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REPUBLIC OF ZAMBIA

Ministry of Agriculture & Cooperatives
and
The Central Statistical Office

2010/2011 Crop Forecast Survey Report

June 2011

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CFS	Crop Forecast Survey
CSO	Central Statistical Office
FAO	Food and Agriculture Organization
FSRP	Food Security Research Project
FBS	Food Balance Sheet
FRA	Food Reserve Agency
GRZ	Government of the Republic of Zambia
MACO	Ministry of Agriculture and Cooperatives
MT	Metric tonne
PPS	Probability Proportional to Size
PSU	Primary Sampling Units
SEA	Standard Enumeration Area
CSA	Census Supervisory Area

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Executive Summary

The 2010/2011 Crop Forecast Survey results indicate that national maize production in the 2010/2011 season has increased by 8 percent to 3,020,380 metric compared to the previous season. Overall, the country has recorded a surplus of 1,661,626 metric tonnes of maize. National maize production increased due to factors such as the increase in area planted to maize by the Small & medium scale sector. This in turn was partly a result of the increase in quantity of inputs distributed by Government and the resulting increase in the usage of hybrid seed by the Small & Medium Scale sector as well as the relatively timely distribution of inputs by Government. The country is also anticipated to record a surplus of wheat in excess of 88,000 metric tonnes. This is largely anticipated to be on the back of relatively high global wheat prices which have resulted in increased investment in irrigation capacity by the Large Scale Sector.

Despite the recorded success in production of crops such as Maize, Tobacco and Cotton, as well as the anticipated increase in wheat production, other key crops such as Groundnuts, millet, sorghum and sweet-potatoes have registered a decline in national output. Government remains committed to promoting crop diversification as a way of increasing food security and livelihood diversity in different parts of the country. To this end, Government has included rice as part of the input subsidy programme with other crops also under consideration for future support.

A. K. Banda (PMP)
Permanent Secretary

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1.0 Introduction

The Ministry of Agriculture and Cooperatives in conjunction with the Central Statistical Office are mandated to provide the country with estimates on crop production for each agricultural season. This information is used to provide a sound-planning base for the country's food security situation in a given year. In order to come up with this information, the Ministry of Agriculture and Cooperatives through the Agriculture Statistics and Early Warning Section, in collaboration with the Central Statistical Office, with technical assistance from the Food Security Research Project conducted the Crop Forecasting Survey (CFS) during the first and second quarters of 2011.

The production estimates that are generated are used to determine the National Food Balance Sheet. Information derived from the Survey is also used for, among other things, to measure the performance of the agricultural sector and its contribution to the country's Gross Domestic Production (GDP). The information from the CFS is further used as a tool to analyze the country's overall food availability and requirements in order to obtain an estimate of the food deficit or surplus situation. The Food Balance Sheet includes information on the country's Strategic Grain Reserve intentions for the season.

1.1 Purpose

- The crop forecasting survey obtains estimates from agricultural holdings on the area under major crops as well as production and sales estimates during the season. This information is used to assess the expected food security situation in the country and also to produce the National Food Balance Sheet (NFBS). The food balance sheet is used to determine the surplus or deficit situation of the country with respect to the major cereals

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n the country. The information is vital to rivate sector as well as donors and is useful for strategic planning and decision making purposes. Statistics generated from the survey must be measurable for their accuracy, comparable across time as well as comparable between different countries within the region. The Survey uses an internationally recognized methodology promoted by the FAO

Objectives of the Crop Forecasting Survey

- To provide Government with reliable, empirical annual crop production statistics for the agricultural season
- To generate the annual National Food Balance Sheet, which gives the National Food Balance
- To provide public institutions, the private sector and other stakeholders with National, Provincial and District level indicators of seasonal agricultural performance
- To provide statistics on the potential available marketable surplus for the major crops grown in the country
- To provide production statistics used for estimation of the agricultural contribution to the country's Gross Domestic Product (GDP).

2.0 Methodology

2.1 Scope and Coverage

Zambia is divided into the following administrative units; Province, District, Constituency and Ward with the ward being the lowest administrative unit in the country. The sample for the CFS is drawn from all the 72 districts of Zambia. For the purpose of sampling, the Central Statistical Office (CSO) has further

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ensus Supervisory Areas (CSA) and Standard SEA is the smallest area with well-defined boundaries identified on a census map. Each SEA contains approximately between 100 -150 households. A total sample of 680 CSAs is allocated nationally to each province and district proportional to its size (in terms of households). Twenty households are randomly selected from each of the 680 SEA's in the sample.

Table 1: Distribution of Enumeration Areas Selected for the CFS

Province	Number of CSA's Selected	Number of SEA's Selected
Central	62	62
Copperbelt	68	68
Eastern	106	106
Luapula	72	72
Lusaka	34	34
Northern	116	116
North-western	60	60
Southern	94	94
Western	68	68
Total	**680**	**680**

Note: One SEA is selected within each sampled CSA

2.2 Sample Selection

The primary sampling units (PSUs) were defined as the Census Supervisory Areas (CSAs) delineated for the census. The CSAs were stratified by district within each province and ordered geographically within each district. A master sample of CSAs was selected systematically with 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 2000 Census. The

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andard Enumeration Area (SEA), defined as the segment covered by one enumerator during the census.

Only one SEA was selected within each sample CSA with PPS for the survey. Once an SEA was selected, an enumerator visited all the households within the SEA and collected basic information about the total area cultivated by the household as well as number of livestock and poultry raised. This information then forms the basis for stratifying a household as being agricultural or non-agricultural. For agricultural households further stratification categorizes them as Category A, B or C.

The first stage of field data collection involves obtaining a complete listing of basic demographic and agricultural information from all the households in the sampled SEA's. Information is collected on village name, name of household head, sex of household head, household size, whether the household planted any crops in reference period, total land under cultivation, whether the household planted any of a list of specified 'special crops' and number of Cattle, Goats, Pigs, Cattle & Chickens currently being raised by the household, After a process of stratification, twenty households are then sampled from each SEA for the detailed household interview. A stratified multi-stage sample design is used for the CFS. The current sampling frame being used is based on the mapping and data based on the 2000 Census of Population, Housing and

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hat the completion of the 2010 Census of Population and Housing will enable the generation of a new sampling frame of agricultural households for future surveys.

2.3 Sampling Frame

The frame of this survey is based on the 2000 Census of Population, Housing and Agriculture results; the frame was constructed by creating Crop Clusters in each district using Census Supervisory Area (CSAs) and Standard Enumeration Areas (SEAs) as geographical boundaries of the crop zones. The 2000 Census mapping exercise created approximately 16,000 SEA's nationally.

2.4 Sample Design

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 Probability Proportional to Size (PPS) with agricultural households as a measure of selection.

At the second stage, SEAs were selected using the same procedure described above on 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 selection of sample households for data collection exercise. A Linear Systematic Sampling procedure (LSS) was used to select the required number of households in each EA.

2.5 Sample Size

A sample size of 680 SEAs were covered out of a total of approximately 16,000 SEAs in which the rural part of the country is demarcated. This means the survey represents 4.5 percent of the total number of SEAs. At household level, 20 households are covered out of a maximum total of 100-150 households per SEA.

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percent of the total number of households in a

2.6 Data Collection

The survey covers three categories of agricultural households namely; Small-scale, Medium-scale and Large-scale farmers[1]. Small and Medium scale farmers are covered on a sample basis. A fixed number of 20 households are canvassed in each selected SEA. A total of 13,600 (i.e. 680 x 20) agricultural households are covered for the small & medium scale. The Large- scale farmers are captured under a separate sub-survey under the CFS on a 100% enumeration basis. All entities cultivating more than 20 hectares of land and/or raising over 2,000 broiler chickens are classified as large scale farming holdings.

2.7 Data Processing and Analysis

After data collection, the questionnaires are sent to the provincial CSO headquarters for editing and data entry by data entry staff and supervisors from CSO and MACO. The edited questionnaires are entered using a software package known as CSPro. The questionnaires and keyed in data are then transmitted to Lusaka for data cleaning. This involves consistency checks on the raw data using SPSS version 19 before the final weighted district estimates are produced. The survey period, from questionnaire design to data collection and analysis takes approximately 5 months. (See CFS work plan in appendix).

Table 2: Data Collection Staff

Data Collection Staff	Number participating
Small & Medium Master Trainers	18
Large Scale Master Trainers	2
Field Supervision Drivers	9
Field Supervisors	85

[1] A Small-scale household is defined as a household cultivating 4.99 hectares of crops or less. Households cultivating between 5 and 19.99 hectares of crops are classified as medium scale households. All households cultivating 20 hectares or more are classified as Large Scale farmers. For a detailed definition that includes Livestock and the cultivation of 'special crops', see the appendix.

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	40
	340
Enumeration Team Drivers	85
Large Scale Drivers	2
Total Core team staff	**681**

2.8 Measurement Methodology

The CFS collects information on area planted for each crop, expected production and sales seed type, tillage method used, acquisition and usage of fertilizer 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. No field visits are conducted. One of the reasons for relying on farmer recall and estimation is to reduce on measurement bias and error by the enumerator. The method used to collect household level data is the farmer recall method. 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. Area expected to be 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 quantity of expected production divided by the estimated area planted for each crop. All estimates are provided by the farmer.

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	ACTIVITIES	DULE: 2010/2011	2010			2011																								
			December			January				February				March				April				May				June				
		Actual Dates	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1*	Designing of Questionnaire, Manual and Listing Books	7-25 Dec 2010																												
2*	Pre-testing and review of questionnaire	10-21 Jan 2011																												
3	Training of Master Trainers	24 Jan-7 Feb 2011																												
4	Questionnaire, Manual and Listing Book final print setting & Printing	24 Jan - 18 Feb 2011																												
5	Training of Enumerators in the Provinces	21 Feb - 2 March 11																												
6	Team Composition and Briefing of Supervisors	3-5 March 2011																												
7	Listing and stratification of households	6-12 March 2011																												
8	Field Data Collection	13 March - 2 April 2011																												
9	Final Questionnaire editing	3-6 April 2011																												
10*	Data entry training	22-26 March 2011																												
11	Data Entry	3-13 April 2011																												
12*	Data cleaning training	5-9 April 2011																												
13	Data cleaning, Tabulation and Calculation of Weights	12 April - 12 May 2011																												
14	Verification of Carry over stocks with the Maize Stocks Committee	15-30 April 2011																												
15	Preparations of the National Food Balance Sheet	12-14 May 2011																												
16	Presentation of CFS/NFBS results to Senior Management	14 - May 2011																												
17	Announcement of Official NFBS and CFS Estimates by Minister of Agric	14 - May 2011																												
18	Report writing and printing	15-30 May 2011																												
19	Invitation of Stake Holders to CFS Results presentation	15-18 May 2011																												
20	Presentation of CFS/NFBS results to wider stake holders	1 June 2011																												
21	Management and Coordination	7 Dec 10 - 1 June 11																												

Note: * FSRP funding these capacity building activities

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3.0 Seasonal Weather Performance

The country experienced normal to above normal rainfall during the 2010/2011 season. There was late onset of effective rains in many parts of the southern region of Zambia. However, the country generally received enough rains to sustain good crop performance. The distribution of rainfall was also relatively good. For the period starting 1st October to 31st December 2010, the country received normal rainfall except for the northern-eastern areas of Nakonde, Isoka, Chama and Lundazi Districts as well as the south-western region of the country particularly Seheke and Kazungula districts which experienced below normal rainfall characterised by prolonged dry spells.

The second half of the rainfall season from 1st January to 31st march 2011 was characterized by above-normal rainfall across the country. Below normal rain was received in the Central and Lusaka provinces. Prolonged dry spells were also reported in February 2011, in Mkushi, Kapiri-Mposhi, Chibombo, Lusaka, Chongwe and Kafue Districts. This resulted in some crop moisture stress. The northern half of the country received above normal rainfall.

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4.0 National Food Balance

The National Food Balance sheet for the 2011/2012 marketing season based on the crop forecasting survey covering 2010 to 2012 shows that the country has produced sufficient maize for both human consumption and industrial use. Total maize production in the 2010/2011 season has been estimated to be 3,020,380 metric tonnes. Maize carry-over stocks have been estimated at 848,606 metric tonnes.

Table 3: Carry-over stocks as at 1st May 2011

Source	Maize	Wheat	Rice	Sorghum & Millet
Farm Stocks captured by CFS (Large Scale and Small & medium	129,968	50,844	564	3,700
FRA	626,252	-	3,647	
Millers Association of Zambia	66,366	21,007		
Grain Traders Association of Zambia	26,020	-	430	1,503

Most of this maize was in storage with the FRA as at 1st May, 2011. Private traders, Large Scale farmers as well as Small & Medium scale Farmers. When the maize carry-over stock from last season is added to the maize production for the 2010/2011agricultural season the total supply of maize available for the 2011/2012 marketing season is 3,868,986 metric tonnes.

For an estimated population of 13.4 million people, the food balance sheet shows that total maize required for human consumption amounts to 1,396,341

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maize requirement for industrial use, specifically
000 and 95,000 metric tonnes respectively. Post-harvest physical losses have been estimated at 5 per cent of current national production. Structural Informal cross-border trade estimates have also been factored into the balance sheet. A provision of 100,000 metric tonnes of maize has been made. This provision does not include formal exports out of Zambia.

When total maize requirements are netted out from total maize availability, a net surplus of 1,661,626 metric tonnes is estimated. Total maize requirements include anticipated government strategic reserve stock of **240,000** metric tonnes to be held by the Food Reserve Agency (FRA).

2 Human staple food consumption represents 70% (1,470 kCal/person) from a total diet of 2,100 kCal/person/day (National Food and Nutrition Commission)

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heet

12 Agricultural Marketing Season

Based on the 2010/2011 MACO/CSO Crop Forecasting Survey and MACO/Private Sector Utilization Estimates (Metric Tonnes)

		Maize	Paddy rice	Wheat	Sorghum & Millet	Sweet and Irish potatoes	Cassava flour	Total (maize equivalent)
A.	**Availability:**							
	(i) Opening stocks (1st May 2011) *1/*	848,606	4,641	71,851	5,203	0	0	928,974
	(ii) Total production (2010/11) *2/*	3,020,380	49,410	237,336	56,102	174,177	1,132,156	4,462,380
	Total availability	**3,868,986**	**54,051**	**309,187**	**61,305**	**174,177**	**1,132,156**	**5,391,355**
B.	**Requirements:**							
	(i) Staple food requirements:							
	Human consumption *3/*	1,396,341	64,164	209,153	58,500	165,468	598,707	2,329,651
	Food Reserve Stocks (net) *4/*	240,000	0	0	0	0	0	240,000
	(ii) Industrial requirements:							
	Stockfeed *5/*	175,000	0	0	0	0	0	175,000
	Breweries *6/*	95,000	0	0	0	0	0	95,000
	Grain retained for seed *7/*	50,000	0	0	0	0	0	50,000
	(iii) Losses *8/*	151,019	2,471	11,867	2,805	8,709	56,608	223,119
	(iv) Structural cross-border trade *9/*	100,000						100,000
	Total requirements	**2,207,360**	**66,634**	**221,020**	**61,305**	**174,177**	**655,315**	**3,212,770**
C.	**Surplus/deficit (A-B)** *10/*	**1,661,626**	**-12,583**	**88,167**	**0**	**0**	**476,842**	**2,178,585**
D.	Commercial imports/exports *11/*	-1,661,626	12,583	-88,167	0	0	0	0
E.	Food aid import requirements *12/*	0	0	0	0	0	0	0

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5.0 Crop Performance

5.1 Maize

Production of Maize, Soya-beans, Cotton, Irish potatoes, and Tobacco increased compared to the 2009/2010 season. Some important crops such as cassava, sorghum, millet, groundnuts and sweet potatoes registered a decline in area planted and expected production.

Total maize production in the 2010/2011 season was estimated to be 3,020,380 metric tonnes. The total area planted to maize by small and medium scale farmers increased by 10.9 percent or 128,983 hectares to1, 311,530 hectares from 1,182,547 hectares. Area planted to maize by large scale farmers has reduced by 26 percent from 59,721 hectares in the 2009/2010 season to 44,324 hectares in the 2010/2011 season.

Large scale farmers have achieved an average maize yield of 5.27 metric tonnes per hectare in the 2010/2011 season compared to 5.13 metric tonnes per hectare recorded in the 2009/2010 season

Small and medium scale farmers have achieved an average yield rate of 2.13metric tonnes per hectare in the 2010/2011 season, compared to a yield rate of 2.10 metric tonnes during the 2009/2010 season.

5.2 Cassava

National cassava production for the 2010/2011 season has been estimated to be 1,132,156 metric tonnes of cassava flour equivalent, which is a reduction of 4.03 percent from the 2009/2010 season production of 1,179,657 metric tonnes.

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va for the 2010/2011 increased by 112 percent to 562 hectares from 264 hectares during the 2009/2010 season.

5.3 Rice

Rice production has been estimated to be 49,410metric tonnes during the 2010/2011 season. This is a decrease of 4 percent compared to the production of 52,937 metric tonnes recorded during the 2009/2010 season.

The total area planted to rice for the 2010/2011 decreased by 5.15 percent to 33,995 hectares from 35,841 hectares during the 2009/2010 season.

5.4 Wheat

The wheat crop for the 2010/2011 season is currently being planted. However, estimates based on forecasted area to be planted indicate that the country is likely to attain production of 237,336 metric tonnes of wheat for the 2010/2011 season compared to 172,256 metric tonnes produced in 2009/2010. This represents a projected 38 percent increase in wheat production. The wheat production estimates will be updated by a specialized wheat survey to be conducted around September-October this year as the wheat crop becomes ready for harvest.

5.5 Sorghum & Millet

Sorghum production has declined by 33 percent to 18,458 metric tonnes in the 2010/2011 season from 27,732 metric tonnes in the previous season.

The total area planted to Sorghum for the 2010/2011 decreased by 21.6 percent to 26,854 hectares from 34,251 hectares during the 2009/2010 season.

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ed by 22 percent to 37,644metric tonnes in the
etric tonnes in the 2009/2010 season.

The total area planted to millet for the 2010/2011 decreased by 25 percent to 42,663 hectares from 56,789 hectares during the 2009/2010 season.

5.6 Sunflower

Sunflower production has declined by 17 percent to 21,954metric tonnes in the 2010/2011 season from 26,420 metric tonnes in the 2009/2010 season.

The total area planted to sunflower for the 2010/2011 decreased by 25 percent to 40,894 hectares from 54,450 hectares during the 2009/2010 season.

5.7 Groundnuts

Groundnuts production has declined by 15 percent to 139,388 metric tonnes in the 2010/2011 season from 164,602 metric tonnes in the 2009/2010 season.

The total area planted to groundnuts for the 2010/2011 season decreased by 17 percent to 224,121 hectares from 268,803 hectares during the 2009/2010 season.

5.8 Soya-beans

Soya-bean production has increased by 4 percent to 116,539 metric tonnes in the 2010/2011 season from 111,888 metric tonnes in the 2009/2010 season.

The total area planted to soya-beans for the 2010/2011 season decreased by 1 percent to 61,422 hectares from 62,331 hectares during the 2009/2010 season.

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d by 68 percent to 121,908 metric tonnes in the 2010/2011 season compared to 75,386 metric tonnes in the 2009/2010 season.

The total area planted to seed cotton for the 2010/2011 season increased by 55 percent to 131,857 hectares from 85,073 hectares during the 2009/2010 season.

5.10 Irish potatoes

Irish potato production has increased by 20 percent to 27,563 metric tonnes in the 2010/2011 season from 22,940 metric tonnes in the previous season.

The total area planted to Irish potatoes for the 2010/2011 season increased by 27 percent to 1,806 hectares from 1,425 hectares during the 2009/2010 season.

5.11 Virginia tobacco

Virginia tobacco production increased by 23 percent to 27,146 metric tonnes in the 2010/2011 season from 22,074 metric tonnes in the 2009/2010 season.

The total area planted to Virginia tobacco for the 2010/2011 season increased by 26 percent to 15,080 hectares from 11,984 hectares during the 2009/2010 season.

5.12 Burley tobacco

Burley tobacco production has increased by 715 percent to 8,878 metric tonnes in the 2010/2011 season from 1,089 metric tonnes in the 2009/2010 season.

The total area planted to burley tobacco for the 2010/2011 season increased by 17 percent to 10,122 hectares from 8,618 hectares during the 2009/2010 season.

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clined by 28 percent to 47,070 metric tonnes in the 2010/2011 season from 65,265 metric tonnes in the 2009/2010 season.

The total area planted to mixed beans for the 2010/2011 season decreased by 16 percent to 71,544 hectares from 85,177 hectares during the 2009/2010 season.

5.14 Sweet potatoes

Sweet potato production has declined by 42 percent to 146,614 metric tonnes in the 2010/2011 season from 252,867 metric tonnes in the 2009/2010 season.

The total area planted to sweet potatoes for the 2010/2011 season decreased by 36 percent to 45,335 hectares from 70,755 hectares during the 2009/2010 season.

5.15 Paprika

Paprika production has declined by 12 percent to 600 metric tonnes in the 2010/2011 season from 533 metric tonnes in the 2009/2010 season.

The total area planted to paprika for the 2010/2011 season decreased by 17 percent to 302 hectares from 363 hectares during the 2009/2010 season.

5.16 Barley

Barley production, which is relatively new in the country, is projected to increase to 8,878 metric tonnes in the 2010/2011 season from the 1,089 metric tonnes that was first reported in the 2009/2010 season.

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ey for the 2010/2011 season increased by 568 81 hectares during the 2009/2010 season.

5.17 Popcorn

Popcorn production has declined by 44 percent to 4,408 metric tonnes in the 2010/2011 season from 7,846 metric tonnes in the 2009/2010 season.

The total area planted to popcorn for the 2010/2011 season decreased by 42 percent to 3,275 hectares from 5,597 hectares during the 2009/2010 season.

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6.0 National Crop Production Tables

Table 5: Area planted Estimates based on the 2010/2011CFS

Crop	Area planted (ha)		
	2009/2010	2010/2011	
Maize	1,242,268	1,355,764	9
Maize (for seed)	6,328	13,922	120
Maize (for silage)	1,608	2,012	25
Green Maize		612	
Sorghum	34,251	26,854	(22)
Rice	35,841	33,995	(5)
Millet	56,789	42,663	(25)
Sunflower	54,450	40,894	(25)
Groundnuts	268,803	224,121	(17)
Soyabeans	62,331	61,422	(1)
Cotton	85,073	131,857	55
Irish potatoes	1,425	1,806	27
Mixed beans	85,177	71,544	(16)
Bambara nuts	6,375	5,750	(10)
Cowpeas	6,416	2,089	(67)
Sweet potatoes	70,755	45,335	(36)
Cassava	403,302	387,062	(4)
Paprika	363	302	(17)
Wheat	27,192	37,637	38
Barley	181	1,206	568
Popcorn	5,597	3,275	(41)

Note: 2010/2011 CFS is the first time statistics for Barley and Popcorn are being collected

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Table 6: Area expected to be harvested and Percentage change based on the 2010/2011CFS by crop (national)

Crop	Area to be harvested (ha)		
	2009/2010	2010/2011	% change
Maize	1,080,558	1,101,785	2
Maize (for seed)	6,284	13,765	119
Maize (for silage)	1,545	2,007	30
Green Maize		912	
Sorghum	28,908	22,446	(22)
Rice	30,788	27,496	(11)
Millet	50,808	39,282	(23)
Sunflower	51,602	36,886	(29)
Groundnuts	255,782	209,237	(18)
Soyabeans	60,777	59,988	(1)
Cotton	81,706	125,108	53
Irish potatoes	1,415	1,764	25
Mixed beans	81,575	68,239	(16)
Bambara nuts	6,083	5,621	(8)
Cowpeas	6,026	1,992	(67)
Sweet potatoes	68,993	43,211	(37)
Cassava			
Paprika	351	302	(14)
Wheat	27,192	37,631	38
Barley	181	1,206	568
Popcorn	5,149	2,954	(43)

Note: 2010/2011 CFS is the first time statistics for Barley and Popcorn are being collected

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Table 7: Expected Production based on the 2010/2011CFSby crop (national)

Crop	Expected Production		
	2009/2010	2010/2011	% change
Maize	2,795,483	3,020,380	8
Maize (for seed)	37,550	69,166	84
Maize (for silage)	.	-	
Green Maize			
Sorghum	27,732	18,458	(33)
Rice	51,656	49,410	(4)
Millet	47,997	37,644	(22)
Sunflower	26,420	21,954	(17)
Groundnuts	164,602	139,388	(15)
Soyabeans	111,888	116,539	4
Cotton	72,482	121,908	68
Irish potatoes	22,940	27,563	20
Mixed beans	65,265	47,070	(28)
Bambara nuts	6,298	7,209	14
Cowpeas	2,722	1,376	(49)
Sweet potatoes	252,867	146,614	(42)
Cassava			
Paprika	533	600	12
Wheat	172,256	237,336	38
Barley	1,089	8,878	715
Popcorn	7,846	4,408	(44)

Note: 2010/2011 CFS is the first time statistics for Barley and Popcorn are being collected

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Table 8: Yield rates (mt/ha) based on the 2010/2011CFS by crop (national)

Crop	Yield_MT		
	2009/2010	2010/2011	% change
Maize	2.25	2.23	(1.00)
Maize (for seed)	5.93	4.97	(16.28)
Maize (for silage)		-	
Green Maize		-	
Sorghum	0.81	0.69	(15.11)
Rice	1.44	1.45	0.85
Millet	0.85	0.88	4.40
Sunflower	0.49	0.54	10.64
Groundnuts	0.61	0.62	1.56
Soyabeans	1.80	1.90	5.70
Cotton	0.85	0.92	8.52
Irish potatoes	16.10	15.27	(5.21)
Mixed beans	0.77	0.66	(14.14)
Bambara nuts	0.99	1.25	26.91
Cowpeas	0.42	0.66	55.35
Sweet potatoes	3.57	3.23	(9.51)
Cassava			
Paprika	1.47	1.98	34.87
Wheat	6.33	6.31	(0.46)
Barley	6.03	7.36	22.07
Popcorn	1.40	1.35	(3.97)

Note: 2009/2010 CFS was the first time statistics for Barley and Popcorn are being collected

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Table 9: Expected Sales based on the 2010/2011CFS by crop (national)

Crop	Expected Sales		
	2009/2010	2010/2011	% change
Maize	1,352,012	1,619,622	20
Maize (for seed)	35,638	67,266	89
Maize (for silage)	.	-	
Green Maize			
Sorghum	7,259	2,784	(62)
Rice	26,338	26,797	2
Millet	13,929	10,022	(28)
Sunflower	1,147	1,547	35
Groundnuts	58,585	46,986	(20)
Soya-beans	85,387	100,698	18
Cotton	413	707	71
Irish potatoes	21,017	26,953	28
Mixed beans	27,772	24,572	(12)
Bambara nuts	2,659	1,867	(30)
Cowpeas	449	103	(77)
Sweet potatoes	123,793	70,714	(43)
Cassava	.	.	
Paprika	450	550	22
Wheat	170,750	200,303	17
Barley	1,089	8,875	715
Popcorn	6,118	3,352	(45)

Note: 2010/2011 CFS is the first time statistics for Barley and Popcorn are being collected

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7.0 Provincial Production Statistics

Table 10: Area, production of Cassava based on the 2010/2011CFS by province

Province	Area under cassava (ha)			Cassava root production (11.7 MT/Ha)		Conversion to flour (mt) based on 25% extraction rate		
	2009/2010	2010/2011	% change	2009/2010	2010/2011	2009/2010	2010/2011	% change
Central	14,701	10,072	-31	172,005	117,844	43,001	29,461	-31
Copperbelt	3,076	1,927	-37	35,985	22,547	8,996	5,637	-37
Eastern	1,446	769	-47	16,923	8,998	4,231	2,250	-47
Luapula	125,846	131,606	5	1,472,402	1,539,785	368,100	384,946	5
Lusaka	343	508.23865	48	4,012	5,946	1,003	1,487	48
Northern	150,907	138,173	-8	1,765,608	1,616,619	441,402	404,155	-8
North-western	54,105	47,212	-13	633,031	552,381	158,258	138,095	-13
Southern	694	344.22056	-50	8,119	4,027	2,030	1,007	-50
Western	52,183	56,451	8	610,542	660,476	152,636	165,119	8
National	**403,302**	**387,062**	**-4**	**4,718,629**	**4,528,624**	**1,179,657**	**1,132,156**	**-4**

Table 11: Maize Production, Expected Sales, Fertilizer Usage, Number of Households Growing Crop and Household Crop Production Retained as Seed by Province During the 2010/2011 season.

Province	Area Planted (ha)	Area Expected to be Harvested (ha)	Expected Production (MT)	Yield (MT/ha)	Expected Total Sales (MT)	Quantity of Basal Fertilizer Used (MT)	Quantity of Top Fertilizer Used (MT)	Number of Households Growing Maize
Central	211,185	169,993	558,493	2.64	367,078	25,169	25,843	159,123
Copperbelt	102,653	89,348	250,190	2.44	126,634	9,887	10,514	93,717
Eastern	310,043	282,264	584,415	1.88	236,306	21,177	22,312	279,640
Luapula	44,283	42,536	124,885	2.82	79,693	5,304	5,321	93,539
Lusaka	49,881	38,956	109,523	2.20	55,589	5,900	5,966	46,924
Northern	151,944	137,949	506,989	3.34	348,255	18,554	18,750	203,645
North Western	73,004	64,961	150,820	2.07	82,145	5,426	5,455	89,740
Southern	315,655	221,374	639,541	2.03	297,525	20,700	21,021	191,157

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			95,524	0.98	26,397	1,636	1,600	117,361
	1,355,784	1,101,785	3,020,380	**2.23**	**1,619,622**	**113,753**	**116,779**	**1,274,846**

Table 12: **Maize Hybrid Seed Production, Area Planted, Area Expected to be Harvested, Expected Production, Yield Rate, Expected sales and Fertilizer Usage by Province During the 2010/2011 Agricultural Season.**

Maize for seed	Area planted (ha)	Area Expected to be Harvested (ha)	Expected Production (MT)	Yield Rate (MT/ha)	Expected Total Sales (MT)	Quantity of Basal Fertilizer Used (MT)	Quantity of Top Fertilizer Used (MT)
Central	8,236	8,082	43,301	5.26	42,586	2,803	2,966
Copperbelt	106	105	606	5.73	600	36	41
Eastern	140	140	700	5.00	680	13	12
Luapula	.	.	.		.	.	.
Lusaka	2,504	2,504	9,765	3.90	8,660	887	710
Northern	2	2	9	5.00	9	0	0
North Western	.	.	.		.	.	.
Southern	2,934	2,932	14,786	5.04	14,731	930	790
Western	.	.	.		.	.	.
Total	**13,922**	**13,765**	**69,166**	**4.97**	**67,266**	**4,671**	**4,520**

Table 13: CFS Maize for silage Production, expected sales and Fertilizer usage by Province

Maize for silage	Area Planted (ha)	Area Expected to be Harvested (ha)	Expected Production (MT)	Yield (MT/ha)	Expected Sales (MT)	Quantity of Basal Fertilizer Used (MT)	Quantity of Top Fertilizer Used (MT)	Number of Households Growing this Crop
Central	461	458	-	-	-	51	51	.
Copperbelt	69	69	-	-	-	9	15	.
Eastern	65	65	-	-	-	8	5	.
Luapula	.	.	.		.	.	.	.
Lusaka	838	837	-	-	-	194	187	.
Northern	22	22	.		.	5	4	.
North Western	.	.	.		.	.	.	.
Southern	557	557	-	-	-	204	86	.
Western	.	.	.		.	.	.	.
Total	2,012	2,007	-	-	-	471	347	.

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Table 14: 2010/2011 CFS Sorghum Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Sorghum	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of Households growing this crop
Central	1,721	1,560	1,322	0.77	378	6	6	4,911
Copperbelt	1,562	1,492	1,398	0.89	46	0	-	3,377
Eastern	1,890	1,794	2,392	1.27	82	.	.	5,660
Luapula	1,189	1,134	1,062	0.89	184	-	-	3,342
Lusaka	717	704	149	0.21	21	98	51	611
Northern	1,221	1,201	880	0.72	283	3	3	3,559
North Western	1,668	1,622	1,282	0.77	309	.	.	4,410
Southern	14,226	10,799	8,506	0.60	1,148	45	44	15,503
Western	2,660	2,141	1,467	0.55	333	0	-	6,766
Total	26,854	22,446	18,458	0.69	2,784	152	103	48,139

Table 15: 2010/2011 CFS Rice Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Rice	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	305	297	610	2.00	453	.	.	640
Copperbelt	18	18	43	2.37	12	.	.	99
Eastern	2,650	2,444	4,418	1.67	1,167	1	1	8,881
Luapula	1,192	1,173	2,652	2.23	1,734	2	2	4,930
Lusaka	125	113	204	1.63	101	1	.	368
Northern	14,995	12,906	25,906	1.73	15,961	37	52	27,117
North Western	649	632	814	1.26	400	7	5	2,464
Southern	.	.	.		.	.	.	.
Western								

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	14,762	1.05	6,969	25	27	19,774
	49,410	1.45	26,797	72	86	64,272

Table 16: 2010/2011 CFS Millet Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Millet	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	2,321	2,192	2,151	0.93	675	1	-	6,923
Copperbelt	281	276	118	0.42	1	.	.	1,057
Eastern	1,784	1,782	1,611	0.90	428	23	28	4,184
Luapula	593	593	547	0.92	170	-	-	2,162
Lusaka	112	112	24	0.22	6	12	9	150
Northern	25,961	25,493	27,967	1.08	8,219	12	5	78,794
North Western	578	569	547	0.95	209	.	.	2,465
Southern	1,195	974	722	0.60	3	.	.	2,885
Western	9,839	7,292	3,958	0.40	311	0	.	15,372
Total	42,663	39,282	37,644	0.88	10,022	48	42	113,991

Table 17: 2010/2011 CFS Sunflower Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Sunflower	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	2,320	2,098	2,287	0.99	856	89	10	2,331
Copperbelt	127	125	83	0.65	0	31	31	417
Eastern	26,250	25,500	13,626	0.52	53	0	-	60,849
Luapula	14	12	5	0.40	-	-	-	93
Lusaka	377	377	632	1.67	445	67	26	186
Northern	3,034	2,743	2,103	0.69	2	15	9	11,049
North					.	.	.	

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			10	0.41				145
			3,202	0.37	191	69	59	9,639
Western	25	15	6	0.26	-	-	-	101
Total	40,894	36,886	21,954	0.54	1,547	271	135	84,810

Table 18: 2010/2011 CFS Groundnuts Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Groundnuts	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	31,002	26,783	17,005	0.55	7,765	-	(1)	63,136
Copperbelt	8,257	8,025	6,093	0.74	2,346	18	15	31,377
Eastern	67,067	64,194	29,558	0.44	8,262	34	24	177,277
Luapula	18,429	17,951	11,486	0.62	4,806	1	1	79,597
Lusaka	3,030	2,853	1,419	0.47	434	1	1	11,555
Northern	42,255	41,176	31,004	0.73	13,325	1	3	159,272
North Western	5,576	5,433	4,605	0.83	2,152	17	18	22,417
Southern	38,360	34,592	32,710	0.85	6,796	21	19	83,045
Western	10,144	8,232	5,508	0.54	1,101	10	5	26,909
Total	224,121	209,237	139,388	0.62	46,986	103	85	654,585

Table 19: 2010/2011 CFS Soya-beans Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Soya-beans	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	24,219	23,253	43,918	1.81	40,641	2,841	545	9,921
Copperbelt	6,429	6,426	18,082	2.81	17,955	1,801	592	1,598
Eastern	7,392	7,360	7,328	0.99	5,298	11	-	15,925
Luapula	129	122	91	0.71	30	-	-	983
Lusaka	10,337	10,288	23,330	2.26	20,083	1,965	220	289
Northern								

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			2,178	0.78	896	0	0	13,921
			552	1.73	217	11	4	1,712
Southern	9,724	9,438	20,968	2.16	15,515	1,656	332	1,373
Western	68	67	92	1.35	64	0	0	293
Total	61,422	59,988	116,539	1.90	100,698	8,284	1,693	46,015

Table 20: 2010/2011 CFS Seed Cotton Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Seed Cotton	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	31,800	29,808	27,596	0.87	233	30	-	24,709
Copperbelt	36	36	40	1.10	.	(0)	(0)	45
Eastern	85,107	82,877	83,903	0.99	66	122	43	111,749
Luapula	.	.	.		.	.	.	.
Lusaka	712	677	502	0.70	83	35	35	859
Northern	.	.	.		.	.	.	.
North Western	8	8	1	0.10	.	.	.	33
Southern	13,975	11,484	9,391	0.67	324	214	212	14,042
Western	217	217	475	2.19	2	-	-	213
Total	131,857	125,108	121,908	0.92	707	400	289	151,650

Table 21: 2010/2011 CFS Irish Potatoes Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Irish Potatoes	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	113	113	2,665	23.56	2,656	76	27	58
Copperbelt	127	127	409	3.23	343	4	3	712
Eastern	195	195	273	1.40	108	15	10	848
Luapula								

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			17	1.67	3	0	0	80
			22,781	28.37	22,728	890	460	133
Northern	34	34	93	2.75	74	0	-	305
North Western	367	367	963	2.62	712	28	.	1,797
Southern	153	117	352	2.30	329	17	14	193
Western	4	3	10	2.61	1	0	0	18
Total	1,806	1,764	27,563	15.27	26,953	1,030	514	4,143

Table 22: 2010/2011 Virginia Tobacco Production, Fertilizer usage, Number of households growing crop by province

Virginia Tobacco	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	6,673	6,621	13,808	2.07	10,158	2,659	941	2,765
Copperbelt	0	0	0	6.00	.	.	.	7
Eastern	1,061	1,061	1,581	1.49	20	240	159	2,067
Luapula	.	.	.		.	.	.	.
Lusaka	311	311	250	0.81	242	38	10	.
Northern	2	2	5	2.88	.	.	.	30
North Western	.	.	.		.	.	.	.
Southern	4,292	4,274	8,329	1.94	6,434	1,392	397	2,218
Western	2,742	2,678	3,172	1.16	39	309	299	2,000
Total	15,080	14,946	27,146	1.80	16,892	4,639	1,808	9,087

Table 23: 2010/2011 Burley Tobacco Production, Fertilizer usage, Number of households growing crop by province

Burley Tobacco	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	2,039	2,039	1,753	0.86	40	353	311	2,852
Copperbelt					.			

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			1	0.07		0	0	22
			8,608	1.25	45	1,470	1,181	14,766
Luapula	.	.	.		.	.	.	.
Lusaka	7	7	2	0.33	.	1	1	18
Northern	401	241	136	0.34	.	10	25	1,518
North Western	59	59	130	2.21	-	6	4	267
Southern	363	316	167	0.46	-	48	22	436
Western	348	315	344	0.99	.	102	20	82
Total	10,122	9,536	11,141	1.10	85	1,989	1,565	19,961

Table 24: 2010/2011 CFS Mixed beans Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Mixed Beans	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	4,440	4,361	3,279	0.74	1,821	113	21	11,387
Copperbelt	2,840	2,696	1,827	0.64	800	100	53	10,260
Eastern	2,599	2,568	1,432	0.55	508	8	1	8,198
Luapula	4,261	4,145	2,999	0.70	1,053	6	6	19,111
Lusaka	856	770	422	0.49	251	3	2	2,854
Northern	50,242	47,854	33,509	0.67	18,622	58	25	119,029
North Western	4,706	4,361	3,147	0.67	1,469	(0)	0	15,548
Southern	357	296	163	0.46	25	4	3	1,192
Western	1,243	1,188	292	0.23	22	0	-	2,669
Total	71,544	68,239	47,070	0.66	24,572	292	111	190,248

Table 25: 2010/2011 CFS Cow-pea Production, Expected sales, Fertilizer usage, Number of households growing crop & household crop production retained as seed by province

Cowpeas	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop

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			71	0.53	14	0	0	660
	72	72	8	0.11	-	.	.	386
Eastern	38	38	23	0.60	-	-	-	426
Luapula	19	19	10	0.54	7	-	-	147
Lusaka	81	81	31	0.38	1	7	-	447
Northern	280	276	105	0.38	19	(2)	13	1,886
North Western	5	5	2	0.36	-	.	.	18
Southern	1,067	1,049	988	0.93	40	1	0	2,989
Western	392	324	139	0.35	22	6	6	1,255
Total	2,089	1,992	1,376	0.66	103	12	19	8,214

Table 26: 2010/2011 CFS Sweet potato Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Sweet Potatoes	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	9,968	9,694	32,906	3.30	19,531	1	3	32,374
Copperbelt	4,531	4,461	18,628	4.11	12,868	2	0	19,687
Eastern	1,688	1,679	4,951	2.93	2,314	7	3	4,990
Luapula	2,651	2,609	10,348	3.90	4,959	-	-	17,617
Lusaka	635	594	2,908	4.58	1,236	9	2	3,152
Northern	11,519	11,078	40,298	3.50	13,982	2	-	51,741
North Western	2,462	2,437	9,837	4.00	4,876	(2)	.	14,268
Southern	10,933	9,711	23,030	2.11	9,791	27	27	26,026
Western	949	947	3,708	3.91	1,157	4	-	3,981
Total	45,335	43,211	146,614	3.23	70,714	51	35	173,835

Table 27: 2010/2011 CFS Paprika Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Paprika	Area planted (ha)	Area expected to be	Expected production (MT)	Yield (MT/ha)	Expected total	Quantity of basal	Quantity of top	Number of hh growing

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					sales (MT)	fert used (MT)	fert used (MT)	this crop
Central	22	22	4	0.16	0	3	3	83
Copperbelt	18	18	31	1.72	.	1	1	66
Eastern	2	2	1	0.44	.	.	.	20
Luapula	.	.	.		.	.	.	.
Lusaka	24	24	9	0.39	4	1	0	28
Northern	4	4	6	1.32	.	.	.	35
North Western	.	.	.		.	.	.	.
Southern	223	223	546	2.44	545	116	58	41
Western	8	8	3	0.41	0	-	-	41
Total	302	302	600	1.98	550	121	63	313

Table 28: 2010/2011 CFS Wheat Production, Expected sales, Fertilizer usage by province

Wheat	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	19,881	19,881	123,308	6.20	107,190	6,736	6,838	.
Copperbelt	3,410	3,410	26,575	7.79	26,575	1,387	1,306	.
Eastern	.	.	.		.	.	.	.
Luapula	.	.	.		.	.	.	.
Lusaka	8,877	8,871	53,597	6.04	43,890	2,930	2,804	.
Northern	2	2	3	1.50	3	-	0	.
North Western	.	.	.		.	.	.	.
Southern	5,467	5,467	33,853	6.19	22,646	1,800	1,790	.
Western	.	.	.		.	.	.	.
Total	37,637	37,631	237,336	6.31	200,303	12,854	12,739	.

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Expected sales, Fertilizer usage by province

Barley	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	305	305	2,078	6.81	2,078	121	94	.
Copperbelt	253	253	2,030	8.02	2,030	76	76	.
Eastern	.	.	.		.	.	.	.
Luapula	.	.	.		.	.	.	.
Lusaka	648	648	4,770	7.36	4,767	303	202	.
Northern	.	.	.		.	.	.	.
North Western	.	.	.		.	.	.	.
Southern	.	.	.		.	.	.	.
Western	.	.	.		.	.	.	.
Total	1,206	1,206	8,878	7.36	8,875	500	372	.

Table 30: 2010/2011 CFS Popcorn Production, Expected sales, Fertilizer usage, Number of households growing crop by province

Popcorn	Area planted (ha)	Area expected to be harvested (ha)	Expected production (MT)	Yield (MT/ha)	Expected total sales (MT)	Quantity of basal fert used (MT)	Quantity of top fert used (MT)	Number of hh growing this crop
Central	1,689	1,518	2,220	1.31	1,590	56	44	2,317
Copperbelt	1,011	986	1,470	1.45	1,210	42	35	1,504
Eastern	118	118	287	2.43	237	17	17	593
Luapula	40	40	79	2.00	15	.	.	214
Lusaka	65	53	126	1.93	109	7	7	128
Northern	138	103	112	0.81	108	.	7	221
North Western	82	82	33	0.40	28	.	.	165
Southern	130	54	81	0.63	56	2	1	215
Western	.	.	.		.	.	.	.
Total	3,275	2,954	4,408	1.35	3,352	124	111	5,357

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8.0 Fertilizer

Table 31: Fertilizer Used By Crop & Mean Quantity Applied Per Hectare By Crop Sorted In Order Of Highest Total Quantity Used

Crop	Area planted (ha)	Quantity of basal fert used (MT)	Quantity of Top dressing used (MT)	Qty of basal fert (kg) applied per/ha	Qty of top fert (kg) applied per/ha
Maize	1,355,764	113,753	116,779	84	86
Maize (for seed)	13,922	4,671	4,520	336	325
Maize (for silage)	2,012	471	347	234	173
Green Maize	612	328	197	535	322
Sorghum	26,854	152	103	6	4
Rice	33,995	72	86	2	3
Millet	42,663	48	42	1	1
Sunflower	40,894	271	135	7	3
Groundnuts	224,121	103	85	0	0
Soyabeans	61,422	8,284	1,693	135	28
Cotton	131,857	400	289	3	2
Irish potatoes	1,806	1,030	514	571	285
Mixed beans	71,544	292	111	4	2
Bambara nuts	5,750	(1)	(1)	0	0
Cowpeas	2,089	12	19	6	9
Sweet potatoes	45,335	51	35	1	1
Cassava	387,062	.	.		
Paprika	302	121	63	400	207
Wheat	37,637	12,854	12,739	342	338
Barley	1,206	500	372	415	309
Popcorn	3,275	124	111	38	34

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Table 32: Quantity of Fertilizer Applied to Maize by Province and Mean quantity of Fertilizer applied per hectare by Category

Maize LS =Large Scale SM=Small & Medium		Area planted (ha)	Quantity of basal fert used (MT)	Quantity of Top dressing used (MT)	Qty of basal fert (kg) applied per/ha	Qty of top fert (kg) applied per/ha
Central	LS	23,904	6,928	7,009	290	293
	SM	187,280	18,241	18,833	97	101
	Total	211,185	25,169	25,843	119	122
Copperbelt	LS	5,370	1,721	1,717	320	320
	SM	97,283	8,167	8,796	84	90
	Total	102,653	9,887	10,514	96	102
Eastern	LS	2,221	429.57115	422.99038	193	190
	SM	307,823	20,747	21,889	67	71
	Total	310,043	21,177	22,312	68	72
Luapula	LS	403.56923	84.756923	83.776538	210	208
	SM	43,879	5,219	5,237	119	119
	Total	44,283	5,304	5,321	120	120
Lusaka	LS	4,367	1,257	1,229	288	281
	SM	45,514	4,643	4,737	102	104
	Total	49,881	5,900	5,966	118	120
Northern	LS	574.85	111.33	108.81	194	189
	SM	151,369	18,443	18,642	122	123
	Total	151,944	18,554	18,750	122	123
North Western	LS	127.91667	29.2	29.2	228	228
	SM	72,876	5,396	5,425	74	74
	Total	73,004	5,426	5,455	74	75
Southern	LS	6,461	1,692	1,384	262	214
	SM	309,194	19,007	19,637	61	64
	Total	315,655	20,700	21,021	66	67
Western	LS	805.03	164.95	164.75	205	205
	SM	96,312	1,471	1,435	15	15
	Total	97,117	1,636	1,600	17	16
Total	LS	44,234	12,418	12,148	281	275
	SM	1,311,530	101,334	104,631	77	80
	Total	1,355,764	113,753	116,779	84	86

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9.0 Spatial Production, Sales and Yield Analysis by Province and District

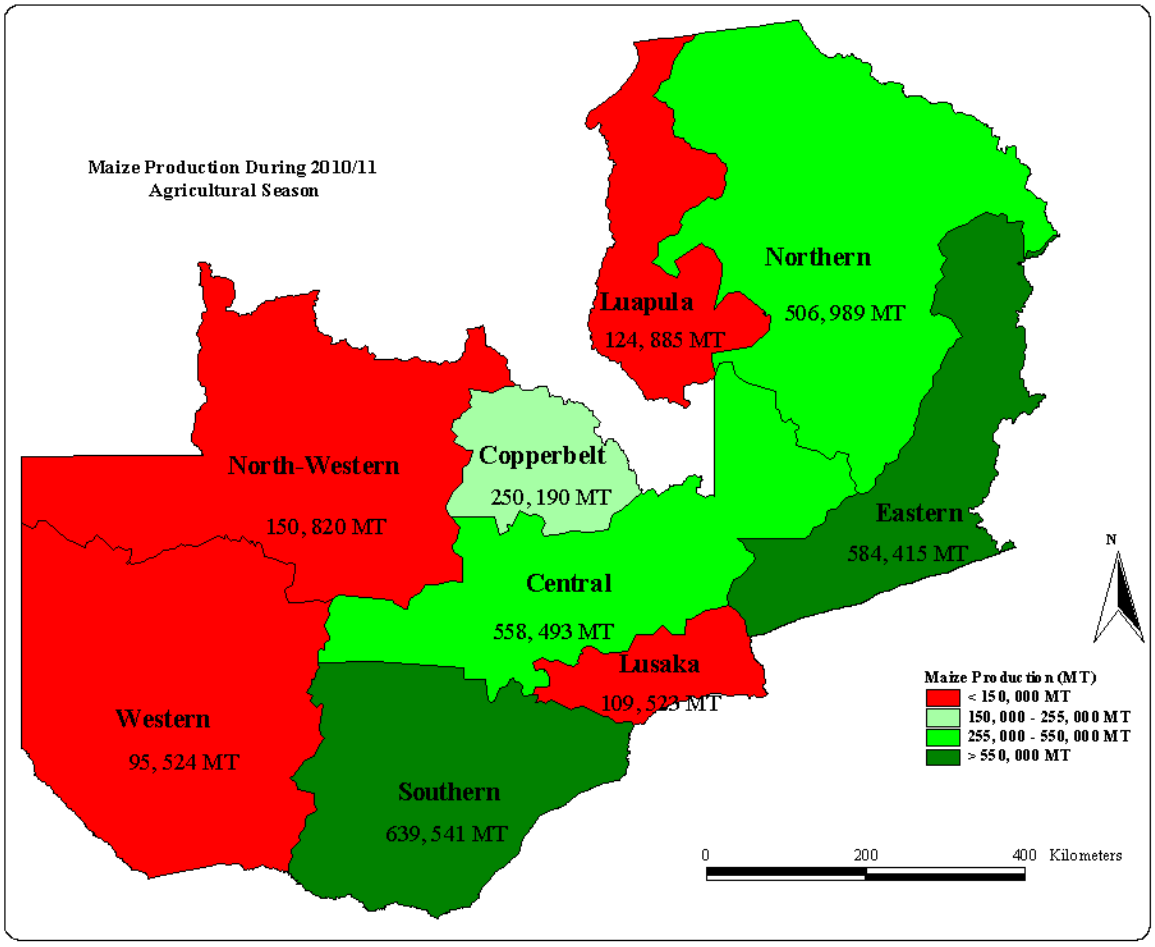

Figure 1: Maize Production (MT) by Province

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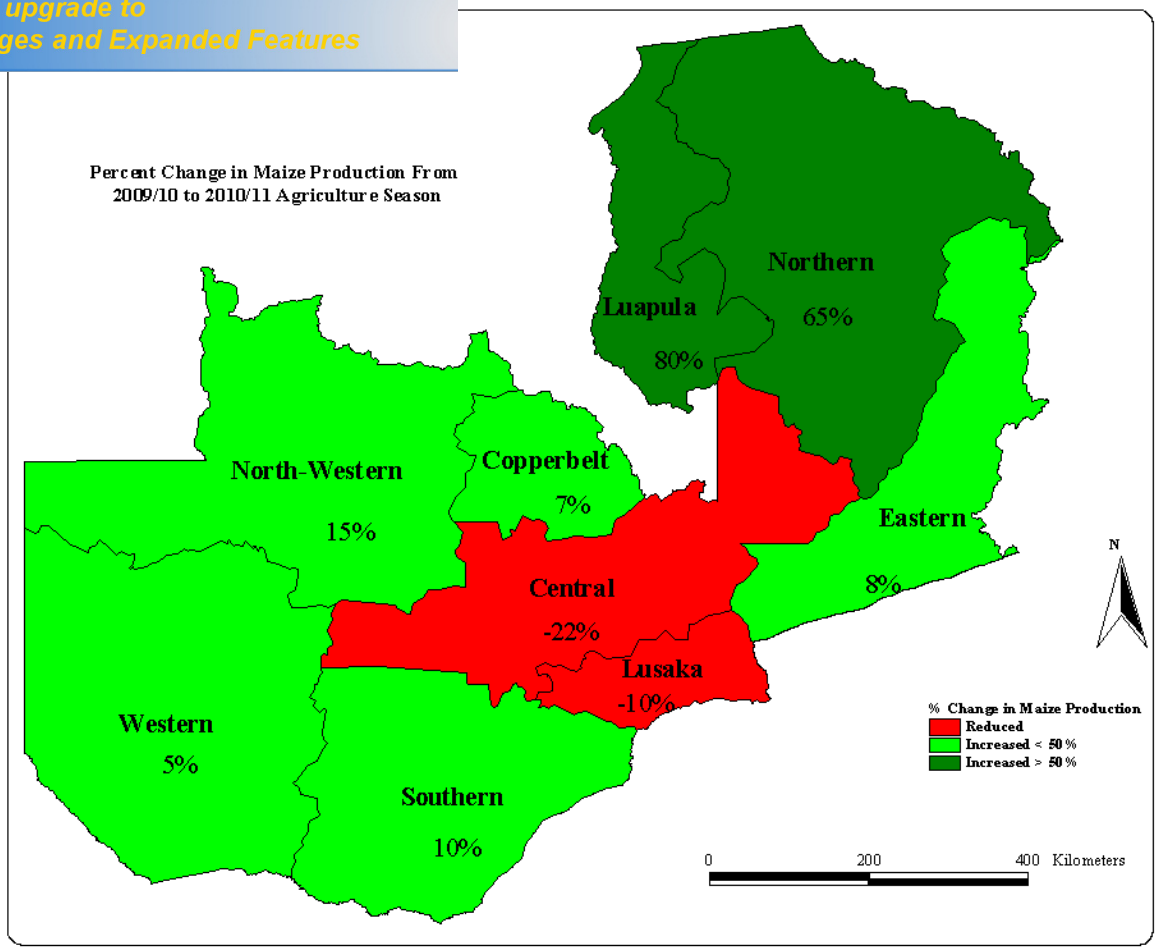

Figure 2: Provincial Percentage Change in Maize Production (2009/10 to 2010/11)

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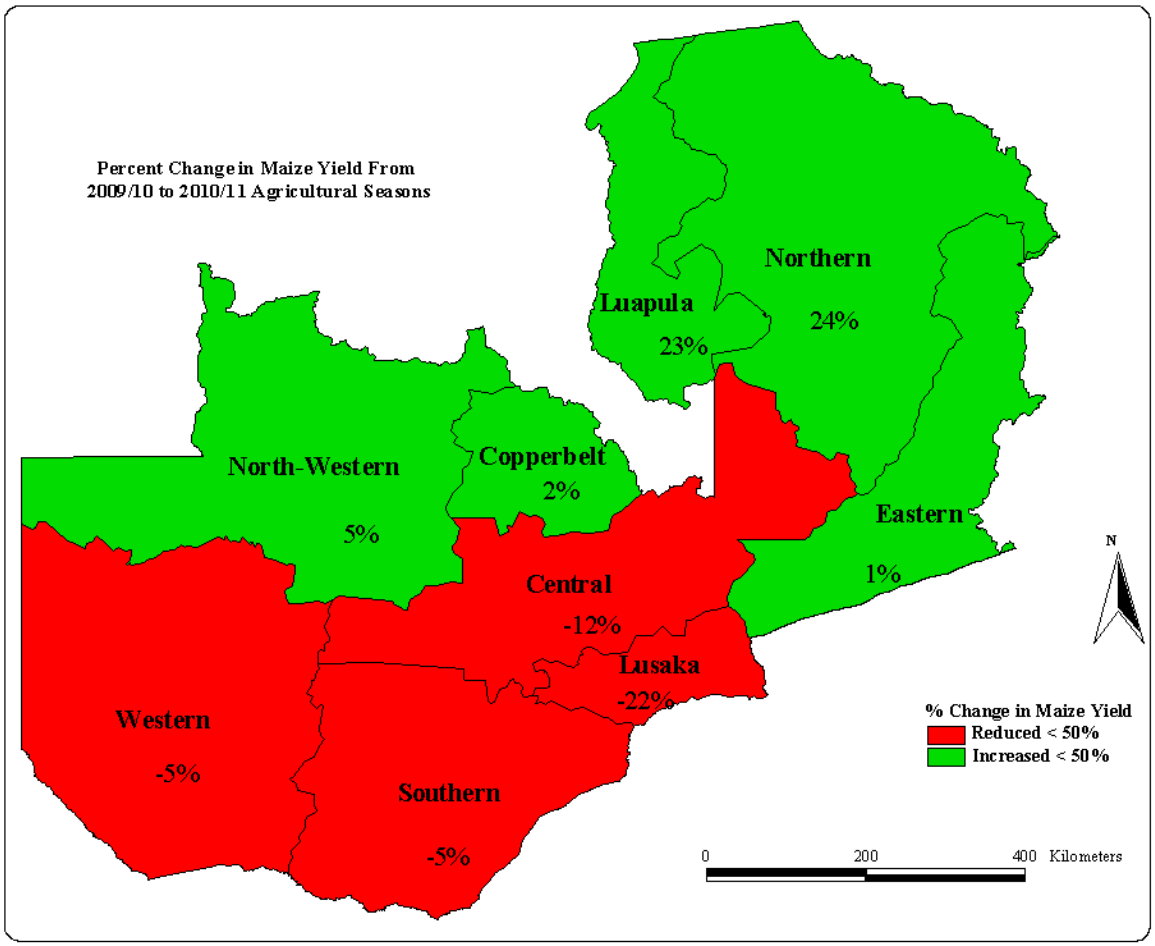

Figure 3: Provincial Percentage Change in Maize Yield (2009/10 to 2010/11)

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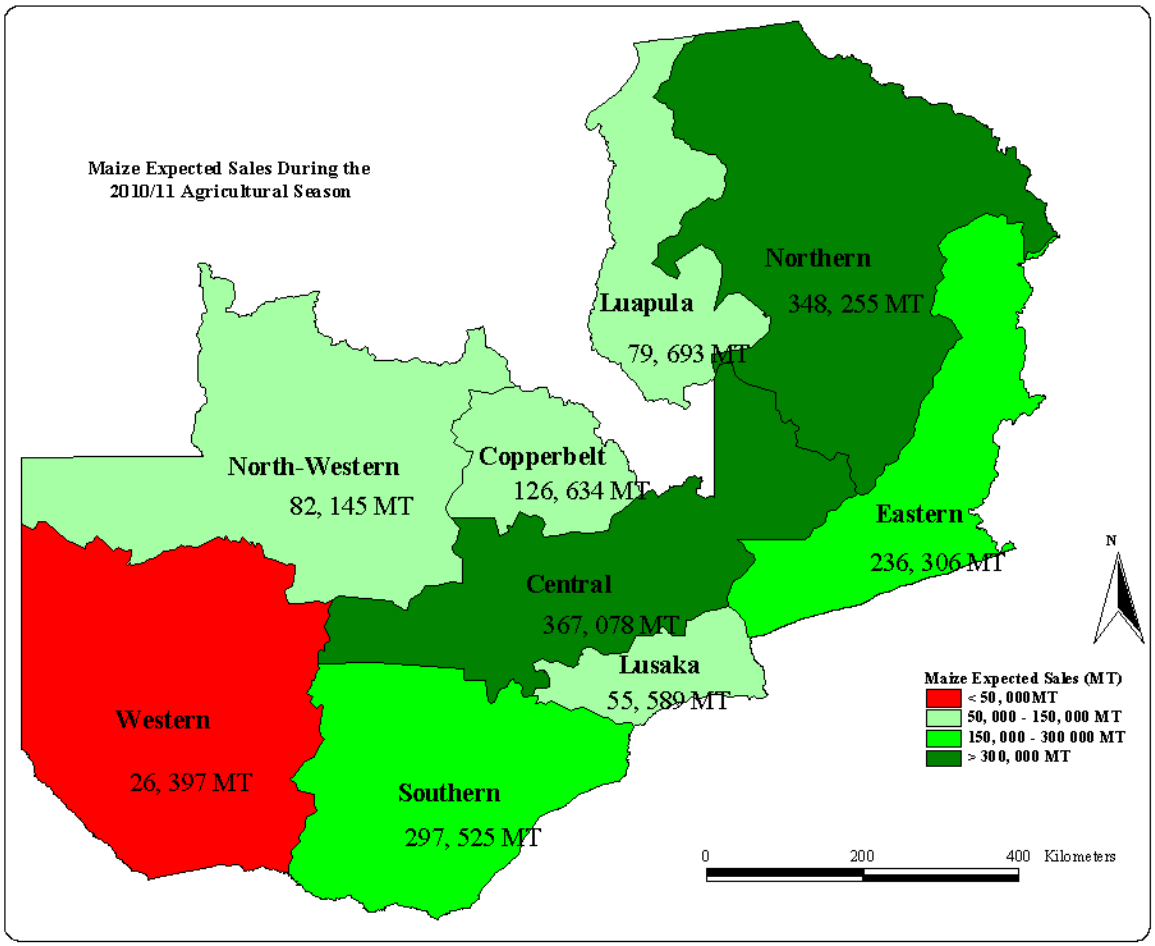

Figure 4: Provincial Maize Expected Sales (MT)

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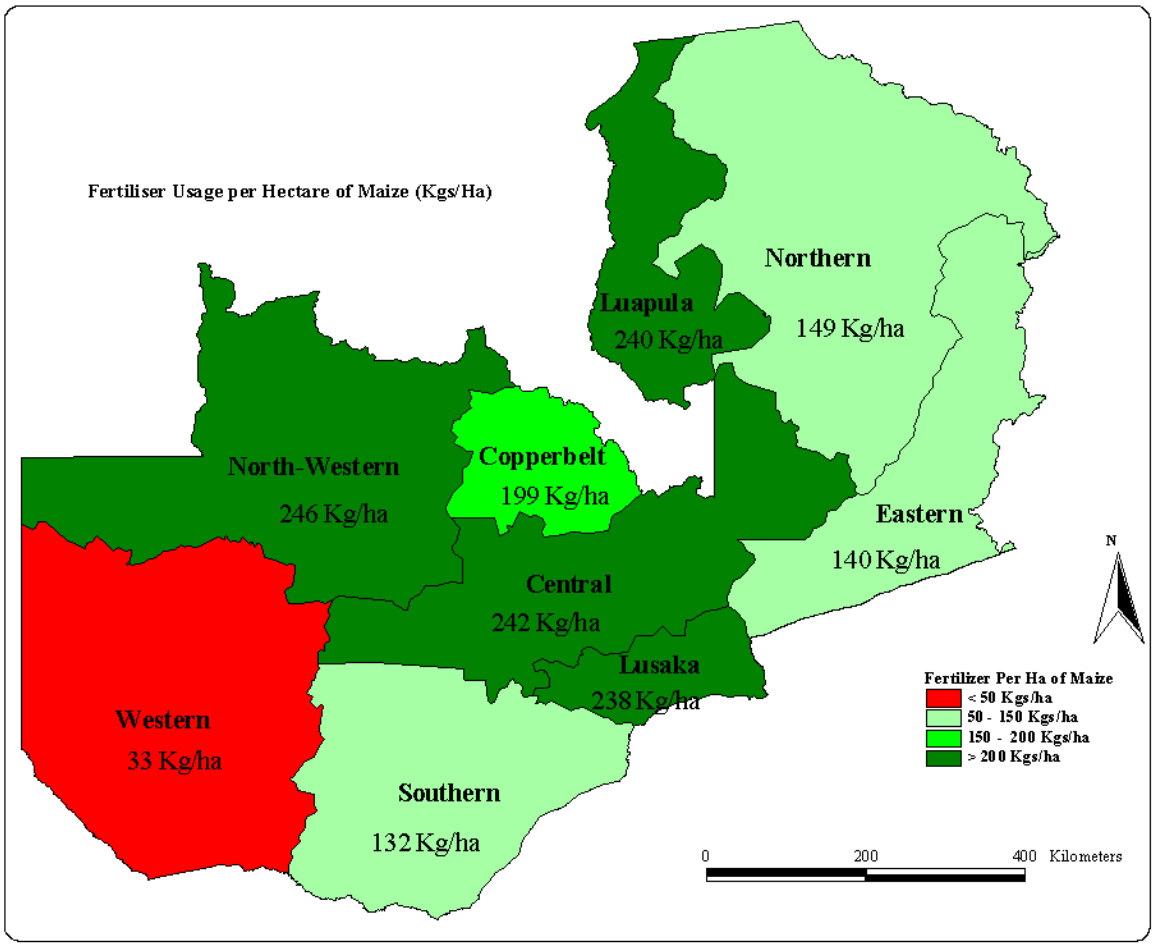

Figure 5: Provincial Fertilizer Usage per Hectare of Maize (Kg/ha)

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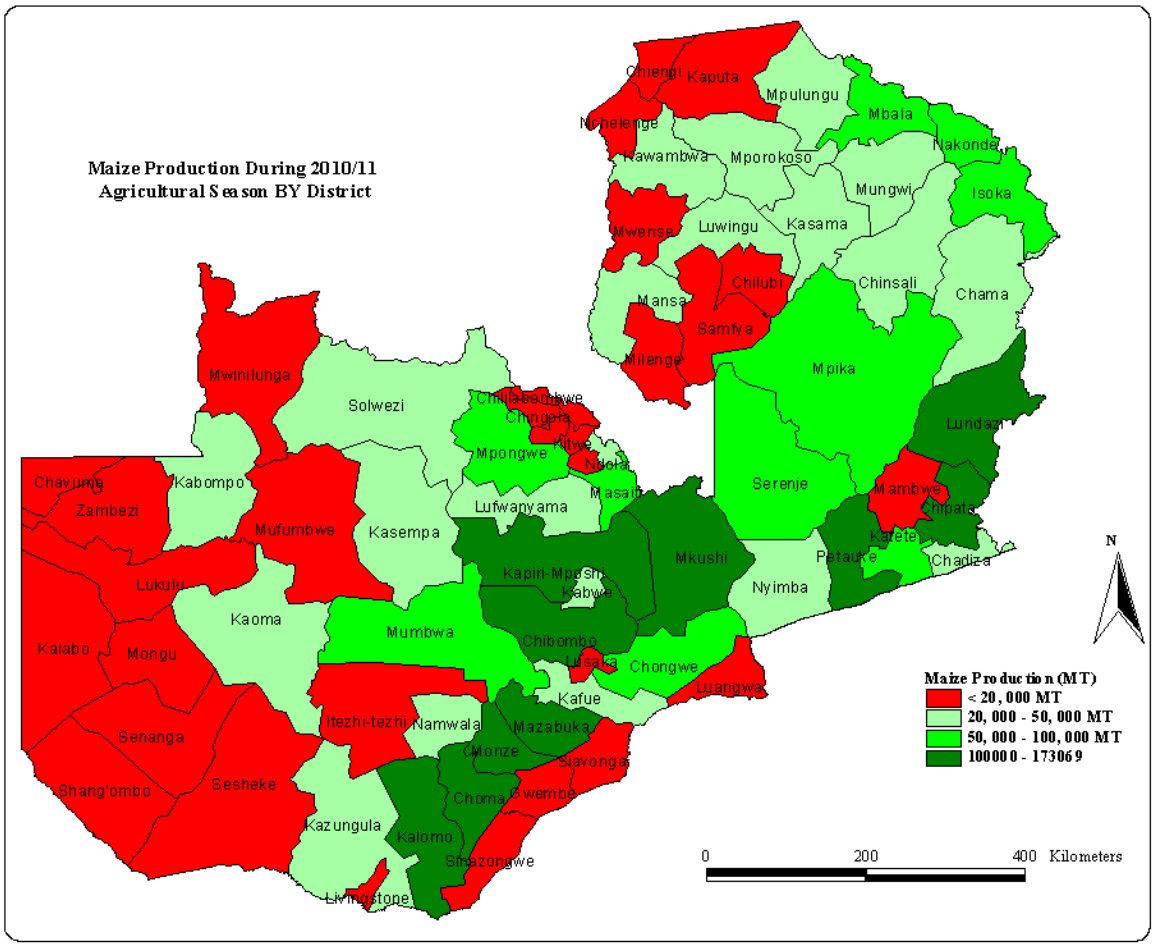

Figure 6: 2010/11 District Maize Production (MT)

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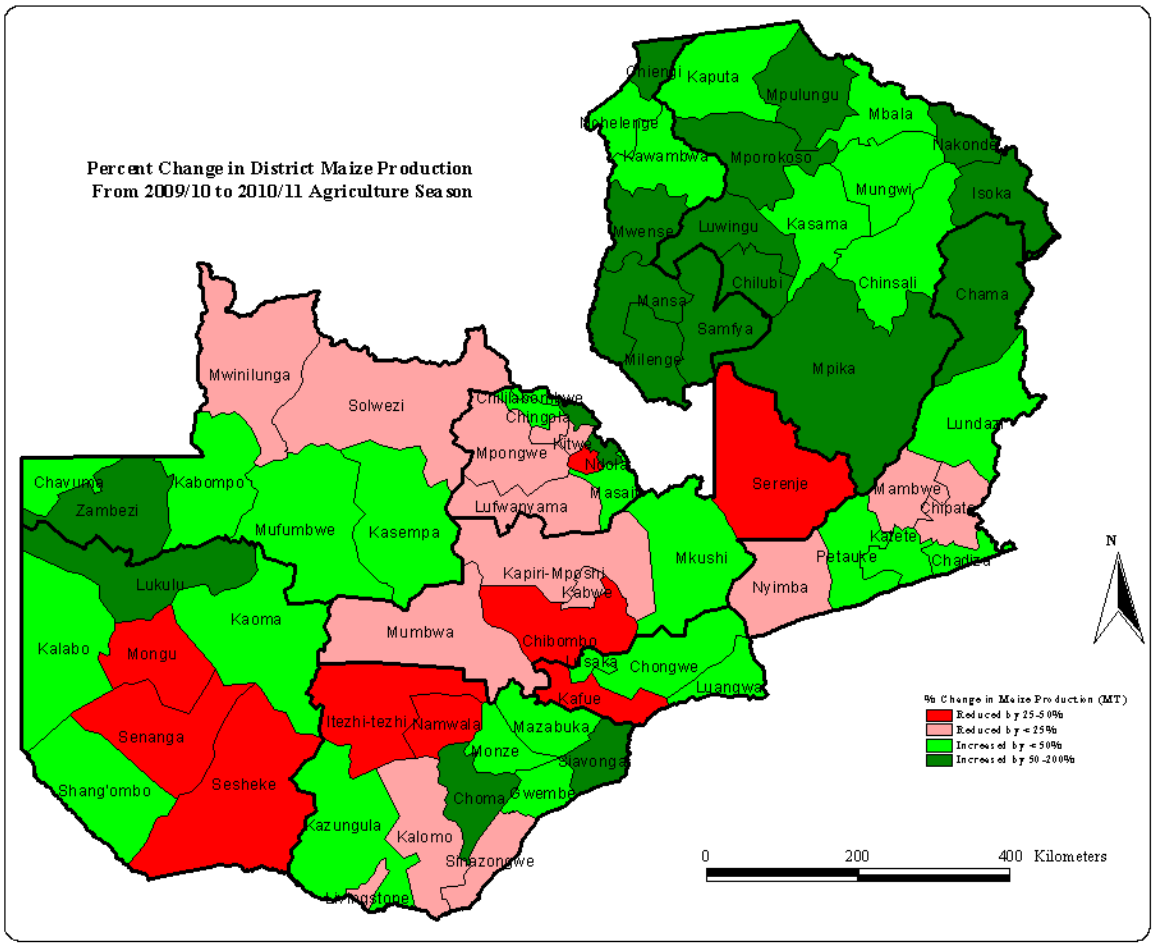

Figure 7: 2009/10 to 2010/11 District Percentage Change in Maize Production

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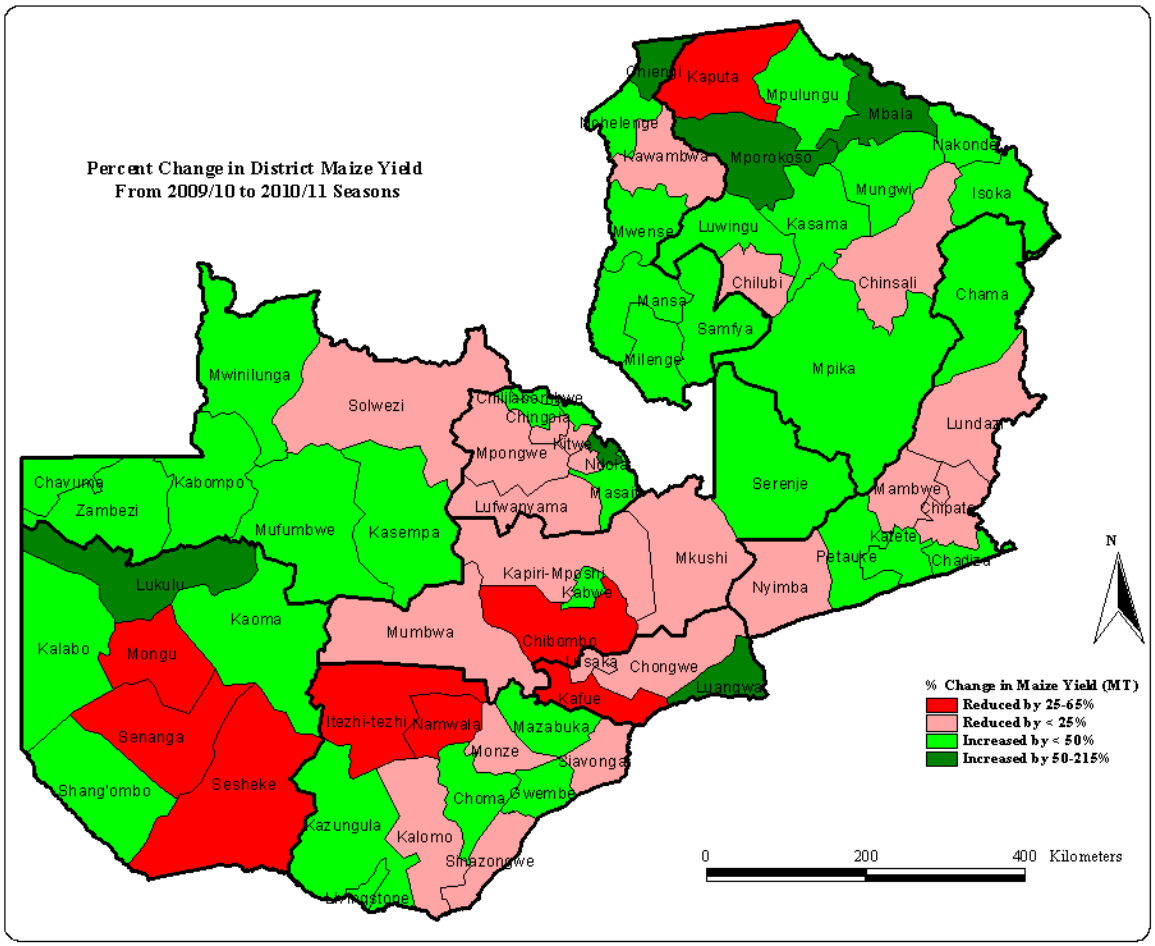

Figure 8: 2009/10 to 2010/11 District Percentage Change in Maize Yield

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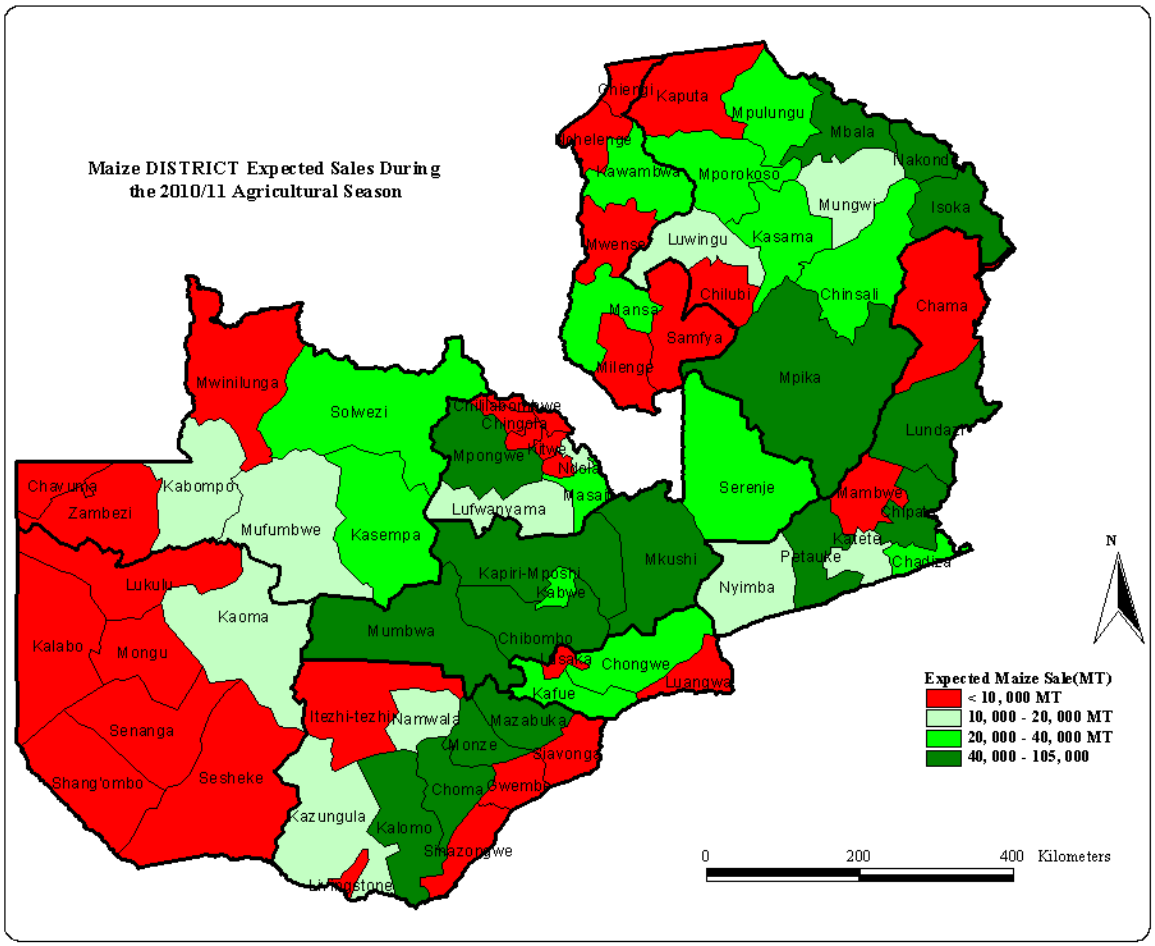

Figure 9: 2010/11 District Expected Maize Sales

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8.0 Appendix

CFS 2010/2011District Summary Tables Can be obtained Online from www.maff.gov.zm or www.zamstats.gov.zm

Categorization of Households

Medium Scale Households

Category C: Area under crops 5.0 – 19.99 ha. This category will also include:

1. Households reporting any of the specified crops when only 1 or 2 households in the SEA report the specified crop(s), even if they do not qualify basing on area under crops.
2. Households raising 50 or more cattle, 20 or more pigs, 30 or more goats, and/or 50 or more chickens, even if they do not qualify basing on area under crops.

Small Scale Households

Category B: Area under crops 2.0- 4.99 ha. This category will also include households reporting any of the specified crops, when 3 to 5 households in the SEA report the specified crop(s), even if they do not qualify basing on area under crops.

Category A: All the remaining agricultural households with area under crops less than 2.0 hectares

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