MINISTRY OF AGRICULTURE

ZIMBABWE

SECOND ROUND CROP AND LIVESTOCK ASSESSMENT REPORT

(7-12 April 2008)

23 April 2008

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Executive Summary

- The Second Round Crop and Livestock Assessment, conducted during the period 7 – 12 April 2008, follows and builds on the First Round Crop Assessment that was conducted in first week of February 2008.
- While the first round focused on verifying major factors that influenced and determined area planted to major crops and establishing the condition and growth stages of major crops in all farming sectors in Zimbabwe, the second round aimed at estimating the potential 2007/08 summer season's harvest from the major crops.
- The summer crop harvest was drastically reduced by a poor rainfall season(incessant heavy rains in December and January and a dry spell in February and March), late availability of maize seed, shortage of fuel, fertilizers, chemicals, labour and finance throughout the summer cropping season.
- A total **maize production of 470,700 mt** is forecast for the 2007/08 summer cropping season at an average yield of 0.27 t/ha. This production level is 49% of last season's production (952,600 mt) and 39% of the last five-year national average of 1,219,548 mt.
- A **national small grains** (sorghum and millets) **production of 93,200** mt is forecast for this season, at an average yield of 0.2 t/ha. This production level is 78% of last season's production (120,000 mt) and 71% of the last five-year national average, estimated as 131,714 mt.
- Given the estimated maize and small grains production, **the nation** is estimated **to face a cereal deficit of about 1,428,360 mt** against an estimated requirement of 1,992, 200mt. This analysis does not consider replenishing the Strategic Grain Reserves, current stocks with GMB, the stocks retained by farming households, and planned imports.
- **National tobacco production** is forecast at **69,790 mt**, with an average yield of 1.1 t/ha for the 2007/08 season. This production level is 88% of last season's production (79,000 mt) and 92% of the last five year national average, estimated as 75,701 mt.
- **Cotton production** is forecast at **226,435 mt**, with an average yield of 0.4t/ha for the 2007/08 season. This production level is 96% of last

season's production (235,000 mt) and 97% of the last five year national average, estimated at 232,595 mt.

- **Soya bean production** is forecast at **48,320 mt**, with an average **yield of 0.66 t/ha** for 2007/08 season. This production level is 43% of last season's production (112,300 mt) and 66% of the last five year national average, estimated at 73,265 mt.
- **Total groundnuts production** is forecast at **131,536 mt** for the 2007/08 season. This production level is 105% of last season's production (125,000 mt) and 159% of the last five year national average, estimated at 82,915 mt.
- **Edible beans production** is forecast at **3,803 mt,** with an average **yield of 0.09t/ha** for the 2007/08 season. This production level is 13% of last season's production (30,300 mt) and 12 percent of the last five year national average, estimated at 29,930 mt.
- **Sunflower production** is forecast at **5,461 mt**, with an average **yield of 0.13 t/ha** for the 2007/08 season. This production level is 21% of last season's production (25,700 mt) and 31% of the last five year national average, estimated at 17,405 mt.
- **Dairy, poultry and piggery** enterprises have **scaled down** significantly mainly due to the shortages of stock feeds and pest and disease control chemicals.
- The **heavy rains** in the first half of the summer season have **ensured** availability of **adequate water and grazing** in most parts of the country. Only a few overgrazed communal areas like Beitbridge and Gwanda will experience the traditional shortage of grazing during the coming dry season. Consequently, grazing stock are in a fair to good condition throughout the country.
- Due to **erratic dipping regimes, poor internal parasites** control arising, partly from shortages of drugs on the market and poor knowledge amongst farmers, a small, but significant proportion of grazing stock are in **a poor condition** and some have succumbed to treatable animal diseases.

- Recalling that the 2007/08 summer season's harvest for maize and small grains will only cover about 28 percent of the national requirements, there is an urgent need to import maize to off-set the cereal deficit of about 1,428,360 mt, less any import commitments to date, and replenish the strategic grain reserves.
- A considerable proportion of rural and urban households dependent on summer cropping for their food and income will not have sufficient entitlements to access adequate food during the 2008/09 consumption year and will require food assistance. **An urgent assessment** to determine who will be food insecure, how many they are, where they are located and the level of their food insecurity **should be undertaken** to inform the food assistance programme.
- Farmers have not been able to access inputs on time due to non availability of these inputs early in the season. As a result, farmers access inputs late, which results in late planting and extremely low yields. **Inputs should** therefore **be** availed on the open market to allow farmers to buy their requirements at their own convenience.
- While grazing is generally good in most parts of the country, the absence of fireguards poses a great danger to grazing. **Measures to protect the available grazing** should be urgently put in place.
- Most **irrigation schemes** in the country are performing below potential. The physical infrastructure and management systems of these schemes **should be rehabilitated to ensure** their contribution to **national food security**.
- There is an urgent need to capacitate the Department of AGRITEX with transport, information and communication technology, and resources for training to ensure adequate support to farmers in all sectors of the country.

1.0 Background and Introduction

Every year, Agricultural Technical and Extension Services (AGRITEX) conducts two national crop and livestock assessments during the summer season: the first and second round assessments. The 2007/08 season first round assessment concentrated on crops only and it was undertaken in the first week February 2008 to;

- ascertain the areas planted to major crops and determine the main factors that influenced area planted to these crops
- assess the availability of crop inputs (seeds, fertilisers, chemicals, tillage equipment, animal draft power, fuel, labour and funding) and their accessibility by farmers in all farming sectors in Zimbabwe
- assess the impact of the inputs situation (availability and accessibility) and the quality of the rainfall season (start of season, temporal and spatial rainfall distribution) on crop growth stages and crop condition

The findings from the assessment showed that the area planted to all crops was more than that of the 2006/07 season, although area under cereals did not reach the targets set for this season. Area planted to maize for this season stands at 1,722,322 ha, of which 14% was planted before December 2007, 43% in December and 43% in January 2008.

The major challenges faced during this season were shortages of fertiliser, late delivery of seed as well as unfavourable weather conditions, which resulted in waterlogging and excessive leaching of soil nutrients. A prolonged dry spell was experienced in almost all provinces in February and March 2008, further worsening prospects of a good harvest that had already been negatively affected by the incessant rains received in December and January.

The Ministry of Agriculture undertook a second round crop and livestock assessment during the second week of April 2008. The exercise was conducted by a team made up of officers from the Ministry of Agriculture, AGRITEX, Operation Maguta, Grain Marketing Board(GMB), CSO(Central Statistical Office(CSO), Meteorological Services Department, FEWSNET, and FAO. The assessment relied upon data collected by AGRITEX officers based

at ward level. The data was compiled periodically at ward, district, provincial and national level. This data formed the basis for estimating area planted to different crops and expected yields from the different farming sectors in the country. It also provided an insight into the current livestock situation.

This report presents the findings from the second round crop and livestock assessment. It also builds on results from the first round crop assessment, such as rainfall season quality and crop input availability in as far as they influenced crop yields and production in the 2007/08 summer season. The report also covers the livestock situation, especially condition of livestock, grazing and other factors that influenced livestock production. It ends by articulating the recommendations coming from the assessment.

2.0 Specific Objectives of the Assessment

The specific objectives of the second round crop and livestock assessment were:

i) To estimate national yields and production of food and non food crops in the country.

ii) To identify areas of deficit/surplus in cereal production at district and provincial levels.

iii) To assess the situation of livestock as it relates to stock-feed availability, grazing condition, water supply, disease prevalence, and animal condition.

iv) To make recommendations based on the findings of the assessment.

3.0 Methodology

Data on inputs situation, season quality, area under crops, crop condition and yields, grazing and livestock condition, as well as other relevant information on livestock and crop production were obtained through a combination of the following activities;

- ***Pre-field visit provincial meetings:*** The meetings were convened by the provincial AGRITEX officers and were attended by provincial representatives of organisations involved in agricultural extension and agricultural inputs supply, such as Operation Maguta, Agribank and the Grain Marketing Board. AGRITEX provincial livestock and crop production specialists also participated in the meetings. The meetings received briefings on the crop and livestock situations from relevant provincial AGRITEX officers and updates on inputs supply in the respective provinces by GMB and/or Operation Maguta. Discussions to clarify issues arising from the presentations followed, and the meeting concluded by developing itineraries for district field visits. All relevant secondary data were identified and collated for further review and analysis.
- ***District field visits:*** District visits were undertaken by two or three national crop and livestock assessment team members and three provincial AGRITEX officers, supported by district AGRITEX, Operation Maguta and/or GMB district officers. The visits started off with a meeting in which the district AGRITEX officer provided a comprehensive report of the crop and livestock situation. The reports provided preliminary yield and production estimates for all major crops for different farming sectors in the district. Field transects of areas with representative crop and livestock situations for all the sectors in the district were agreed upon, and two to three teams were assigned to each transect, depending on available transport. During the field visits, members of the assessment teams selected fields with the most representative crop stands and measured yields for these fields. The teams also held discussion with farmers on the crop and livestock situations, major season challenges, and harvest prospects for the major crops. The grazing and livestock conditions were observed during the field visits. At the end of each field visit, discussions were held with the respective district AGRITEX team to review their preliminary yield estimates, and necessary yield adjustments were

done. The agreed crop and livestock situation data for the districts was collated for incorporation into the provincial report.

- ***Final Provincial Assessment Consolidation Meeting:*** After all the districts field visits, the provincial and national members of the assessment team reviewed all data from the district fields and any relevant provincial reports, assembled the data, and analysed it for compilation of the provincial report. All national team members left their respective provinces with draft provincial reports in their hands.
- National Report compilation: The national report was compiled from the provincial reports. Data from the provincial reports were brought together to produce the national picture on the crop and livestock situation for the 2007/08 summer season.

4.0 Major Findings

4.1 2007/08 Rainfall Season

4.1.1. Seasonal Forecast for 2007/08

Normal to above normal rains were forecast across the country for both the October to December (OND) and January to March (JFM) periods. An updated forecast of JFM also predicted normal to above normal rains.

4.1.2. Season Quality

Figure 1a: December 2007 percentage of Normal Rainfall

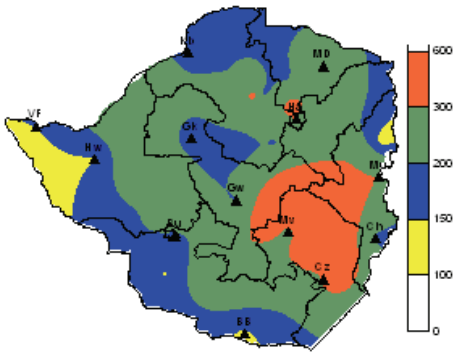
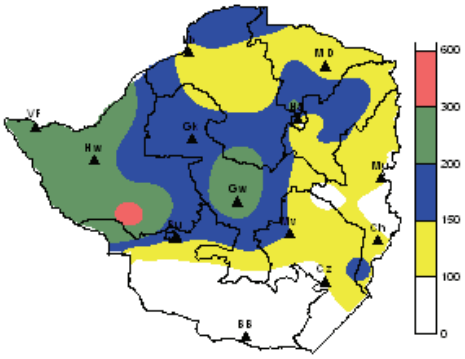


Figure 1b: January 2008 percentage of Normal Rainfall



As forecast, normal to above normal rains were experienced in most parts of the country, but however the temporal distribution was poor. This contributed significantly to severe reduction in crop yields across the whole country.

Generally, the first effective rains were received during the period 20 -30 November 2007 for most parts of the country. Though the onset of the main rains was near normal, it was followed by heavy rains in December and January. December 2007 set a new record as the wettest December, Zimbabwe has ever experienced in over the 100 years the country had been keeping rainfall records. The excessive rains did not only disrupt land preparation, weeding and application of fertilizers, it caused nationwide water logging and excessive nutrient leaching.

To complicate the season further, dry conditions covered the country as from 1st February. Masvingo, Matabeleland South, southern parts of Manicaland, and Midlands were the worst affected; the main rains ceased in January for these areas. Beitbridge went for at least 21 days without any rains in February. Most parts of Mashonaland provinces continued to receive rains after 1st February, and, as a result, the situation in these provinces is somewhat different to the southern provinces. In general, the late crop suffered from moisture stress at the critical reproductive stages.

4.2 Input Availability

Generally, the season was characterised by a critical shortage of fertilisers and late availability of maize seed. The bulk of inputs, particularly maize seed and fertilisers, were supplied through Government programmes, which were implemented through the Operation Maguta and GMB. Inputs were also availed through contract programmes, NGOs and individual farmer purchases.

- A total of 41,591 mt of maize seed was availed for the season from various sources. This was equivalent to cover 1,633,640 ha out of the 1,722,322 ha planted. The remaining hectarage was planted using left over and retained seed.
- Certified seed for small grains, groundnuts and soya bean was generally inadequate throughout the season. As a result, some

farmers received pure grain as seed, and some used retained seed, which compromised germination rates and yields.

- The fertiliser supply situation for the summer crop remained critically below the targeted requirements, with 7% of the targeted 600,000 tonnes of the basal fertiliser and 10% of the required 400,000 tonnes of top dressing fertiliser having been supplied. Inputs for cotton and tobacco were supplied by the contractors, though in some instances, cotton input packages were incomplete without either the chemicals or fertilisers. Consequently, the bulk of the 2007/08 crop suffered severely from nutrient deficiency.
- The amount of fuel supplied was inadequate in all provinces, and this resulted in slow progress in land preparation before the onset of the rains and ineffective execution of other various farm operations that depend on petrol or diesel powered mechanical equipments.
- Farmers found it extremely difficult to attract enough labour at critical times due to general low farm labour availability. In most cases, farm workers were not willing to accept cash as payment for their labour; they would rather be paid in kind with basic commodities that were not readily available.
- Agricultural funding was generally inadequate, and the high levels of inflation experienced during the summer season significantly eroded the value of awarded loans before they even got to the farmers. High levels of inflation coupled with slow processing of loan applications and late disbursements of funds to farmers accounted for a significant proportion of non-performance by farmers.

4.3 Crop Production Forecast

4.3.1.1 Maize

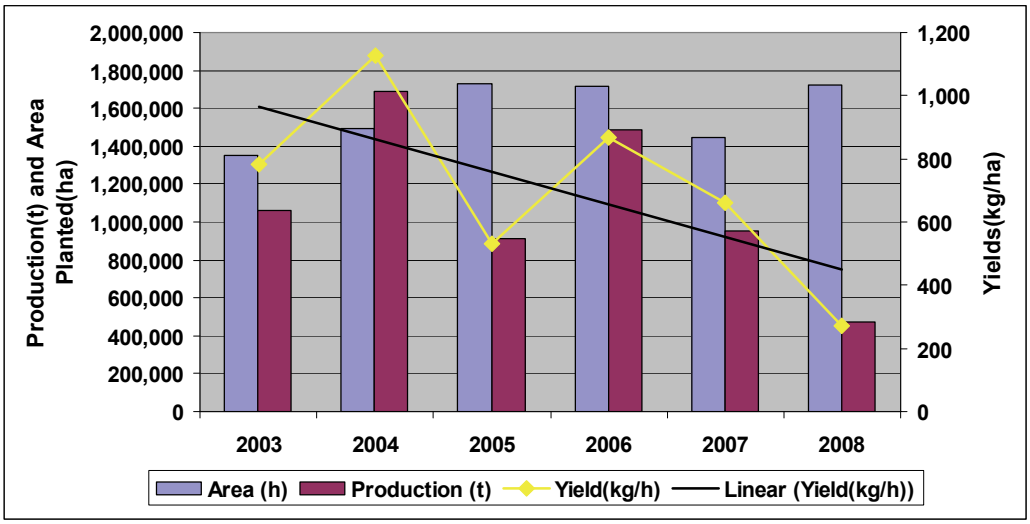
A national production of 470,700 mt is forecast for the 2007/08 summer cropping season at an average yield of 0.27 t/ha. This production level is 49% of last season's production (952,600 mt) and 39% of the last five-year national average of 1,219,548 mt.

Table 1: Maize Production for 2007/08 Summer Cropping Season by Province

Province	Area(ha)	Yield(t/ha)	Production(t)	% Contribution
Mashonaland East	322341	0.273	87937	19
Mashonaland West	190594	0.445	84752	18
Mashonaland Central	226106	0.501	113183	24
Manicaland	315063	0.345	108632	23
Masvingo	229717	0.141	32336	7
Midlands	294297	0.098	28740	6
Matabeleland North	76246	0.112	8506	2
Matabeleland South	67958	0.097	6583	1
Total	1722322	0.273	470669	100

The highest maize production is expected to come from Mashonaland Central (24%) followed by Manicaland (23%) and Mashonaland East and West provinces (19% and 18%, respectively) (Table 1). Matabeleland South and North provinces are expected, as usual, to have the lowest contributions to national maize production in the 2007/08 agricultural season.

Figure 2: Trends in Maize Production for Years2003 - 08



A total of 1,722,322 ha were planted to maize in the 2007/08 season, compared to 1,621,200 ha in the previous season. The increase in area planted to maize came from Mashonaland East, Mashonaland Central, Manicaland, and the two Matabeleland provinces. Notable reductions in area

planted to maize were recorded in Masvingo (7%), Mashonaland West (12%) and Midlands provinces (14%).

Figure 2 shows that the area planted to maize compares favourably with the trend in the last six years. Generally, there has been an increase in area planted whilst yields continued to decrease. The declining maize productivity per unit area, in recent years, has been largely fuelled by late arrival of seed maize to the farmer, resulting in late plantings, the ever deepening shortage of fertilisers, and the erratic rainfall.

Figure 3a: Sector Contribution to National Area Under Maize

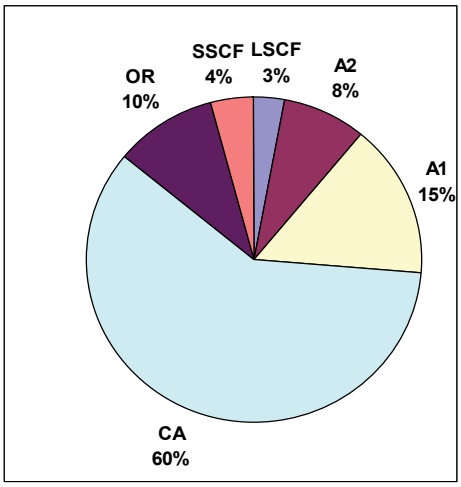
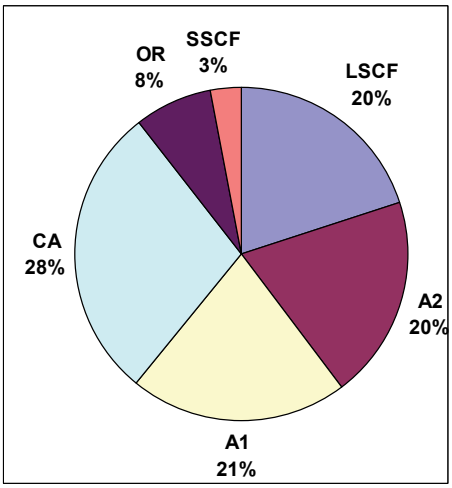


Figure 3b: Sector Contribution to National Maize Production



The area planted to maize by the communal sector constitutes about 60% (1,024,000 ha) of the total area planted to maize in the 2007/08 summer season This sector is, however, estimated to contribute a disproportionate 21% to the total harvest for the 2007/08 maize harvest estimate(figures 3a and 3b). In the last half of the 1990s, the communal area sector used to contribute around 80% of the total summer harvest (averaging about 1 million mt per season). The greatest fall in yields was experienced in the communal sector.

4.3.1.2 Small Grains (Sorghum, Finger Millet, and Pearl Millet)

A national small grains production of 93,200 mt is forecast for this season, at an average yield of 0.2 t/ha. This production level is 78% of last season's production (120,000 mt) and 71% of the last five-year national average, estimated as 131,714 mt.

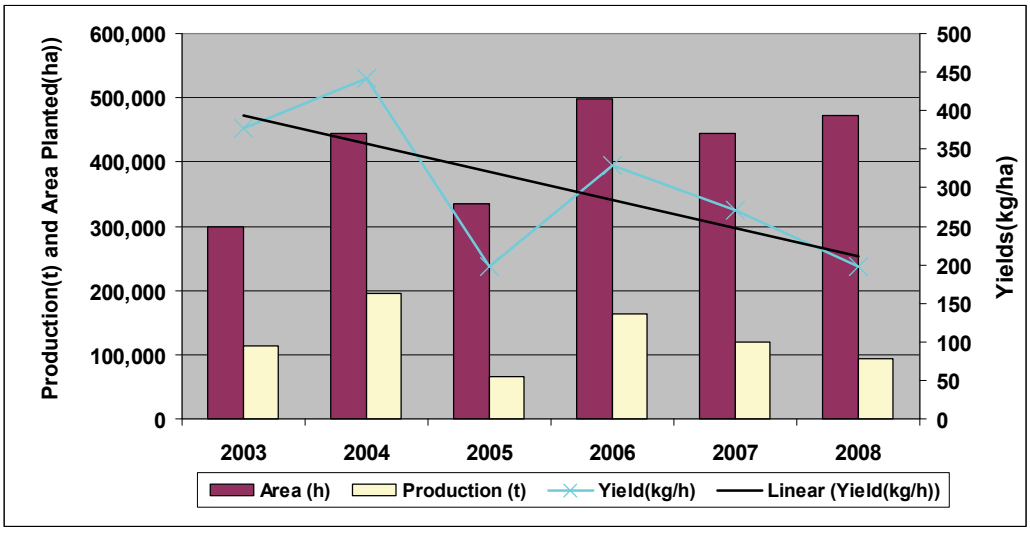
Table 2: Small Grains Production for the 2007/08 Summer Season by Province

Province	Area(ha)	Yields(t/ha)	Production(t)	% Contribution
Mashonaland East	43518	0.092	4025	4
Mashonaland West	6285	0.334	2098.14	2
Mashonaland Central	28516	0.390	11109.26	12
Manicaland	115283	0.191	22023.65	24
Masvingo	112770	0.193	21740.095	23
Midlands	44716	0.119	5308.547	6
Matabeleland North	72573	0.253	18384.65	20
Matabeleland South	48826	0.174	8482.63	9
Total	**472487**	**0.197**	**93172**	**100**

The highest small grains production is expected to come from Manicaland (24%), followed by Masvingo (23%), and Matabeleland North (20%) (Table 2). Mashonaland East and West provinces are expected to have the lowest contributions to national small grains production in the 2007/08 agricultural season.

A total of 452,425 ha were planted to small grains in the 2007/08 season, which is a 23 percent increase compared to 368,803 ha planted last year. Figure 3 shows that the area planted to small grains has generally increased over the last 5 years, but like in the case with maize, yields have generally been on a downward trend.

Figure 3: Trends in Small Grains Production 2003 – 08



4.3.1.3 Estimated Cereal Production versus Annual Requirements

National cereal requirements (maize and small grains only) for human, livestock and other industrial use are estimated at 1,992,200 mt. This analysis disregards Strategic Grain Reserves replenishment, current stocks with GMB, the stocks retained by farming households, and planned imports, the nation is estimated to face a cereal deficit of about 1,428,360 mt.

Table 3: Cereal harvest Forecast Compared to National Cereal Requirements

Requirements (MT)		**Production (MT)**	
Human	1,642,200	Maize	470,668
Livestock and other uses	350,000	Small Grains	93,172
Total	1,992,200	Total	563,840
Estimated Gap			**1,428,360**

Based on the CSO population projection of 12,347,238 people for 2008

4.3.2 Other Major Crop Production Estimates

This year's estimated production of all other crops, save for groundnuts, is lower compared to last year's production. This is mainly due to poor yields resulting from the poor season quality compounded by critical shortage of

fertilizers. Although, groundnuts yields declined, overall groundnut production increased due to increased area planted to the crop.

4.3.2.1 Tobacco.

- A total of 61,622 ha flue cured tobacco was planted in 2007/08, compared to 52,592 ha planted last year.
- National production is forecast at 69,790 mt, with an average yield of 1.1 t/ha for the 2007/08 season.
- This production level is 88% of last season's production (79,000 mt) and 92% of the last five year national average, estimated as 75,701 mt.
- Highest production of tobacco is expected to come from Mashonaland Central, with an estimated production of 20,717 mt at 1.5 t/ha, followed by Mashonaland West with an estimated production of 17,128 t at 1 t/ha.
- Generally, these two leading provinces are considered to have the best tobacco growing districts.

4.3.2.2 Cotton

- A total of 431,131 ha was planted, which is a 22% increase from the 353,857 ha planted last year.
- National production is forecast at 226,435 mt, with an average yield of 0.4t/ha for the 2007/08 season.
- This production level is 96% of last season's production (235,000 mt) and 97% of the last five year national average, estimated at 232,595 mt.
- Highest estimated production is from Mashonaland Central, with 69,130.2 t at 0.6t/ha.

4.3.2.3 Soyabeans

- A total of 72,311 ha was planted, which is 33% increase from the 54,172 ha planted last year.
- National production is forecast at 48,320 mt, with an average yield of 0.66 t/ha for 2007/08 season.

- This production level is 43% of last season's production (112,300 mt) and 66% of the last five year national average, estimated at 73,265 mt.

4.3.2.4 Groundnuts

- A total of 299,252 ha was planted, which is a 14% increase from the 262,521 ha planted last year.
- National production is forecast at 131,536 mt for the 2007/08 season.
- This production level is 105% of last season's production (125,000 mt) and 159% of the last five year national average, estimated at 82,915 mt.

4.3.2.5 Edible Beans

- A total of 39,875 ha was planted, which is 29% decrease from the 56,300 ha planted last year.
- National production is forecast at 3,803 mt, with an average yield of 0.09t/ha for the 2007/08 season.
- This production level is 13 percent of last season's production (30,300 mt) and 12 percent of the last five year national average, estimated at 29,930 mt.

4.3.2.6 Sunflower

- A total of 41,445 ha was planted, which is a 38% decrease from the 67,200 ha planted last year.
- National production is forecast at 5,461 mt, with an average yield of 0.13 t/ha for the 2007/08 season.
- This production level is 21% of last season's production (25,700 mt) and 31% of the last five year national average, estimated at 17,405 mt.

4.4 Livestock Situation

This section discusses current condition of cattle, sheep, and goats, and the condition and availability of grazing, stock feeds, and water supply. It will

discuss prevalence of major cattle diseases and associated problems in all provinces of Zimbabwe.

4.4.1 Livestock Condition

- The condition of cattle ranges from fair to good in communal areas to excellent in commercial farming areas.
- In some areas, condition of cattle is not good due to disease incidence. Some of the major diseases reported across the country are lumpy skin disease, tick-borne diseases, and black leg. For instance, all Mashonaland Central districts reported incidences of lumpy skin disease.
- Tick-borne diseases were reported in all provinces across the country due to erratic dipping as the drugs were unavailable and in some cases unaffordable. This has resulted in an increased number of tick infestations and some mortality. However, in some districts, such as Lupane, where NGOs are providing dipping chemicals, dipping continues to take place as recommended.
- Animals that have not been dosed for internal parasites are generally in poor condition.

Table 4: Examples of Beef Cattle Condition and Carcass Grades in Some Parts of the Country

Area	Body Condition	Carcass Grades
- Mat. South (Gwanda, Beitbridge) - Masvingo (Mwenezi)	Good - Excellent	Super/Chiller
- Mash East (Chivhu Commercial Farms, Hwedza Farms) - Most A1 and A2 Farms - Parts of Mat North	Fair - Good	Commercial
- Mat. North (Lupane), - Rest of Mashonaland, - Rest of Masvingo, - Manicaland, Midlands	Moderate	Economy

4.4.3 Grazing Condition

- Following the above normal rains received throughout the country most areas have adequate grazing.

- Communal areas are generally overstocked and overgrazed. However, the current grazing is likely going to take the animals to the next season, except for some areas in Matabeleland South province such as Beitbridge and Gwanda south.
- Few farmers were taking advantage of the abundant grass to make hay for dry season supplementation and fire guards to protect the veldt were very limited.

4.4.4 Stock Feed Supply

- The availability of livestock feed in the country depends on the performance of the cropping season. The major inputs for livestock feed are maize, soyabeans, cotton seed, and sunflower. Because of low production of these crops this summer season, coupled with the economic decline the country has been experiencing in the last 10 years, feed production has been on the decline in the country.
- The commercial feed supply situation has been less than ideal, with severe shortages being experienced in all parts of the country. The most affected enterprises are dairy, commercial poultry, and piggery operations.

4.4.5 Water Supplies

- Livestock depend on dams, rivers, weirs, and boreholes for their water supplies.
- Water supplies are adequate throughout all the provinces and are likely to get the animals to the next season.

5.0 Recommendations

Premised on the foregoing findings, the second round crop and livestock assessment put forward the following recommendations.

5.1 Short-term

- Given that the 2007/08 summer season's harvest for maize and small grains will only cover about 28 percent of the national requirements (human, livestock and other uses), there is an urgent need to import maize to close the deficit of about 1,428,360 mt, less any import commitments to date, and replenish the strategic grain reserves.
- A considerable proportion of rural and urban households dependent on summer cropping for their food and income will not have sufficient entitlements to access adequate food during the 2008/09 consumption year and will require food assistance. An urgent assessment to determine who will be food insecure, how many they are, where they are located and the level of their food insecurity should be undertaken to inform the food assistance programme.
- Many farmers had planted very large areas but could not access both basal and top dressing fertiliser for their maize crop and were not able to weed efficiently. Therefore farmers should be encouraged to relate their target areas to the inputs and labour that is available, as spreading limited resources over large areas has affected farming operations, thereby drastically reducing yields.
- Farmers have not been able to access inputs on time due to non availability of these inputs early in the season. As a result, farmers access inputs late, which results in late planting and extremely low yields. Inputs should therefore be availed on the open market to allow farmers to buy their requirements at their own convenience.
- Due to unattractive maize producer prices, some farmers prioritised other cash crops (cotton, soyabean and groundnuts) considered to be more profitable. Therefore, maize producer prices should be constantly reviewed in line with the prevailing inflation rates.
- Scarce inputs are usually distributed unsystematically among the different agro ecological regions and individual farmers. In times of scarcity, inputs should be targeted to more productive regions and to farmers with the capacity and commitment to produce.

- While grazing is generally good in most parts of the country, the absence of fireguards poses a great danger to grazing. Measures to protect the available grazing should be urgently put in place.
- Farmers in some communal areas planted late as a result of draft power shortages. Farming systems, such as conservation farming, which reduce reliance on draft power, should be encouraged in such areas.
- An outbreak of Larger Grain Borer was reported in some parts of the country and poses a potential threat to whatever farmers in the affected areas are going to harvest. Corrective measures should therefore be taken to contain the outbreak.
- More efficient dissemination of and proper use of agro meteorological information should be strengthened and strongly encouraged.

5.2 Long Term

- There is an urgent need to capacitate the Department of AGRITEX with transport, information and communication technology, and resources for training to ensure adequate support to farmers in all sectors of the country.
- Most irrigation schemes in the country are performing below potential. The physical infrastructure and management systems of these schemes should be rehabilitated to ensure their contribution to national food security.
- Irrigation development should be complimented with soil and water conservation practices to reduce the incidences of crop failure as a result of dry spells which have become very regular in recent years.
- Noting that there is a general reduction in crops and livestock enterprises that farmers deem to be non-viable, it is recommended that policies that determine and influence the viability of agricultural enterprises be urgently reviewed to restore profitability.

Appendices

Appendix 1: Maize Production Forecast for 2007/08 by Farming Sector and Province

Mashonaland East							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	10928	21637	60805	175845	28155	24971	322341
Yield(t/ha)	1.8	0.8	0.5	0.1	0.1	0.1	0.272
Prodn(t)	**19670.4**	**17309.6**	**27362.25**	**17584.5**	**2815.5**	**2996.52**	**87738.77**
Mashonaland West							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	14377	32063	32809	90120	14899	6326	190594
Yield(t/ha)	1.6	0.9	0.4	0.2	0.3	0.4	0.4
Prodn(t)	23003.2	27574.18	11483.15	15320.4	4618.69	2720.18	84719.8
Mashonaland Central							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	15600	22461	46791	117763	17599	5892	226106
Yield(t/ha)	2.7	0.9	0.5	0.2	0.2	0.2	0.5
Prodn(t)	**42588**	**20214.9**	**22927.59**	**23552.6**	**2639.85**	**1178.4**	**113101.3**
Manicaland							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	3900	23034	43621	178545	56110	9853	315063
Yield(t/ha)	1.8	1.0	0.5	0.2	0.3	0.3	0.3
Prodn(t)	**7020**	**23034**	**21810.5**	**35709**	**17955.2**	**3054.43**	**108583.1**
Midlands							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	3446	5129	38875	224118	18187	4542	294297
Yield(t/ha)	0.4	0.3	0.1	0.1	0.1	0.2	0.1
Prodn(t)	**1378.4**	**1538.7**	**5442.5**	**17929.44**	**1818.7**	**681.3**	**28789.04**
Masvingo							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	9	2058	28689	158798	25730	14433	229717
Yield(t/ha)	0.0	0.6	0.3	0.1	0.2	0.2	0.1
Prodn(t)	0	1131.9	8606.7	15879.8	3859.5	2886.6	32364.5
Matabeleland North							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	1669	861	6345	58679	7235	1457	76246
Yield(t/ha)	0.4	0.2	0.2	0.1	0.1	0.1	0.1
Prodn(t)	650.91	172.2	951.75	5867.9	723.5	145.7	8511.96
Matabeleland South							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	1582	13041	8231	29875	10925	4304	67958
Yield(t/ha)	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Prodn(t)	**396**	**1304**	**823**	**2689**	**983**	**430**	**6625**
National							
Sector	LSCF	A2	A1	CA	OR	SSCF	Total
Area(ha)	52079	139029	265315	1023562	171213	71124	1722322
Yield(t/ha)	1.82	0.66	0.37	0.13	0.21	0.20	0.27
Prodn(t)	**94706.91**	**92279.48**	**99407.44**	**134532.6**	**35413.94**	**14093.13**	**470433.5**

Appendix 2*: Production forecast for major crops by District*

MASHONALAND Central					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Mazoe					
Area Planted(ha)	47731	330	0	15	
Ave Yeild(t/ha)	1.3	0.4	0	0.2	
Production(t)	62050.3	132	0	3	62185
Bindura					
Area Planted(ha)	19075	214	0	259	
Ave Yeild(t/ha)	0.8	0.6	0	0.2	
Production(t)	15260	128.4	0	51.8	15440
Guruve					
Area Planted(ha)	49900	5200	72	105	
Ave Yeild(t/ha)	0.3	0.8	0.5	0.3	
Production(t)	14970	4160	36	31.5	19198
Mt Darwin					
Area Planted(ha)	34860	2932	76	86	
Ave Yeild(t/ha)	0.09	0.18	0.1	0.1	
Production(t)	3137.4	527.76	7.6	8.6	3681
Muzarabani					
Area Planted(ha)	26046	11800	250	0	
Ave Yeild(t/ha)	0.2	0.4	0.4	0	
Production(t)	5209.2	4720	100	0	10029
Rushinga					
Area Planted(ha)	25980	4550	2550	30	
Ave Yeild(t/ha)	0.05	0.2	0.1	0.1	
Production(t)	1299	910	255	3	2467
Shamva					
Total Area(ha)	22514	16	0	31	
Ave Yeild(t/ha)	0.50	1.00	0.00	0.60	
Production(t)	11257	16	0	18.6	11292
Total					
Total Area(ha)	**226106**	**25042**	**2948**	**526**	
Ave Yeild(t/ha)	**0.50**	**0.42**	**0.14**	**0.22**	
Production(t)	**113182.9**	**10594.16**	**398.6**	**116.5**	**124292**

MASHONALAND WEST					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Chegutu					
Area Planted(ha)	23623	938	0	117	
Ave Yeild(t/ha)	0.384981	0.441151	0	0.111966	
Production(t)	9094.4	413.8	0	13.1	9521
Hurungwe					
Area Planted(ha)	46809	698	5	202	
Ave Yeild(t/ha)	0.485729	0.27937	0.1	0	
Production(t)	22736.5	195	0.5	0	22932
Kadoma					
Area Planted(ha)	43605	2530	13	74	
Ave Yeild(t/ha)	0.316504	0.451265	0.1	0.167568	
Production(t)	13801.15	1141.7	1.3	12.4	14957
Kariba					
Area Planted(ha)	2450	1045	127	0	
Ave Yeild(t/ha)	0.121102	0.2	0.1	0	
Production(t)	296.7	209	12.7	0	518
Makonde					
Area Planted(ha)	40622	77	0	13	
Ave Yeild(t/ha)	0.617363	0.585714	0	0.018462	
Production(t)	25078.5	45.1	0	0.24	25124
Zvimba					
Area Planted(ha)	33485	170	0	276	
Ave Yeild(t/ha)	0.410467	0.297059	0	0.010145	
Production(t)	13744.5	50.5	0	2.8	13798
Total					
Total Area(ha)	**190594**	**5458**	**145**	**682**	
Ave Yeild(t/ha)	**0.44**	**0.38**	**0.10**	**0.04**	
Production(t)	**84751.75**	**2055.1**	**14.5**	**28.54**	**86850**

MASHONALAND EAST					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Goromonzi					
Area Planted(ha)	26498	75	0	224	
Ave Yeild(t/ha)	0.68	0.35	0	0.1	
Production(t)	18018.6	26.25	0	22.4	**18067**
Chikomba					
Area Planted(ha)	59746	461	0	6441	
Ave Yeild(t/ha)	0.1	0.2	0	0.05	
Production(t)	5974.6	92.2	0	322.05	**6389**
Seke					
Area Planted(ha)	35669	212	10	876	
Ave Yeild(t/ha)	0.3	0.1	0.1	0.1	
Production(t)	10700.7	21.2	1	87.6	**10811**
Marondera					
Area Planted(ha)	35200	175	4	174	
Ave Yeild(t/ha)	0.6	0.3	0.2	0.1	
Production(t)	21120	52.5	0.8	17.4	**21191**
UMP					
Area Planted(ha)	33851	6132	3456	1874	
Ave Yeild(t/ha)	0.2	0.1	0.1	0.05	
Production(t)	6770.2	613.2	345.6	93.7	**7823**
Mudzi					
Area Planted(ha)	27002	8526	2533	581	
Ave Yeild(t/ha)	0.1	0.1	0.05	0.05	
Production(t)	2700.2	852.6	126.65	29.05	**3709**
Murehwa					
Area Planted(ha)	35550	258	0	1027	
Ave Yeild(t/ha)	0.25	0.3	0	0.1	
Production(t)	8887.5	77.4	0	102.7	**9068**
Mutoko					
Area Planted(ha)	24775	3883	4732	375	
Ave Yeild(t/ha)	0.2	0.1	0.1	0.1	
Production(t)	4955	388.3	473.2	37.5	**5854**
Hwedza					
Area Planted(ha)	44050	413	256	820	
Ave Yeild(t/ha)	0.2	0.3	0.3	0.05	
Production(t)	8810	123.9	76.8	41	**9052**
Total					
Total Area(ha)	**322341**	**20135**	**10991**	**12392**	
Ave Yeild(t/ha)	**0.27**	**0.11**	**0.09**	**0.06**	
Production(t)	**87937**	**2248**	**1024**	**753**	**91962**

MANICALAND					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Buhera					
Area Planted(ha)	23661	12675	7992	2886	
Ave Yeild(t/ha)	0.13	0.4	0.33	0.26	
Production(t)	3075.93	5070	2637.36	750.36	11534
Chimanimani					
Area Planted(ha)	52300	3484	200	545	
Ave Yeild(t/ha)	0.3	0.1	0.1	0.11	
Production(t)	15690	348.4	20	59.95	16118
Chipinge					
Area Planted(ha)	45076	9124	361	591	
Ave Yeild(t/ha)	0.43	0.16	0.24	0.2	
Production(t)	19382.68	1459.84	86.64	118.2	21047
Makoni					
Area Planted(ha)	90360	1951	344	1977	
Ave Yeild(t/ha)	0.33	0.45	0.22	0.26	
Production(t)	29818.8	877.95	75.68	514.02	31286
Mutare					
Area Planted(ha)	37720	14133	5239	0	
Ave Yeild(t/ha)	0.15	0.04	0.04	0	
Production(t)	5658	565.32	209.56	0	6433
Mutasa					
Area Planted(ha)	39018	294	1185	0	
Ave Yeild(t/ha)	0.49	0.21	0.2	0	
Production(t)	19118.82	61.74	237	0	19418
Nyanga					
Area Planted(ha)	26928	51911	204	187	
Ave Yeild(t/ha)	0.59	0.17	0.34	0.2	
Production(t)	15887.52	8824.87	69.36	37.4	24819
Total					
Total Area(ha)	**315063**	**93572**	**15525**	**6186**	
Ave Yeild(t/ha)	**0.34**	**0.18**	**0.21**	**0.24**	
Production(t)	**108631.8**	**17208.12**	**3335.6**	**1479.93**	**130655**

MIDLANDS					
DISTRICT	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Gokwe North					
Planted Area	63804	7610	2020	1527	
Yield (t/ha)	0.1	0.1	0.08	0.08	
Production (Mt)	6380.4	761	161.6	122.16	7425
Gokwe South					
Planted Area	76540	4852	8652	4500	
Yield (t/ha)	0.08	0.08	0.095	0.08	
Production (Mt)	6123	388	822	360	7693
Gweru					
Planted Area	19121	1958	242	785	
Yield (t/ha)	0.1	0.1	0.09	0.05	
Production (Mt)	1912	196	22	39	2169
Kwekwe					
Planted Area	69672	5174	1863	391	
Yield (t/ha)	0.11	0.12	0.1	0.09	
Production (Mt)	7664	621	186	35	8506
Mberengwa					
Planted Area	18155	3310	1425	4590	
Yield (t/ha)	0.11	0.11	0.2	0.08	
Production (Mt)	1997	364	285	367	3013
Chirumhanzu					
Planted Area	21540	580	210	1860	
Yield (t/ha)	0.1	0.09	0.1	0.06	
Production (Mt)	2154	52.2	21	111.6	2339
Shurugwi					
Planted Area	10875	947	183	1839	
Yield (t/ha)	0.11	0.1	0.09	0.08	
Production (Mt)	1196.36	94.7	16.47	147.12	1455
Zvishavane					
Planted Area	14590	1320	16	19	
Yield (t/ha)	0.09	0.1	0.095	0.083	
Production (Mt)	1313.1	132	1.52	1.577	1448
Total					
Planted Area	**294297**	**18141**	**12591**	**13984**	
Yield (t/ha)	**0.098**	**0.144**	**0.120**	**0.085**	
Production (Mt)	**28740.13**	**2608.84**	**1515.61**	**1184.097**	**34049**

MASVINGO					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Bikita					
Area Planted(ha)	36023	3412	2495	10705	
Ave Yeild(t/ha)	0.08	0.2	0.19	0.25	
Production(t)	2881.84	682.4	474.05	2676.25	6715
Chiredzi					
Area Planted(ha)	20341	28315	1141	275	
Ave Yeild(t/ha)	0.05	0.2	0.16	0.15	
Production(t)	1017.05	5663	182.56	41.25	6904
Chivi					
Area Planted(ha)	25508	6220	3034	2056	
Ave Yeild(t/ha)	0.04	0.013	0.17	0.19	
Production(t)	1020.32	80.86	515.78	390.64	2008
Gutu					
Area Planted(ha)	48312	6199	10421	15895	
Ave Yeild(t/ha)	0.23	0.2	0.18	0.21	
Production(t)	11111.76	1239.8	1875.78	3337.95	17565
Masvingo					
Area Planted(ha)	52615	1912	540	3823	
Ave Yeild(t/ha)	0.25	0.18	0.16	0.185	
Production(t)	13153.75	344.16	86.4	707.255	14292
Mwenezi					
Area Planted(ha)	5318	4836	5377	654	
Ave Yeild(t/ha)	0.045	0.25	0.18	0.2	
Production(t)	239.31	1209	967.86	130.8	2547
Zaka					
Area Planted(ha)	41600	190	150	5120	
Ave Yeild(t/ha)	0.07	0.7	0.19	0.19	
Production(t)	2912	133	28.5	972.8	4046
Total					
Total Area(ha)	**229717**	**51084**	**23158**	**38528**	
Ave Yeild(t/ha)	**0.14**	**0.18**	**0.18**	**0.21**	
Production(t)	**32336.03**	**9352.22**	**4130.93**	**8256.945**	**54076**

MATABELELAND NORTH					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Binga					
Area Planted(ha)	6250	9773	2495	0	
Ave Yeild(t/ha)	0.07	0.1	0.19	0	
Production(t)	437.5	977.3	474.05	0	1889
Bubi					
Area Planted(ha)	18933	3000	3500	0	
Ave Yeild(t/ha)	0.12	0.2	0.3	0	
Production(t)	2271.96	600	1050	0	3922
Hwange					
Area Planted(ha)	4329	4098	5963	0	
Ave Yeild(t/ha)	0.04	0.3	0.3	0	
Production(t)	173.16	1229.4	1788.9	0	3191
Lupane					
Area Planted(ha)	19762	1950	3000	0	
Ave Yeild(t/ha)	0.09	0.3	0.3	0	
Production(t)	1778.58	585	900	0	3264
Nkayi					
Area Planted(ha)	14300	8550	1900	0	
Ave Yeild(t/ha)	0.19	0.2	0.3	0	
Production(t)	2717	1710	570	0	4997
Tsholotsho					
Area Planted(ha)	3787	15161	12888	32	
Ave Yeild(t/ha)	0.11	0.3	0.3	0.2	
Production(t)	416.57	4548.3	3866.4	6.4	8838
Umguza					
Area Planted(ha)	8885	197	66	0	
Ave Yeild(t/ha)	0.08	0.3	0.3	0	
Production(t)	710.8	59.1	19.8	0	790
Total					
Total Area(ha)	**76246**	**42729**	**29812**	**32**	
Ave Yeild(t/ha)	**0.11**	**0.23**	**0.29**	**0.20**	
Production(t)	**8505.57**	**9709.1**	**8669.15**	**6.4**	**26890**

MATABELELAND SOUTH					
Production Parameters	**Maize**	**Sorghum**	**Millet**	**Rapoko**	**Total Cereals**
Gwanda					
Area Planted(ha)	14500	5250	5000	44	
Ave Yeild(t/ha)	0.1	0.2	0	0.1	
Production(t)	1450	1050	0	4.4	2504
Insiza					
Area Planted(ha)	18047	550	22	10	
Ave Yeild(t/ha)	0.1	0.15	0.1	0.2	
Production(t)	1804.7	82.5	2.2	2	1891
Beitbridge					
Area Planted(ha)	1227	3488	1798	50	
Ave Yeild(t/ha)	0.05	0.01	0	0.05	
Production(t)	61.35	34.88	0	2.5	99
Umzingwane					
Area Planted(ha)	3024	74	50	4	
Ave Yeild(t/ha)	0.05	0.1	0	0.1	
Production(t)	151.2	7.4	0	0.4	159
Bulilimamangwe					
Area Planted(ha)	4854	9275	9225	10	
Ave Yeild(t/ha)	0.1	0.1	0.1	0.1	
Production(t)	485.4	927.5	922.5	1	2336
Matobo					
Area Planted(ha)	26306	8387	5577	12	
Ave Yeild(t/ha)	0.1	0.25	0.6	0.2	
Production(t)	2630.6	2096.75	3346.2	2.4	8076
Total					
Total Area(ha)	**67958**	**27024**	**21672**	**130**	
Ave Yeild(t/ha)	**0.10**	**0.16**	**0.20**	**0.10**	
Production(t)	**6583.25**	**4199.03**	**4270.9**	**12.7**	**15066**

Appendix 3: *Estimated Cereal Deficits By District*

Estimated Maize, Sorghum and Millets 2008 Production Surplus/Deficit By District						
District	**CSO 2008 Pop Est**	**Percapita Requirement (kg)**	**Total Cereal Production (MT)**	**Estimated Requirement (MT)**	**Surplus / Deficit (MT)**	**% Surplus / Deficit**
Beitbridge	110105	133	99	14,644	-14,545	-99
Bikita	166595	133	6,715	22,157	-15,443	-70
Bindura Rural	150981	133	15,440	20,080	-4,640	-23
Binga	127391	133	1,889	16,943	-15,054	-89
Bubi	50815	133	3,922	6,758	-2,836	-42
Buhera	233598	133	11,534	31,069	-19,535	-63
Bulilima	100123	133	1,168	13,316	-12,148	-91
Centenary	114407	133	10,029	15,216	-5,187	-34
Chegutu	239009	133	9,521	31,788	-22,267	-70
Chikomba	127646	133	6,389	16,977	-10,588	-62
Chimanimani	122390	133	16,118	16,278	-160	-1
Chipinge	301251	133	21,047	40,066	-19,019	-47
Chiredzi Rural	248417	133	6,904	33,039	-26,136	-79
Chirumhanzu	74764	133	2,339	9,944	-7,605	-76
Chivi	165215	133	2,008	21,974	-19,966	-91
Gokwe North	227546	133	7,425	30,264	-22,839	-75
Gokwe South	311684	133	7,693	41,454	-33,761	-81
Goromonzi	163752	133	18,067	21,779	-3,712	-17
Guruve	196699	133	19,198	26,161	-6,963	-27
Gutu	210750	133	17,565	28,030	-10,464	-37
Gwanda Rural	138020	133	2,504	18,357	-15,852	-86
Gweru Rural	238990	133	2,169	31,786	-29,617	-93
Hurungwe	329584	133	22,932	43,835	-20,903	-48
Hwange	140608	133	3,191	18,701	-15,509	-83
Hwedza	75025	133	9,052	9,978	-927	-9
Insiza	90889	133	1,891	12,088	-10,197	-84
Kadoma Rural	250766	133	14,957	33,352	-18,395	-55
Kariba Rural	62411	133	518	8,301	-7,782	-94
Kwekwe Rural	303094	133	8,506	40,311	-31,805	-79
Lupane	104738	133	3,264	13,930	-10,667	-77
Makonde	183898	133	25,124	24,458	665	3
Makoni	289802	133	31,286	38,544	-7,257	-19
Mangwe	82971	133	1,168	11,035	-9,867	-89
Marondera	164193	133	21,191	21,838	-647	-3
Masvingo Rural	280196	133	14,292	37,266	-22,974	-62
Matobo	105858	133	8,076	14,079	-6,003	-43
Mazowe	206919	133	62,185	27,520	34,665	126
Mberengwa	194682	133	3,013	25,893	-22,879	-88
Mount Darwin	212291	133	3,681	28,235	-24,553	-87
Mudzi	136059	133	3,709	18,096	-14,387	-80
Murehwa	172144	133	9,068	22,895	-13,827	-60
Mutare Rural	417017	133	6,433	55,463	-49,030	-88
Mutasa	176898	133	19,418	23,527	-4,110	-17
Mutoko	140405	133	5,854	18,674	-12,820	-69

Mwenezi	134004	133	2,547	17,823	-15,276	-86
Nkayi	119131	133	4,997	15,844	-10,847	-68
Nyanga	124494	133	24,819	16,558	8,261	50
Rushinga	71320	133	2,467	9,486	-7,019	-74
Seke	81655	133	10,811	10,860	-50	0
Shamva	104048	133	11,292	13,838	-2,547	-18
Shurugwi Rural	93828	133	1,455	12,479	-11,024	-88
Tsholotsho	127044	133	8,838	16,897	-8,059	-48
Umguza	78590	133	790	10,452	-9,663	-92
UMP	110755	133	7,823	14,730	-6,908	-47
Umzingwane	65264	133	159	8,680	-8,521	-98
Zaka	196495	133	4,046	26,134	-22,088	-85
Zvimba	258784	133	13,798	34,418	-20,620	-60
Zvishavane Rural	109471	133	1,448	14,560	-13,111	-90

NB Population for Bulawayo and Harare Metropolitan Province is not considered in this analysis. Only requirements for humans are considered; requirements for livestock and other uses are excluded