96.3	156,529	100
Northern	58,577	19.2	255	0.1	246,159	80.7	304,992	100
North-Western	17,658	12.7	230	0.2	121,334	87.2	139,221	100
Southern	693,300	94.7	23,729	3.2	15,044	2.1	732,073	100
Western	173,807	76.2	1,012	0.4	53,305	23.4	228,123	100
Total	**1,852,493**	**61.4**	**64,097**	**2.1**	**1,099,332**	**36.5**	**3,015,922**	**100**

5.4 Trained/draught animals

Table 5.3 shows the distribution of trained/draught animals by province during the 2021/2022 agricultural season. At the beginning of the 2021/2022 agricultural season, there were 1,237,984 cattle and 9,209 donkeys raised for draught power. As of 30th November 2022, a total of 1,253,062 cattle and 9,492 donkeys were raised for draught power.

Southern, Eastern and Central provinces raised more trained/draught cattle with 415,605, 350,946 and 241,501 animals respectively. Luapula and Muchinga provinces reported the least number of trained/draught cattle raised with 2,029 and 3,709 animals respectively. On the other hand, Western and Southern provinces raised more donkeys than the rest of the provinces with 4,902 and 3,785 animals respectively. Central province reported the lowest number of trained/draught donkeys at 84.

The table also shows that 62,656 trained/draught cattle were rented out for ploughing to other households at a total value of ZMW 123,627,663. In addition, 38,109 trained cattle were rented out for transportation at ZMW 59,198,502. Further, eighty donkeys were rented out for ploughing and transportation at the value of ZMW 119,564 and ZMW 39,855 respectively.

Table 5.3: Provincial Distribution of Trained/Draught Animals, 2021/2022 Agricultural Season

Trained/Drought Animals	Province	Number raised on 1st October 2021	Number raised on the Survey date(November 2022{	Number rented out for ploughing to other households	Total amount in ZMW obtained for renting out	Number rented out for transport to other households	Total amount in ZMW obtained from renting out
Cattle	Central	250,812	241,501	9,205	16,934,146	3,808	19,598,587
	Copperbelt	20,278	21,379	2,959	6,756,557	1,756	7,441,310
	Eastern	335,976	350,946	24,329	42,103,707	16,272	14,797,977
	Luapula	2,083	2,029	416	159,936	-	-
	Lusaka	33,285	30,631	2,639	5,469,927	1,751	2,523,396
	Muchinga	2,935	3,708	317	5,070,041	235	3,945,611
	Northern	42,635	41,495	2,907	10,185,200	1,421	49,770
	North-Western	18,546	21,578	3,196	5,729,850	2,593	3,931,102
	Southern	413,414	415,605	12,079	23,977,569	6,903	2,726,608
	Western	118,020	124,190	4,611	7,240,729	3,370	4,184,142
	Total	**1,237,984**	**1,253,062**	**62,656**	**123,627,663**	**38,109**	**59,198,502**

Donkeys	Central	84	84	-	-	-	-
	Copperbelt	240	274	-	-	-	-
	Eastern	198	198	-	-	-	-
	Southern	3,785	3,976	-	-	-	-
	Western	4,902	4,959	80	119,564	80	39,855
	Total	9,209	9,492	80	119,564	80	39,855

5.5 Weeding

Table 5.4 presents a distribution of crops by type of weeding and number of households during the 2021/2022 agricultural season. A total of 1,638,602 households reported to have weeded their maize field, out of which 1,474,132 weeded manually, 88,211 weeded chemically and 76,260 weeded mechanically. For groundnuts, 756,468 households weeded their fields manually, 13,246 households weeded mechanically and 10,849 households weeded chemically. Generally, regardless of the type of crop, most households weeded their fields manually.

Table 5.4: Distribution of Households by Type of Weeding, 2021/2022 Agricultural Season

Crop	Number of Households			
	Manual weeding	Mechanical weeding	Chemical weeding	Total
Maize	1,474,132	76,260	88,211	1,638,602
Groundnuts	756,468	13,246	10,849	780,564
Soya beans	301,612	25,199	43,536	370,347
Sunflower	277,241	36,109	8,810	322,161
Mixed beans	163,362	1,223	2,036	166,622
Sweet potatoes	100,219	1,313	96	101,628
Cowpeas	83,403	3,689	985	88,077
Millet	64,219	212	135	64,566
Sorghum	58,384	790	-	59,174
Bambara nuts	54,758	278	-	55,036
Rice	37,478	20	276	37,774
Seed cotton	31,777	2,189	1,644	35,609
Popcorn	15,276	546	1,615	17,437
Virginia Tobacco	8,343	330	295	8,967
Burley tobacco	6,187	81	47	6,316
Irish potato	4,458	32	210	4,701
Velvet beans	2,065	224	62	2,350
Pineapples	1,882	-	-	1,882
Sugarcane (plantation)	965	-	-	965
Cashew nut	946	-	-	946
Paprika	118	-	-	118

5.6 Application of animal manure, plant compost and agricultural lime

Table 5.5 shows the distribution of small and medium farming households by type of field management practices and by type of crop grown in the 2021/2022 agricultural season. In general, the use of animal manure, plant compost and agricultural lime was very low. The least of all was agricultural lime which was applied to the maize, soya beans, groundnuts, mixed beans, tobacco and Bambara nuts fields only. Most households applied animal manure (95,104), plant compost (69,870) and agricultural lime (1,261) in the maize field.

For soya beans fields, 10,114 households reported to have applied plant composite/residue, 8,908 households applied animal manure and 209 households applied agricultural lime. Further, 23,620 households applied plant compost/ residue to their groundnut fields followed by 8,706 households that applied animal manure and 104 households that applied agricultural lime.

Table 5.5: Distribution of Households by type of Field Management Practices, 2021/2022 Agricultural Season

Crop	Animal Manure	Plant Compost	Agricultural Lime
	Households	Households	Households
Maize	95,104	69,870	1,261
Soya beans	8,908	10,114	209
Groundnuts	8,706	23,620	104
Sunflower	6,903	9,436	-
Mixed beans	3,774	7,068	84
Cowpeas	3,246	4,935	-
Sweet potatoes	2,661	11,410	-
Millet	1,835	6,764	-
Virginia Tobacco	1,390	78	261
Bambara nuts	1,098	1,390	48
Cashew nut	1,054	205	-
Sorghum	914	2,890	-
Seed cotton	784	1,642	-
Rice	759	2,011	-
Popcorn	232	899	-
Irish potato	194	299	-
Sugarcane (plantation)	79	-	-
Velvet beans	54	538	-
Burley tobacco	49	272	46
Pineapples	-	63	-

CHAPTER 6:
CROP PRODUCTION

CHAPTER 6: CROP PRODUCTION

6.0 CROP PRODUCTION

6.1 Introduction

This chapter presents information on actual production data for the various crops grown during the 2021/2022 agricultural season. Information on area planted, area harvested, yields, fertilizer use and production is provided by type of crop. The area harvested was less than area planted and the crop yields was lower than the potential yields mainly due to delayed rainfall, floods, dry spells and pest infestations (refer to CFS Report, 2022, page 58-64).

6.2 Maize

6.2.1 Households and Farms Growing Maize

Table 6.1 shows that a total of 1,619,694 small and medium scale households and 936 large-scale farms grew maize in the 2021/2022 agricultural season. Eastern, Southern and Central provinces reported the highest number of households that grew maize accounting for 19 percent, 16 percent and 13 percent respectively. The rest of the provinces reported 10 percent or less with Lusaka province reporting the lowest with four percent of the total number of the households that grew maize. Central and Copperbelt provinces had the highest number of large-scale farms that grew maize accounting for 41.9 percent and 17.7 percent respectively. North-Western province had the lowest proportion of large-scale farms that grew maize at 1.3 percent.

Table 6.1: Distribution of Households and Large-scale Farms that grew Maize grain by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of farms	Percentage share
Central	202,835	13	392	41.9
Copperbelt	76,332	5	166	17.7
Eastern	311,933	19	53	5.7
Luapula	131,967	8	74	7.9
Lusaka	59,395	4	26	2.8
Muchinga	135,246	8	19	2.0
Northern	168,331	10	15	1.6
North-Western	116,809	7	12	1.3
Southern	256,013	16	139	14.9
Western	160,832	10	40	4.3
Total	**1,619,694**	**100**	**936**	**100**

6.2.2 Area Planted to Maize, Area Harvested and Fertilizer Application

Table 6.2 shows the distribution of area planted to maize, area harvested and quantity of fertilizer applied by province.

The total area planted to maize in the 2021/2022 agricultural season was 1,564,349 Ha out of which 1,367,563 Ha was harvested. Southern, Eastern and Central provinces had the highest contributions to the total area planted to maize of 26 percent, 17.9 percent and 15.2 percent respectively. The contribution of each of the remaining provinces was less than nine percent with Luapula province recording the lowest area planted to maize at four percent.

At country level, 147,148 metric tonnes (Mt) of top-dressing fertilizer and 148,942 Mt of basal dressing fertilizer were applied to the maize fields. Southern province accounted for the largest proportion of the fertilizer used in maize fields at 17.9 percent of basal and 18.2 percent of top dressing followed by Central province at 17.5 percent of basal and 18 percent of top dressing. Western province recorded the lowest proportion of both basal and top-dressing fertilizers used in the maize fields at 1.8 percent and 1.7 percent respectively.

Table 6.2: Provincial Distribution of area planted to Maize, Area Harvested and quantity of Fertilizer applied, 2021/2022 Agricultural Season

Province	Area Planted		Hectares Harvested		Basal Fertilizer Applied		Top dressing Fertilizer Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	237,552	15.2	216,652	15.8	26,061	17.5	26,542	18.0
Copperbelt	79,982	5.1	76,427	5.6	9,905	6.7	10,258	7.0
Eastern	280,178	17.9	266,267	19.5	25,192	16.9	23,897	16.2
Luapula	62,708	4.0	59,394	4.3	10,211	6.9	10,106	6.9
Lusaka	65,973	4.2	60,394	4.4	7,857	5.3	7,904	5.4
Muchinga	83,417	5.3	77,621	5.7	11,475	7.7	10,968	7.5
Northern	135,378	8.7	128,124	9.4	18,627	12.5	18,197	12.4
North-Western	90,395	5.8	83,846	6.1	10,282	6.9	10,068	6.8
Southern	406,376	26.0	292,905	21.4	26,645	17.9	26,731	18.2
Western	122,389	7.8	105,933	7.7	2,686	1.8	2,479	1.7
Total	**1,564,349**	**100**	**1,367,563**	**100**	**148,942**	**100**	**147,148**	**100**

6.2.3 Maize Production, Yield and Sales

Table 6.3 shows the distribution of the actual production, yields and sales of maize in the 2021/2022 agricultural season.

A total of 2,648,203 Mt of maize was produced, out of which 1,058,254 Mt was sold for cash and/or bartered for goods and/or labour by the time of the survey. Eastern province had the largest share of the total maize produced at 18.3 percent followed by Central province at 17.8 percent and Southern province at 16.2 percent. The lowest production was recorded in Western province with 3.7 percent. The national average yield for maize was 1.7 metric tonnes per hectare (Mt/Ha). The highest yields were recorded in Luapula and North-Western provinces with 2.5 Mt/Ha and 2.43 Mt/Ha respectively. The lowest yields were reported in Western province with 0.81 Mt/Ha and Southern province with 1.06 Mt/Ha.

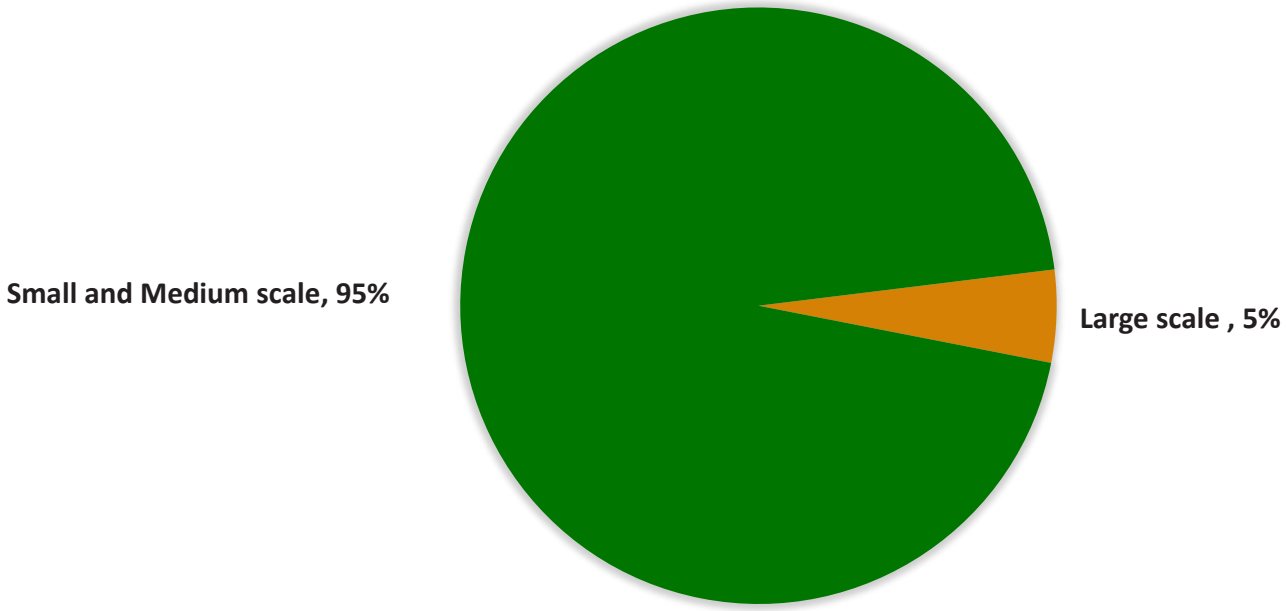
Table 6.3: Area planted to Maize, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	237,552	472,894	17.8	1.99	227,788	19.0
Copperbelt	79,982	188,513	7.1	2.36	98,429	8.6
Eastern	280,178	484,667	18.3	1.73	138,199	12.7
Luapula	62,708	156,565	5.9	2.50	79,807	7.6
Lusaka	65,973	138,509	5.2	2.10	63,822	6.2
Muchinga	83,417	178,997	6.7	2.15	60,067	5.7
Northern	135,378	284,986	10.7	2.11	126,333	12.8
North Western	90,395	220,036	8.3	2.43	116,687	10.2
Southern	406,376	429,933	16.2	1.06	129,220	15.7
Western	122,389	98,705	3.7	0.81	17,902	1.7
Total	**1,564,349**	**2,653,805**	**100**	**1.70**	**1,058,254**	**100.0**

6.2.4 Maize Production by Category of farmers

Figure 6.1 shows the distribution of maize production by small and medium scale households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 95 percent and large-scale farms accounted for five percent of the total maize output.

Figure 6.1: Distribution of maize production by Category, 2021/2022 agricultural season



6.3 Sorghum

6.3.1 Households and Farms Growing Sorghum

Table 6.4 shows a total of 66,990 small and medium scale households and 21 large-scale farms that grew sorghum in the 2021/2022 agricultural season. Southern and Western provinces reported the highest number of households that grew sorghum accounting for 79.8 percent. Each of the remaining provinces reported less than 10 percent of the total households that grew sorghum. Central province had the highest number of large-scale farms that grew sorghum accounting for 52.9 percent. Copperbelt province had the lowest proportion of large-scale farms that grew sorghum at 4.8 percent.

Table 6.4: Distribution of Households and Large-scale Farms that grew Sorghum by Province, 2021/2022 Agricultural Season

Province	Small and Medium Scale Households		Large scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage Share
Central	3,080	4.4	11	52.4
Copperbelt	675	1.0	1	4.8
Eastern	487	0.7	2	9.5
Luapula	904	1.3	3	14.3
Lusaka	1,088	1.6	-	-
Muchinga	4,865	7.0	-	-
Northern	1,724	2.5	-	-
North Western	1,315	1.9	-	-
Southern	32,261	46.1	-	-
Western	23,590	33.7	4	19
Total	**69,990**	**100**	**21**	**100.0**

6.3.2 Area Planted to Sorghum, Area Harvested and Fertiliser Application

Table 6.5 depicts the distribution of area planted to sorghum, area harvested and quantity of fertilizer applied by province. In the 2021/2022 agricultural season, the total area planted to sorghum was estimated at 44,460 Ha out of which 35,925 Ha were harvested. Southern and Western provinces accounted for more than 90 percent of the area planted to sorghum. Eastern province had the lowest contribution of 0.3 percent to the total area planted to sorghum.

The results of the survey show that 82 Mt of basal and 74 Mt of top-dressing fertilizers were applied to the sorghum fields. Lusaka province used more basal fertilizer (31 percent) and Copperbelt province used more top-dressing fertilizer (36 percent). The quantities of the fertilizers used in the sorghum fields by Eastern, North-Western and Western provinces were insignificant.

Table 6.5: Provincial Distribution of Area planted to Sorghum, Area harvested and Quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Hectares Harvested		Basal Fertilizer Applied		Top dressing Fertilizer Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	984	2.2	901	2.51	1	1.22	1	1.35
Copperbelt	274	0.6	274	0.76	2	2.44	27	36.49
Eastern	143	0.3	141	0.39	-	-	-	-
Luapula	186	0.4	149	0.41	11	13.41	4	5.41
Lusaka	285	0.6	221	0.62	26	31.71	11	14.86
Muchinga	1,340	3.0	1,305	3.63	11	13.41	15	20.27
Northern	752	1.7	745	2.07	6	7.32	-	-
North-Western	372	0.8	372	1.04	-	-	-	-
Southern	26,869	60.4	21,772	60.60	25	30.49	17	22.97
Western	13,255	29.8	10,045	27.96	-	-	-	-
Total	**44,460**	**100**	**35,925**	**100**	**82**	**100**	**74**	**100**

6.3.3 Sorghum Production, Yield and Sales

Table 6.6 shows the distribution of the area planted, production, yield and sales for sorghum in the 2021/2022 agricultural season. The results of the survey show that 14,184 Mt of sorghum was produced by the country. The highest production was recorded in Southern province with 54.5 percent and Western province with 22.5 percent of the total output. Eastern province had the lowest production accounting for 0.7 percent of the sorghum produced by the country.

The national average yield for sorghum was 0.32 Mt/Ha. The highest yield was reported on the Copperbelt province with 1.4 Mt/Ha and North-Western with 1.12 Mt/Ha. The lowest yields were recorded in Southern province with 0.29 Mt/Ha and Western province with 0.24 Mt/Ha.

In terms of sales, 1,874 Mt out of 14,184 Mt of sorghum produced was sold for cash and/or bartered for goods and/or labour. Southern and Western provinces accounted for 77.3 percent of the total sorghum sales.

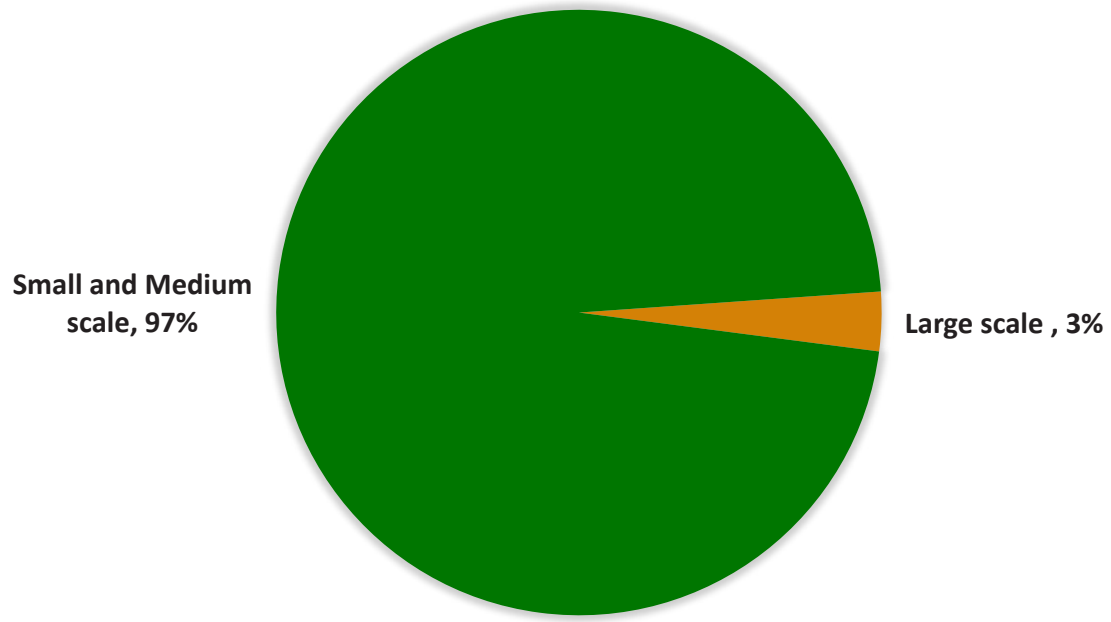
Table 6.6: Area planted to Sorghum, Production, and Yield by Province, 2021/2022 Agricultural Season

Province	Area Planted		Production		Yield	Sales	
	Hectares	Percent	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	984	2.2	506	3.6	0.51	51	2.7
Copperbelt	274	0.6	384	2.7	1.40	37	2.0
Eastern	143	0.3	104	0.7	0.73	6	0.3
Luapula	186	0.4	126	0.9	0.68	7	0.4
Lusaka	285	0.6	189	1.3	0.66	59	3.2
Muchinga	1,340	3.0	1,168	8.2	0.87	49	2.6
Northern	752	1.7	365	2.6	0.49	39	2.1
North-Western	372	0.8	415	2.9	1.12	179	9.6
Southern	26,869	60.4	7,736	54.5	0.29	1,100	58.7
Western	13,255	29.8	3,191	22.5	0.24	349	18.6
Total	**44,460**	**100.0**	**14,184**	**100.0**	**0.32**	**1,874**	**100.0**

6.3.4 Sorghum Production by Category of farmers

Figure 6.2 shows the distribution of sorghum production by small and medium scale households, and large-scale farms in the 2021/2022 agricultural season. The contributions of the small and medium scale-farming households to the total sorghum production were 97 percent and that of large-scale farms was three percent.

Figure 6.2: Distribution of sorghum production by Category, 2021/2022 agricultural season



6.4 Rice

6.4.1 Households and Farms Growing Rice

Table 6.7 shows that 98,313 small and medium scale households and 32 large-scale farms grew rice in the 2021/2022 agricultural season. Western, Muchinga and Northern provinces reported the highest number of households that grew rice accounting for 35.6 percent, 20.6 percent and 17.3 percent of the total respectively. Eastern province accounted for 11.9 percent and the remaining provinces reported 10 percent or less of the total number of the households that grew rice. Central province had the highest number of large-scale farms that grew rice accounting for 96.9 percent.

Table 6.7: Provincial Distribution of Households and Large-Scale Farms that Grew Rice, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of households	Percentage share	Number of farms	Percentage share
Central	146	0.1	31	96.9
Copperbelt	79	0.1	1	3.1
Eastern	11,693	11.9	-	-
Luapula	9,491	9.7	-	-
Muchinga	20,300	20.6	-	-
Northern	16,959	17.3	-	-
North Western	4,614	4.7	-	-
Western	35,032	35.6	-	-
Total	**98,313**	**100.0**	**32**	**100**

6.4.2 Area Planted to rice, Area Harvested and Fertilizer Application

Table 6.8 depicts the distribution of area planted to rice, area harvested and quantity of fertilizer applied by province in the 2021/2022 agricultural season. A total of 67,601 hectares was planted to rice out of which 59,601 hectares were harvested. The largest area under rice production was recorded in Western province, which accounted for 43.7 percent of the total area planted to rice. Northern and Muchinga provinces contributed 27.9 percent and 14.5 percent to the total area planted to rice respectively.

With regard to fertiliser application, 781 Mt of basal and 423 Mt of top-dressing fertilizers were applied to the rice fields. Northern and Central provinces accounted for 75.3 percent of the basal fertilizer used in rice fields countrywide. The largest quantity of top-dressing fertiliser applied to rice fields was recorded in central province at 60.5 percent. The quantities of the fertilisers used in the rice fields by Copperbelt province were insignificant.

Table 6.8: Provincial Distribution of Area Planted to Rice, Area Harvested and Quantity of Fertilizer Applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	1,528	2.3	1,528	2.6	290	37.1	256	60.5
Copperbelt	6	-	2	-	-	-	-	-
Eastern	3,378	5.0	3,236	5.4	2	0.3	2	0.5
Luapula	2,588	3.8	2,530	4.2	52	6.7	20	4.7
Muchinga	9,820	14.5	8,404	14.1	70	9.0	54	12.8
Northern	18,849	27.9	16,024	26.9	297	38.0	31	7.3
North Western	1,909	2.8	1,889	3.2	61	7.8	52	12.3
Western	29,522	43.7	25,989	43.6	8	1.0	8	1.9
Total	**67,601**	**100.0**	**59,601**	**100.0**	**781**	**100.0**	**423**	**100.0**

6.4.3 Rice Production, Yield and Sales

The distribution of the area planted, production, yields and sales for rice is shown in table 6.9. The country produced 62,918 Mt of rice in the 2021/2022 agricultural season. The highest production was in Western province with 47.8 percent of the total output. Muchinga and Northern provinces contributed 15.5 percent and 11.7 percent respectively, to the total rice output. The national average yield for rice was 0.93 Mt/Ha. The highest yield was in Copperbelt province with 2.17 Mt/Ha followed by Luapula province with 1.95 Mt/Ha. The lowest yield of 0.39 Mt/Ha was recorded in Northern province.

A total of 27,532 Mt of rice produced during the 2021/2022 agricultural season had been sold for

cash and/or bartered for goods and/or labour by the date of the survey. Western province had the largest proportion of the rice sales at 50.4 percent followed by Northern and Muchinga provinces at 14.9 percent and 13.3 percent respectively.

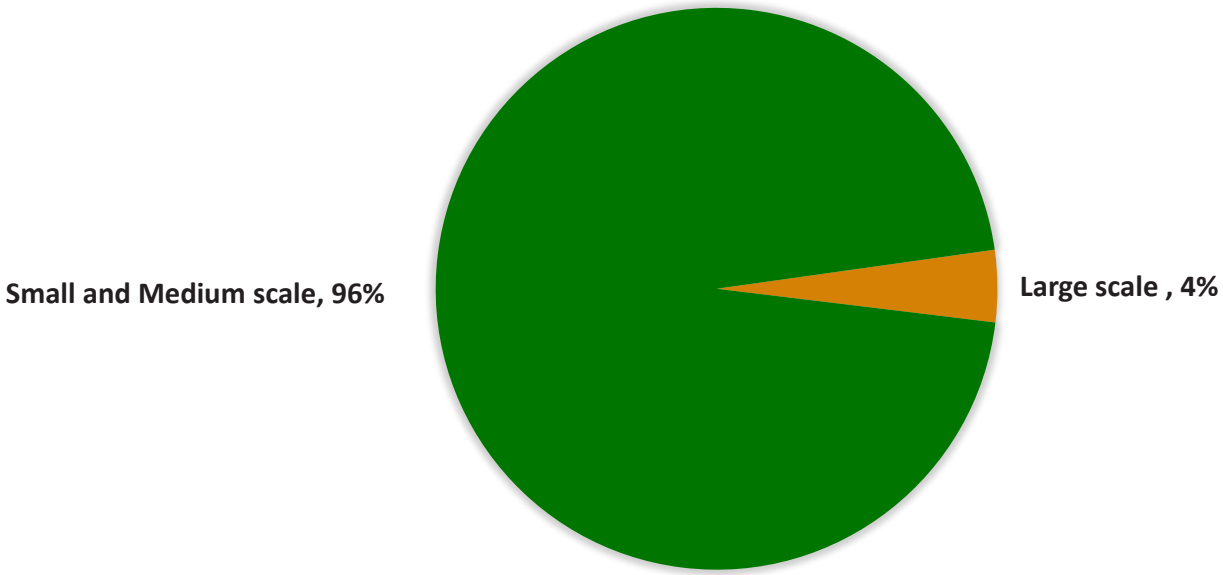
Table 6.9: Area Planted to Rice, Production, and Yield by Province, 2021/2022 Agricultural Season

Province	Area Planted		Production		Yield	Sales	
	Hectares	Percent	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	1,528	2.3	2,729	4.3	1.79	2,210	6.5
Copperbelt	6	-	13	-	2.17	0	0.0
Eastern	3,378	5.0	4,617	7.3	1.37	1,279	3.9
Luapula	2,588	3.8	5,049	8.0	1.95	2,705	8.2
Muchinga	9,820	14.5	9,737	15.5	0.99	4,509	13.3
Northern	18,849	27.9	7,337	11.7	0.39	3,523	14.9
North Western	1,909	2.8	3,369	5.4	1.76	806	2.8
Western	29,522	43.7	30,066	47.8	1.02	12,501	50.4
Total	**67,601**	**100.0**	**62,918**	**100.0**	**0.93**	**27,532**	**100.0**

6.4.4 Rice production by Category of Farmers

Figure 6.3 shows the distribution of rice production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 96 percent to the total rice output and large-scale farms contributed four percent. The large-scale farms that were in Chitambo area were recorded under Serenje district where rice was grown in clusters.

Figure 6.3: Distribution of Rice Production by Category, 2021/2022 Agricultural Season



6.5 Millet

6.5.1 Households and Farms Growing Millet

Table 6.10 shows that 149,547 small and medium scale households and three large-scale farms grew millet in the 2021/2022 agricultural season. Northern, Western and Muchinga provinces reported the highest number of households that grew millet accounting for 37.6 percent, 27.8 percent and 20.7 percent respectively. The rest of the provinces reported 4.9 or less with Lusaka province accounting for 0.2 percent of the total number of the households that grew millet.

Table 6.10: Distribution of Households that grew Millet by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	5,711	3.8	2	66.7
Copperbelt	358	0.2	-	-
Eastern	2,533	1.7	-	-
Luapula	3,338	2.2	-	-
Lusaka	350	0.2	1	33.3
Muchinga	31,014	20.7	-	-
Northern	56,238	37.6	-	-
North Western	1,131	0.8	-	-
Southern	7,330	4.9	-	-
Western	41,546	27.8	-	-
Total	**149,547**	**100.0**	**3**	**100.0**

6.5.2 Area Planted to Millet, Area Harvested and Fertiliser Application

Table 6.11 depicts the distribution of area planted to millet, area harvested and quantity of fertilizer applied by province in the 2021/2022 agricultural season.

The total area planted to millet was 57,663 hectares out of which 52,552 hectares were harvested. Western province had the highest proportion of the area planted to millet at 38.8 percent followed by Northern and Muchinga provinces at 30.5 percent and 15.9 percent respectively. Copperbelt and Lusaka provinces had the smallest area planted to millet accounting for individual contribution of 0.1 percent.

A total of 126 metric tonnes of basal and 123 metric tonnes of top-dressing fertilizers were applied to the millet fields countrywide. Eastern province accounted for the highest proportion of the fertiliser used in millet fields at 52.4 percent of basal and 53.7 percent of top dressing. The quantities of the fertilisers applied in the millet fields by Copperbelt. Luapula, Lusaka, North-Western, Southern and Western provinces were insignificant.

Table 6.11: Provincial Distribution of Area Planted to Millet, area Harvested and Quantity of Fertilizer applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	2,357	4.1	2,357	4.5	21	16.7	21	17.1
Copperbelt	51	0.1	51	0.1	.	-	.	-
Eastern	900	1.6	900	1.7	66	52.4	66	53.7
Luapula	702	1.2	677	1.3	.	-	.	-
Lusaka	42	0.1	42	0.1	0	-	0	-
Muchinga	9,150	15.9	9,059	17.2	15	11.9	19	15.4
Northern	17,575	30.5	17,529	33.4	25	19.8	14	11.4
North Western	282	0.5	282	0.5	.	-	.	-
Southern	4,173	7.3	3,024	5.8	.	-	.	-
Western	22,324	38.8	18,631	35.5	.	-	3	2.4
Total	**57,556**	**100.0**	**52,552**	**100.0**	**126**	**100**	**123**	**100**

6.5.3 Millet Production, Yield and Sales

Table 6.12 shows the distribution of the area planted, production, yield and sales for millet produced in the 2021/2022 agricultural season. A total of 31,962 Mt of millet were produced out of which 6,353 Mt had been sold for cash and/or bartered for goods and/or labour by the time of the survey.

The highest production of millet was in Northern province with 43.1 percent and Muchinga province with 24.3 percent of the total output. Copperbelt and Lusaka provinces each accounted for 0.1 percent of the millet produced by the country.

The national average yield for millet was 0.56 Mt/Ha. North-Western province had the highest yield of 1.28 Mt/Ha, followed by Luapula province with 1.02 Mt/Ha. The lowest yield of millet was recorded in Western Province with 0.26 Mt/Ha.

Northern province sold the largest quantity of millet at 69.7 percent, followed by Muchinga province at 17.8 percent of the total sales. The quantities of millet sales in Copperbelt and Lusaka provinces were insignificant.

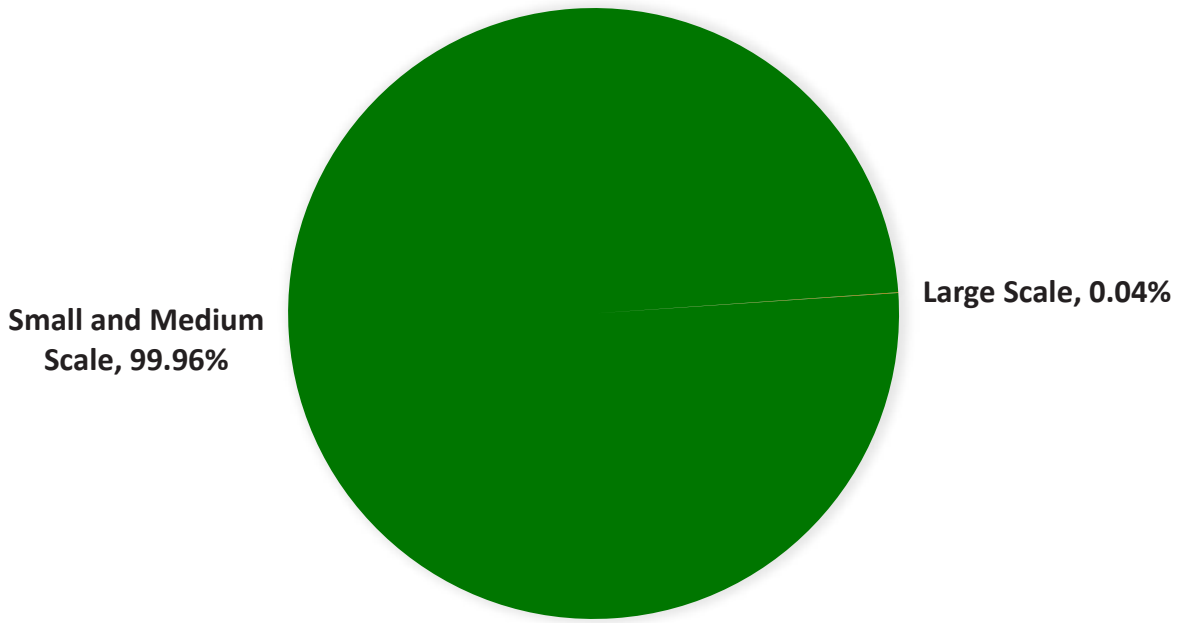
Table 6.12: Area Planted to Millet, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	2,357	1,068	3.3	0.45	133	2.1
Copperbelt	51	27	0.1	0.53	-	-
Eastern	900	599	1.9	0.67	105	1.7
Luapula	702	717	2.2	1.02	201	3.2
Lusaka	42	24	0.1	0.57	-	-
Muchinga	9,150	7,756	24.3	0.85	1,129	17.8
Northern	17,575	13,773	43.1	0.78	4,426	69.7
North Western	282	360	1.1	1.28	54	0.9
Southern	4,173	1,832	5.7	0.44	107	1.7
Western	22,324	5,806	18.2	0.26	198	3.1
Total	**57,556**	**31,962**	**100.0**	**0.56**	**6,353**	**100**

6.5.4 Millet production by Category of farmers

Figure 6.4 shows the distribution of millet production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 99.96 percent to the total millet output and large-scale farms contributed 0.04 percent.

Figure 6.4: Distribution of Millet Production by Category of Farmers, 2021/2022 Agricultural Season.



6.6 Sunflower

6.6.1 Households and Farms Growing Sunflower

Table 6.13 shows that 384,443 small and medium scale households and 195 large-scale farms grew sunflower in the 2021/2022 agricultural season. Eastern, Southern and Central provinces accounted for 53.5 percent, 28 percent and 10.7 percent, respectively, of the households that grew sunflower. Central and Southern provinces had the highest number of large-scale farms that grew sunflower accounting for 38.5 percent and 28.2 percent.

Table 6.13: Distribution of Households growing Sunflower by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	41,010	10.7	75	38.5
Copperbelt	3,120	0.8	19	9.7
Eastern	205,625	53.5	18	9.2
Luapula	804	0.2	3	1.5
Lusaka	4,624	1.2	2	1.0
Muchinga	8,949	2.3	12	6.2
Northern	12,076	3.1	2	1.0
North Western	169	0.0	3	1.5
Southern	107,691	28.0	55	28.2
Western	374	0.1	6	3.1
Total	**384,443**	**100**	**195**	**100**

6.6.2 Area Planted to sunflower, Area Harvested and Fertiliser Application

Table 6.14 shows the distribution of area planted to sunflower, area harvested and quantity of fertilizer applied by province in the 2021/2022 agricultural season. A total of 273,776 hectares was planted to sunflower out of which 238,315 Hectares were harvested. The largest area under sunflower production was recorded in Southern province that accounted for 49.4 percent of the total area planted to sunflower. Eastern and Central provinces contributed 35.6 percent and 10 percent respectively. The smallest area planted to sunflower was recorded in North-Western province whose contribution to the total area was insignificant.

The results of the survey show that 212 Mt of basal and 147 Mt of top-dressing fertilizers were applied to the sunflower fields. Southern and Lusaka provinces had largest proportions of the total basal fertilizer used in sunflower fields at 25.5 percent and 17.6 percent respectively. North-Western and Western provinces applied insignificant quantities of basal and top-dressing fertilisers.

Table 6.14: Provincial Distribution of Area planted to Sunflower, Area Harvested and Quantity of Fertilizer applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	27,480	10.0	25,728	10.8	34	16.0	23	15.6
Copperbelt	1,080	0.4	1,041	0.4	9	4.2	9	6.1
Eastern	97,419	35.6	93,044	39.0	4	1.9	27	18.4
Luapula	289	0.1	284	0.1	6	2.8	0	0.0
Lusaka	2,929	1.1	2,859	1.2	37	17.5	26	17.7
Muchinga	3,039	1.1	2,956	1.2	33	15.6	32	21.8
Northern	6,171	2.3	5,625	2.4	34	16.0	21	14.3
North-Western	39	-	39	-	-	-	-	-
Southern	135,244	49.4	106,652	44.8	54	25.5	9	6.1
Western	86	-	86	0.0	-	-	-	-
Total	**273,776**	**100**	**238,315**	**100**	**212**	**100**	**147**	**100**

6.6.3 Sunflower Production, Yield and Sales

The distribution of the area planted, production, yield and sales for sunflower is shown in table 6.15. The country produced 82,861 Mt of sunflower. The highest production was in Eastern province at 53.2 percent of the total output, followed by Southern province at 27.8 percent. The lowest production was recorded in North-Western and Western provinces with individual contribution of 0.1 percent to the total sunflower production.

The national average yield for sunflower was 0.30 Mt/Ha. North-Western province had highest yield of 1.49 Mt/Ha, followed by Lusaka province with 0.62 Mt/Ha. Southern province recorded the lowest yield of 0.17 Mt/Ha.

A total of 24,706 Mt of sunflower had been sold for cash and/or bartered for goods and/or labour by date of the survey. Eastern province had the largest proportion of the sunflower sold at 59.2 percent followed by Southern province at 24.8 percent. The quantities of sunflower sold in North-Western and Western provinces were insignificant.

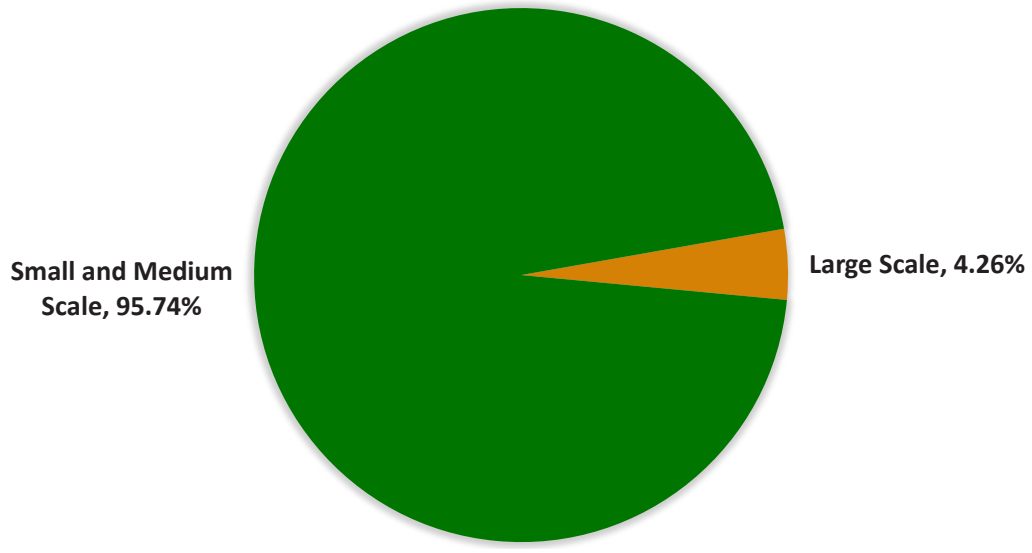
Table 6.15: Area planted to Sunflower, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	27,480	9,605	11.6	0.35	2,140	8.7
Copperbelt	1,080	491	0.6	0.45	148	0.6
Eastern	97,419	44,075	53.2	0.45	14,618	59.2
Luapula	289	103	0.1	0.36	42	0.2
Lusaka	2,929	1,813	2.2	0.62	575	2.3
Muchinga	3,039	1,835	2.2	0.60	301	1.2
Northern	6,171	1,821	2.2	0.30	748	3.0
North Western	39	58	0.1	1.49	-	-
Southern	135,244	23,010	27.8	0.17	6,133	24.8
Western	86	52	0.1	0.60	1	-
Total	**273,776**	**82,861**	**100**	**0.30**	**24,706**	**100**

6.6.4 Sunflower production by Category of farmers

Figure 6.5 depicts the distribution of sunflower production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 95.74 percent to the total sunflower output and large-scale farms contributed 4.26 percent.

Figure 6.5: Distribution of Sunflower Production by Category, 2021/2022 Agricultural Season



6.7 Groundnuts

6.7.1 Households and Farms Growing Groundnuts

Table 6.16 shows that 899,853 small and medium scale households and 350 large-scale farms grew groundnuts in the 2021/2022 agricultural season. Eastern and Southern provinces reported the highest number of households that grew groundnuts accounting for 21.7 percent and 17.4 percent respectively. Northern province accounted for 13.5 percent and Central province accounted for 10.7 percent. Lusaka province had the lowest proportional of households that grew groundnuts, at two percent. Central province had the highest number of large-scale farms that grew groundnuts, accounting for 45.1 percent. The number of large-scale farms that grew groundnuts in Lusaka province were insignificant.

Table 6.16: Distribution of Households that Grew Groundnuts by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	95,968	10.7	158	45.1
Copperbelt	39,322	4.4	65	18.6
Eastern	195,043	21.7	22	6.3
Luapula	89,079	9.9	36	10.3
Lusaka	17,735	2.0	-	-
Muchinga	77,154	8.6	6	1.7
Northern	121,584	13.5	3	0.9
North Western	55,274	6.1	5	1.4
Southern	156,574	17.4	42	12.0
Western	52,120	5.8	13	3.7
Total	**899,853**	**100.0**	**350**	**100.0**

6.7.2 Area Planted to Groundnuts, Area Harvested and Fertiliser Application

Table 6.17 shows the distribution of area planted to groundnuts, area harvested and quantity of fertilizer applied by province.

The total area planted to groundnuts in the 2021/2022 agricultural season was 348,980 Ha out of which 322,408 Ha were harvested. Eastern and Southern provinces had the largest proportion of area planted to groundnuts, accounting for 23.7 percent and 21.7 percent respectively. Lusaka province had the smallest area planted to groundnuts with two percent of the national total. At country level, 435 Mt of basal fertilizer and 249 Mt of top-dressing fertilizer were applied to the groundnut fields. Central province accounted for the highest proportion of the total basal fertiliser applied in groundnuts fields at 32.6 percent, followed by Northern province at 12.9 percent. The highest proportion of the top-dressing fertiliser applied in groundnuts fields was recorded in Northern (18.9 percent) and Lusaka (15.3 percent) provinces. The quantities of the fertilisers applied in the groundnuts fields by Western province were insignificant.

Table 6.17: Provincial Distribution of Area planted to Groundnuts, Area Harvested and Quantity of Fertilizer applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	49,503	14.2	47,660	14.8	142	32.6	28	11.2
Copperbelt	14,216	4.1	13,354	4.1	39	9.0	14	5.6
Eastern	82,678	23.7	79,454	24.6	5	1.1	23	9.2
Luapula	20,979	6.0	19,895	6.2	42	9.7	27	10.8
Lusaka	7,144	2.0	6,478	2.0	41	9.4	38	15.3
Muchinga	22,807	6.5	21,714	6.7	29	6.7	25	10.0
Northern	33,787	9.7	32,267	10.0	56	12.9	47	18.9
North Western	22,805	6.5	21,985	6.8	47	10.8	17	6.8
Southern	75,560	21.7	61,459	19.1	33	7.6	29	11.6
Western	19,501	5.6	18,142	5.6	-	-	-	-
Total	**348,980**	**100.0**	**322,408**	**100**	**435**	**100**	**249**	**100**

6.7.3 Groundnut Production, Yields and Sales

Table 6.18 shows the distribution of the area planted, production, yields and sales of groundnuts in the 2021/2022 agricultural season.

A total of 180,256 Mt of groundnuts was produced out of which 46,908 Mt had been sold for cash and/or bartered for goods and/or labour. Eastern province had the largest share of the total groundnuts produced at 21.3 percent followed by Southern province at 19.4 percent and Central province at 16.3 percent. The lowest production was recorded in Lusaka province with 1.9 percent.

The national average yield for groundnuts was 0.52 Mt per hectare. The highest yields were recorded in North-Western provinces with 0.77 Mt/Ha, followed by Muchinga province with 0.70 Mt/Ha respectively. The lowest yield was recorded in Western province with 0.41 MT/Ha.

A total of 46,908 Mt of groundnuts had been sold for cash and/or bartered for goods and/or labour by date of the survey. Eastern province had the largest proportion of the groundnuts sold at 23.4 percent followed by Central province at 19.6 percent.

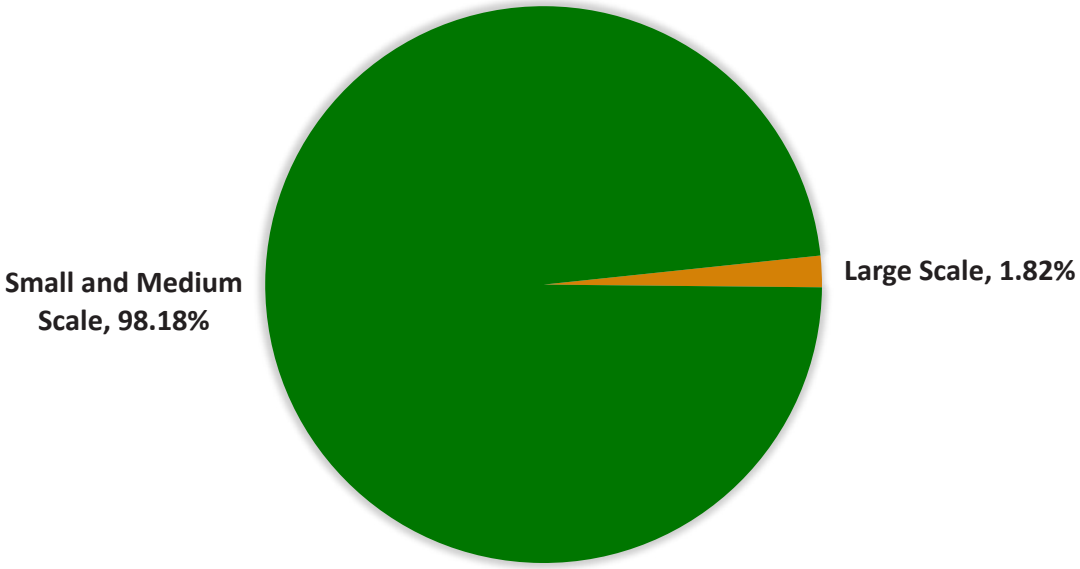
Table 6.18: Area Planted to Groundnuts, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	49,503	29,361	16.3	0.59	9,188	19.6
Copperbelt	14,216	8,287	4.6	0.58	2,878	6.1
Eastern	82,678	38,478	21.4	0.47	10,956	23.4
Luapula	20,979	9,371	5.2	0.45	2,478	5.3
Lusaka	7,144	3,469	1.9	0.49	471	1.0
Muchinga	22,807	15,863	8.8	0.7	2,710	5.8
Northern	33,787	15,050	8.4	0.45	2,341	5.0
North Western	22,805	17,470	9.7	0.77	7,554	16.1
Southern	75,560	34,979	19.4	0.46	5,712	12.2
Western	19,501	7,928	4.4	0.41	2,618	5.6
Total	**348,980**	**180,256**	**100**	**0.52**	**46,908**	**100**

6.7.4 Groundnut production by Category of farmers

Figure 6.6 illustrates the distribution of groundnut production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 98.18 percent to the total groundnuts harvest and large-scale farms accounted for 1.82 percent.

Figure 6.6: Distribution of Groundnuts Production by Category, 2021/2022 Agricultural Season



6.8 Soya Beans

6.8.1 Households and Farms Growing Soya beans

Table 6.19 shows 442,353 small and medium scale households and 600 large-scale farms that grew soya beans in the 2021/2022 agricultural season. Eastern and Central provinces reported the highest number of households that grew soya beans accounting for 68.8 percent. The remaining provinces each reported less than 10 percent of the total households that grew soya beans. Central province had the highest number of large-scale farms that grew soya beans accounting for 55 percent. Muchinga province had the lowest proportion of large-scale farms that grew soya beans at 0.8 percent.

Table 6.19: Distribution of Households Growing Soya Beans by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	106,252	24.0	330	55.0
Copperbelt	15,848	3.6	105	17.5
Eastern	198,367	44.8	29	4.8
Luapula	9,477	2.1	30	5.0
Lusaka	12,501	2.8	27	4.5
Muchinga	22,165	5.0	5	0.8
Northern	42,907	9.7	8	1.3
North Western	13,019	2.9	7	1.2
Southern	19,069	4.3	29	4.8
Western	2,747	0.6	30	5.0
Total	**442,353**	**100**	**600**	**100**

6.8.2 Area Planted to Soya beans, Area Harvested and Fertiliser Application

Table 6.20 depicts the distribution of area planted to soya beans, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 436,354 Ha was planted to soya beans out of which 415,831 Ha was harvested. The largest area under soya beans production was recorded in Central province which accounted for 37.8 percent of the total area planted. Eastern province contributed 36.7 percent to the total area planted to soya beans. Luapula province had the lowest proportion contribution of 0.7 percent to the total area planted to soya beans.

A total of 12,363 Mt of basal and 2,788 Mt of top-dressing fertilizers were applied to the soya beans fields. Central and Copperbelt provinces accounted for 79 percent of the basal fertiliser used in soya beans fields countrywide. Sixty-point three percent of the top-dressing fertilisers applied in soya beans fields was in Central province.

Table 6.20: Provincial Distribution of Area Planted to Soya Beans, Area Harvested and Quantity of Fertiliser Applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	164,833	37.8	158,554	38.1	4,280	34.6	1,681	60.3
Copperbelt	31,705	7.3	31,007	7.5	5,486	44.4	365	13.1
Eastern	160,186	36.7	153,608	36.9	216	1.7	76	2.7
Luapula	3,225	0.7	3,124	0.8	221	1.8	5	0.2
Lusaka	17,883	4.1	16,276	3.9	1,183	9.6	437	15.7
Muchinga	6,813	1.6	6,319	1.5	150	1.2	63	2.3
Northern	17,400	4.0	17,119	4.1	305	2.5	40	1.4
North Western	6,313	1.4	6,112	1.5	134	1.1	21	0.8
Southern	24,691	5.7	20,454	4.9	170	1.4	80	2.9
Western	3,305	0.8	3,258	0.8	217	1.8	19	0.7
Total	**436,354**	**100**	**415,831**	**100**	**12,363**	**100**	**2,788**	**100**

6.8.3 Soya beans Production, Yield and sales

The distribution of the area planted, production, yield and sales for soya beans is shown in Table 6.21 below. A total of 438,679 Mt of soya beans were produced in the 2021/2022 agricultural season. The highest production was in Central province with 41 percent of the total output. Eastern and Copperbelt provinces contributed 28 percent and 13.3 percent respectively, to the total soya beans harvest. The national average yield for soya beans was 1.01 Mt/Ha. The highest yield was in Copperbelt province at 1.84 Mt/Ha followed by Lusaka province with 1.38 Mt/Ha. The lowest yield was 0.72 Mt/Ha, recorded in North-Western province.

A total of 328,525 Mt of soya beans produced during the 2021/2022 agricultural season had been sold for cash and/or bartered for goods and/or labour by date of the survey. Central province had the largest proportion of the soya beans sales at 40 percent followed by Eastern and Central provinces at 28.1 percent and 15.9 percent respectively.

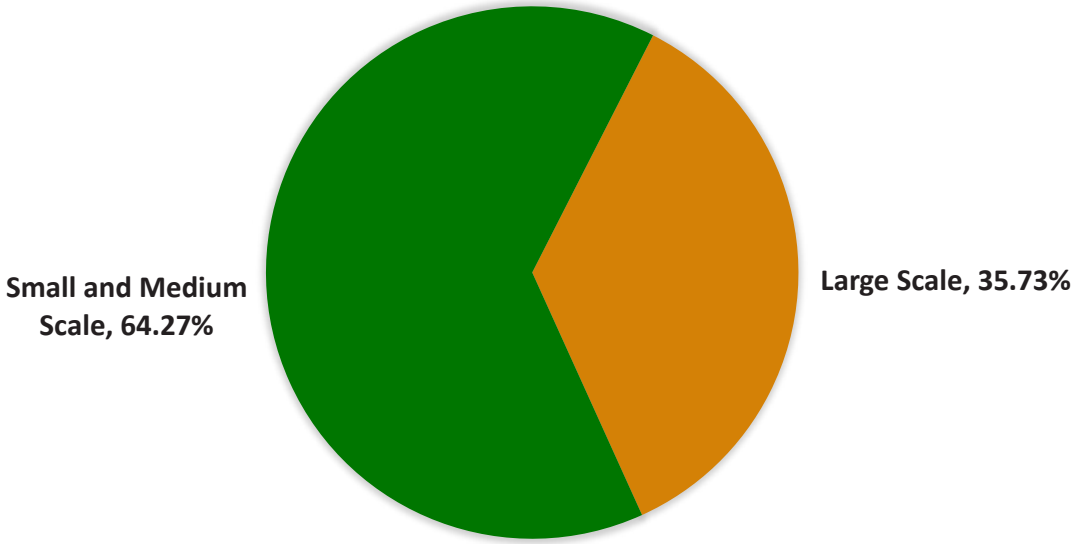
Table 6.21: Area Planted to Soya Beans, Production, yield and sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	Yield (MT/Ha)	Metric Tonnes	Percent
Central	164,756	179,906	41.0	1.09	131,396	40.0
Copperbelt	31,705	58,234	13.3	1.84	52,102	15.9
Eastern	160,186	122,606	28.0	0.77	92,203	28.1
Luapula	3,225	3,722	0.9	1.15	2,370	0.7
Lusaka	17,883	24,667	5.6	1.38	18,802	5.7
Muchinga	6,813	5,533	1.3	0.81	2,257	0.7
Northern	17,400	13,525	3.1	0.78	8,155	2.5
North Western	6,313	4,555	1.0	0.72	2,492	0.8
Southern	24,691	22,597	5.2	0.92	16,633	5.1
Western	3,305	3,332	0.8	1.01	2,113	0.6
Total	**436,277**	**438,679**	**100**	**1.01**	**328,525**	**100**

6.8.4 Soya beans production by Category of Farmers

Figure 6.7 illustrates the distribution of soya beans production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households accounted for 64.27 percent to the total soya beans harvest and large-scale farms contributed 35.73 percent.

Figure 6.7: Distribution of soya beans production by Category, 2021/2022 agricultural season



6.9 Seed Cotton

6.9.1 Households and Farms Growing Seed Cotton

Table 6.22 shows that 40,926 small and medium scale households and 14 large-scale farms grew seed cotton in the 2021/2022 agricultural season. Central, Eastern and Southern provinces had the highest number of households that grew seed cotton accounting for 26.9 percent, 26.2 percent and 23.7 percent respectively. Muchinga province accounted for 21 percent of the households that grew seed cotton. The rest of the provinces reported 1.9 percent or less of the total number of the households that grew seed cotton.

Table 6.22: Distribution of Households that Grew Seed Cotton by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	11,016	26.9	14	100
Copperbelt	128	0.3	-	-
Eastern	10,707	26.2	-	-
Lusaka	761	1.9	-	-
Muchinga	8,608	21.0	-	-
Southern	9,707	23.7	-	-
Total	**40,926**	**100**	**14**	**100**

6.9.2 Area Planted to Seed Cotton, Area Harvested and Fertiliser Application

Table 6.23 depicts the distribution of area planted to seed cotton, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season.

The total area planted to seed cotton was 37,229 Ha out of which 33,384 Ha were harvested. Southern province had the highest proportion of the area planted to seed cotton at 37.4 percent followed by Central and Eastern provinces at 26 percent and 21.5 percent respectively. Copperbelt province had the smallest area planted to seed cotton, accounting for 0.5 percent.

A total of 50 Mt of basal and 89 Mt of top-dressing fertilisers were applied to the seed cotton fields countrywide. Southern province accounted for the highest proportion of the fertiliser used in seed cotton fields at 66 percent of basal and 100 percent of top dressing. The quantities of the top-dressing fertiliser applied in the seed cotton fields by Central, Copperbelt, Lusaka, Eastern and Muchinga provinces were insignificant.

Table 6.23: Provincial Distribution of Area Planted to Seed Cotton, area Harvested and Quantity of Fertiliser Applied, 2021/2022 agricultural season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	9,690	26.0	8,231	24.7	12	24.0	-	-
Copperbelt	173	0.5	173	0.5	0	0.0	.	-
Eastern	8,014	21.5	7,600	22.8	1	2.0	-	-
Lusaka	578	1.6	527	1.6	5	10.0	-	-
Muchinga	4,859	13.1	4,643	13.9	0	0.0	-	-
Southern	13,916	37.4	12,210	36.6	33	66.0	89	100
Total	**37,229**	**100.0**	**33,384**	**100.0**	**50**	**100**	**89**	**100**

6.9.3 Seed Cotton Production, Yield and Sales

Table 6.24 shows the distribution of the area planted, production, yield and sales for seed cotton in the 2021/2022 agricultural season. A total of 19,375 Mt was produced out of which 14,643 Mt had been sold for cash and/or bartered for goods and/or labour by the time of the survey.

The highest production of seed cotton was in Southern province with 26.5 percent and Eastern province with 26 percent of the total output. Copperbelt province recorded the lowest production of seed cotton accounting for 0.6 percent of the total produce.

Muchinga province sold the largest quantity of seed cotton at 26.9 percent, followed by Southern province at 26.6 percent of the total sales. Copperbelt province accounted for 0.8 percent of the total quantities of seed cotton sold.

The national average yield for seed cotton was 0.52 Mt/Ha. Muchinga province had the highest yield of 0.95 Mt/Ha, followed by Copperbelt province with 0.71 Mt/Ha. The lowest yield of seed cotton was recorded in Southern Province with 0.37 Mt/Ha.

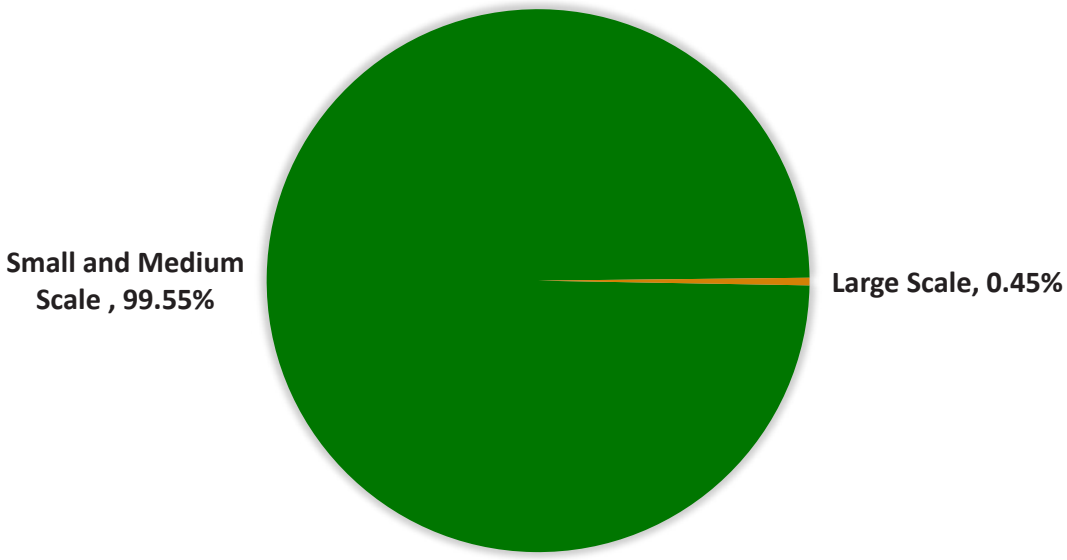
Table 6.24: Area planted to Seed Cotton, Production, Yield and sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	MT/Ha)	Metric Tonnes	Percent
Central	9,690	4,226	21.8	0.44	2,975	20.3
Copperbelt	173	123	0.6	0.71	117	0.8
Eastern	8,014	5,040	26.0	0.63	3,497	23.9
Lusaka	578	238	1.2	0.41	218	1.5
Muchinga	4,859	4,606	23.8	0.95	3,936	26.9
Southern	13,916	5,143	26.5	0.37	3,899	26.6
Total	**37,229**	**19,375**	**100.0**	**0.52**	**14,643**	**100**

6.9.4 Seed Cotton production by Category of farmers

Figure 6.8 shows the distribution of seed cotton production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households contributed 99.55 percent to the total seed cotton output and large-scale farms accounted for 0.45 percent

Figure 6.8: Distribution of Seed Cotton Production by Category, 2021/2022 Agricultural Season



6.10 Irish Potatoes

6.10.1 Households and Farms growing Irish potatoes

Table 6.25 shows those 10,319 small and medium scale households and 21 large-scale farms that grew Irish potatoes in the 2021/2022 agricultural season. Eastern and North-Western provinces reported the highest number of households that grew Irish potatoes accounting for 56.5 percent. Southern province accounted for 20.6 percent and the remaining provinces reported 10 percent or less of the total number of the households that grew Irish potatoes. The numbers of households that grew Irish potatoes in Luapula and Lusaka provinces were insignificant.

Central province had the highest number of large-scale farms that grew Irish potatoes accounting for 47.6 percent. The numbers of large-scale farms that grew Irish potatoes in Copperbelt, Eastern and Western provinces were insignificant.

Table 6.25: Distribution of Households and Farms that grew Irish Potatoes by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	164	1.6	10	47.6
Copperbelt	1,029	10.0	-	-
Eastern	3,316	32.1	-	-
Luapula	-	0.0	2	9.5
Lusaka	-	0.0	4	19.1
Muchinga	702	6.8	2	9.5
Northern	435	4.2	1	4.8
North Western	2,520	24.4	-	0.0
Southern	2,121	20.6	2	9.5
Western	32	0.3	-	-
Total	**10,319**	**100**	**21**	**100**

6.10.2 Area Planted to Irish Potatoes, Area Harvested and Fertiliser Application

Table 6.26 depicts the distribution of area planted to Irish Potatoes, area harvested and quantity of fertilizer applied by province in the 2021/2022 agricultural season. A total of 4,018 Ha was planted to Irish potatoes out of which 3,408 Ha were harvested. The largest area under Irish potatoes production was recorded in Southern province, which accounted for 36.1 percent of the total area planted. North-Western and Eastern provinces contributed 14.1 percent and 13.7 percent to the total area planted to Irish potatoes respectively.

With regard to fertiliser application, 458 Mt of basal and 334 Mt of top-dressing fertilisers were applied to Irish potato fields. Lusaka and Southern provinces accounted for 55 percent of the basal fertiliser and 68.2 percent of top-dressing fertiliser used in the fields for Irish potatoes countrywide. The quantities of the basal fertiliser used in Irish potato fields by Luapula and Muchinga provinces were insignificant. The quantities of top-dressing fertiliser used in the fields for Irish potatoes by Copperbelt, Luapula, Muchinga, Northern and North Western provinces were insignificant.

Table 6.26: Provincial Distribution of Area Planted to Irish Potatoes, Area Harvested and Quantity of Fertiliser Applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares Harvested	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	491	12.2	491	14.4	105	22.9	77	23.1
Copperbelt	166	4.1	140	4.1	5	1.1	-	-
Eastern	550	13.7	367	10.8	83	18.1	28	8.4
Luapula	4	0.1	4	0.1	-	-	-	-
Lusaka	384	9.6	384	11.3	120	26.2	121	36.2
Muchinga	187	4.7	187	5.5	-	-	-	-
Northern	215	5.4	91	2.7	1	0.2	-	-
North Western	568	14.1	475	13.9	11	2.4	-	-
Southern	1,449	36.1	1,266	37.1	132	28.8	107	32.0
Western	4	0.1	4	0.1	1	0.2	1	0.3
Total	**4,018**	**100**	**3,408**	**100**	**458**	**100**	**334**	**100**

6.10.3 Irish Potato Production, Yield and Sales

The distribution of the area planted, production, yields and sales for Irish potatoes is shown in Table 6.27 below. The country produced 43,939 Mt of Irish potatoes in the 2021/2022 agricultural season. The highest production was in Lusaka province with 47.8 percent of the total output. Central and Southern provinces contributed 21.6 percent and 16.5 percent to the total production respectively.
The national average yield for Irish Potatoes was 10.93 Mt/Ha. The highest yield was in Northern province with 20.53 Mt/Ha followed by Central province with 19.31 Mt/Ha. The lowest yield of 0.75 Mt/Ha was recorded in Western province.

A total of 33,845 Mt of Irish potatoes was sold for cash and/or bartered for goods and/or labour by date of the survey. Lusaka province had the largest proportion of the sales at 48.8 percent followed by Central and Southern provinces at 26.9 percent and 13.0 percent respectively. The quantities of Irish potatoes sold in Western province were insignificant.

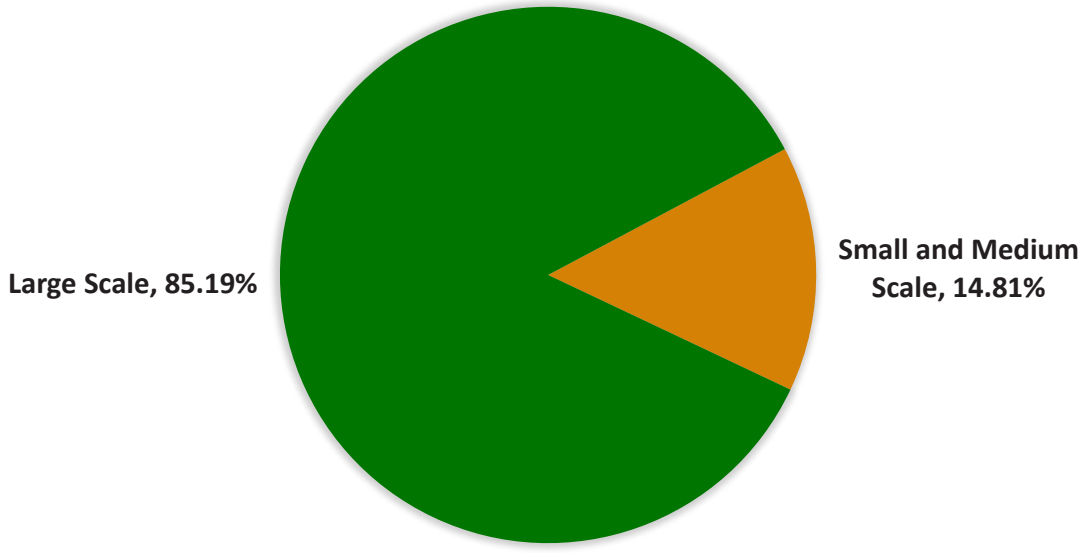
Table 6.27: Area planted to Irish Potatoes, Production, and Yield by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	491	9,480	21.6	19.31	9,112	26.9
Copperbelt	166	341	0.8	2.05	217	0.6
Eastern	550	1,286	2.9	2.34	350	1.0
Luapula	4	200	0.5	50	2	0.0
Lusaka	384	18,317	41.7	47.7	14,152	41.8
Muchinga	187	370	0.8	1.98	179	0.5
Northern	215	4,415	10.1	20.53	4,200	12.4
North Western	568	2,241	5.1	3.95	1,247	3.7
Southern	1,449	7,263	16.5	5.01	4,384	13.0
Western	4	3	-	0.75	2	-
Total	**4,018**	**43,917**	**100**	**10.93**	**33,845**	**100**

6.10.4 Irish Potato Production by Category of Farmers

Figure 6.9 shows the percentage distribution of Irish potato production by category of farmers in the 2021/2022 agricultural season. The small and medium scale households accounted for 14.81 percent of the total Irish potatoes produced. The contribution from the large-scale farms to the total Irish potato harvest was 85.19 percent.

Figure 6.9: Percentage Distribution of Irish Potato Production by Category, 2021/2022 Agricultural Season



6.11 Virginia Tobacco

6.11.1 Households and Farms Growing Virginia Tobacco

Table 6.28 indicates that 9,279 small and medium scale households and 100 large-scale farms grew Virginia tobacco in the 2021/2022 agricultural season. Eastern province reported the highest number of households that grew Virginia tobacco accounting for 65.5 percent. The number of small and medium scale households that grew Virginia tobacco in Lusaka province were insignificant. Central province had the highest number of large-scale farms that grew Virginia tobacco, accounting for 56 percent. The large-scale farms that grew Virginia tobacco in Northern province were insignificant.

Table 6.28: Distribution of Households and Large-Scale Farms that Grew Virginia Tobacco by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	1,228	13.2	56	56.0
Eastern	6,077	65.5	8	8.0
Lusaka	-	-	1	1.0
Northern	107	1.2	-	-
Southern	1,101	11.9	30	30.0
Western	766	8.3	5	5.0
Total	**9,279**	**100**	**100**	**100**

6.11.2 Area Planted to Virginia Tobacco, Area Harvested and Fertiliser Application

The distribution of area planted to Virginia tobacco, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season is presented in table 6.29. A total of 8,749 Ha was planted to Virginia tobacco out of which 8,238 Ha were harvested. The largest area under Virginia tobacco production was recorded in Eastern province, which represented 42.1 percent of the total area planted. The table also shows that Northern province recorded the lowest area planted to Virginia tobacco at 0.2 percent.

With regard to fertiliser application, 1,879 Mt of basal and 854 Mt of top-dressing fertilisers were applied to the Virginia tobacco fields. Eastern province accounted for 44.2 percent of the basal fertiliser and 47 percent of top-dressing fertiliser used in Virginia tobacco fields countrywide. The quantities of both basal and top-dressing fertilisers used in Virginia tobacco fields in Lusaka and Northern province were insignificant.

Table 6.29: Provincial Distribution of Area Planted to Virginia Tobacco, Area Harvested and Quantity of Fertiliser Applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	2,018	23.1	2,002	24.3	429	22.8	169	19.8
Eastern	3,686	42.1	3,548	43.1	830	44.2	401	47.0
Lusaka	100	1.1	100	1.2	-	-	-	-
Northern	16	0.2	16	0.2	-	-	-	-
Southern	2,219	25.4	1,910	23.2	511	27.2	204	23.9
Western	709	8.1	662	8.0	109	5.8	81	9.5
Total	**8,749**	**100**	**8,238**	**100**	**1,879**	**100.0**	**854**	**100**

6.11.3 Virginia tobacco Production, Yield and sales

Table 6.30 presents the distribution of area planted, production, yield and sales for Virginia tobacco. The table reveals that the country produced 16,447 Mt of Virginia tobacco in the 2021/2022 agricultural season. The highest production was in Central province at 32.3 percent of the total output. Eastern and Southern provinces contributed 30.7 percent and 29.7 percent to the total Virginia tobacco harvest respectively.

The national average yield for Virginia tobacco was 1.88 Mt/Ha with Lusaka province recording highest yield at 3 Mt/Ha followed by Central province at 2.63 Mt/Ha. The lowest yield of 0.69 Mt/Ha was recorded in Northern province.

A total of 13,194 Mt of Virginia Tobacco was sold for cash and/or bartered for goods and/or labour by date of the survey. Eastern province had the largest proportion of sales at 30.8 percent followed by Southern and Central provinces at 30.6 percent and 30 percent respectively.

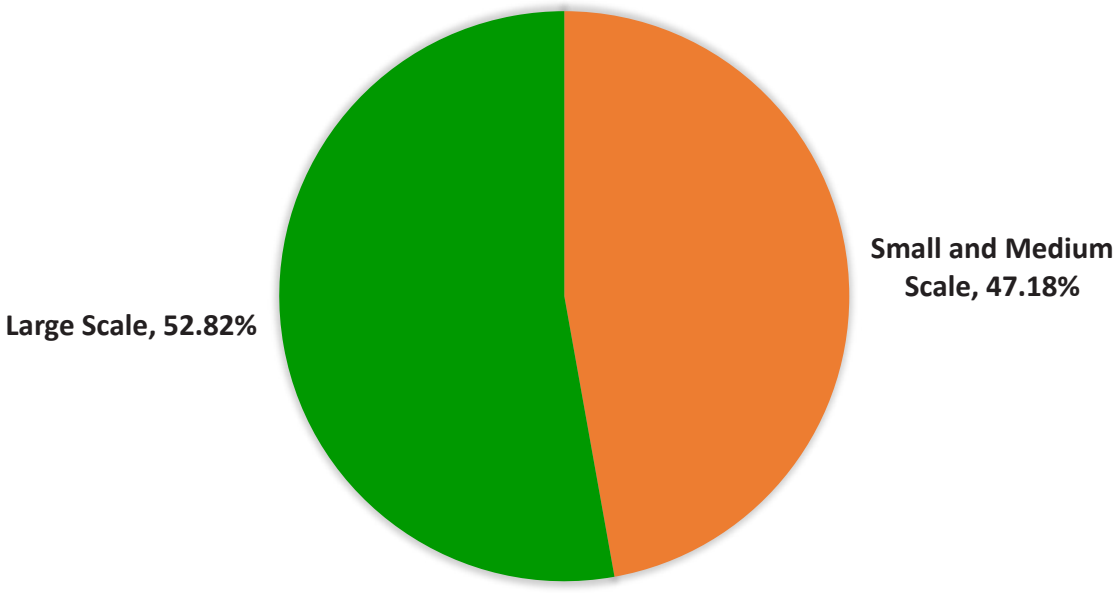
Table 6.30: Area Planted to Virginia Tobacco, Production, Yield and sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	2,018	5,304	32.3	2.63	3,955	30.0
Eastern	3,686	5,043	30.7	1.37	4,059	30.8
Lusaka	100	300	1.8	3.00	270	2.1
Northern	16	11	0.1	0.69	5	-
Southern	2,219	4,879	29.7	2.20	4,040	30.6
Western	709	910	5.5	1.28	866	6.6
Total	**8,749**	**16,447**	**100**	**1.88**	**13,194**	**100**

6.11.4 Virginia Tobacco production by Category of farmers

Figure 6.10 illustrates the distribution of Virginia tobacco production by category of farmers in the 2021/2022 agricultural season. The small and medium scale households contributed 47.18 percent to the total production and large-scale farms accounted for 52.82 percent.

Figure 6.10: Distribution of Virginia Tobacco Production by Category, 2021/2022 Agricultural Season



6.12 Burley Tobacco

6.12.1 Households and Farms Growing Burley Tobacco

Table 6.31 shows that 6,774 small and medium scale households and six large-scale farms grew Burley tobacco in the 2021/2022 agricultural season. Eastern, Western and Southern provinces reported the highest number of households that grew Burley tobacco at 65.7 percent, 14.9 percent and 13 percent respectively. Luapula province reported the lowest proportion of the households that grew Burley tobacco at 0.5 percent. Central province reported the highest number of large-scale farms that grew Burley tobacco at 50 percent of the total. The number of large-scale farms that grew Burley tobacco in Luapula, Muchinga, Northern and Western provinces were insignificant.

Table 6.31: Distribution of Households and Large-Scale Farms that grew Virginia Tobacco by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large scale Farms	
	Number of Households	Percentage share	Number of farms	Percentage share
Central	143	2.1	3	50.0
Eastern	4,448	65.7	2	33.3
Luapula	32	0.5	-	-
Muchinga	173	2.6	-	-
Northern	86	1.3	-	-
Southern	883	13.0	1	16.7
Western	1,008	14.9	-	-
Total	**6,774**	**100**	**6**	**100**

6.12.2 Area Planted to Burley tobacco, Area Harvested and Fertiliser Application

Table 6.32 below depicts the area planted to Burley tobacco, area harvested and quantity of fertiliser applied by province during the 2021/2022 agricultural season.

The total area planted to Burley tobacco was 5,303 Ha out of which 5,153 Ha were harvested. Eastern province had the highest proportion of the area planted to Burley tobacco at 66 percent followed by Western province at 19.3 percent. Luapula province reported the smallest area planted to Burley tobacco at 0.2 percent.

A total of 836 Mt of basal and 633 Mt of top-dressing fertilisers were applied to the Burley tobacco fields countrywide. Eastern province accounted for the highest proportion of the fertiliser used in Burley tobacco fields at 54.8 percent of basal and 63.4 percent of top dressing. The quantities of the fertilisers applied in Luapula and Northern provinces were insignificant.

Table 6.32: Provincial Distribution of Area Planted to Burley Tobacco, Area Harvested and Quantity of Fertiliser Applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	264	5.0	264	5.1	87	10.4	69	10.9
Eastern	3,502	66.0	3,451	67.0	458	54.8	401	63.4
Luapula	8	0.2	8	0.2	-	-	-	-
Muchinga	35	0.7	35	0.7	10	1.2	8	1.3
Northern	18	0.3	18	0.4	-	-	-	-
Southern	453	8.5	453	8.8	105	12.6	45	7.1
Western	1,023	19.3	924	17.9	175	20.9	111	17.5
Total	**5,303**	**100**	**5,153**	**100**	**836**	**100**	**633**	**100**

6.12.3 Burley Tobacco Production, Yield and Sales

Table 6.33 depicts the distribution of the area planted, production, yield and sales for Burley tobacco. The table shows that 7,893 Mt of Burley tobacco was produced during the 2021/2022 agricultural season. The highest production was in Eastern province at 59.4 percent of the total output. Western and Central provinces contributed 19.4 percent and 11.7 percent to the total production respectively.

The national average yield for Burley tobacco was 1.49 Mt/Ha with highest yield recorded in Central province at 3.48 Mt/Ha followed by Western province with 1.50 Mt/Ha. The lowest yields of 0.28 Mt/Ha were recorded in Northern province.

A total of 6,940 Mt of Burley tobacco had been sold for cash and/or bartered for goods and/or labour by date of the survey. Eastern province had the largest proportion of the Burley tobacco sales at 59.1 percent followed by Western and Central provinces at 18.6 percent and 13.3 percent respectively.

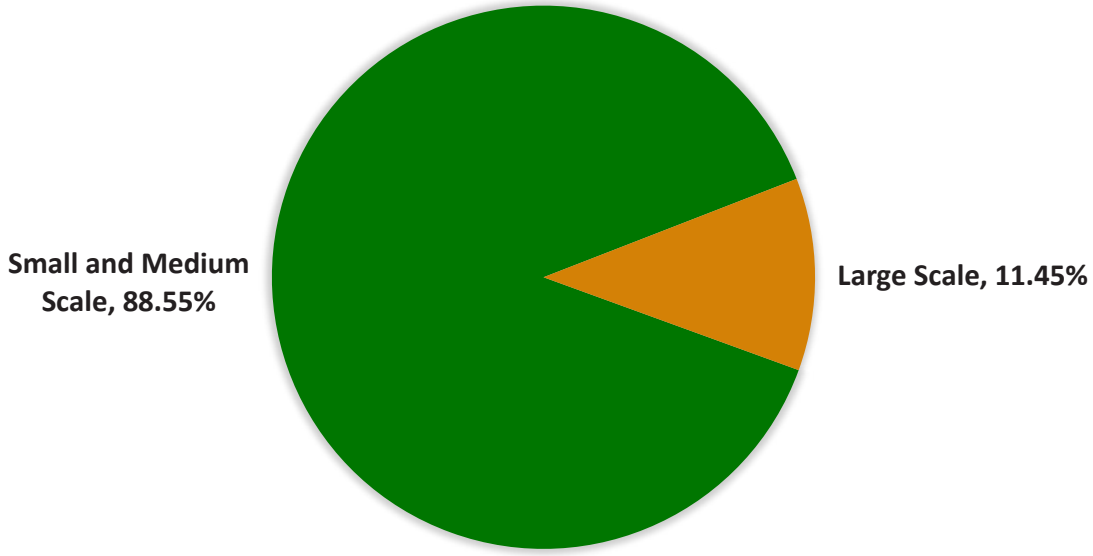
Table 6.33: Area Planted to Burley Tobacco, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	264	920	11.7	3.48	920	13.3
Eastern	3,502	4,723	59.8	1.35	4,098	59.1
Luapula	8	3	-	0.38	1	-
Muchinga	35	38	0.5	1.09	10	0.1
Northern	18	5	0.1	0.28	3	-
Southern	453	673	8.5	1.49	621	9.0
Western	1,023	1,531	19.4	1.50	1,288	18.6
Total	**5,303**	**7,893**	**100**	**1.49**	**6,940**	**100**

6.12.4 Burley Tobacco production by Category of farmers

Figure 6.11 shows the percentage distribution of Burley tobacco production by category of farmers in the 2021/2022 agricultural season. The small and medium scale farming households contributed 11.45 percent to the total output and large-scale farms accounted for 88.55 percent.

Figure 6.11: Distribution of Burley Tobacco Production by Category, 2021/2022 Agricultural Season



6.13 Mixed beans

6.13.1 Households and Farms growing Mixed Beans

Table 6.34 shows 305,462 small and medium scale households and 66 large-scale farms that grew mixed beans in the 2021/2022 agricultural season. Northern and North-Western provinces reported the highest number of households that grew mixed beans, representing 36.8 percent and 13.3 percent respectively. Lusaka province reported the lowest number of households that grew mixed beans at 1.4 percent. Luapula province had the highest number of large-scale farms that grew mixed beans, accounting for 37.9 percent. The number of large-scale farms that grew mixed beans in North-Western and Western provinces were insignificant.

Table 6.34: Distribution of Households and Large-Scale Farms that Grew Mixed Beans by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	14,544	4.8	10	15.2
Copperbelt	14,587	4.8	8	12.1
Eastern	17,908	5.9	2	3.0
Luapula	38,843	12.7	25	37.9
Lusaka	4,308	1.4	3	4.6
Muchinga	39,666	13.0	7	10.6
Northern	112,467	36.8	7	10.6
North-Western	40,699	13.3	-	-
Southern	12,426	4.1	4	6.1
Western	10,013	3.3	-	-
Total	**305,462**	**100**	**66**	**100**

6.13.2 Area Planted to Mixed Beans, Area Harvested and Fertiliser Application

Table 6.35 depicts the distribution of area planted to mixed beans, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 121,969 Ha was planted to mixed beans out of which 115,878 Ha was harvested. The largest area under mixed beans production was recorded in Northern province which accounted for 56 percent of the total area planted. Muchinga and North-Western provinces contributed 8.9 percent and eight percent to the total area planted to mixed beans respectively.

With regard to fertiliser application, 998 Mt of basal and 534 Mt of top-dressing fertilisers were applied to the mixed beans fields. Muchinga province accounted for the highest proportion of the fertiliser used in mixed beans fields at 29.3 percent of basal and 27.3 percent of top dressing. The quantities of the fertilisers applied in the mixed beans fields by Western province were insignificant.

Table 6.35: Provincial Distribution of Area Planted to Mixed Beans, Area Harvested and Quantity of Fertiliser applied during, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	4,076	3.3	3,957	3.4	92	9.2	15	2.8
Copperbelt	3,229	2.7	3,125	2.7	96	9.6	77	14.4
Eastern	6,798	5.6	5,837	5.0	42	4.2	10	1.9
Luapula	8,275	6.8	7,870	6.8	53	5.3	28	5.2
Lusaka	1,366	1.1	1,141	1.0	40	4.0	1	0.2
Muchinga	10,870	8.9	10,435	9.0	292	29.3	199	37.3
Northern	68,329	56.0	66,237	57.2	250	25.1	142	26.6
North Western	9,780	8.0	9,407	8.1	18	1.8	12	2.3
Southern	6,529	5.4	5,439	4.7	114	11.4	50	9.4
Western	2,717	2.2	2,429	2.1	-	-	-	-
Total	**121,969**	**100**	**115,878**	**100**	**998**	**100**	**534**	**100**

6.13.3 Mixed Beans Production, Yield and sales

The distribution of the area planted, production, yield and sales for mixed beans is shown in table 6.36. The country produced 56,683 Mt of mixed beans in the 2021/2022 agricultural season. The highest production was in Northern province at 49.3 percent of the total output. Muchinga and North-Western provinces contributed 12 percent and 10.4 percent to the total production respectively.

The national average yield for mixed beans was 0.46 Mt/Ha. The highest yield was recorded in Central province with 0.86 Mt/Ha followed by Copperbelt province with 0.68 Mt/Ha. The lowest yield of 0.29 Mt/Ha was recorded in Southern province.

A total of 21,230 Mt of mixed beans produced during the 2021/2022 agricultural season was sold for cash and/or bartered for goods and/or labour by date of the survey. Northern province had the largest proportion of the mixed beans sales at 51.5 percent followed by North-Western and Central provinces at 14.7 percent and 8.9 percent respectively.

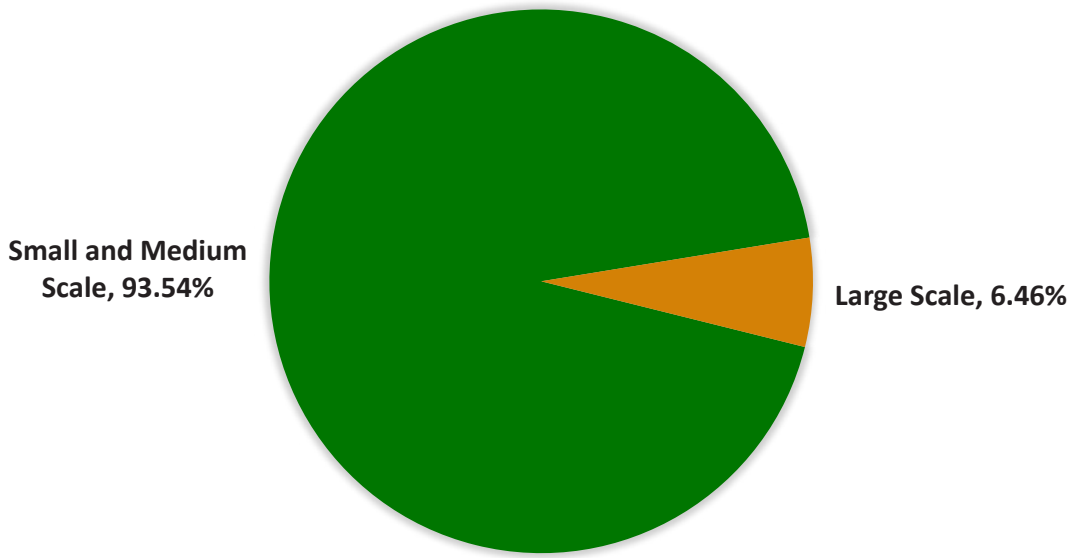
Table 6.36: Area planted to Mixed Beans, Production, and yield by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production	Yield	Quantity Sold		
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	4,076	3,489	6.2	0.86	1,891	8.9
Copperbelt	3,229	2,189	3.9	0.68	421	2.0
Eastern	6,798	3,138	5.5	0.46	1,041	4.9
Luapula	8,275	3,322	5.9	0.4	1,270	6.0
Lusaka	1,366	423	0.8	0.31	148	0.7
Muchinga	10,870	7,255	12.8	0.67	1,381	6.5
Northern	68,329	28,020	49.4	0.41	10,943	51.5
North Western	9,780	5,909	10.4	0.6	3,114	14.7
Southern	6,529	1,890	3.3	0.29	823	3.9
Western	2,717	1,049	1.9	0.39	198	0.9
Total	**121,969**	**56,683**	**100**	**0.46**	**21,230**	**100**

6.13.4 Mixed Beans Production by Category of Farmers

Figure 6.12 illustrates the distribution of mixed beans production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale households accounted for 93.54 percent to the total mixed beans harvest and large-scale farms contributed 6.46 percent.

Figure 6.12: Distribution of Mixed Beans Production by Category, 2021/2022 Agricultural Season



6.14 Bambara nuts

6.14.1 Households growing Bambara nuts

Table 6.37 shows 67,423 small and medium scale households that grew Bambara nuts in the 2021/2022 agricultural season. Luapula and Northern provinces reported the highest number of households that grew Bambara nuts accounting for 58.5 percent. Copperbelt province had the lowest proportion of households that grew Bambara nuts at 1.6 percent of the national total.

Table 6.37: Distribution of Households that grew Bambara Nuts by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households	
	Number of Households	Percentage share
Central	3,358	5.0
Copperbelt	1,051	1.6
Eastern	1,198	1.8
Luapula	23,758	35.2
Muchinga	3,573	5.3
Northern	15,673	23.3
North Western	1,188	1.8
Southern	7,436	11.0
Western	10,188	15.1
Total	**67,423**	**100**

6.14.2 Area Planted to Bambara Nuts, Area Harvested and Fertiliser Application

Table 6.38 presents the distribution of area planted to Bambara nuts, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 12,647 Ha was planted to Bambara nuts out of which 11,878 Ha was harvested. The largest area under Bambara nuts production was recorded in Western province which accounted for 26.7 percent of the total area planted. Luapula and Northern provinces contributed 26 percent and 18.1 percent to the total area planted to Bambara nuts respectively.

With regard to fertiliser application, a total of 58 Mt of basal and 58 Mt of top-dressing fertilisers were applied to the Bambara nut fields. Luapula province accounted for the highest proportion of the fertiliser used in Bambara nut fields at 63.8 percent of basal and 63.8 percent of top dressing. The quantities of the fertilisers used in the Bambara nut fields by Copperbelt, Eastern, Muchinga, Northern, North-Western and Southern provinces were insignificant.

Table 6.38: Provincial Distribution of Area planted to Bambara Nuts area Harvested and Quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	904	7.2	777	6.5	11	19.0	11	19.0
Copperbelt	95	0.8	92	0.8	-	-	-	-
Eastern	180	1.4	146	1.2	-	-	-	-
Luapula	3,353	26.5	3,269	27.5	37	63.8	37	63.8
Muchinga	687	5.4	670	5.6	-	-	-	-
Northern	2,284	18.1	2,227	18.8	-	-	-	-
North Western	149	1.2	149	1.3	-	-	-	-
Southern	1,625	12.9	1,428	12.0	-	-	-	-
Western	3,370	26.7	3,120	26.3	10	17.2	10	17.2
Total	**12,647**	**100**	**11,878**	**100**	**58**	**100**	**58**	**100**

6.14.3 Bambara Nuts Production, Yield and sales

The distribution of the area planted, production, yield and sales for Bambara nuts is presented in Table 6.39. The table reveals that the country produced 10,167 Mt of Bambara nuts in the 2021/2022 agricultural season. The highest production was reported in Western province at 31.1 percent of the total output. Luapula and Northern provinces contributed 28.7 percent and 17.6 percent to the total Bambara nut output respectively.

The national average yield for Bambara nuts was 0.8 Mt/Ha. The highest yield was recorded in Copperbelt province with 1.24 Mt/Ha followed by North-Western province with 1.1 Mt/Ha. The lowest yield of 0.33 Mt/Ha was recorded in Eastern province.

A total of 2,213 Mt of Bambara nuts produced during the 2021/2022 agricultural season was sold for cash and/or bartered for goods and/or labour by date of the survey. Luapula province had the largest proportion of Bambara nut sales at 38.4 percent followed by Western and Northern provinces at 37.1 percent and 9.8 percent respectively.

Table 6.39: Area planted to Bambara Nuts, Production, yield and sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	904	792	7.8	0.88	112	5.1
Copperbelt	95	118	1.2	1.24	14	0.6
Eastern	180	59	0.6	0.33	22	1.0
Luapula	3,353	2,918	28.7	0.87	850	38.4
Muchinga	687	446	4.4	0.65	21	1.0
Northern	2,284	1,788	17.6	0.78	216	9.8
North Western	149	164	1.6	1.10	113	5.1
Southern	1,625	722	7.1	0.44	45	2.0
Western	3,370	3,160	31.1	0.94	820	37.1
Total	**12,647**	**10,167**	**100**	**0.80**	**2,213**	**100**

6.15 Cowpeas

6.15.1 Households and Farms growing cowpeas

Table 6.40 shows 109,262 small and medium scale households and 43 large-scale farms that grew cowpeas in the 2021/2022 agricultural season. Southern and Western provinces reported the highest number of households that grew cowpeas, accounting for 65.8 percent and 17.3 percent respectively. Copperbelt and Muchinga provinces had the lowest proportion of households that grew cowpeas at 0.1 percent of the total households. Central province had the highest number of large-scale farms that grew cowpeas accounting for 65.1 percent. The number of large-scale farms that grew cowpeas in Eastern, Luapula, Muchinga, Northern and North-Western provinces was insignificant.

Table 6.40: Distribution of Households that grew Cowpeas by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	9,236	8.5	28	65.1
Copperbelt	157	0.1	1	2.3
Eastern	2,973	2.7	-	-
Luapula	688	0.6	-	-
Lusaka	2,008	1.8	1	2.3
Muchinga	124	0.1	-	-
Northern	3,094	2.8	-	-
North Western	188	0.2	-	-
Southern	71,928	65.8	12	27.9
Western	18,866	17.3	1	2.3
Total	**109,262**	**100**	**43**	**100**

6.15.2 Area Planted to Cowpeas, Area Harvested and Fertiliser Application

Table 6.41 depicts the distribution of area planted to cowpeas, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 36,621 Ha was planted to cowpeas out of which 29,398 Ha was harvested. The largest area under cowpeas production was in Southern province at 64.3 percent of the total area planted. Western and Central provinces contributed 20 percent and 9.6 percent to the total area planted to cowpeas, respectively.

With regard to fertiliser application, 67 Mt of basal and 48 Mt of top-dressing fertilisers were applied to the cowpeas fields. Southern province accounted for the highest proportion of the fertiliser used in cowpeas fields at 97 percent of basal and 100 percent of top dressing. Central and Lusaka provinces accounted for three percent of basal fertiliser used in cowpeas fields. The quantities of the fertilisers used in the cowpeas fields by the remaining provinces were insignificant.

Table 6.41: Provincial distribution of area planted to Cowpeas, Area harvested and quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	3,526	9.6	3,451	11.7	1	1.5	-	-
Copperbelt	159	0.4	159	0.5	-	-	-	-
Eastern	878	2.4	856	2.9	-	-	-	-
Luapula	86	0.2	86	0.3	-	-	-	-
Lusaka	439	1.2	392	1.3	1	1.5	-	-
Muchinga	10	0.0	10	0.0	-	-	-	-
Northern	571	1.6	571	1.9	-	-	-	-
North Western	43	0.1	43	0.2	-	-	-	-
Southern	23,533	64.3	16,976	57.8	65	97.0	48	100
Western	7,377	20.1	6,855	23.3	-	-	-	-
Total	**36,621**	**100**	**29,398**	**100**	**67**	**100**	**48**	**100**

6.15.3 Cowpeas Production, Yield and sales

The distribution of the area planted, production, yield and sales for cowpeas is shown in table 6.42. The table shows that 10,638 Mt of cowpeas was produced in the 2021/2022 agricultural season. Southern province accounted for 59.7 percent of the total output followed by Central province at 16.5 percent.

The national average yield for cowpeas was 0.29 Mt/Ha. The highest yield was in North-Western province at 0.74 Mt/Ha followed by Northern province with 0.71 Mt/Ha. The lowest yield of 0.18 Mt/Ha was estimated in Western province.

A total of 2,151 Mt of cowpeas produced during the 2021/2022 agricultural season was sold for cash and/or bartered for goods and/or labour by date of the survey. Southern province had the largest proportion of the cowpeas sales at 42.5 percent followed by Central province at 35.6 percent.

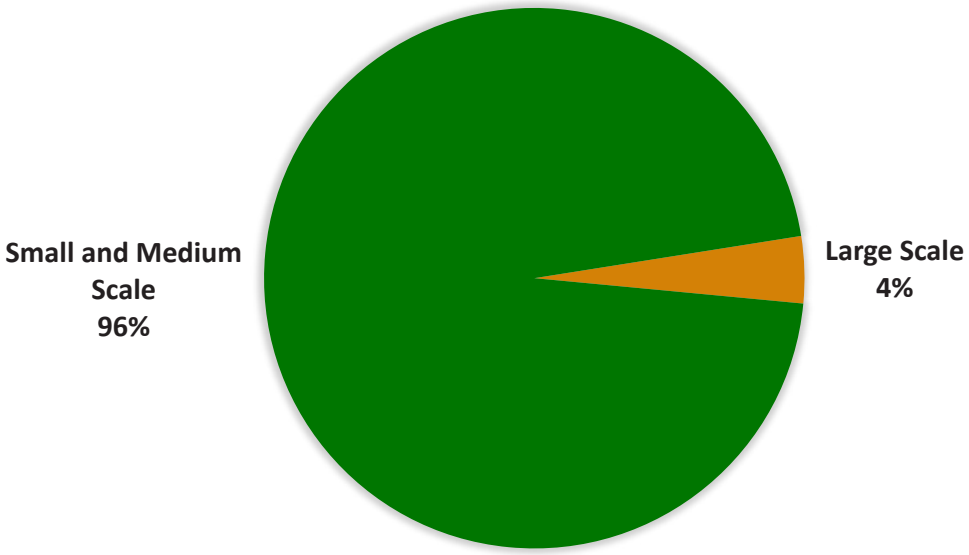
Table 6.42: Area planted to Cowpeas, Production, yield and quantity Sold by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	3,526	1,760	16.5	0.5	765	35.6
Copperbelt	159	62	0.6	0.39	53	2.5
Eastern	878	361	3.4	0.41	31	1.4
Luapula	86	28	0.3	0.33	12	0.6
Lusaka	439	271	2.6	0.62	16	0.7
Muchinga	10	6	0.1	0.6	1	0.1
Northern	571	406	3.8	0.71	167	7.8
North Western	43	32	0.3	0.74	19	0.9
Southern	23,533	6,353	59.7	0.27	913	42.5
Western	7,377	1,361	12.8	0.18	174	8.1
Total	**36,621**	**10,638**	**100**	**0.29**	**2,151**	**100**

6.15.4 Cowpeas Production by Category of Farmers

Figure 6.13 shows the distribution of cowpeas production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The figure shows that small and medium scale farmers produced 96 percent of cowpeas and 4 percent was produced by the large-scale farms.

Figure 6.13: Distribution of Cowpeas Production by Category, 2021/2022 Agricultural Season



6.16 Sweet Potatoes

6.16.1 Households and Farms Growing Sweet Potatoes

Table 6.43 shows that 245,896 small and medium scale households and 61 large-scale farms grew sweet potatoes in the 2021/2022 agricultural season. Southern, Central and Luapula provinces reported the highest number of households that grew sweet potatoes accounting for 23 percent, 17.5 percent and 12 percent respectively. Southern province had the highest number of large-scale farms that grew sweet potatoes accounting for 29.5 percent. The number of large-scale farms that grew sweet potatoes in Lusaka province was insignificant.

Table 6.43: Distribution of Households that grew Sweet Potatoes by Province, 2021/2022 Agricultural Season

Province	Small and Medium Households		Large Scale Farms	
	Number of Households	Percentage share	Number of Farms	Percentage share
Central	43,094	17.5	17	27.9
Copperbelt	23,792	9.7	3	4.9
Eastern	7,427	3.0	1	1.6
Luapula	29,748	12.1	12	19.7
Lusaka	5,379	2.2	-	-
Muchinga	16,132	6.6	4	6.6
Northern	28,509	11.6	1	1.6
North Western	25,303	10.3	2	3.3
Southern	56,865	23.1	18	29.5
Western	9,647	3.9	3	4.9
Total	**245,896**	**100**	**61**	**100**

6.16.2 Area Planted to Sweet Potatoes, Area Harvested and Fertiliser Application

Table 6.44 depicts the distribution of area planted to sweet potatoes, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season.

The total area planted to sweet potatoes was 76,945 Ha out of which 72,605 Ha was harvested. Central province had the highest proportion of the area planted to sweet potatoes at 34.3 percent followed by Southern province at 24.8 percent. Lusaka province reported the smallest area planted to sweet potatoes at 1.8 percent of the national total. A total of 140 Mt of basal and 88 Mt of top-dressing fertilisers were applied to the sweet potato fields countrywide. Southern province accounted for the highest proportion of the fertiliser used in sweet potato fields at 49.2 percent of basal and 40.9 percent of top dressing. The quantities of basal fertilisers applied in the sweet potato fields by Luapula, North-Western and Western provinces were insignificant. The quantities of top-dressing fertilisers applied in the sweet potato fields by Copperbelt, Luapula, Lusaka, Northern, North-Western and Western provinces were insignificant.

Table 6.44: Provincial Distribution of Area planted to Sweet Potatoes, Area harvested and Quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	26,377	34.3	26,104	36.0	33	23.6	30	34.1
Copperbelt	5,787	7.5	5,637	7.8	1	0.7	-	-
Eastern	2,573	3.3	2,533	3.5	14	10.0	12	13.6
Luapula	4,557	5.9	4,494	6.2	-	-	-	-
Lusaka	1,405	1.8	1,342	1.9	5	3.6	-	-
Muchinga	3,842	5.0	3,697	5.1	19	13.6	10	11.4
Northern	5,712	7.4	5,402	7.4	1	0.7	-	-
North Western	5,938	7.7	5,718	7.9	-	-	-	-
Southern	19,075	24.8	16,014	22.1	69	49.3	36	40.9
Western	1,680	2.2	1,664	2.3	-	-	-	-
Total	**76,945**	**100**	**72,605**	**100**	**140**	**100**	**88**	**100**

6.16.3 Sweet Potatoes Production, Yield and Sales

Table 6.45 shows the distribution of the area planted, production, yield and sales for sweet potatoes produced in the 2021/2022 agricultural season. A total of 162,614 Mt of sweet potatoes was produced during the season. The highest production of sweet potatoes was in Central province with 25.4 percent and Southern province with 21 percent of the total

output. North-Western and Copperbelt provinces contributed 14.9 percent and 9.3 percent to the total sweet potato production, respectively.

The national average yield for sweet potatoes was 2.11 Mt/Ha. The highest yield was recorded in North-Western province at 40.9 Mt/Ha followed by Eastern province with 2.92 Mt/Ha. The lowest yield of 1.57 Mt/Ha was estimated in Central province. A total of 79,666 Mt of sweet potatoes produced during the 2021/2022 agricultural season was sold for cash and/or bartered for goods and/or labour by survey date. Central province had the largest proportion of sweet potatoes sales at 29 percent followed by Southern and North-Western provinces at 16.4 percent and 15.7 percent, respectively.

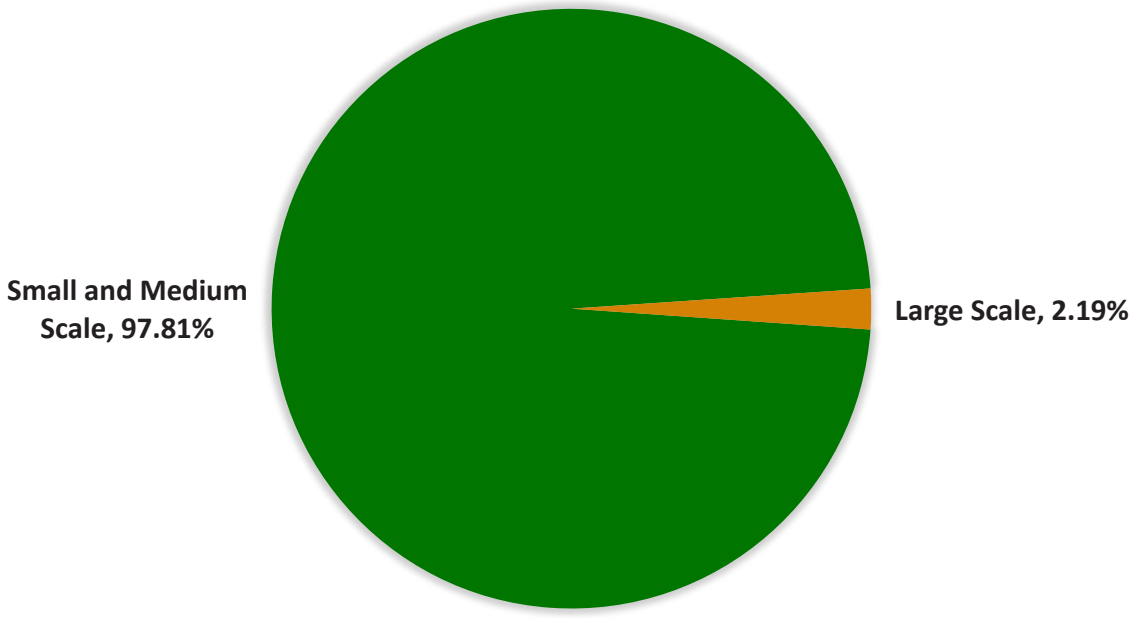
Table 6.45: Area planted to Sweet Potatoes, Production, Yield and Quantity sold by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	26,377	41,286	25.4	1.57	23,132	29.0
Copperbelt	5,787	15,080	9.3	2.61	9,963	12.5
Eastern	2,573	7,516	4.6	2.92	5,090	6.4
Luapula	4,557	13,275	8.2	2.91	6,615	8.3
Lusaka	1,405	2,602	1.6	1.85	1,510	1.9
Muchinga	3,842	8,834	5.4	2.3	2,756	3.5
Northern	5,712	10,863	6.7	1.9	3,567	4.5
North Western	5,938	24,263	14.9	4.09	12,532	15.7
Southern	19,075	34,708	21.3	1.82	13,069	16.4
Western	1,680	4,189	2.6	2.49	1,432	1.8
Total	76,945	162,614	100	2.11	79,666	100

6.16.4 Sweet Potatoes Production by Category of Farmers

Figure 6.14 shows the distribution of sweet potatoes production by small and medium scale farming households, and large-scale farms in the 2021/2022 agricultural season. The small and medium scale farming households accounted for 97.81 percent to the total sweet potatoes production and large-scale farms contributed 2.19 percent.

Figure 6.14: Distribution of Sweet Potatoes Production by Category, 2021/2022 Agricultural Season



6.17 Wheat

6.17.1 Large scale farms growing wheat

Table 6.46 shows that of the total 155 large-scale farms that grew wheat in the 2021/2022 agricultural season, Central province recorded the highest number of large-scale farms at 61.9 percent while Western province had the lowest proportion at 0.7 percent.

Table 6.46: Distribution of Large-Scale Farms that grew Wheat by Province, 2021/2022 Agricultural Season

Province	Number of Farms	Percentage share
Central	96	61.9
Copperbelt	10	6.5
Lusaka	27	17.4
Southern	21	13.6
Western	1	0.7
Total	**155**	**100**

6.17.2 Area Planted to Wheat, Area Harvested and Fertiliser Application

Table 6.47 depicts the distribution of area planted to wheat, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 29,329 Ha was planted to wheat out of which 29,321 Ha was harvested. The largest area under wheat production was recorded in Central province which accounted for 64.8 percent of the total area planted to wheat. Lusaka and Southern provinces contributed 13.9 percent and 10.9 percent to the total area planted to wheat respectively.

A total of 5,793 Mt of basal and 5,759 Mt of top-dressing fertilisers were applied to the wheat fields. The table shows that Central province reported the highest proportion of fertiliser used in wheat fields at 63.4 percent of basal and 60.9 percent of top dressing. Western province recorded the lowest quantities of the fertilisers used in the wheat fields at 0.3 percent of basal and 0.2 percent of top dressing.

Table 6.47: Provincial Distribution of Area planted to Wheat, Area harvested and Quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	18,991	64.8	18,983	64.7	3,672	63.4	3,505	60.9
Copperbelt	2,990	10.2	2,990	10.2	749	12.9	897	15.6
Lusaka	4,086	13.9	4,086	13.9	801	13.8	802	13.9
Southern	3,193	10.9	3,193	10.9	554	9.6	541	9.4
Western	70	0.2	70	0.2	18	0.3	14	0.2
Total	**29,329**	**100**	**29,321**	**100**	**5,793**	**100**	**5,759**	**100**

6.17.3 Wheat Production, Yield and sales

The distribution of the area planted, production, yield and sales for wheat is displayed in table 6.48. The table shows that the country produced 278,433 Mt of wheat in the 2021/2022 agricultural season. The highest production was recorded in Central province at 72 percent of the total output. Lusaka and Copperbelt provinces contributed 11.7 percent and 9 percent to the total wheat production respectively.

The national average yield for wheat was 9.49 Mt/Ha. The highest yield was in Central province with 10.55 Mt/Ha followed by Copperbelt province with 8.46 Mt/Ha. The lowest yield of 1.30 Mt/Ha was recorded in Western province.

A total of 242,587 Mt of wheat produced during the 2021/2022 agricultural season had been sold for cash and/or bartered for goods and/or labour by date of the survey. Central province had the largest proportion of the wheat sales at 73.2 percent followed by Lusaka and Copperbelt provinces at 9.8 percent and 9.5 percent respectively.

Table 6.48: Area Planted to Wheat, Production, Yield and Quantity sold by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	18,991	200,320	72.0	10.55	177,464	73.2
Copperbelt	2,990	25,300	9.1	8.46	22,987	9.5
Lusaka	4,086	32,662	11.7	7.99	23,878	9.8
Southern	3,193	20,061	7.2	6.28	18,166	7.5
Western	70	91	0.03	1.30	91	-
Total	**29,329**	**278,433**	**100**	**9.49**	**242,587**	**100**

6.18 Barley

6.18.1 Large Scale Farms growing Barley

Table 6.49 shows 26 large-scale farms that grew Barley in the 2021/2022 agricultural season. Central province had the highest number of large-scale farms that grew Barley accounting for 53.9 percent and Lusaka province had the lowest proportion at 7.7 percent.

Table 6.49: Distribution of Large-Scale farms that grew Barley by Province, 2021/2022 Agricultural Season

Province	Number of Farms	Percentage share
Central	14	53.9
Lusaka	2	7.7
Southern	10	38.5
Total	**26**	**100**

6.18.2 Area Planted to Barley, Area Harvested and Fertiliser Application

Table 6.50 depicts the distribution of area planted to barley, area harvested and quantity of fertiliser applied by province in the 2021/2022 agricultural season. A total of 2,531 Ha was planted to barley out of which 2,521 Ha were harvested. The largest area under barley production was recorded in Central province at 67.4 percent of the total area planted. Southern and Lusaka provinces contributed 21.4 percent and 11.3 percent to the total area planted to barley respectively.

Approximately, 500 Mt of basal and 477 Mt of top-dressing fertilisers were applied to the barley fields. Central province accounted for the highest proportion of the fertiliser used in barley fields at 74.2 percent of basal and 69 percent of top dressing. Lusaka province had lowest quantities of the fertilisers used in the barley fields at 9.2 percent of basal and 9.4 percent of top dressing.

Table 6.50: Provincial Distribution of Area planted to Barley, Area harvested and Quantity of Fertiliser applied, 2021/2022 Agricultural Season

Province	Area Planted		Area Harvested		Basal Fertiliser Applied		Top Fertiliser Applied	
	Hectares	Percent	Hectares	Percent	Metric Tonnes	Percent	Metric Tonnes	Percent
Central	1,705	67.4	1,705	67.6	371	74.2	329	69.0
Lusaka	285	11.3	285	11.3	46	9.2	45	9.4
Southern	542	21.4	532	21.1	83	16.6	103	21.6
Total	**2,531**	**100**	**2,521**	**100**	**500**	**100**	**477**	**100**

6.18.3 Barley Production, Yield and sales

The distribution of the area planted, production, yield and sales for barley is shown in table 6.51. The country produced 19,759 Mt of barley in the 2021/2022 agricultural season. The highest production was in Central province at 67.9 percent of the total output. Southern and Lusaka provinces contributed 19.8 percent and 12.3 percent respectively, to the total barley output.

The national average yield for barley was 7.81 Mt/Ha. The highest yield was in Lusaka province at 8.52 Mt/Ha followed by Central province with 7.87 Mt/Ha. The lowest yield of 7.23 Mt/Ha was recorded in Southern province.

A total of 18,919 Mt of barley produced during the 2021/2022 agricultural season was sold for cash and/or bartered for goods and/or labour by survey date. Central province had the largest proportion of the barley sales at 67.5 percent followed by Southern and Lusaka provinces at 19.7 percent and 12.8 percent, respectively.

Table 6.51: Area Planted to Barley, Production, Yield and Sales by Province, 2021/2022 Agricultural Season

Province	Area Planted	Production		Yield	Sales	
	Hectares	Metric Tonnes	Percent	(MT/Ha)	Metric Tonnes	Percent
Central	1,705	13,411	67.9	7.87	12,771	67.5
Lusaka	285	2,427	12.3	8.52	2,427	12.8
Southern	542	3,921	19.8	7.23	3,721	19.7
Total	**2,531**	**19,759**	**100**	**7.81**	**18,919**	**100**

6.19 Cassava

6.19.1 Households Growing Cassava

Table 6.52 shows 473,251 small and medium scale households that grew cassava in the 2021/2022 agricultural season. Northern and Luapula provinces had the highest number of households that grew cassava, accounting for 29.9 percent and 29.7 percent respectively. Lusaka and Southern provinces had the lowest proportion of households that grew cassava with individual contribution of 0.2 percent.

Table 6.52: Distribution of households that grew Cassava by Province, 2021/2022 Agricultural Season

Province	Number of Households	Percentage share
Central	11,077	2.3
Copperbelt	5,654	1.2
Eastern	2,853	0.6
Luapula	140,354	29.7
Lusaka	1,009	0.2
Muchinga	33,186	7.0
Northern	141,630	29.9
North-Western	64,265	13.6
Southern	859	0.2
Western	72,363	15.3
Total	**473,251**	**100**

6.19.2 Area under Cassava, Area under mature cassava and production

Table 6.53 shows the distribution of area under cassava, area under mature cassava, cassava root production and cassava flour equivalent. The total area under cassava was 283,386 Ha. Luapula province reported the largest area under cassava of 90,149 Ha followed by Northern province with 85,091 Ha and Western province with 48,878 Ha. Southern province recorded the smallest area under cassava with 117 Ha.

The total area under mature cassava during the 2021/2022 agricultural season was 191,190 Ha. Northern province recorded the largest area under mature cassava of 57,371 Ha followed by Luapula province with 55,673 Ha and Western province with 39,533 Ha. The area under mature cassava in Lusaka and Southern provinces was insignificant.
The production of cassava root tuber was 3,315,611 Mt in the 2021/2022 agricultural season. The highest production was in Luapula province with 1,054,747 Mt followed by Northern province with 995,560 Mt. The lowest production of cassava root tuber of 1,375 Mt was in Southern province.

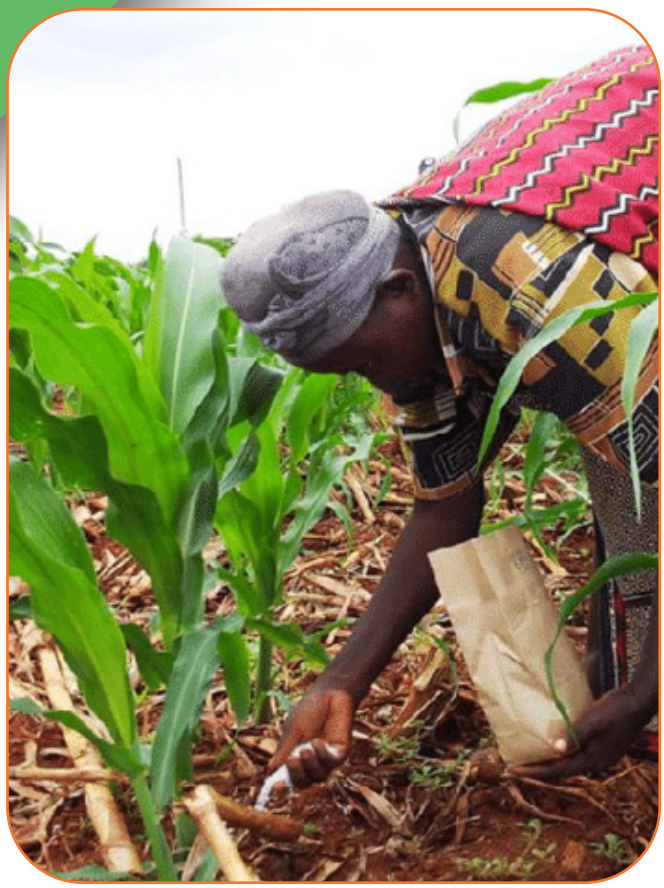
Table 6.53 further shows the quantity of cassava flour equivalent. The total quantity of cassava flour estimated during the season was 828,903 Mt. Luapula province recorded the largest quantity of cassava flour with 263,687 Mt followed by Northern province with 248,890 Mt. The lowest quantity of cassava flour equivalent was recorded in Southern province with 344 Mt.

Table 6.53: Cassava Production by Province, 2021/2022 Agricultural Season

Province	Area under cassava	Area under mature cassava	Cassava root production 11.7 Mt/Ha	Conversion to flour 25% extraction rate
Central	4,894	3,428	57,257	14,314
Copperbelt	1,366	1,348	15,978	3,995
Eastern	664	582	7,769	1,942
Luapula	90,149	55,673	1,054,747	263,687
Lusaka	339	-	3,961	990
Muchinga	15,477	8,094	181,077	45,269
Northern	85,091	57,371	995,560	248,890
North Western	36,412	25,162	426,016	106,504
Southern	117	-	1,375	344
Western	48,878	39,533	571,871	142,968
Total	**283,386**	**191,190**	**3,315,611**	**828,903**


COMPOUND

CHAPTER 7:
FERTILISER APPLICATION



CHAPTER 7: FERTILISER APPLICATION

7.1 Introduction

This chapter presents an overview of fertiliser application during the 2021/2022 agricultural season.

7.2 Fertiliser Application

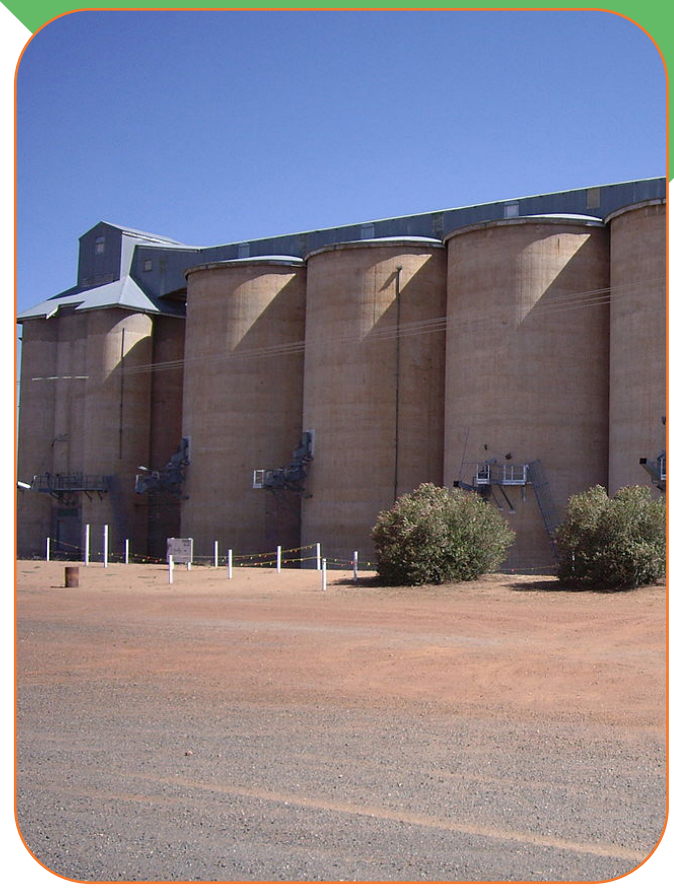
Table 7.1 presents the quantities of basal and top-dressing fertiliser applied during the 2021/2022 agricultural season. At national level, 605,455 Mt of basal fertiliser and 564,408 Mt of top-dressing fertiliser were applied to various crops including field crops, vegetables and fruits across the country. Central, Eastern and Southern provinces accounted for 21.7 percent, 20 percent and 15 percent of the total basal fertiliser applied, respectively.

Central province recorded the largest application of basal and top-dressing fertiliser at 21.7 percent and 22.4 percent of the national total, respectively. Western province applied the smallest quantity of basal and top-dressing fertiliser at 1.4 percent and one percent of the national total, respectively.

Table 7.1: Basal and Top-Dressing Fertiliser applied by Province, 2021/2022 Agricultural Sseason

Province	Basal Fertiliser (Mt)		Top Fertiliser (Mt)	
	Number	Percent	Number	Percent
Central	131,133	21.7	126,709	22.4
Copperbelt	23,254	3.8	16,708	3.0
Eastern	121,232	20.0	107,353	19.0
Luapula	21,379	3.5	22,352	4.0
Lusaka	30,036	5.0	28,429	5.0
Muchinga	88,199	14.6	80,768	14.3
Northern	74,310	12.3	73,905	13.1
North Western	17,010	2.8	17,052	3.0
Southern	90,565	15.0	84,752	15.0
Western	8,338	1.4	6,381	1.1
Total	**605,455**	**100**	**564,408**	**100**

CHAPTER 8: CROP STORAGE AND MARKETING



CHAPTER 8: CROP STORAGE AND MARKETING

8.1 Introduction

This chapter discusses storage and marketing of the major crops grown during the 2021/2022 agricultural season. The chapter provides information on the storage facilities used; stocks of different crops held at the time of the survey and the marketing modalities employed by households.

8.2 Storage Facilities

Table 8.1 presents the distribution of small and medium scale farming households by main type of storage facility owned during the 2021/2022 agricultural season. A total of 1,281,748 households reported having different types of storage facilities. Many households (892,305) stored their produce in the house, in sacks and 113,899 households kept the produce loose in an open crib. A total of 971 and 525 households stored the produce in a hermetically sealed bag and hermetically sealed metal drum, respectively. In addition, 266 households stored produce in a hermetically sealed plastic drum. Further, 423 households stored their produce in plastic and metal silos.

Table 8.1: Distribution of Households by Main type of Storage Facility, 2021/2022 Agricultural Season

Type of Storage Facility	Number of Households
In the house, in sacks	892,305
In an open crib, loose	113,899
In a covered crib with sides made of wood/branches (no mud)	56,322
In a closed mud basket, loose	50,059
In a brick structure, in sacks	43,187
In an open crib in sacks	33,538
In the house, loose	32,140
In a closed mud basket, in sacks	19,699
In a brick structure, loose	13,737
Other	5,434
Ferrumbu	4,554
In a cement plastered basket, in sacks	4,548
On the roof, loose	4,201
In a cement plastered basket, loose	3,782
In a tent in Sacks	1,899
Hermetically sealed bag	971
In a hermetically sealed metal drum	525
Plastic Silo	524
In a hermetically sealed plastic drum	266
Metal silo	157
Total	1,281,748

8.3 Crop Stocks from Own Harvest

Table 8.2 shows the quantities of stocks in storage at household and farm levels from own harvest as at 30th November, 2022. The total maize and rice stocks in storage were 511,259 Mt and 9,851 Mt respectively. The quantities of sorghum and millet in storage were 8,689 Mt and wheat stocks amounted to 57,642 Mt.

Table 8.2: Stocks as at 30th November 2022

Crop	Small and Medium Scale	Large Scale Farms	Total
Maize	511,259	31,113	542,372
Sorghum	3,031	26	3,057
Rice	9,558	293	9,851
Millet	5,631	1	5,632
Sunflower	12,955	15	12,970
Groundnuts	24,071	141	24,212
Groundnuts(unshelled)	-	197	197
Soya beans	21,842	8,110	29,952
Mixed beans	8,905	279	9,184
Bambara nuts	896	-	896
Cowpeas	1,099	-	1,099
Wheat	-	57,642	57,642

8.4 Marketing Channels

8.4.1 Crop Marketing Channels

Table 8.3 shows the distribution of small and medium scale agricultural households by main buyer of selected crops during the 2022/2023 agricultural marketing season.

There were several market channels for small and medium scale farming households for the largest cash/barter transactions made. Generally, most households sold their produce to private traders followed by other households and the Food Reserve Agency. A total of 374,021 households sold maize to private traders and 107,289 households sold to the Food Reserve Agency. Majority (3,872) of the households sold sorghum to other households and 2,989 households sold to private traders. The main buyers of soya beans were private traders and the Food Reserve Agency. The main buyers of the rest of the crops were private traders and other households.

Table 8.3: Distribution of Small and Medium Scale Agricultural Households by Main Buyer of selected Crops, 2022/2023 Agricultural Marketing Season

Crop	Private traders/ Marketeer	Other households	Direct sale to Food Reserve Agency	NGO	Cooperative	Miller/processors	Out grower
Maize	374,021	93,097	107,289	493	2,701	33,059	836
Sorghum	2,989	3,872	-	225	-	534	-
Rice	40,395	10,254	49	167	0	286	171
Millet	34,391	7,589	0	0	0	29	0
Sunflower	104,252	22,807	0	420	300	1,946	417
Groundnuts	207,192	76,555	0	273	119	794	590
Soya beans	287,611	18,368	20,332	698	1,061	14,208	3,657
Irish potato	4,414	1,059	0	0	0	0	0
Mixed beans	98,274	31,490	0	195	41	1,012	93
Bambara nuts	8,362	9,042	0	0	0	0	0
Cowpeas	12,483	7,682	0	479	0	0	28

8.5 Cassava Marketing

8.5.1 Main buyer of Raw Cassava

Table 8.4 depicts the distribution of households that sold raw cassava by province and main buyer during the 2022/2023 marketing season. On average, 61.16 percent of the households sold raw cassava to private traders.

The second largest market for raw cassava was other households at 38.22 percent market share. Approximately, 0.62 percent of the households sold to other channels. In Lusaka and Southern provinces, the raw cassava was mainly sold to private traders. In Western and North-Western provinces, the main buyers were other households followed by private traders.

Table 8.4: Distribution of Households that sold raw Cassava by Main Buyer, 2021/2022 Agricultural Season

Province	Private Trader/Marketeer		Other Households		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Central	1,266	86.06	205	13.94	-	-	1,471	100
Copperbelt	501	79.78	127	20.22	-	-	628	100
Eastern	608	50.17	604	49.83	-	-	1,212	100
Luapula	3,740	62.15	2,215	36.81	63	1.05	6,018	100
Lusaka	130	100.00	-	-	-	-	130	100
Muchinga	992	59.80	667	40.20	-	-	1,659	100
Northern	5,208	82.59	1,098	17.41	-	-	6,306	100
North Western	1,186	37.17	2,005	62.83	-	-	3,191	100
Southern	35	100.00	-	-	-	-	35	100
Western	1,237	33.27	2,393	64.36	88	2.37	3,718	100
Total	**14,902**	**61.16**	**9,314**	**38.22**	**151**	**0.62**	**24,367**	**100**

8.5.2 Main buyer of dried cassava chips

Table 8.5 shows the provincial distribution of households that sold dried cassava chips by main buyer during the 2022/2023 marketing season. The largest markets for dried cassava chips were private traders and other households which accounted for 56.81 percent and 40.94 percent market shares. In Eastern and Muchinga provinces, the main buyers of dried cassava chips were other households followed by private traders.

Table 8.5: Distribution of Households that Sold Dried Cassava Chips by type of Buyer, 2021/2022 Agricultural Season

Province	Private Trader/Marketeer		Other households		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Central	598	68.58	-	-	274	31.42	872	100
Copperbelt	384	79.34	62	12.81	38	7.85	484	100
Eastern	26	8.78	270	91.22	-	-	296	100
Luapula	13,237	62.48	7,705	36.37	244	1.15	21,186	100
Muchinga	920	37.95	1,443	59.53	61	2.52	2,424	100
Northern	8,385	51.81	7,245	44.77	553	3.42	16,183	100
North Western	4,738	50.11	4,718	49.89	-	-	9,456	100
Western	4,584	65.86	2,248	32.30	128	1.84	6,960	100
Total	**32,872**	**56.81**	**23,691**	**40.94**	**1,298**	**2.24**	**57,861**	**100**

8.5.3 Main buyer of Cassava flour

Table 8.6 shows the distribution of households that sold cassava flour by province and main buyer during the 2022/2023 marketing season. The largest market for cassava flour were other households with 52.79 percent market share followed by private traders with 41.74 percent shares. In Eastern and Muchinga provinces, the main buyers of cassava flour were private traders. In Central province, the main buyers of cassava flour were private traders followed by other households.

Table 8.6: Distribution of Households that sold Cassava Flour by main Buyer, 2022/2023 Agricultural Marketing Season

Province	Private trader/Marketeer		Other households		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Central	326	54.33	274	45.67	-	-	600	100
Eastern	26	100.00	-	-	-	-	26	100
Luapula	1,811	34.05	3,253	61.16	255	4.79	5,319	100
Muchinga	85	100.00	-	-	-	-	85	100
Northern	3,216	48.32	2,960	44.47	480	7.21	6,656	100
North Western	104	18.74	451	81.26	-	-	555	100
Western	41	20.92	155	79.08	-	-	196	100
Total	**5,609**	**41.74**	**7,093**	**52.79**	**735**	**5.47**	**13,437**	**100**

CHAPTER 9: IRRIGATION METHODS AND SOURCES OF WATER AND ENERGY

CHAPTER 9: IRRIGATION METHODS AND SOURCES OF WATER AND ENERGY

9.1 Introduction

This chapter provides information on the top 10 crops that were irrigated by small and medium households and large-scale farms. It also includes methods of irrigation, sources of water for irrigation, and sources of energy for drawing the water. The households and farms recorded are those that indicated to have grown any crop exclusively under irrigation during the 2021/2022 agricultural season.

9.2 Irrigated Crops

9.2.1 Irrigated crops by Small and Medium Households

Table 9.1 shows the top 10 crops that were irrigated by small and medium households during the 2021/2022 agricultural season. The table shows that Rape and tomato were the most irrigated crops by 78,153 and 49,950 small and medium households respectively.

Table 9.1: Distribution of Households by Irrigated Crops, 2021/2022 Agricultural Season

No.	Crop	Number of Small and Medium Households
1	Rape	78,153
2	Tomato	49,950
3	Green maize	26,950
4	Cabbage	17,569
5	Onion	16,626
6	Chinese cabbage	15,307
7	Maize	9,656
8	Pumpkin leaves	7,929
9	Impwa	6,968
10	Okra	6,191

9.2.2 Irrigated crops by Large Scale Farms

Table 9.2 shows the top 10 crops that were irrigated by large-scale farms during the 2021/2022 agricultural season. Wheat and tomatoes were the most irrigated crops by 155 and 155 large-scale farms respectively.

Table 9.2: Distribution of Large-Scale Farms by Irrigated Crops, 2021/2022 Agricultural Season

No.	Crop	Number of Large Scale Farms
1	Wheat	155
2	Tomato	105
3	Maize (for Green)	63
4	Onion	58
5	Rape	47
6	Maize (for Seed)	31
7	Maize	25
8	Barley	17
9	Okra	14
10	Irish Potatoes	13

9.3 Main method of irrigation

9.3.1 Main methods of irrigation used by small and medium scale farming households

Table 9.3 shows the main methods of irrigation used by small and medium scale farming households during the 2021/2022 agricultural season. Results of the PHS indicate that 79.86 percent of the small and medium scale households used buckets for irrigation and one percent of the households used drip irrigation.

Table 9.3: Main methods of Irrigation used by Small and Medium Scale Farming Households, 2021/2022 Agricultural Season

Main Method of Irrigation	Small and Medium Scale Households	
	Number	Percent
Bucket	216,001	79.86
Canal/furrow	17,485	6.46
Sprinkler / hose	13,298	4.92
Treadle pump	8,316	3.07
Other	5,812	2.15
Wetland/Dambo	5,811	2.15
Drip irrigation	3,748	1.39
Total	**270,471**	**100.00**

9.3.2 Main methods of irrigation used by large scale farms

Table 9.4 shows that 28.59 percent and 22 percent of the 850 large-scale farms used center pivots and sprinkler/rain-gun/horse for irrigation during the 2021/2022 agricultural season respectively.

Table 9.4: Main Methods of Irrigation used by Large-Scale Farms, 2021/2022 Agricultural Season

Main Method of Irrigation	Large scale Farms	
	Number	Percent
Centre pivot	243	28.59
sprinkler/rain-gun/horse	187	22.00
Bucket	176	20.71
Drip irrigation	161	18.94
Canal/furrow	44	5.18
Other specify	18	2.12
Treadle pump	15	1.76
Wetland/Dambo	7	0.82
Total	**850**	**100.00**

9.4 Sources of Water for Irrigation

9.4.1 Sources of water used for irrigation by small and medium households

Table 9.5 presents the sources of water used for irrigation during the 2021/2022 agricultural season.

A total of 105,923 small and medium households used the well as the main source of water for irrigation. In addition, 102,100 households used the river/stream. The lake was the least source of water for irrigation by 397 households.

Table 9.5: Source of Water for Irrigation by Small and Medium Scale Households, 2021/2022 Agricultural Season

Source of Water	Small and Medium Scale Households	
	Number	Percent
Well	105,923	39.16
River/stream	102,100	37.75
Dambo/wetland	34,505	12.76
Borehole	18,539	6.85
Dam	6,944	2.57
Spring	2,062	0.76
Lake	397	0.15
Total	**270,471**	**100.00**

9.4.2 Sources of water used for irrigation by Large Scale Farms

Table 9.6 presents the sources of water used for irrigation during the 2021/2022 agricultural season. Approximately, 400 large-scale farms used the borehole as the main source of water for irrigation. In addition, 222 large-scale farms used the river/stream. The dambo/wetland was the least source of water for irrigation by 36 large-scale farms.

Table 9.6: Source of Water for Irrigation by Large-Scale Farms, 2021/2022 Agricultural Season

Source of Water	Large Scale Farm	
	Number	Percent
Borehole	400	47.06
River/stream	222	26.12
Dam	136	16.00
Well	55	6.47
Dambo/wetland	36	4.24
Total	**850**	**100.00**

9.5 Sources of Energy for Drawing Water for Irrigation

9.5.1 Sources of energy used for drawing water for irrigation by small and medium households

Table 9.7 shows the sources of energy used in drawing water for irrigation by small and medium households in the 2021/2022 agricultural season. A total of 210,133 small and medium households used manual labor for drawing water for irrigation and 1,512 households used solar energy.

Table 9.7: Source of Energy for drawing Water for Irrigation by Small and Medium Scale Households, 2021/2022 Agricultural Season

Source of Energy	Small and Medium Scale Households	
	Number	Percent
Manual	210,133	77.69
Non-Response	36,964	13.67
Diesel/Petrol generator	11,587	4.28
Electricity	7,732	2.86
Other Sources	2,544	0.94
Solar	1,512	0.56
Total	**270,471**	**100**

9.5.2 Sources of energy used for drawing water for irrigation by large-scale farms

Table 9.8 shows the sources of energy used in drawing water for irrigation by large-scale farms in the 2021/2022 agricultural season. The table indicates that 537 large-scale farms used electricity for drawing water for irrigation and 159 farms drew water manually.

Table 9.8: Source of Energy for drawing Water for Irrigation by Large Scale Farms, 2021/2022 Agricultural Season

Source of Energy	Large Scale Farms	
	Number	Percent
Electricity	537	63.18
Manual	159	18.71
Diesel/petrol generator	66	7.76
Solar	46	5.41
Other	36	4.24
Windmill	6	0.71
Total	**850**	**100.00**

CHAPTER 10: LABOUR AND HIRED SERVICES

CHAPTER 10: LABOUR AND HIRED SERVICES

10.1 Introduction

This chapter presents the type, sources of labour, mechanical and draught power used to undertake various farming activities for the largest maize field by small and medium scale farming households during the 2021/2022 agricultural season.

10.2 Sources of Labour

Table 10.1 shows the distribution of households by farm activity and source of labour for the largest maize field during the 2021/2022 agricultural season. Generally, the results show that all the activities from land preparation to shelling and packing maize were mainly carried out using unpaid family labour. The table indicates that 1,320,042 households used unpaid family labour to undertake land preparation and 226,545 households used hired labour to do land preparation.

Table 10.1: Distribution of Households by Farm activity and Source of Labour for the Largest Maize field, 2021/2022 Agricultural Season

Activity	Households that used unpaid Family Labour	Households that used Hired Labour
Land Prep	1,320,042	226,545
Planting	1,459,280	94,412
Basal Fertiliser Application	982,801	57,710
Top Fertiliser Application	978,758	51,958
1st Weeding	1,396,613	192,793
2nd Weeding	616,280	64,124
3rd Weeding	90,397	7,444
Harvesting	1,421,484	175,856
Transporting the crop from the field to homestead	1,249,000	121,022
Shelling and packing	1,330,785	123,864

10.3 Main type of mechanical and draught power used to conduct farm activity

Table 10.2 shows the main type of mechanical and draught power that small and medium households used to undertake land preparation, planting, fertiliser application, weeding and harvesting in the largest maize fields. The table also shows the main type of mechanical and draught power used for transporting maize from the fields to the homestead, shelling and packing.

Most households used animals to prepare land in the largest maize fields. A total of 241,276 households used own animals, 133,070 households used borrowed animals and 117,262 households used hired animals to prepare land for the largest maize field. Only 11,730 household used a tractor to prepare land for the largest maize field. A total of 196,287 households weeded the fields using own animals.

The main type of power used by most households to plant the largest maize fields was animals. A total of 193,932 households used own animals, 98,453 households used borrowed animals and 47,975 households used hired animals to plant the largest maize field. About 2,654 households used a tractor to plant the largest maize field.

The main type of power used by most households to apply fertiliser in the largest maize field was own tractor. A total of 464 households and 215 households used own tractor to apply basal and top-dressing fertilisers, respectively.

The transportation of maize from the field to the homestead was mainly undertaken using animals. A total of 299,710 households used own animals, 192,941 households used borrowed animals and 131,046 households used hired animals to transport maize from the field to the homestead. A total of 2,968 households used own tractor, 3,672 households used borrowed tractor and 25,329 households used hired tractor to transport maize from the field to the homestead.

The main type of mechanical power that 34,676 households used for shelling and packing maize was a hired sheller. A total of 4,299 households used own sheller while 5,234 households used borrowed sheller.

Table 10.2: Distribution of Households by main type of Mechanical/draught Power used, 2021/2022 Agricultural Season

Activity	Own animals	Own sheller	Own tractor	Borrowed animals	Borrowed sheller	Borrowed tractor	Hired animals	Hired sheller	Hired tractor
Land Prep	241,276	-	2,490	133,070	-	2,206	117,262	-	7,034
Planting	193,932	-	1,666	98,453	-	356	47,975	-	632
Basal Fertiliser Application	-	-	464	-	-	-	-	-	-
Top Fertiliser Application	-	-	215	-	-	-	-	-	-
1st Weeding	99,677	-	309	31,808	-	34	6,698	-	-
2nd Weeding	89,128	-	385	40,872	-	-	13,183	-	-
3rd Weeding	7,482	-	215	4,131	-	-	221	-	-
Transporting the crop from the field to homestead	299,710	-	2,968	192,941	-	3,672	131,046	-	25,329
Shelling and Packing	-	4,299	311	-	5,234	439	-	34,676	1,863

CHAPTER 11: FOOD SECURITY SITUATION

CHAPTER 11: FOOD SECURITY SITUATION

11.1 Introduction

This chapter presents the updated national food balance sheet for the 2022/2023 agricultural marketing season in terms of the cereals and tubers, which include maize, paddy rice, wheat, sorghum, millet, sweet potatoes, Irish potatoes and cassava. It provides information on food availability, requirements and balances. The production figures were adjusted based on the Post-Harvest Survey for the 2021/2022 agricultural season. The human staple food consumption requirements were adjusted based on the 2022 Census of population and housing estimates.

11.2 National Food Balance Sheet

Table 11.1 reveals that the country has a net surplus of 1,162,526 Mt of maize, net deficit of 45,000 Mt of /paddy rice, net deficit of 94,398 Mt of wheat for the 2022/2023 agricultural marketing season. In addition, the country has a net deficit of 293,038 Mt of cassava flour. Overall, the National Food Balance sheet reveals that the country is food secure with a surplus of 753,997 Mt of maize equivalent.

Table 11.1: National (CEREALS AND TUBERS)Food Balance for Zambia for the 2022/2023 agricultural marketing season based on the 2021/2022 MoA/ZamStat Post Harvest Survey and MoA/ZamStat/Private Sector Utilization Estimates (Mt)

			Maize	Paddy Rice	Wheat	Sorghum & Millet	Sweet and Irish potatoes	Cassava flour	Total (maize equivalent)
A. Availability:									
	(i) Opening stocks (1st May 2022)	1/	1,503,432	1,631	84,431	1,612	0	0	1,589,788
	(ii) Total production (2021/22)	2/	2,653,805	62,918	278,433	46,146	206,531	828,903	3,868,793
	Total availability		4,157,237	64,549	362,864	47,758	206,531	828,903	5,458,581
B. Requirements:									
	(i) Staple food requirements:								
	Human consumption	3/	1,756,839	100,688	443,340	42,196	196,204	1,080,495	3,397,253
	Strategic Reserve Stocks (net)	4/	500,000	0	0	0	0	0	500,000
	(ii) Industrial requirements:								
	Stockfeed	5/	298,565	0	0	0	0	0	298,565
	Breweries	6/	130,904	0	0	0	0	0	130,904
	Grain retained for other uses	7/	78,789	5,715	0	3,254	0	0	87,498
	(iii) Losses	8/	79,614	3,146	13,922	2,307	10,327	41,445	140,364
	(iv) Structural cross-border trade	9/	150,000						150,000
	Total requirements		2,994,711	109,549	457,262	47,758	206,531	1,121,940	4,704,584
C.	**Surplus/deficit (A-B)**	**10/**	**1,162,526**	**-45,000**	**-94,398**	**0**	**0**	**-293,038**	**753,997**
D.	**Potential Commercial exports**	**11/**	**-1,162,526**	**45,000**	**94,398**	**0**	**0**	**0**	**0**
E.	**Food aid import requirements**	**12/**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Notes:

1/ Stocks held by commodity traders, millers, brewers, FRA, DMMU and commercial and small scale farmers as at 1st May 2022

2/ Production estimates by MoA/ZamStat. Cassava production is based on the total area under cassava, using an annual yield figure of 11.7 tonnes per hectare (MAFF Root and Tuber Improvement Programme, 1996). A flour extraction rate of 25% is used.

3/ Human staple food consumption represents 70% (1,470 kCal/person/day, ZAMSTAT) of total diet (2,100 kCal/person/day, National Food and Nutrition Commission), for the national population of 19.3 million people (based on ZamStat Census projections and 2022 Census with 2022 and 2023 average population used). The food balance shows an overall surplus of staple foods. Food prices may affect the level of food consumption.

4/ National strategic requirements expected to be carried over into the next season by FRA. (this amount of 500,000 Mt includes equivalent to 4 months cover)

5/ Estimated requirements by major stock feed producers.

6/ Estimated requirements by industrial breweries.

7/ Estimated retention of grain for other uses by smallholders.

8/ Post-harvest losses are estimated at 3% for grains, sweet potatoes and cassava, in line with estimates from other SADC countries.

9/ Structural exports represent cross-border trade, mostly to the DRC, that occurs on a continuing basis and that is likely to occur during the 2022/23 marketing season. It does not include Formal trade.

10/ Expected surpluses or deficits that arise after meeting minimum overall staple human consumption requirements as well as industrial requirements. The total surplus/deficit is expressed as maize equivalent using energy values. The rice deficit is based on a 3 year rolling average of what is known to be imported each year, as indicated under D.

11/ Commercial imports/exports represent expected regional and international trade by the private sector. For cassava, the surplus represents cassava that is still in the ground and may not necessarily be harvested

12/ Total estimated requirement for food relief among vulnerable groups, to be imported. This could be met with maize or other grains.

CHAPTER 12: ANNEXES

Annex 1: Crop Forecasting and Post-Harvest Data, 2021/2022 Agricultural Season

Table 12.1 Area Planted, Production and Yields for various Crops, 2021/2022 Agricultural Season

Crop	Planted (Ha)			Production (Mt)			Yield Mt/Ha)		
	Expected	Actual	% Change	Expected	Actual	% Change	Expected	Actual	% Change
Maize	1,507,441	1,564,349	3.8	2,706,243	2,653,805	-1.9	1.80	1.70	-5.5
Sorghum	30,136	44,460	47.5	14,843	14,184	-4.4	0.49	0.32	-35.2
Rice	46,971	67,601	43.9	62,280	62,918	1	1.33	0.93	-29.8
Millet	39,095	57,556	47.2	24,224	31,962	31.9	0.62	0.56	-10.4
Sunflower	217,913	273,776	25.6	80,164	82,861	3.4	0.37	0.30	-17.7
Groundnuts	295,203	348,980	18.2	190,150	180,256	-5.2	0.64	0.52	-19.8
Soya beans	424,440	436,277	2.8	475,353	438,679	-7.7	1.12	1.01	-10.2
Seed cotton	31,771	37,229	17.2	22,752	19,375	-14.8	0.72	0.52	-27.3
Irish potato	2,940	4,018	36.7	52,372	43,917	-16.1	17.81	10.93	-38.6
Virginia Tobacco	8,828	8,749	-0.9	16,428	16,447	0.1	1.86	1.88	1.0
Burley tobacco	5,664	5,303	-6.4	6,717	7,893	17.5	1.19	1.49	25.5
Mixed beans	104,822	121,969	16.4	60,262	56,683	-5.9	0.57	0.46	-19.2
Bambara nuts	7,443	12,647	69.9	5,829	10,167	74.4	0.78	0.80	2.7
Cowpeas	22,056	36,621	66	8,138	10,638	30.7	0.37	0.29	-21.3
Sweet potatoes	48,298	76,945	59.3	132,442	162,614	22.8	2.74	2.11	-22.9
Cassava	298,940	283,386	-5.2	3,497,601	3,315,611	-5.2	11.7	11.7	0
Wheat	33,568	29,329	-12.6	234,925	278,433	18.5	7.00	9.46	35.2
Barley	1,751	2,531	44.5	14,201	19,759	39.1	8.1	7.81	-3.7

Table 12.2: Hectares Planted, Hectares harvested, Production (Mt), yield (Mt/Ha), Sales (Mt), Basal dressing Fertiliser (Mt), and Top-dressing Fertiliser (Mt) for various Crops by District, 2021/2022 Agricultural Season

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
Maize	Central	Chibombo	68,993	59,367	104,305	1.51	46,128	7,517	7,666
		Kabwe	7,028	6,517	20,245	2.88	8,526	1,070	1,068
		Kapiri Mposhi	58,645	55,577	143,113	2.44	84,764	6,467	6,904
		Mkushi	25,515	22,987	66,933	2.62	29,557	4,020	3,971
		Mumbwa	55,618	51,122	90,633	1.63	35,622	3,794	3,839
		Serenje	21,752	21,084	47,665	2.19	23,191	3,194	3,093
		Total	**237,552**	**216,652**	**472,894**	**1.99**	**227,788**	**26,061**	**26,542**
	Copperbelt	Chililabombwe	1,086	1,079	2,545	2.34	1,211	176	177
		Chingola	3,221	3,150	8,913	2.77	3,549	624	610
		Kalulushi	2,906	2,788	6,494	2.23	2,659	423	409
		Kitwe	1,826	1,786	5,148	2.82	2,554	341	336
		Luanshya	1,868	1,771	5,062	2.71	1,622	266	279
		Lufwanyama	20,669	20,182	48,129	2.33	25,892	1,814	1,841
		Masaiti	16,642	15,872	39,192	2.36	17,350	2,303	2,352
		Mpongwe	28,371	26,529	65,463	2.31	40,949	3,445	3,740
		Mufulira	1,414	1,401	3,263	2.31	1,330	243	231
		Ndola	1,979	1,868	4,303	2.17	1,314	271	283
		Total	**79,982**	**76,427**	**188,513**	**2.36**	**98,429**	**9,905**	**10,258**
	Eastern	Chadiza	18,759	18,372	50,225	2.68	14,448	2,538	2,600
		Chipata	59,089	56,319	107,819	1.82	22,638	6,285	5,930
		Katete	42,000	37,794	53,612	1.28	7,935	3,494	2,823
		Lundazi	57,110	54,853	108,102	1.89	24,621	5,892	5,765
		Mambwe	13,223	11,875	12,852	0.97	1,655	675	646
		Nyimba	19,844	19,120	29,383	1.48	9,555	1,283	1,263
		Petauke	70,153	67,933	122,674	1.75	57,347	5,025	4,869
		Total	**280,178**	**266,267**	**484,667**	**1.73**	**138,199**	**25,192**	**23,897**
	Luapula	Chienge	7,092	6,607	14,226	2.01	6,784	874	853
		Kawambwa	14,436	13,530	43,708	3.03	25,932	2,535	2,573
		Mansa	12,016	11,264	28,180	2.35	15,248	2,102	2,100
		Milenge	3,490	3,255	8,492	2.43	3,829	533	499
		Mwense	7,339	7,003	18,142	2.47	6,724	1,266	1,219
		Nchelenge	8,150	7,808	19,174	2.35	9,962	1,116	1,116
		Samfya	10,185	9,926	24,643	2.42	11,329	1,785	1,745
		Total	**62,708**	**59,394**	**156,565**	**2.50**	**79,807**	**10,211**	**10,106**
	Lusaka	Chongwe	35,539	33,123	69,516	1.96	33,397	4,276	4,272
		Kafue	27,401	25,503	67,171	2.45	30,330	3,426	3,482
		Luangwa	2,986	1,726	1,711	0.57	82	144	139
		Lusaka	47	42	112	2.38	14	10	10
		Total	**65,973**	**60,394**	**138,509**	**2.10**	**63,822**	**7,857**	**7,904**
	Muchinga	Chama	13,847	12,034	21,586	1.56	2,955	1,004	942
		Chinsali	13,491	11,424	24,614	1.82	5,466	2,061	1,977
		Isoka	8,280	7,692	16,128	1.95	7,684	1,326	1,219
		Mafinga	11,276	11,068	27,451	2.43	13,987	1,829	1,868
		Mpika	25,978	25,109	66,545	2.56	21,707	3,786	3,449
		Nakonde	10,545	10,294	22,673	2.15	8,268	1,470	1,513
		Total	**83,417**	**77,621**	**178,997**	**2.15**	**60,067**	**11,475**	**10,968**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Northern	Chilubi	2,431	1,992	4,304	1.77	1,558	376	333
		Kaputa	6,808	5,954	13,797	2.03	4,920	988	939
		Kasama	12,517	12,067	34,386	2.75	15,251	2,421	2,405
		Luwingu	9,119	8,693	24,290	2.66	13,849	1,599	1,584
		Mbala	63,557	60,406	108,901	1.71	48,930	6,567	6,398
		Mporokoso	11,731	11,343	32,129	2.74	10,337	1,952	1,867
		Mpulungu	9,876	9,826	23,984	2.43	11,186	1,517	1,516
		Mungwi	19,339	17,842	43,195	2.23	20,302	3,207	3,156
		Total	**135,378**	**128,124**	**284,986**	**2.11**	**126,333**	**18,627**	**18,197**
	North-Western	Chavuma	1,864	1,828	4,750	2.55	1,938	348	339
		Ikelenge	1,218	1,207	2,747	2.26	1,299	242	240
		Kabompo	11,829	10,103	32,093	2.71	14,898	1,450	1,497
		Kasempa	14,508	13,788	33,931	2.34	18,215	1,573	1,537
		Mufumbwe	16,723	15,972	38,306	2.29	23,864	1,499	1,480
		Mwinilunga	15,352	14,667	54,067	3.52	36,718	2,706	2,639
		Solwezi	21,993	19,911	44,787	2.04	17,395	1,801	1,765
		Zambezi	6,909	6,369	9,355	1.35	2,359	663	572
		Total	**90,395**	**83,846**	**220,036**	**2.43**	**116,687**	**10,282**	**10,068**
	Southern	Choma	56,769	42,409	65,648	1.16	18,480	4,983	4,667
		Gwembe	19,341	16,410	14,881	0.77	3,388	1,161	1,236
		Itezhi-tezhi	23,424	19,136	38,999	1.66	22,675	1,366	1,320
		Kalomo	125,040	89,721	113,678	0.91	37,353	7,674	7,513
		Kazungula	44,066	31,622	35,202	0.80	11,331	1,747	1,751
		Livingstone	526	443	960	1.83	550	59	62
		Mazabuka	22,270	14,266	36,333	1.63	9,704	2,320	2,500
		Monze	47,268	30,763	66,136	1.40	14,404	4,152	4,401
		Namwala	38,813	25,878	32,634	0.84	7,885	1,712	1,701
		Siavonga	10,855	6,717	11,315	1.04	2,179	623	620
		Sinazongwe	18,004	15,539	14,147	0.79	1,268	849	960
		Total	**406,376**	**292,905**	**429,933**	**1.06**	**129,220**	**26,645**	**26,731**
	Western	Kalabo	11,087	7,954	6,830	0.62	479	117	61
		Kaoma	24,892	23,677	34,440	1.38	10,923	1,866	1,862
		Lukulu	8,441	8,070	8,701	1.03	2,256	338	280
		Mongu	10,182	8,636	9,090	0.89	622	81	68
		Senanga	23,260	22,119	10,020	0.43	205	17	15
		Sesheke	15,318	13,447	16,742	1.09	2,054	202	143
		Shangombo	29,210	22,030	12,882	0.44	1,363	65	49
		Total	**122,389**	**105,933**	**98,705**	**0.81**	**17,902**	**2,686**	**2,479**
Sorghum	Central	Chibombo	38	38	2	0.05	-	-	-
		Kabwe	11	11	44	4.00	9	1	1
		Kapiri Mposhi	290	207	187	0.64	25	-	-
		Mkushi	296	296	118	0.40	16	-	-
		Serenje	350	350	156	0.45	-	-	-
		Total	**984**	**901**	**506**	**0.51**	**51**	**1**	**1**
	Copperbelt	Kalulushi	6	6	1	0.17	-	1	-
		Lufwanyama	89	89	103	1.16	33	-	-
		Masaiti	21	21	11	0.52	-	-	-
		Mpongwe	130	130	258	1.98	-	-	27
		Mufulira	1	1	1	1.00	-	-	-
		Ndola	26	26	10	0.38	4	-	-
		Total	**274**	**274**	**384**	**1.40**	**37**	**2**	**27**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Eastern	Chipata	16	14	36	2.25	-	-	-
		Mambwe	48	48	25	0.52	6	-	-
		Nyimba	77	77	35	0.45	-	-	-
		Petauke	2	2	9	4.50	-	-	-
		Total	**143**	**141**	**104**	**0.73**	**6**	**-**	**-**
	Luapula	Kawambwa	3	3	2	0.67	-	-	-
		Mansa	26	19	60	2.31	4	1	-
		Milenge	85	58	41	0.48	-	-	-
		Nchelenge	71	70	22	0.31	2	10	3
		Samfya	-	-	1		-	-	-
		Total	**186**	**149**	**126**	**0.68**	**7**	**11**	**4**
	Lusaka	Chongwe	144	144	159	1.10	39	22	11
		Kafue	44	29	26	0.59	20	4	-
		Luangwa	97	48	3	0.03	-	-	-
		Total	**285**	**221**	**189**	**0.66**	**59**	**26**	**11**
	Muchinga	Chama	783	774	691	0.88	-	-	-
		Chinsali	205	179	121	0.59	-	-	-
		Isoka	42	42	31	0.74	9	5	2
		Mafinga	117	117	80	0.68	40	-	-
		Mpika	192	192	246	1.28	.	6	12
		Total	**1,340**	**1,305**	**1,168**	**0.87**	**49**	**11**	**15**
	Northern	Chilubi	11	11	6	0.55	4	-	-
		Kasama	65	65	73	1.12	-	-	-
		Luwingu	7	7	-	-	-	-	-
		Mbala	97	97	46	0.47	35	-	-
		Mporokoso	97	97	79	0.81	-	6	-
		Mpulungu	17	17	23	1.35	-	-	-
		Mungwi	458	458	137	0.30	-	-	-
		Total	**752**	**745**	**365**	**0.49**	**39**	**6**	**-**
	North-Western	Kasempa	329	329	374	1.14	179	-	-
		Mwinilunga	3	3	4	1.33	-	-	-
		Zambezi	40	40	37	0.93	-	-	-
		Total	**372**	**372**	**415**	**1.12**	**179**	**-**	**-**
	Southern	Choma	164	35	19	0.12	-	-	-
		Gwembe	2,036	1,733	542	0.27	91	-	-
		Itezhi-tezhi	475	430	65	0.14	-	-	-
		Kalomo	4,654	3,396	573	0.12	23	-	-
		Kazungula	3,053	2,256	547	0.18	8	-	-
		Livingstone	33	24	5	0.15	-	-	-
		Mazabuka	106	26	39	0.37	-	-	-
		Monze	81	81	27	0.33	-	-	-
		Namwala	89	45	8	0.09	-	-	-
		Siavonga	12,515	10,569	4,931	0.39	969	25	17
		Sinazongwe	3,662	3,178	982	0.27	9	-	-
		Total	**26,869**	**21,772**	**7,736**	**0.29**	**1,100**	**25**	**17**
	Western	Kalabo	2,591	2,262	896	0.35	41	-	-
		Kaoma	622	622	280	0.45	9	-	-
		Lukulu	91	70	28	0.31	3	-	-
		Mongu	76	76	29	0.38	-	-	-
		Senanga	869	823	195	0.22	6	-	-
		Sesheke	960	863	332	0.35	14	-	-
		Shangombo	8,045	5,328	1,430	0.18	275	-	-
		Total	**13,255**	**10,045**	**3,191**	**0.24**	**349**	**-**	**-**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
Rice	Central	Serenje	1,528	1,528	2,729	1.79	2,210	290	256
		Total	**1,528**	**1,528**	**2,729**	**1.79**	**2,210**	**290**	**256**
	Copperbelt	Mpongwe	6	2	13	2.17	-	-	-
		Total	**6**	**2**	**13**	**2.17**	**-**	**-**	**-**
	Eastern	Chadiza	78	78	56	0.72	.	-	-
		Chipata	322	322	472	1.47	233	2	2
		Katete	2	2	1	0.50	.	.	.
		Lundazi	1,196	1,196	1,390	1.16	376	.	.
		Mambwe	1,448	1,305	2,490	1.72	644	.	.
		Nyimba	285	285	147	0.52	-	.	.
		Petauke	47	47	61	1.30	27	.	.
		Total	**3,378**	**3,236**	**4,617**	**1.37**	**1,279**	**2**	**2**
	Luapula	Chienge	589	575	1,304	2.21	810	.	.
		Kawambwa	158	158	165	1.04	67	.	.
		Mansa	792	761	1,210	1.53	486	23	17
		Milenge	14	10	42	3.00	34	.	.
		Mwense	986	975	2,194	2.23	1,246	29	3
		Nchelenge	8	8	17	2.13	.	.	.
		Samfya	41	41	117	2.85	63	.	.
		Total	**2,588**	**2,530**	**5,049**	**1.95**	**2,705**	**52**	**20**
	Muchinga	Chama	4,524	3,972	6,129	1.35	3,251	33	35
		Chinsali	3,737	2,942	2,460	0.66	977	13	6
		Isoka	687	624	603	0.88	165	16	13
		Mafinga	88	88	147	1.67	83	.	.
		Mpika	59	53	42	0.71	.	.	.
		Nakonde	724	724	355	0.49	33	8	.
		Total	**9,820**	**8,404**	**9,737**	**0.99**	**4,509**	**70**	**54**
	Northern	Chilubi	93	93	85	0.91	21	.	.
		Kaputa	2,125	1,789	1,675	0.79	592	.	.
		Kasama	530	495	445	0.84	141	5	3
		Mporokoso	16	16	19	1.19	.	.	.
		Mpulungu	115	115	79	0.69	40	.	.
		Mungwi	15,971	13,517	5,034	0.32	2,729	292	28
		Total	**18,849**	**16,024**	**7,337**	**0.39**	**3,523**	**297**	**31**
	North-Western	Chavuma	319	306	556	1.74	147	10	1
		Ikelenge	55	55	62	1.13	13	.	.
		Mwinilunga	1,020	1,014	1,633	1.60	461	.	.
		Solwezi	222	222	324	1.46	152	.	.
		Zambezi	293	291	795	2.71	32	51	51
		Total	**1,909**	**1,889**	**3,369**	**1.76**	**806**	**61**	**52**
	Western	Kalabo	12,555	10,275	13,991	1.11	6,826	.	.
		Kaoma	1,269	1,185	1,402	1.10	455	2	1
		Lukulu	877	762	844	0.96	401	.	.
		Mongu	6,494	5,588	8,369	1.29	2,601	6	7
		Senanga	7,583	7,491	4,518	0.60	1,889	.	.
		Sesheke	725	668	896	1.24	293	.	.
		Shangombo	19	19	47	2.47	35	.	.
		Total	**29,522**	**25,989**	**30,066**	**1.02**	**12,501**	**8**	**8**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
Millet	Central	Kapiri Mposhi	87	87	25	0.29	.	.	.
		Mkushi	1,253	1,253	278	0.22	55	.	.
		Mumbwa	5	4	4	0.80	3	-	-
		Serenje	1,013	1,013	761	0.75	74	21	21
		Total	**2,357**	**2,357**	**1,068**	**0.45**	**133**	**21**	**21**
	Copperbelt	Chingola	18	18	9	0.50	.	.	.
		Luanshya	7	7	6	0.86	.	.	.
		Masaiti	20	20	10	0.50	.	.	.
		Mpongwe	4	4	1	0.25	.	.	.
		Ndola	2	2	1	0.50	-	.	.
		Total	**51**	**51**	**27**	**0.53**	**-**	**.**	**.**
	Eastern	Chadiza	39	39	7	0.18	.	.	.
		Katete	72	72	74	1.03	4	.	.
		Lundazi	789	789	517	0.66	101	66	66
		Total	**900**	**900**	**599**	**0.67**	**105**	**66**	**66**
	Luapula	Kawambwa	596	572	641	1.08	181	.	.
		Mansa	65	65	36	0.55	5	.	.
		Mwense	40	40	41	1.03	15	.	.
		Total	**702**	**677**	**717**	**1.02**	**201**	**.**	**.**
	Lusaka	Chongwe	40	40	24	0.60	-	-	-
		Kafue	2	2	.		.	.	.
		Total	**42**	**42**	**24**	**0.57**	**-**	**-**	**-**
	Muchinga	Chama	147	147	121	0.82	5	.	.
		Chinsali	3,036	2,976	2,668	0.88	293	1	3
		Isoka	616	601	425	0.69	3	7	7
		Mafinga	496	496	368	0.74	47	.	.
		Mpika	2,874	2,874	2,632	0.92	232	.	.
		Nakonde	1,982	1,966	1,541	0.78	549	7	10
		Total	**9,150**	**9,059**	**7,756**	**0.85**	**1,129**	**15**	**19**
	Northern	Chilubi	49	49	36	0.73	.	.	.
		Kaputa	526	526	418	0.79	95	.	.
		Kasama	2,602	2,600	1,885	0.72	395	1	1
		Luwingu	567	567	313	0.55	96	-	.
		Mbala	4,211	4,211	2,646	0.63	914	4	4
		Mporokoso	3,839	3,810	3,224	0.84	1,192	1	.
		Mpulungu	825	825	678	0.82	306	.	.
		Mungwi	4,955	4,940	4,574	0.92	1,427	19	9
		Total	**17,575**	**17,529**	**13,773**	**0.78**	**4,426**	**25**	**14**
	North-Western	Kabompo	6	6	6	1.00	-	.	.
		Kasempa	163	163	196	1.20	15	.	.
		Solwezi	98	98	129	1.32	39	.	.
		Zambezi	15	15	29	1.93	.	.	.
		Total	**282**	**282**	**360**	**1.28**	**54**	**.**	**.**
	Southern	Gwembe	1,149	930	534	0.46	.	.	.
		Kalomo	397	332	314	0.79	55	.	.
		Kazungula	391	184	257	0.66	31	.	.
		Livingstone	2	1	1	0.50	.	.	.
		Mazabuka	15	2	15	1.00	.	.	.
		Siavonga	1,723	1,077	530	0.31	21	.	.
		Sinazongwe	497	497	180	0.36	.	.	.
		Total	**4,173**	**3,024**	**1,832**	**0.44**	**107**	**.**	**.**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Western	Kalabo	5,405	4,582	1,461	0.27	55	.	.
		Kaoma	252	220	123	0.49	11	.	.
		Lukulu	1,141	1,065	655	0.57	62	.	3
		Mongu	767	719	152	0.20	10	.	.
		Senanga	3,565	3,275	1,045	0.29	30	.	.
		Sesheke	1,545	1,388	667	0.43	9	.	.
		Shangombo	9,649	7,382	1,705	0.18	20	.	.
		Total	**22,324**	**18,631**	**5,806**	**0.26**	**198**	**.**	**3**
Sunflower	Central	Chibombo	9,732	8,823	3,742	0.38	716	3	-
		Kabwe	217	178	176	0.81	45	26	23
		Kapiri Mposhi	6,995	6,687	1,641	0.23	262	1	-
		Mkushi	1,091	985	581	0.53	228	1	-
		Mumbwa	9,114	8,723	3,348	0.37	842	2	-
		Serenje	331	331	117	0.35	47	2	-
		Total	**27,480**	**25,728**	**9,605**	**0.35**	**2,140**	**34**	**23**
	Copperbelt	Chililabombwe	12	12	9	0.75	6	2	.
		Chingola	10	10	9	0.90	1	1	1
		Kalulushi	55	49	23	0.42	13	-	-
		Kitwe	10	10	1	0.10	-	-	-
		Luanshya	33	33	12	0.36	-	.	.
		Lufwanyama	114	96	83	0.73	4	-	-
		Masaiti	261	248	153	0.59	50	.	3
		Mpongwe	574	571	196	0.34	74	5	5
		Mufulira	3	3	1	0.33	-	-	.
		Ndola	9	9	4	0.44	.	.	.
		Total	**1,080**	**1,041**	**491**	**0.45**	**148**	**9**	**9**
	Eastern	Chadiza	6,178	6,113	3,062	0.50	1,241	-	-
		Chipata	15,294	14,750	6,927	0.45	1,335	-	-
		Katete	15,042	14,214	6,297	0.42	2,103	-	24
		Lundazi	25,304	24,314	11,761	0.46	3,518	3	3
		Mambwe	2,618	2,436	1,048	0.40	116	1	.
		Nyimba	6,822	6,534	3,927	0.58	1,551	.	.
		Petauke	26,161	24,683	11,053	0.42	4,755	-	-
		Total	**97,419**	**93,044**	**44,075**	**0.45**	**14,618**	**4**	**27**
	Luapula	Kawambwa	104	99	42	0.40	19	6	.
		Mansa	16	16	4	0.25	3	-	-
		Milenge	1	1	3	3.00	-	-	-
		Samfya	168	168	54	0.32	20	-	-
		Total	**289**	**284**	**103**	**0.36**	**42**	**6**	**-**
	Lusaka	Chongwe	2,035	1,967	1,182	0.58	517	9	-
		Kafue	890	890	630	0.71	58	29	26
		Luangwa	4	3	1	0.25	.	.	.
		Total	**2,929**	**2,859**	**1,813**	**0.62**	**575**	**37**	**26**
	Muchinga	Chama	379	337	119	0.31	.	.	4
		Chinsali	142	142	51	0.36	18	-	-
		Isoka	605	565	215	0.36	57	9	4
		Mafinga	48	48	29	0.60	.	.	.
		Mpika	1,517	1,516	1,266	0.83	225	-	-
		Nakonde	349	349	155	0.44	-	24	24
		Total	**3,039**	**2,956**	**1,835**	**0.60**	**301**	**33**	**32**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Northern	Kasama	155	155	107	0.69	67	15	15
		Luwingu	50	40	2	0.04	.	.	.
		Mbala	5,215	4,756	1,404	0.27	605	17	6
		Mporokoso	365	314	134	0.37	32	1	-
		Mpulungu	138	138	65	0.47	7	1	.
		Mungwi	248	222	109	0.44	38	.	.
		Total	**6,171**	**5,625**	**1,821**	**0.30**	**748**	**34**	**21**
	North-Western	Chavuma	1	1	1	1.00	.	.	.
		Ikelenge	3	3	4	1.33	.	.	.
		Kasempa	9	9	16	1.78	-	-	-
		Mufumbwe	8	8	5	0.63	.	.	.
		Mwinilunga	8	8	23	2.88	-	-	-
		Solwezi	11	11	10	0.91	-	-	-
		Total	**39**	**39**	**58**	**1.49**	**-**	**-**	**-**
	Southern	Choma	14,066	9,539	2,940	0.21	681	5	9
		Gwembe	1,643	1,385	436	0.27	125	.	.
		Itezhi-tezhi	8,871	7,354	1,606	0.18	543	.	.
		Kalomo	80,361	65,513	10,212	0.13	3,021	37	-
		Kazungula	11,032	8,443	2,770	0.25	794	9	-
		Livingstone	44	40	6	0.14	.	.	.
		Mazabuka	4,399	2,621	1,432	0.33	390	-	-
		Monze	8,367	6,299	2,459	0.29	411	3	-
		Namwala	4,499	3,759	835	0.19	101	.	.
		Siavonga	658	429	81	0.12	9	.	.
		Sinazongwe	1,302	1,269	233	0.18	58	.	.
		Total	**135,244**	**106,652**	**23,010**	**0.17**	**6,133**	**54**	**9**
	Western	Kaoma	65	65	47	0.72	1	-	-
		Lukulu	6	6	1	0.17	.	.	.
		Sesheke	16	16	4	0.25	.	.	.
		Total	**86**	**86**	**52**	**0.60**	**1**	**-**	**-**
Groundnuts	Central	Chibombo	17,214	16,489	5,441	0.32	1,232	82	25
		Kabwe	501	434	312	0.62	89	1	-
		Kapiri Mposhi	15,244	14,724	12,084	0.79	5,706	25	1
		Mkushi	2,714	2,399	2,154	0.79	455	12	3
		Mumbwa	11,251	11,127	7,705	0.68	1,263	-	-
		Serenje	2,579	2,487	1,665	0.65	442	22	.
		Total	**49,503**	**47,660**	**29,361**	**0.59**	**9,188**	**142**	**28**
	Copperbelt	Chililabombwe	120	113	105	0.88	30	2	2
		Chingola	474	468	510	1.08	126	6	.
		Kalulushi	1,028	909	580	0.56	84	.	.
		Kitwe	355	346	255	0.72	30	2	2
		Luanshya	438	433	260	0.59	50	.	.
		Lufwanyama	3,289	2,871	2,151	0.65	822	7	-
		Masaiti	1,734	1,719	640	0.37	209	.	.
		Mpongwe	6,044	5,830	3,373	0.56	1,442	9	-
		Mufulira	338	333	244	0.72	48	-	-
		Ndola	396	331	169	0.43	37	12	10
		Total	**14,216**	**13,354**	**8,287**	**0.58**	**2,878**	**39**	**14**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Eastern	Chadiza	3,795	3,675	1,346	0.35	365	-	-
		Chipata	19,305	18,403	10,389	0.54	2,525	-	-
		Katete	6,881	6,156	2,610	0.38	533	5	5
		Lundazi	28,108	27,459	14,050	0.50	5,108	-	-
		Mambwe	2,672	2,407	1,352	0.51	248	.	18
		Nyimba	5,731	5,466	2,957	0.52	1,102	-	-
		Petauke	16,186	15,887	5,774	0.36	1,076	-	-
		Total	**82,678**	**79,454**	**38,478**	**0.47**	**10,956**	**5**	**23**
	Luapula	Chienge	2,319	2,210	1,283	0.55	517	.	.
		Kawambwa	4,229	3,962	1,634	0.39	286	14	-
		Mansa	2,479	2,249	885	0.36	264	1	-
		Milenge	1,377	1,292	580	0.42	145	-	-
		Mwense	3,271	3,163	1,586	0.48	364	-	-
		Nchelenge	3,361	3,291	2,146	0.64	727	1	1
		Samfya	3,943	3,727	1,257	0.32	176	26	26
		Total	20,979	19,895	9,371	0.45	2,478	42	27
	Lusaka	Chongwe	4,460	4,050	2,292	0.51	334	1	.
		Kafue	2,413	2,295	1,159	0.48	136	40	38
		Luangwa	268	131	18	0.07	1	.	.
		Lusaka	3	2	1	0.33	-	-	.
		Total	**7,144**	**6,478**	**3,469**	**0.49**	**471**	**41**	**38**
	Muchinga	Chama	6,898	6,541	5,460	0.79	1,557	.	.
		Chinsali	3,813	3,460	2,144	0.56	328	.	.
		Isoka	1,346	1,047	470	0.35	38	26	25
		Mafinga	3,321	3,249	1,335	0.40	152	.	.
		Mpika	6,740	6,740	6,119	0.91	583	-	-
		Nakonde	689	678	335	0.49	52	3	.
		Total	**22,807**	**21,714**	**15,863**	**0.70**	**2,710**	**29**	**25**
	Northern	Chilubi	511	397	146	0.29	10	.	.
		Kaputa	2,087	1,893	817	0.39	81	.	.
		Kasama	3,533	3,309	1,735	0.49	170	.	.
		Luwingu	8,004	7,707	4,450	0.56	907	19	19
		Mbala	6,296	6,009	2,415	0.38	313	4	-
		Mporokoso	3,801	3,671	1,417	0.37	103	28	28
		Mpulungu	1,481	1,471	525	0.35	39	.	.
		Mungwi	8,075	7,811	3,545	0.44	718	4	.
		Total	**33,787**	**32,267**	**15,050**	**0.45**	**2,341**	**56**	**47**
	North-Western	Chavuma	102	102	68	0.67	6	.	.
		Ikelenge	47	47	21	0.45	13	.	.
		Kabompo	5,672	5,500	5,298	0.93	2,414	7	6
		Kasempa	1,192	1,128	502	0.42	217	12	-
		Mufumbwe	8,456	8,193	5,786	0.68	2,940	.	.
		Mwinilunga	1,526	1,526	944	0.62	427	12	.
		Solwezi	3,811	3,547	3,493	0.92	1,246	16	10
		Zambezi	2,000	1,942	1,358	0.68	293	.	.
		Total	**22,805**	**21,985**	**17,470**	**0.77**	**7,554**	**47**	**17**
	Southern	Choma	11,789	9,692	5,277	0.45	579	-	-
		Gwembe	2,117	2,047	531	0.25	114	.	.
		Itezhi-tezhi	2,868	2,691	1,394	0.49	242	.	.
		Kalomo	17,299	15,823	6,677	0.39	1,290	10	7
		Kazungula	9,940	8,123	4,349	0.44	840	19	18
		Livingstone	38	32	37	0.97	-	-	-

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
		Mazabuka	4,948	2,875	2,757	0.56	133	.	.
		Monze	13,490	9,899	9,376	0.70	1,607	3	3
		Namwala	12,209	9,531	4,294	0.35	866	.	.
		Siavonga	452	336	155	0.34	28	.	.
		Sinazongwe	410	410	133	0.32	13	.	.
		Total	**75,560**	**61,459**	**34,979**	**0.46**	**5,712**	**33**	**29**
	Western	Kalabo	463	428	189	0.41	88	.	.
		Kaoma	6,492	6,327	4,727	0.73	2,090	-	-
		Lukulu	1,092	1,063	512	0.47	82	.	.
		Mongu	404	354	148	0.37	52	.	.
		Senanga	391	391	83	0.21	.	.	.
		Sesheke	5,678	5,404	1,646	0.29	202	.	.
		Shangombo	4,982	4,175	624	0.13	104	.	.
		Total	**19,501**	**18,142**	**7,928**	**0.41**	**2,618**	**-**	**-**
Soya beans	Central	Chibombo	31,634	29,798	30,706	0.97	18,754	899	121
		Kabwe	5,633	5,197	10,033	1.78	7,060	365	94
		Kapiri Mposhi	38,913	37,935	31,859	0.82	23,810	95	21
		Mkushi	32,990	31,128	50,097	1.52	42,239	1,240	1,118
		Mumbwa	39,391	38,345	36,810	0.93	22,653	755	318
		Serenje	16,061	16,017	20,152	1.25	16,629	926	9
		Ndola	133	133	250	1.88	250	-	-
		Total	**164,756**	**158,554**	**179,906**	**1.09**	**131,396**	**4,280**	**1,681**
	Copperbelt	Chililabombwe	44	44	44	1.00	19	4	1
		Chingola	1,237	1,237	3,317	2.68	3,161	28	20
		Kalulushi	238	235	186	0.78	142	10	-
		Kitwe	832	832	1,847	2.22	1,754	43	1
		Luanshya	307	252	175	0.57	62	9	3
		Lufwanyama	2,309	2,245	1,732	0.75	1,091	13	2
		Masaiti	2,399	2,292	2,164	0.90	1,440	87	13
		Mpongwe	23,089	22,623	44,759	1.94	40,590	5,268	320
		Mufulira	29	28	42	1.45	10	2	1
		Ndola	1,221	1,219	3,968	3.25	3,832	23	3
		Total	**31,705**	**31,007**	**58,234**	**1.84**	**52,102**	**5,486**	**365**
	Eastern	Chadiza	17,513	17,381	17,562	1.00	12,957	3	5
		Chipata	46,045	44,626	32,794	0.71	24,791	35	5
		Katete	35,249	32,984	25,853	0.73	20,754	47	22
		Lundazi	39,562	37,357	28,195	0.71	19,388	78	44
		Mambwe	8,749	8,484	7,268	0.83	6,038	17	.
		Nyimba	1,882	1,686	1,603	0.85	1,025	31	-
		Petauke	11,185	11,089	9,333	0.83	7,250	4	-
		Total	**160,186**	**153,608**	**122,606**	**0.77**	**92,203**	**216**	**76**
	Luapula	Chienge	182	151	62	0.34	15	3	.
		Kawambwa	980	955	1,904	1.94	1,678	89	1
		Mansa	512	480	569	1.11	232	50	-
		Milenge	59	59	80	1.36	23	-	-
		Mwense	460	447	314	0.68	147	14	.
		Nchelenge	300	300	204	0.68	142	26	1
		Samfya	732	732	590	0.81	133	38	2
		Total	**3,225**	**3,124**	**3,722**	**1.15**	**2,370**	**221**	**5**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Lusaka	Chongwe	10,241	9,698	14,489	1.41	10,967	438	142
		Kafue	7,390	6,348	9,688	1.31	7,351	657	294
		Luangwa	54	31	4	0.07	-	1	1
		Lusaka	198	198	485	2.45	485	87	-
		Total	**17,883**	**16,276**	**24,667**	**1.38**	**18,802**	**1,183**	**437**
	Muchinga	Chama	254	186	158	0.62	22	.	.
		Chinsali	1,083	989	684	0.63	398	65	29
		Isoka	472	435	168	0.36	17	15	10
		Mafinga	1,843	1,683	1,205	0.65	634	.	.
		Mpika	2,651	2,544	3,054	1.15	1,077	56	10
		Nakonde	510	482	265	0.52	109	15	14
		Total	**6,813**	**6,319**	**5,533**	**0.81**	**2,257**	**150**	**63**
	Northern	Mpongwe	1,045	1,045	2,729	2.61	2,671	123	-
		Chilubi	102	97	99	0.97	83	.	.
		Kaputa	535	533	253	0.47	62	.	.
		Kasama	2,975	2,856	2,015	0.68	933	27	8
		Luwingu	713	621	937	1.31	134	2	-
		Mbala	3,461	3,437	1,308	0.38	646	7	5
		Mporokoso	2,235	2,234	1,756	0.79	987	10	-
		Mpulungu	925	925	513	0.55	314	.	.
		Mungwi	5,410	5,370	3,915	0.72	2,326	136	27
		Total	**17,400**	**17,119**	**13,525**	**0.78**	**8,155**	**305**	**40**
	North-Western	Chavuma	2	2	2	1.00	.	.	.
		Ikelenge	23	23	15	0.65	4	1	.
		Kabompo	93	93	77	0.83	63	13	1
		Kasempa	1,910	1,747	1,309	0.69	739	42	10
		Mufumbwe	1,517	1,517	1,048	0.69	390	36	7
		Mwinilunga	810	810	622	0.77	446	25	4
		Solwezi	1,928	1,890	1,472	0.76	849	15	-
		Zambezi	30	30	11	0.37	2	2	.
		Total	**6,313**	**6,112**	**4,555**	**0.72**	**2,492**	**134**	**21**
	Southern	Choma	2,368	2,057	1,318	0.56	913	3	1
		Gwembe	734	658	321	0.44	125	19	.
		Itezhi-tezhi	1,915	1,756	1,857	0.97	1,492	11	.
		Kalomo	6,657	5,720	5,416	0.81	3,991	27	42
		Kazungula	1,092	1,092	1,112	1.02	457	-	-
		Mazabuka	5,976	5,331	9,999	1.67	8,230	92	35
		Monze	4,960	3,083	1,873	0.38	906	4	1
		Namwala	569	395	252	0.44	128	11	.
		Siavonga	390	332	434	1.11	390	2	2
		Sinazongwe	30	30	15	0.50	.	.	.
		Total	**24,691**	**20,454**	**22,597**	**0.92**	**16,633**	**170**	**80**
	Western	Kaoma	3,000	2,976	3,289	1.10	2,071	217	19
		Mongu	17	17	-	-	.	.	.
		Shangombo	288	281	43	0.15	42	.	.
		Total	**3,305**	**3,258**	**3,332**	**1.01**	**2,113**	**217**	**19**
Seed Cotton	Central	Chibombo	1,878	1,861	876	0.47	773	9	-
		Kabwe	4	4	4	1.00	4	2	-
		Kapiri Mposhi	1,233	740	314	0.25	258	-	-
		Mumbwa	6,575	5,626	3,031	0.46	1,940	-	-
		Total	**9,690**	**8,231**	**4,226**	**0.44**	**2,975**	**12**	**-**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Copperbelt	Lufwanyama	149	149	106	0.71	106	-	.
		Mpongwe	24	24	17	0.71	11	.	.
		Total	**173**	**173**	**123**	**0.71**	**117**	**-**	**.**
	Eastern	Chadiza	26	26	8	0.31	8	.	.
		Chipata	158	150	97	0.61	95	-	.
		Katete	207	207	92	0.44	92	.	.
		Lundazi	707	584	248	0.35	204	.	.
		Mambwe	4,681	4,499	3,208	0.69	1,977	1	.
		Nyimba	689	603	470	0.68	445	-	-
		Petauke	1,545	1,532	916	0.59	674	.	.
		Total	**8,014**	**7,600**	**5,040**	**0.63**	**3,497**	**1**	**-**
	Lusaka	Chongwe	449	434	189	0.42	179	.	.
		Kafue	68	68	35	0.51	35	5	.
		Luangwa	61	25	14	0.23	4	.	.
		Total	**578**	**527**	**238**	**0.41**	**218**	**5**	**.**
	Muchinga	Chama	4,859	4,643	4,606	0.95	3,936	-	-
		Total	**4,859**	**4,643**	**4,606**	**0.95**	**3,936**	**-**	**-**
	Southern	Choma	433	346	72	0.17	38	.	.
		Gwembe	2,216	2,162	471	0.21	387	.	-
		Itezhi-tezhi	835	772	495	0.59	432	.	.
		Kalomo	2,847	2,847	1,005	0.35	810	.	.
		Kazungula	244	244	81	0.33	81	.	.
		Mazabuka	808	258	378	0.47	324	.	.
		Monze	1,033	635	512	0.50	185	.	.
		Namwala	1,019	770	444	0.44	357	-	-
		Siavonga	700	456	527	0.75	527	5	7
		Sinazongwe	3,781	3,721	1,157	0.31	758	28	81
		Total	**13,916**	**12,210**	**5,143**	**0.37**	**3,899**	**33**	**89**
Irish Potatoes	Central	Chibombo	9	9	154	17.11	154	-	-
		Kabwe	241	241	6,471	26.85	6,175	69	42
		Mkushi	200	200	2,660	13.30	2,615	35	35
		Serenje	41	41	196	4.78	168	.	.
		Total	**491**	**491**	**9,480**	**19.31**	**9,112**	**105**	**77**
	Copperbelt	Chingola	7	7	21	3.00	.	.	.
		Kalulushi	4	4	4	1.00	.	1	.
		Kitwe	3	3	11	3.67	.	-	.
		Lufwanyama	61	43	198	3.25	117	4	.
		Mpongwe	81	81	96	1.19	96	.	.
		Mufulira	2	2	4	2.00	4	.	.
		Ndola	7	7	7	1.00	.	-	.
		Total	**166**	**140**	**341**	**2.05**	**217**	**5**	**.**
	Eastern	Chadiza	213	52	193	0.91	53	4	5
		Chipata	336	316	1,071	3.19	297	79	24
		Lundazi	1	1	22	22.00	.	.	.
		Total	**550**	**367**	**1,286**	**2.34**	**350**	**83**	**28**
	Luapula	Mansa	1	1	50	50.00	2	-	-
		Samfya	3	3	150	50.00	-	-	-
		Total	**4**	**4**	**200**	**50.00**	**2**	**-**	**-**
	Lusaka	Chongwe	345	345	16,002	46.38	11,837	111	111
		Kafue	39	39	2,314	59.33	2,314	9	10
		Total	**384**	**384**	**18,317**	**47.70**	**14,152**	**120**	**121**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Muchinga	Chinsali	106	106	126	1.19	77	.	.
		Mpika	81	81	244	3.01	102	-	-
		Total	**187**	**187**	**370**	**1.98**	**179**	**-**	**-**
	Northern	Luwingu	10	10	20	2.00	.	.	.
		Mbala	130	91	4,307	33.13	4,200	1	-
		Mpulungu	7	7	35	5.00	.	.	.
		Mungwi	68	68	52	0.76	.	.	.
		Total	**215**	**91**	**4,415**	**20.53**	**4,200**	**1**	**-**
	North-Western	Kasempa	12	12	64	5.33	64	.	.
		Mwinilunga	9	6	47	5.22	3	.	.
		Solwezi	547	457	2,130	3.89	1,181	11	.
		Total	**568**	**475**	**2,241**	**3.95**	**1,247**	**11**	**.**
	Southern	Choma	142	128	118	0.83	104	6	.
		Itezhi-tezhi	5	5	6	1.20	.	.	.
		Kalomo	269	263	5,479	20.37	3,436	60	52
		Mazabuka	1,033	870	1,661	1.61	843	65	55
		Total	**1,449**	**1,266**	**7,263**	**5.01**	**4,384**	**132**	**107**
	Western	Kaoma	4	4	3	0.75	2	1	1
		Total	**4**	**4**	**3**	**0.75**	**2**	**1**	**1**
Tobacco (Virginia)	Central	Chibombo	168	163	533	3.17	514	26	-
		Kabwe	44	44	132	3.00	39	13	8
		Kapiri Mposhi	192	192	912	4.75	299	72	27
		Mkushi	1,471	1,471	3,488	2.37	2,891	293	110
		Mumbwa	1	1	1	1.00	1	-	-
		Serenje	143	132	239	1.67	212	23	23
		Total	**2,018**	**2,002**	**5,304**	**2.63**	**3,955**	**429**	**169**
	Eastern	Chadiza	623	623	1,050	1.69	950	206	75
		Chipata	1,221	1,219	1,358	1.11	1,055	208	105
		Katete	44	44	32	0.73	30	14	7
		Lundazi	1,778	1,641	2,589	1.46	2,013	403	215
		Mambwe	20	20	13	0.65	10	.	.
		Total	**3,686**	**3,548**	**5,043**	**1.37**	**4,059**	**830**	**401**
	Lusaka	Chongwe	100	100	300	3.00	270	-	-
		Total	100	100	300	3.00	270	-	-
	Northern	Mpulungu	16	16	11	0.69	5	.	.
		Total	**16**	**16**	**11**	**0.69**	**5**	**.**	**.**
	Southern	Choma	850	844	2,659	3.13	1,850	221	98
		Kalomo	1,369	1,065	2,220	1.62	2,189	290	105
		Total	**2,219**	**1,910**	**4,879**	**2.20**	**4,040**	**511**	**204**
	Western	Kaoma	709	662	910	1.28	866	109	81
		Total	**709**	**662**	**910**	**1.28**	**866**	**109**	**81**
Tobacco (Burley)	Central	Chibombo	125	125	675	5.40	675	56	63
		Kabwe	10	10	9	0.90	9	2	2
		Kapiri Mposhi	40	40	24	0.60	24	.	.
		Mkushi	50	50	150	3.00	150	25	-
		Serenje	38	38	61	1.61	61	4	4
		Total	**264**	**264**	**920**	**3.48**	**920**	**87**	**69**
	Eastern	Chadiza	3	3	2	0.67	2	1	1
		Chipata	2,903	2,853	3,823	1.32	3,317	321	293
		Lundazi	587	587	885	1.51	766	136	106
		Petauke	8	8	13	1.63	13	.	.
		Total	**3,502**	**3,451**	**4,723**	**1.35**	**4,098**	**458**	**401**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Luapula	Kawambwa	8	8	3	0.38	1	.	.
		Total	**8**	**8**	**3**	**0.38**	**1**	**.**	**.**
	Muchinga	Chama	20	20	28	1.40	.	6	4
		Chinsali	11	11	-	-	.	4	4
		Isoka	5	5	10	2.00	10	.	.
		Total	**35**	**35**	**38**	**1.09**	**10**	**10**	**8**
	Northern	Mbala	17	17	3	0.18	3	.	.
		Mporokoso	1	1	2	2.00	.	.	.
		Total	**18**	**18**	**5**	**0.28**	**3**	**.**	**.**
	Southern	Kalomo	453	453	673	1.49	621	105	45
		Total	453	453	673	1.49	621	105	45
	Western	Kalabo	6	6	9	1.50	.	.	.
		Kaoma	1,017	918	1,522	1.50	1,288	175	111
		Total	**1,023**	**924**	**1,531**	**1.50**	**1,288**	**175**	**111**
Mixed Beans	Central	Chibombo	498	475	1,197	2.40	1,061	46	3
		Kabwe	85	85	29	0.34	-	9	-
		Kapiri Mposhi	661	661	294	0.44	106	11	2
		Mkushi	582	526	578	0.99	287	16	10
		Mumbwa	321	321	440	1.37	34	-	-
		Serenje	1,929	1,889	951	0.49	403	9	.
		Total	**4,076**	**3,957**	**3,489**	**0.86**	**1,891**	**92**	**15**
	Copperbelt	Chililabombwe	24	24	11	0.46	3	.	.
		Chingola	36	36	11	0.31	2	-	-
		Kalulushi	180	176	63	0.35	12	2	.
		Kitwe	97	88	69	0.71	3	3	-
		Luanshya	116	114	32	0.28	1	.	.
		Lufwanyama	989	913	355	0.36	142	15	24
		Masaiti	673	673	501	0.74	207	10	.
		Mpongwe	799	789	1,039	1.30	21	63	50
		Mufulira	101	100	49	0.49	12	.	.
		Ndola	215	212	57	0.27	17	3	2
		Total	**3,229**	**3,125**	**2,189**	**0.68**	**421**	**96**	**77**
	Eastern	Chadiza	497	216	234	0.47	31	2	-
		Chipata	2,647	2,443	1,189	0.45	591	5	2
		Katete	891	759	335	0.38	119	29	8
		Lundazi	2,018	1,685	987	0.49	295	7	-
		Mambwe	31	31	9	0.29	1	.	.
		Petauke	714	703	383	0.54	3	.	.
		Total	**6,798**	**5,837**	**3,138**	**0.46**	**1,041**	**42**	**10**
	Luapula	Chienge	806	793	297	0.37	71	9	9
		Kawambwa	2,864	2,665	1,377	0.48	612	25	14
		Mansa	957	932	396	0.41	123	3	2
		Milenge	219	182	141	0.64	25	1	1
		Mwense	1,482	1,450	493	0.33	206	13	-
		Nchelenge	664	625	244	0.37	63	.	.
		Samfya	1,284	1,222	375	0.29	169	3	3
		Total	**8,275**	**7,870**	**3,322**	**0.40**	**1,270**	**53**	**28**
	Lusaka	Chongwe	479	396	52	0.11	18	8	1
		Kafue	750	705	356	0.47	123	32	-
		Luangwa	134	37	13	0.10	7	.	.
		Lusaka	3	3	1	0.33	-	-	-
		Total	**1,366**	**1,141**	**423**	**0.31**	**148**	**40**	**1**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Muchinga	Chama	28	28	6	0.21	.	.	.
		Chinsali	2,739	2,380	992	0.36	203	3	-
		Isoka	380	353	149	0.39	11	8	5
		Mafinga	1,368	1,368	507	0.37	42	56	56
		Mpika	4,932	4,895	5,058	1.03	1,054	206	121
		Nakonde	1,423	1,412	543	0.38	72	19	18
		Total	**10,870**	**10,435**	**7,255**	**0.67**	**1,381**	**292**	**199**
	Northern	Chilubi	127	127	108	0.85	32	8	7
		Kaputa	1,309	1,267	853	0.65	339	11	9
		Kasama	4,006	3,876	2,049	0.51	634	78	60
		Luwingu	2,577	2,567	1,277	0.50	499	9	6
		Mbala	42,661	41,032	13,345	0.31	6,097	98	49
		Mporokoso	7,409	7,180	4,869	0.66	1,952	11	1
		Mpulungu	5,642	5,642	2,949	0.52	831	4	.
		Mungwi	4,598	4,546	2,570	0.56	561	30	11
		Total	**68,329**	**66,237**	**28,020**	**0.41**	**10,943**	**250**	**142**
	North-Western	Chavuma	5	5	2	0.40	.	.	.
		Ikelenge	87	87	44	0.51	16	1	1
		Kabompo	83	79	60	0.72	31	.	.
		Kasempa	953	914	448	0.47	235	.	.
		Mufumbwe	517	517	334	0.65	192	.	.
		Mwinilunga	3,790	3,689	1,908	0.50	1,157	-	.
		Solwezi	4,047	3,820	2,924	0.72	1,421	17	11
		Zambezi	296	296	190	0.64	63	.	.
		Total	**9,780**	**9,407**	**5,909**	**0.60**	**3,114**	**18**	**12**
	Southern	Choma	1,616	1,094	217	0.13	5	36	.
		Gwembe	1,158	1,116	226	0.20	70	6	.
		Itezhi-tezhi	180	180	57	0.32	.	.	.
		Kalomo	1,291	1,251	736	0.57	526	38	28
		Kazungula	290	109	11	0.04	6	.	.
		Livingstone	6	6	-	-	.	.	.
		Mazabuka	963	807	377	0.39	144	29	19
		Monze	590	524	150	0.25	35	-	1
		Namwala	185	131	39	0.21	4	.	.
		Siavonga	184	172	66	0.36	32	4	2
		Sinazongwe	66	48	11	0.17	.	-	-
		Total	**6,529**	**5,439**	**1,890**	**0.29**	**823**	**114**	**50**
	Western	Kalabo	38	24	13	0.34	.	.	.
		Kaoma	896	823	476	0.53	155	.	.
		Lukulu	114	114	55	0.48	11	.	.
		Mongu	92	92	88	0.96	6	.	.
		Senanga	624	616	187	0.30	17	.	.
		Sesheke	322	304	123	0.38	4	.	.
		Shangombo	630	456	108	0.17	6	.	.
		Total	**2,717**	**2,429**	**1,049**	**0.39**	**198**	**.**	**.**
Bambara nuts	Central	Chibombo	92	92	111	1.21	111	.	.
		Mkushi	476	350	508	1.07	1	11	11
		Mumbwa	237	237	142	0.60	.	.	.
		Serenje	98	98	31	0.32	.	.	.
		Total	**904**	**777**	**792**	**0.88**	**112**	**11**	**11**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Copperbelt	Chililabombwe	2	2	1	0.50	1	.	.
		Chingola	11	11	21	1.91	5	.	.
		Kitwe	3	3	3	1.00	1	.	.
		Luanshya	2	2	2	1.00	.	.	.
		Lufwanyama	36	33	58	1.61	-	.	.
		Masaiti	8	8	8	1.00	5	.	.
		Mpongwe	24	24	15	0.63	1	.	.
		Mufulira	7	7	8	1.14	1	.	.
		Ndola	2	2	1	0.50	.	.	.
		Total	**95**	**92**	**118**	**1.24**	**14**	**.**	**.**
	Eastern	Chadiza	14	14	4	0.29	.	.	.
		Katete	85	52	41	0.48	22	.	.
		Mambwe	49	49	5	0.10	.	.	.
		Petauke	31	31	8	0.26	.	.	.
		Total	**180**	**146**	**59**	**0.33**	**22**	**.**	**.**
	Luapula	Chienge	92	89	37	0.40	10	.	.
		Kawambwa	558	547	519	0.93	60	.	.
		Mansa	153	136	80	0.52	2	.	.
		Milenge	15	15	12	0.80	2	.	.
		Mwense	1,398	1,380	1,250	0.89	572	.	.
		Nchelenge	313	313	546	1.74	170	.	.
		Samfya	824	791	473	0.57	34	37	37
		Total	**3,353**	**3,269**	**2,918**	**0.87**	**850**	**37**	**37**
	Muchinga	Chama	98	93	167	1.70	.	.	.
		Chinsali	487	475	188	0.39	7	.	.
		Mafinga	72	72	34	0.47	7	.	.
		Mpika	15	15	20	1.33	3	.	.
		Nakonde	14	14	37	2.64	4	.	.
		Total	**687**	**670**	**446**	**0.65**	**21**	**.**	**.**
	Northern	Chilubi	976	946	845	0.87	121	.	.
		Kaputa	34	34	18	0.53	8	.	.
		Kasama	405	405	216	0.53	6	.	.
		Luwingu	174	147	158	0.91	.	.	.
		Mbala	117	117	43	0.37	6	.	.
		Mporokoso	236	236	261	1.11	16	.	.
		Mpulungu	111	111	50	0.45	7	.	.
		Mungwi	231	231	197	0.85	53	.	.
		Total	**2,284**	**2,227**	**1,788**	**0.78**	**216**	**.**	**.**
	North-Western	Kasempa	20	20	40	2.00	38	.	.
		Mwinilunga	39	39	19	0.49	3	.	.
		Solwezi	49	49	47	0.96	33	.	.
		Zambezi	40	40	58	1.45	39	.	.
		Total	**149**	**149**	**164**	**1.10**	**113**	**.**	**.**
	Southern	Choma	159	154	42	0.26	.	.	.
		Gwembe	32	32	8	0.25	.	.	.
		Kalomo	784	772	415	0.53	42	.	.
		Kazungula	366	243	44	0.12	.	.	.
		Livingstone	1	1	-	-	.	.	.
		Mazabuka	53	10	5	0.09	.	.	.
		Monze	89	75	49	0.55	.	.	.
		Namwala	141	141	159	1.13	3	.	.
		Total	**1,625**	**1,428**	**722**	**0.44**	**45**	**.**	**.**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Western	Kalabo	109	109	38	0.35	2	.	.
		Kaoma	1,642	1,556	2,258	1.38	775	10	10
		Lukulu	71	71	69	0.97	27	.	.
		Mongu	255	241	99	0.39	9	.	.
		Senanga	791	744	358	0.45	1	.	.
		Sesheke	402	347	332	0.83	5	.	.
		Shangombo	99	52	6	0.06	.	.	.
		Total	**3,370**	**3,120**	**3,160**	**0.94**	**820**	**10**	**10**
Cow Peas	Central	Chibombo	885	859	535	0.60	334	.	.
		Kabwe	102	55	54	0.53	8	-	-
		Kapiri Mposhi	1,293	1,293	747	0.58	293	-	-
		Mkushi	72	72	19	0.26	4	1	.
		Mumbwa	1,135	1,134	375	0.33	127	-	-
		Serenje	37	37	28	0.76	.	.	.
		Total	**3,526**	**3,451**	**1,760**	**0.50**	**765**	**1**	**-**
	Copperbelt	Lufwanyama	31	31	6	0.19	.	.	.
		Mpongwe	126	126	56	0.44	53	-	-
		Ndola	2	2	1	0.50	.	.	.
		Total	**159**	**159**	**62**	**0.39**	**53**	**-**	**-**
	Eastern	Chadiza	13	13	4	0.31	.	.	.
		Chipata	22	22	6	0.27	.	.	.
		Katete	85	68	16	0.19	1	.	.
		Lundazi	64	64	21	0.33	21	.	.
		Mambwe	145	142	57	0.39	1	.	.
		Nyimba	166	166	69	0.42	8	.	.
		Petauke	381	381	187	0.49	.	.	.
		Total	**878**	**856**	**361**	**0.41**	**31**	**.**	**.**
	Luapula	Kawambwa	25	25	9	0.36	2	.	.
		Mansa	18	18	3	0.17	2	.	.
		Milenge	2	2	1	0.50	.	.	.
		Mwense	7	7	3	0.43	1	.	.
		Samfya	34	34	11	0.32	6	.	.
		Total	**86**	**86**	**28**	**0.33**	**12**	**.**	**.**
	Lusaka	Chongwe	284	274	133	0.47	16	1	.
		Kafue	103	103	133	1.29	-	1	-
		Luangwa	52	15	5	0.10	.	.	.
		Total	439	392	271	0.62	16	1	-
	Muchinga	Chama	5	5	4	0.80	.	.	.
		Chinsali	5	5	2	0.40	1	.	.
		Total	**10**	**10**	**6**	**0.60**	**1**	**.**	**.**
	Northern	Kaputa	58	58	12	0.21	.	.	.
		Kasama	152	152	261	1.72	164	.	.
		Luwingu	10	10	4	0.40	1	.	.
		Mbala	231	231	96	0.42	.	.	.
		Mporokoso	49	49	24	0.49	.	.	.
		Mpulungu	62	62	8	0.13	2	.	.
		Mungwi	9	9	1	0.11	.	.	.
		Total	**571**	**571**	**406**	**0.71**	**167**	**.**	**.**
	North-Western	Kabompo	21	21	19	0.90	19	.	.
		Solwezi	20	20	11	0.55	-	.	.
		Zambezi	1	1	2	2.00	.	.	.
		Total	**43**	**43**	**32**	**0.74**	**19**	**.**	**.**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Southern	Choma	2,862	2,209	749	0.26	63	-	-
		Gwembe	1,129	1,121	231	0.20	22	.	.
		Itezhi-tezhi	721	366	155	0.21	58	.	.
		Kalomo	8,934	6,599	1,853	0.21	366	9	-
		Kazungula	1,601	1,234	604	0.38	13	30	30
		Livingstone	10	8	6	0.60	.	.	.
		Mazabuka	1,829	808	678	0.37	157	.	.
		Monze	3,044	2,000	1,303	0.43	132	-	-
		Namwala	1,892	1,435	509	0.27	78	.	.
		Siavonga	249	164	81	0.33	4	.	.
		Sinazongwe	1,261	1,031	186	0.15	20	26	18
		Total	**23,533**	**16,976**	**6,353**	**0.27**	**913**	**65**	**48**
	Western	Kalabo	287	147	66	0.23	5	.	.
		Kaoma	179	179	84	0.47	33	-	-
		Lukulu	295	248	102	0.35	9	.	.
		Mongu	138	136	46	0.33	.	.	.
		Senanga	62	62	12	0.19	.	.	.
		Sesheke	793	743	309	0.39	24	.	.
		Shangombo	5,622	5,341	743	0.13	103	.	.
		Total	**7,377**	**6,855**	**1,361**	**0.18**	**174**	**-**	**-**
Sweet Potatoes	Central	Chibombo	3,944	3,921	4,470	1.13	1,616	22	19
		Kabwe	59	59	253	4.29	26	-	-
		Kapiri Mposhi	2,012	2,012	5,936	2.95	3,229	10	10
		Mkushi	14,854	14,742	10,618	0.71	4,975	.	.
		Mumbwa	561	561	990	1.76	351	1	1
		Serenje	4,947	4,810	19,018	3.84	12,934	.	.
		Total	**26,377**	**26,104**	**41,286**	**1.57**	**23,132**	**33**	**30**
	Copperbelt	Chililabombwe	66	66	195	2.95	121	.	.
		Chingola	265	257	789	2.98	605	.	.
		Kalulushi	137	137	329	2.40	171	.	.
		Kitwe	251	246	898	3.58	542	.	.
		Luanshya	129	128	314	2.43	115	-	.
		Lufwanyama	2,923	2,863	6,625	2.27	4,788	-	-
		Masaiti	644	642	2,104	3.27	1,074	.	.
		Mpongwe	1,080	1,008	2,965	2.75	2,046	-	-
		Mufulira	162	162	465	2.87	332	.	.
		Ndola	130	130	395	3.04	168	-	.
		Total	**5,787**	**5,637**	**15,080**	**2.61**	**9,963**	**1**	**-**
	Eastern	Chadiza	952	948	2,437	2.56	2,146	12	.
		Chipata	243	243	437	1.80	363	1	1
		Katete	490	465	2,700	5.51	1,492	-	2
		Lundazi	739	739	1,515	2.05	998	.	9
		Mambwe	22	11	147	6.68	.	.	.
		Nyimba	98	98	245	2.50	91	.	.
		Petauke	29	29	35	1.21	.	.	.
		Total	**2,573**	**2,533**	**7,516**	**2.92**	**5,090**	**14**	**12**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Luapula	Chienge	159	159	501	3.15	265	.	.
		Kawambwa	793	789	2,132	2.69	1,014	-	-
		Mansa	1,401	1,371	4,488	3.20	2,795	-	-
		Milenge	48	48	107	2.23	18	.	.
		Mwense	627	605	1,362	2.17	488	.	.
		Nchelenge	947	947	2,805	2.96	1,301	-	-
		Samfya	582	576	1,879	3.23	734	.	.
		Total	**4,557**	**4,494**	**13,275**	**2.91**	**6,615**	**-**	**-**
	Lusaka	Chongwe	866	813	1,614	1.86	954	4	.
		Kafue	537	528	985	1.83	553	-	.
		Lusaka	2	2	3	1.50	2	.	.
		Total	**1,405**	**1,342**	**2,602**	**1.85**	**1,510**	**5**	**.**
	Muchinga	Chinsali	1,811	1,713	3,128	1.73	618	.	.
		Isoka	343	343	894	2.61	219	.	.
		Mafinga	161	161	375	2.33	208	.	.
		Mpika	1,314	1,267	4,007	3.05	1,580	19	10
		Nakonde	213	213	430	2.02	131	.	.
		Total	**3,842**	**3,697**	**8,834**	**2.30**	**2,756**	**19**	**10**
	Northern	Chilubi	218	180	378	1.73	65	.	.
		Kaputa	372	351	735	1.98	10	.	.
		Kasama	1,835	1,652	4,289	2.34	2,105	.	.
		Luwingu	402	372	555	1.38	65	.	.
		Mbala	1,398	1,360	2,088	1.49	418	-	-
		Mporokoso	235	235	506	2.15	19	.	.
		Mpulungu	132	132	265	2.01	43	.	.
		Mungwi	1,122	1,122	2,046	1.82	842	1	.
		Total	**5,712**	**5,402**	**10,863**	**1.90**	**3,567**	**1**	**-**
	North-Western	Chavuma	57	57	102	1.79	46	.	.
		Ikelenge	6	6	12	2.00	3	.	.
		Kabompo	158	158	529	3.35	325	.	.
		Kasempa	870	870	3,047	3.50	1,377	.	.
		Mufumbwe	306	306	902	2.95	269	.	.
		Mwinilunga	365	350	1,925	5.27	1,647	.	.
		Solwezi	3,622	3,417	16,583	4.58	8,183	-	-
		Zambezi	553	553	1,164	2.10	682	.	.
		Total	**5,938**	**5,718**	**24,263**	**4.09**	**12,532**	**-**	**-**
	Southern	Choma	4,348	3,894	6,702	1.54	2,368	14	-
		Gwembe	567	538	329	0.58	127	6	.
		Itezhi-tezhi	461	454	821	1.78	339	.	.
		Kalomo	4,209	4,047	9,301	2.21	5,591	33	30
		Kazungula	277	277	849	3.06	78	-	5
		Mazabuka	906	667	2,075	2.29	1,009	.	.
		Monze	5,929	4,710	11,572	1.95	2,646	-	1
		Namwala	2,330	1,378	3,042	1.31	899	15	.
		Sinazongwe	48	48	17	0.35	12	.	.
		Total	**19,075**	**16,014**	**34,708**	**1.82**	**13,069**	**69**	**36**

Crop	Province	District	Hectares Planted	Hectares Harvested	Production (MT)	Yield (MT/ Ha)	Sales (MT)	Basal (MT)	Top (MT)
	Western	Kalabo	438	438	808	1.84	205	.	.
		Kaoma	665	665	1,931	2.90	581	-	-
		Lukulu	270	254	510	1.89	245	.	.
		Mongu	134	134	556	4.15	137	.	.
		Senanga	9	9	39	4.33	39	.	.
		Sesheke	50	50	142	2.84	91	.	.
		Shangombo	114	114	202	1.77	135	.	.
		Total	**1,680**	**1,664**	**4,189**	**2.49**	**1,432**	**-**	**-**
Wheat	Central	Chibombo	5,095	5,095	53,855	10.57	44,218	936	764
		Kabwe	2,441	2,441	19,529	8.00	13,072	352	511
		Kapiri Mposhi	784	784	6,272	8.00	2,878	107	121
		Mkushi	9,047	9,039	104,047	11.50	94,262	1,968	1,855
		Mumbwa	412	412	3,296	8.00	1,900	18	18
		Serenje	1,211	1,211	13,321	11.00	21,134	291	237
		Total	**18,991**	**18,983**	**200,320**	**10.55**	**177,464**	**3,672**	**3,505**
	Copperbelt	Chingola	104	104	1,000	9.62	1,000	26	10
		Mpongwe	2,101	2,101	17,990	8.56	17,618	470	548
		Mufulira	505	505	4,041	8.00	2,154	202	202
		Ndola	280	280	2,269	8.10	2,215	51	137
		Total	**2,990**	**2,990**	**25,300**	**8.46**	**22,987**	**749**	**897**
	Lusaka	Chongwe	2,234	2,234	17,916	8.02	13,662	385	405
		Kafue	1,819	1,819	14,553	8.00	10,023	403	387
		Lusaka	32	32	193	6.03	193	13	10
		Total	**4,086**	**4,086**	**32,662**	**7.99**	**23,878**	**801**	**802**
	Southern	Choma	76	76	524	6.89	204	24	22
		Kalomo	100	100	781	7.81	760	23	25
		Livingstone	528	528	2,497	4.73	2,435	85	89
		Mazabuka	2,396	2,396	15,535	6.48	14,043	376	359
		Monze	93	93	724	7.78	724	46	46
		Total	**3,193**	**3,193**	**20,061**	**6.28**	**18,166**	**554**	**541**
	Western	Kaoma	70	70	91	1.30	91	18	14
		Total	**70**	**70**	**91**	**1.30**	**91**	**18**	**14**
Barley	Central	Chibombo	598	598	5,210	8.71	5,210	122	103
		Kabwe	67	67	575	8.58	575	17	17
		Mkushi	1,040	1,040	7,625	7.33	6,986	232	209
		Total	**1,705**	**1,705**	**13,411**	**7.87**	**12,771**	**371**	**329**
	Lusaka	Chongwe	115	115	900	7.83	900	3	3
		Kafue	170	170	1,527	8.98	1,527	43	42
		Total	**285**	**285**	**2,427**	**8.52**	**2,427**	**46**	**45**
	Southern	Choma	470	460	3,335	7.10	3,135	65	85
		Kalomo	72	72	586	8.14	586	18	18
		Total	**542**	**532**	**3,921**	**7.23**	**3,721**	**83**	**103**

Annex 2: Key personnel involved in data cleaning and analysis, and report writing

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