

PREFACE

The core business of this directorate is to do analysis on national level in order to produce agricultural economic information and advice for sound decision-making on the South African (SA) agricultural sector. To support this important task the division (Economic Research) concentrates on economic analysis of performance of and external impact on the agricultural sector and its industries.

This publication developed from a need within the Department of Agriculture (DoA) to be regularly informed on developments and expected economic trends in the agricultural sector. The quarterly report has now been established as a regular feature in the Directorate's work plan. Since the beginning of 2004 the report is also published for outside consumption to add value to a number of existing regular economic publications on the agricultural sector. It is our vision to maintain it as indispensable reading for every serious student of the SA agricultural sector.

At this stage most of the content is based on sources outside the DoA. However, progress is being made to incorporate more departmental generated material.

Any new comments on the content of this quarterly report series are most welcome.

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1. WORLD ECONOMY

The IMF estimates that global economic growth increased above the 5% mark (measured at purchasing power parity exchange rates) during the first half of 2007. China recorded the highest real growth output of 11,5% during the corresponding period, thus for the first time making the largest contribution to global output measured on both market and purchasing power parity exchange rate (BER, October 2007). Global economic growth is forecasted to increase by 5,2% in 2007 slowing down to 4,8% in 2008 (IMF, October 2007). The US sub-prime mortgage and subsequent liquidity crisis led to a sharp deterioration in global credit market conditions during the third quarter of 2007 although it appears to have had no major immediate adverse impact on global economic growth. However, the US and countries closely related with it are expected to feel the pinch going forward resulting in a slowdown in economic growth for such countries. US GDP growth is expected to be below the 2% mark this year, recovering from 2008 onwards once the current financial market crisis recedes. The euro reached record highs against the US dollar during the third quarter of 2007 and this is likely to affect the output performance of the Euro

area thus moderating growth in the short-term. However, GDP growth in the Euro area is expected to move back to a 2% trend level in the medium term. The global economic growth is expected to be driven by China's strong performance, but rising concerns regarding overinvestment is likely to lead to further tightening in monetary policy and administrative interventions which, together with an anticipated gradual appreciation of the Chinese currency, is expected to lead to a more moderate GDP growth rate towards the end of 2008. Inflation in advanced economies remained stable, with core inflation in both the US and the Euro area remaining under the accepted 2% mark in 2007. Global food inflation remained high adding to inflationary pressures in developing countries and emerging markets where the weight of food features more prominently in the headline inflation basket compared to advanced economies. High oil prices also contributed to global inflationary pressures; however, with the expected slowdown in global economic growth, oil prices are also expected to drop from current elevated levels. News events that influenced the world economy: European Union agreed to lift the export ban on British meat and livestock, imposed due to a foot and mouth disease outbreak. A global free trade deal nearly six years in the making is not a certainty this year or next, despite a convergence of positions by

TABLE 1: The World Economic Outlook-Real GDP growth %

Countries	2006	2007	2008	Countries	2006	2007	2008
World ¹	5,4	5,2	4,8	ASEAN-4 ³	5,4	5,6	5,9
USA	3,3	2,0	2,8	China	11,1	11,2	10,5
Japan	2,2	2,6	2,0	India	9,7	9,0	8,4
Euroland ²	2,8	2,6	2,5	Latin America	5,5	5,0	4,4
OECD	3,2	2,5	2,6	East-central Europe	6,3	5,7	5,4
Non-OECD	8,1	7,7	7,1	Sub-Saharan Africa	5,5	6,9	6,4

Source: EIU ¹ PPP ² The 11 Euro countries ³ Indonesia, Thailand, Philippines and Malaysia

key countries and blocs. Global warming is likely to lead to an increase in infectious disease around the world, as viruses, microbes and the agents that spread them flourish, experts at a medical conference warned. According to the head of United Nations Environmental programme, Africa's coastal infrastructure faces increasing danger of erosion from rising sea levels caused by climate change. Unscrupulous vendors in Thailand have been selling meat of the deadly puffer fish disguised as salmon, causing the deaths of more than 15 people over the past three years, a doctor said. (*Price Watch*, 2007).

2. SUB-SAHARAN ECONOMY

TABLE 2: Sub Sahara Africa – Economic Outlook

	2006	2007	2008
Growth	5,6	6,2	6,7
Consumer Inflation	11,8	13,0	13,0
External Debt ¹	146,7	155,0	163,5
Current Account ¹	-0,6	6,2	11,1

Source: EIU ¹US\$ Billion

Real GDP growth in sub-Saharan Africa (SSA) is forecasted to rise to 6,2% in 2007 and further to 6,7% in 2008 as the continent is increasingly being viewed by investors as "the final frontier" for emerging markets (EIU, August 2007). The positive economic outlook for the region is due to: rapid rise in oil production in several oil-producing countries (Angola, Chad, Equatorial Guinea and Nigeria) while global oil prices escalate sharply; rising prices of other mineral and non-mineral commodities; policy reforms; generous debt write-offs and rising foreign direct investment in SSA economies. Of the four sub-regions within SSA, growth is estimated to have been strongest in the SADC region at 6%

in 2006, despite ongoing problems in Zimbabwe (which has experienced eight years of falling real GDP since 1999). Strong growth in Angola and South Africa – two largest economies in the subregion – played a major role in offsetting poor performances by some countries; and though both economies are expected to slow down, a positive growth of 6,9% in 2007 and 7,1% in 2008 is forecasted. Annual growth of 6,5% is forecasted for the East Africa and the Central and West Africa regions in 2007 and 2008. Growth in Central and West Africa is expected to be driven mainly by the anticipated pick-up in growth in the Nigerian economy after slowing down in 2006 due to ongoing problems with oil production in the Niger Delta. The Franc Zone is expected to experience the lowest growth rate of 4,2% in 2007, picking up to 4,7% in 2008. This is mainly due to the ongoing economic depression in the region's largest economy – Ivory Coast – reflecting the continuing political crisis in the country. Also, growth in Cameroon and Gabon – the other two large economies in the subregion – is expected to remain relatively low. Various debt write-offs have resulted in significant changes in the external debt profile of SSA in 2006. The Economist Intelligence Unit estimates that the total external debt for SSA fell from US\$199,4 billion at the end of 2005 to US\$146,7 billion at end of 2006 though it is expected to rise again in 2007 and 2008 due to new borrowing, currency revaluations and further build-up of arrears. According to the World Bank, African countries are becoming more politically stable and their governments more respectful of the rule of law with reports showing an overall improvement in African governance over the past year. The best per-

former according to the latest *Governance Matters* survey is Botswana followed by Mauritius, Cape Verde and South Africa while the worst performer is Somalia, followed by the DRC, Zimbabwe and Ivory Coast. Consumer inflation in SSA is expected to increase further reaching 13,0% in 2007, remaining unchanged in 2008. This is partly due to the impact of high world oil prices in many countries, which pushed up transport and distribution costs. The inflation rate also reflects poor harvests in East Africa although food price inflation remained low in West Africa. Zimbabwe's hyperinflation is estimated to be over 4500% year-on-year and the spiralling inflationary conditions are expected to persist fuelled by severe food and foreign-exchange shortages. Excluding the three economies with traditionally very high inflations – Angola, DRC and Zimbabwe – the inflation rate for SSA in 2007 estimated at 6,4% in 2007 and 6,3% in 2008. Given the strong commodity prices and rising oil production, SSA is expected to run trade surpluses in 2007-08 despite strong import growth in many countries. This is mainly due to large trade surpluses expected to be run by oil exporters which tend to outweigh the modest trade deficits that are run by other countries. The EIU expects high oil prices to drive a further reduction in the regional current-account deficit to US\$632 million in 2006, forecasting a move into a surplus of US\$6,2 billion in 2007 and US\$11,1 billion in 2008. News events that influenced the SSA economy: Kenya is making a promising economic growth recovery after a general poor record at the end of the nineties and the opening years of this decade. This is further confirmation that the overall Sub-Saharan region is now enjoying major success

in contrast to the largely dismal performance for the 30 years from the late sixties. Investment in the livestock over the past five years was negative. Those lower stock numbers explain in part why meat prices increased faster than most other agricultural products over the past year or two. Zimbabwe delayed the release of inflation data and said it might not be available for a while, fuelling concerns that the government had failed to hold back runaway prices. Analysts had expected annualised inflation for October to jump to 15000% from nearly 8000% from previous months (Fin 24.com). Leaders of Southern Africa are divided over how to help Zimbabwe out of its economic crisis. Malawi is enjoying its second consecutive surplus harvest, with a crop of 3,4 million tons, 1,3 million more than the national requirement. US and Gabonese scientists say a common type of fruit bacteria could be the source of an outbreak of the deadly Marburg disease in Africa (*Price Watch*, 2007).

3. SOUTH AFRICAN ECONOMY

TABLE 3: South Africa – Economic Outlook

	2006	2007	2008
Growth	5,0	4,9	4,7
Consumer Inflation X	4,6	6,2	5,8
Exchange rate ¹	6,97	7,10	7,75
Interest rate (Prime) ²	11,5	13,9	13,6

Source:BER ¹End of year ²Yearly Average

The South African economy was characterised by high inflation – fuelled by high food and energy prices – and consequently higher interest rates during the third quarter of 2007. Consumer inflation is set to hit 7% before the end of the year and it will stick around that level for some months. However, looking ahead to the next year, there is a chance that

the CPIX rate will subside enough to allow SA reserve Governor Tito Mboweni to cut the interest rates in 2008. It is expected that the CPIX rate will hit 7% and above that level until march next year, from then on inflation will be within the target in the third quarter of 2008 (standard bank 2007). Interest rates increased by a further 50 basis points in August following a similar hike in June, and analysts cannot rule out further hikes before the end of the year as the Reserve Bank is adamant to bring the inflation rate back within the 3%-6% target range. Real Gross Domestic product contracted to 4,5% in the second quarter after reaching 4,7% in the first quarter, as the second largest sector in the economy – the manufacturing sector – suffered due to a strong rand. While fixed investment is expected to boost economic growth, a slowdown is anticipated with GDP growth forecasted at 4,9% for 2007 from 5% in 2006. Though consumer spending remained relatively strong since the beginning of the year, the effects of higher interest rates are beginning to show as household spending slowed to 5,5% year-on-year in the second quarter of 2007 from 7,5% in the first quarter. Wage pressures in the second half of 2007 (with settlements in the 7-8% range) also played a role in pushing inflation up as it implied more disposable income and consequently more consumer demand. The current account deficit improved during the second quarter of 2007 as the slowdown in real domestic expenditure led to a small contraction in imports and a R20 billion improvement in the trade balance compared to the first quarter of the same year (BER Economic Prospects, Q4 2007). The exchange rate strengthened at the beginning of the third quarter supported by

high commodity prices, a weak dollar and huge capital inflows into the country; then started to decline towards the end of the quarter. With the ongoing financial market uncertainties, the volatile rand is expected to come under some pressure which will support growth in tradable goods sectors such as agriculture and manufacturing. News events that influenced the SA economy: The EU health and consumer protection directorate has recommended that South Africa be removed from the EU's list of exporters of ostrich meat, milk, poultry, honey, pork and beef after failing to provide an approved residue monitoring plan (Business Report). SA reserve bank governor Tito Mboweni, indicated that he would prefer another interest hike to counteract the inflation pressures despite figures released indicating a sharp slowdown in consumer spending- retail sales decline by 2% year on year in September after 6,6% rise in August. National treasury has indicated the need for further adjustments to social grants to smooth the impact of rising food prices – driven by the biofuel industry – on the poor. The investigation by the competition commission uncovered bread price fixing activities over the past 12 years within the bread and milling industry- in which four major role players control more than 90% of the wheat milling activities and a significant percentage of SA's bread baking activities. South Africa – the biggest oil market and largest economy in Africa – had a record amount of fuel sales in the third quarter of 2007, with sales of all products rising by 8,5% to a quarterly record of 6,6 billion litres. Manufacturing output fell 1,4% in September- its first annual contraction in three and half years- mainly due to the strike in the vehicle industry

as well as a slowdown in consumer demand following interest rate hikes. The South African Institute of Race Relations reported that the deaths of young adults have increased by 213% since 1997 and this could be attributed to the HIV/AIDS pandemic. Cabinet has approved the implementation of a government procurement strategy covering 10 key categories of products; which is expected to significantly boost Small, Medium and Micro Enterprises (SMME s)(Price Watch, 2007).

4. MACROECONOMIC VARIABLES AND THEIR IMPACT ON AGRICULTURE

4.1 Inflation

TABLE 4: Annual average CPIX inflation rate

2006		2007	2008
4,6	BER	6,2	5,8
	Standard Bank	6,2	5,8
	Absa	6,2	6,3
	Average	6,2	6,0

BER - Bureau for Economic Research

Recent trends: Since breaching the reserve bank's inflation target ceiling (6%) in April this year, the CPIX has remained above 6% throughout the third quarter of 2007. The CPIX inflation for September increased by 6,7% year-on-year (y/y) – the highest increase since May 2003 – from 6,3% in August 2007. The headline CPI inflation rate was 7,2% y/y in September, 0,5% higher than 6,7% recorded in August 2007. Rising food prices continue to be the main contributor to growing inflation with annual contributions in the price indices of food increasing by 2,7% followed by housing (2,0%), medical care and health expenses (0,5%), household operation (0,4%), transport (0,4%), education (0,4%) as well as fuel and

power (0,3%). The CPI annual rate for food increased to 11,9% in September 2007 from 11,1% in August 2007. This increase was due to increases in the prices of grain products, meat, vegetables, milk, cheese and eggs, other food products, fats and oils, fruit and nuts, fish and other seafood, tea and cocoa, coffee and sugar. The CPI annual rate for vegetables increased to 21,1% in September from 14,1% in August 2007 while the CPI annual rate for sugar increased to 10,4% in September from 5,9% in August 2007, (Statistics South Africa, September 2007). The annual percentage change in the PPI remained unchanged at 9,4% in September; the same rate as August 2007 – which remains the lowest increase since December 2006, after reaching a peak of 11,3% in May 2007. Forecast: Given the worse that expected inflation developments within the South African economy, most forecasters have upwardly adjusted their inflation expectations. On average the CPIX inflation is expected to remain above 6% until the end of the first quarter of 2008. The BER projects the CPIX to average 6,2% in 2007, peaking at 7,2% in February 2008 and then recede to 5,8% by end of 2008. PPI inflation is projected to average 10% this year and 7,7% in 2008. Impact on agriculture: In relative terms, income levels of most farmers may increase as consumer inflation rises while input costs slow down. On the other hand high inflation prompts interest rate hikes which negatively affect farmers who utilise credit in their operations. A high inflation rate may also negatively impact on the international competitiveness of the SA agricultural sector which relies heavily on price competitiveness.

4.2 Growth

TABLE 5: Annual real GDP growth rates

2006		2007	2008
5,0	BER	4,9	4,7
	Standard Bank	4,5	4,4
	ABSA	4,7	4,0
	Average	4,7	4,4

BER - Bureau for Economic Research

Recent trends: Real GDP growth at market prices slowed to 4,5% during the second quarter of 2007 following an increase of 4,7% in the first quarter of 2007. This was mainly due to a slowdown in the manufacturing industry – the second largest industry within the SA economy – which contributed 0,1% to the annualized percentage change in real GDP during the second quarter of 2007, down from 0,8% in the first quarter. After recording declines in the contribution to annualized percentage change in the real GDP for the four quarters of 2006, the agriculture, forestry and fishing industry recorded increasing contributions during the first and second quarters of 2007. This can be attributed to improved performance in animal products as well as increasing activity within the agricultural sector driven by the emergence of the bio-fuel industry. Forecast: Growth forecasts have generally been revised downwards following recent unfavourable developments within the SA economy such as worse than expected inflation rates and rising interest rates. Also, consumer spending – which has been one of the major contributors to rising economic growth – reached a four-year low during the second quarter of 2007 slowing to an annualised 5,5% from 7,5% in Q12007 as consumers start to feel the impact of higher interest rates. With fixed investment expected to sustain growth, the BER forecasts a moderate economic slowdown with real

GDP growth at 4,9% for 2007, slowing to 4,7% in 2008 before accelerating again in 2009. Absa forecasts a 4,7% economic growth for 2007, slowing to 4,0% in 2008 while Standard Bank forecasts are more pessimistic at 4,5% for 2007 and 4,4% for 2008. Impact on agriculture: The slight improvement in the contribution of agriculture to real GDP growth in the first two quarters of 2007 is positive news for the agricultural sector as it may imply more income for farmers and more employment opportunities in the long run if sustained. However, a slowdown in the overall economy may also reduce activity within the agricultural sector.

4.3 Exchange rates

TABLE 6: End of year R/\$ exchange rates

2006		2007	2008
R6,77	BER	7,10	7,75
	Standard Bank	7,09	7,09
	Absa	7,08	7,06
	Average	7,09	7,30

BER - Bureau for Economic Research

Recent trends: The rand remained very strong (below the R7/\$ mark) for most part of July 2007, reaching its strongest level against the US dollar towards the end of July before sliding back above the R7/\$ mark in August as the global financial markets faced turbulent times, and then recovered swiftly back to below the R7/\$ mark towards the end of the third quarter. Huge capital inflows, strong commodity prices and a weak dollar – which reached record lows against the euro – were the main factors behind the rand’s strong performance during the third quarter. Forecast: With the US dollar expected to remain weak against the euro and given the strong commodity prices, the rand is expected to remain firm in the short term and then gradually depreciate due to

heightened global risk aversion. According to the BER forecasts, the rand is expected to remain relatively firm closing at R7,10/\$ at the end of 2007 and then come under some pressure due to a worsening current account deficit and lower commodity prices bringing it to a close of around R7,75/\$ at the end of 2008. Standard Bank and Absa's forecasts are more optimistic, expecting the rand to end the year at R7,09 and R7,08 respectively, against the US dollar. Impact on agriculture: The forecasted weaker rand imply increased competitiveness of SA agricultural products on the international markets which will boost exports while at the same time imported raw materials will cost more resulting in higher input costs.

4.4 Interest rates

TABLE 7: Average yearly Prime interest rate

2006		2007	2008
11,5	BER	13,9	13,6
	Standard Bank	13,5	13,7
	Absa	13,1	13,9
	Average	13,5	13,7

BER - Bureau for Economic Research

Recent trends: With the inflation at worse than expected levels, the Reserve Bank's Monetary Policy Committee (MPC) increased the repo rate by 50 basis points in June and August to 9,5% and 10% respectively, in its bid to bring the inflation within the 3% - 6% target range. Commercial banks also responded by increasing their prime overdraft rate to 13% and 13,5% in June and August 2007 respectively. Bonds performed better supported by a firmer rand during the third quarter. The key six-year R153 interest rate was 8,95% at the end of Q3 2007 compared to 9,14% at end of Q3 2006. Forecast: The Reserve Bank has made it clear that

their primary concern at present is bringing the inflation rate within the target range. Currently the inflation outlook is somewhat troubling as food and energy price pressures seem to be going to remain a long-term problem. With the CPIX expected to re-accelerate peaking slightly above 7% early next year, combined with current wage pressures, most analysts cannot rule out a further interest rate hike during the December MPC sitting. Impact on agriculture: Farmers will feel the pinch should interest rates rise again as servicing debt becomes more expensive, implying higher input costs.

5. OTHER FACTORS IMPACTING ON AND RELATED TO AGRICULTURE

5.1 Agri-market indicators

TABLE 8: Price of maize and wheat per ton

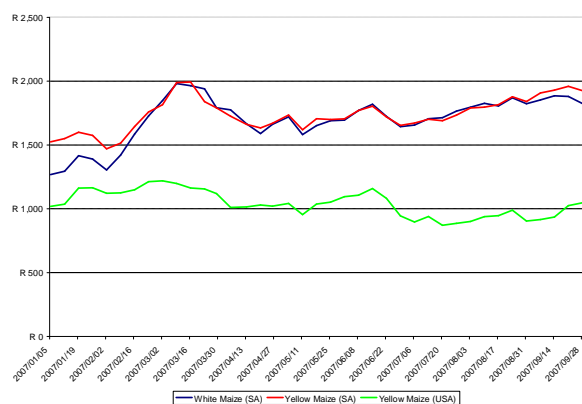
	End September 2006	End September 2007
White Maize price	R1 255	R1 825
Yellow Maize price	R1 270	R1 926
Wheat price	R1 885	R3 320
Sunflower price	R2 390	R4 280

Source: Safex

Domestic prices of major crops remained significantly high in line with global prices despite a strong rand during the third quarter of 2007. Tight supplies amidst rising demand fuelled by the bio-fuel industry remains the main driving force behind rising grain prices. Domestic prices of sunflower per ton recorded a sharp increase of 79% at the end of September 2007 compared to end of September 2006, as reports indicate a 43,2% drop in the sunflower seed final crop for the 2006/7 season. Local wheat prices also increased significantly (76%) at the end of September 2007 compared to the same period in 2006, reaching an 11-year

high in August 2007 and a record high in September due to concerns over global supply shortages. White and yellow maize prices increased by 45% and 52% respectively, during the period under review.

Figure 1: Domestic and USA maize prices



Source: Safex

Figure 1 illustrates the weekly price trends of domestic and US maize prices for the year to end of September 2007. Local white and yellow maize prices show a similar trend depicting sharp increases in the middle of quarter 1 followed by a drop towards the end of the quarter, with quarter 2 characterised by fluctuating prices. Third quarter prices indicate a steady increase since the beginning of the quarter. USA yellow maize prices have also been following a similar trend though at a relatively flat pace. US wheat prices recorded the highest increase (86%) from R1 269,92 at the end of September 2006 to R2 358,53 at the end of September 2007, with the US Department of Agriculture (USDA) reporting a 66% increase in US wheat sales for the year to July 2007 compared to the same period in 2006 (Weekly Price Watch, August 2007). The US price of soybean increased by 62% from R1 575,59 at the end of September 2006 to R2

546,08 at the end of September 2007 while the yellow maize price increased by 30% from R807,12 to R1 047,14 during the same period.

5.2 Climatic and other conditions

The incessant drought conditions over the country coupled with strong winds resulted in veld fires in some areas. In contrast, a bumper rainfall season was experienced with good yields over the winter rainfall areas in the southwest. A series of cold spells dominated the winter season. Levels of dams: According to the Department of Water Affairs and Forestry report, levels of dams continued to decline in most areas with restrictions imposed in some others. The decline in underground water in some areas is a concern. However, levels of dams remained higher than last year this time in the Western Cape due to good rains received since the beginning of winter season. Crop Conditions: The planted winter crops are in good condition in the winter rainfall areas and good yield is expected. Cold and wet conditions continued in some winter rainfall areas and will be beneficial to deciduous fruit trees. Livestock condition: The condition of veld and livestock remained poor in most areas due to drought conditions with reported mortalities in some areas. The situation is aggravated by poor veld management practices and veld fires which ravaged most areas. However, farmers were continuously advised to maintain stock numbers to suit carrying capacity of camps. Forecast of rainfall and temperature: Wet and warm conditions are expected over the summer rainfall areas. A La Niña is expected to develop during the next couple of months and is likely to improve the rainfall prospects. SADC: According to

FEWSNET, recently concluded National Vulnerability Assessments found that the food insecure population in the region has doubled from about 3,1 million last year to 6,1 million this year. Food insecurity is most severe in Lesotho, Swaziland and Zimbabwe, where significant production deficits occurred as a result of severe drought. In Malawi, Tanzania, Zambia, Angola and northern Mozambique, the food security situation is projected as satisfactory with above average harvests following a good crop growing season. Staple food prices remain lower than at the same time last year and the past five year average in these countries. Food prices dropped significantly after the harvest, easing access for the poor and market dependent households. In general, food supplies for most households are expected to remain comfortable until the start of the hunger season in September/October 2007. However, grain availability in the region remains insufficient to cover staple food requirements in the countries facing large production deficits. As a result, both intra-regional trade and international trade are expected to play a major role in filling the cereal import requirements of individual countries this marketing year. Excessive rains in Malawi, Tanzania, Zambia, Angola and northern Mozambique caused flooding, loss of crops, and disruptions of livelihoods placing many at risk of food insecurity. Lesotho, Mozambique, Namibia, Swaziland and Zimbabwe will face worse food shortages this year when compared to last year and the past five year average primarily on account of poor 2006/07 harvests. In normal years, structurally grain deficit countries (including Zimbabwe) usually source most of their requirements from South

Africa. However, this year, with the shortages existing in South Africa (and resultant high prices), and surpluses existing in Malawi, Tanzania and Zambia, some importing countries have turned their attention northwards, and have concluded import agreements with the three surplus producing countries. Conclusions: Good yields for winter crops are expected due to good rains received in the winter rainfall areas. The veld and livestock are very poor in most areas with reported mortalities in some areas. The poor conditions were aggravated by veld fires which ravaged most of the grazing land. The level of dams continued to decline in most areas except the Western Cape. The decline in underground water level is also a concern in some areas. Farmers were advised to maintain good farming practices and take precautionary measures for veld fires. Although good rains are expected, farmers are advised to utilize supplementary feeds during the first few months of summer in order to allow the veld to recover. Precautions have to be taken for pests and diseases associated with wet and warm conditions. Occasional heat waves with rather humid conditions are possible throughout the summer season; precautionary measures also need to be in place for evaporative loss of moisture.

5.3 Livestock Numbers

Cattle, sheep and pig numbers increased by approximately 2,8%, 0,4% and 1,7% respectively, during August 2007 compared to August 2006. On the other hand, goat numbers decreased by 2,1% during the same period. Cattle: The number of cattle in South Africa at the end of August 2007 is estimated at 13,9 million. On a provincial basis, about 3,1 million (22%)

were recorded in the Eastern Cape; 2,9 million (21%) in KwaZulu-Natal and 2,3 million (17%) in the Free State. The remaining provinces represent 40% (5,6m) of the total cattle population in South Africa. Sheep: The total number of sheep at the end of August 2007 is estimated at 25,1 million. The provincial distribution of sheep during the same period was as follows: 7,5m (30%) in the Eastern Cape; 6,2m (25%) in the Northern Cape; 4,9m (20%) in the Free State and 6,4m (25%) in the remaining provinces. Pigs: The number of pigs at the end of August 2007 is estimated at 1,7 million with most of South Africa's pig population in the Limpopo Province – recorded at 339 000 (24%). The North West Province follows with 329 000 (20%) and Gauteng with 181 000 (11%). The remaining provinces represent approximately 45% (801 000) of the total pig population. Goats: Goat numbers are estimated at 6,3 million during the same period. The Eastern Cape recorded the highest number at 2,4m (39%), followed by the Limpopo Province with 1,1m (17%).

5.4 Crop production and estimates

Table 9 summarises the final production estimates of the most important summer crops for

the 2006/07 production season. The size of the expected commercial maize crop has been set at 6,902 million tons, which is 4,3% more than the 6,618 million tons of the previous season. The production estimate of white maize is 4,127 million tons, which is 1,4% less than the 4,187 million tons of the previous season and the yield for white maize is 2,54 t/ha compared to 4,05 t/ha the previous season. In the case of yellow maize, the production estimate is 2,774 million tons which is 14,1% more than the 2,431 million tons produced last season. The yield for yellow maize is 2,99 t/ha compared to 4,29 t/ha the previous season. The total area planted to maize for the 2006/07 season is 2,552 million ha. The ratio of white to yellow maize plantings is 64:36 compared to the previous season's 65:35. The area estimate for white maize is 1,625 million ha, which is 57,3% higher than the 1,033 million ha of the previous season, while yellow maize plantings are 927 000 ha, up by 63,4% from the 567 200 ha of the previous season. The bulk of South Africa's maize is planted in the Free State, North West and Mpumalanga provinces. The final crop for sunflower seed for the 2006/07 season is 300 000 tons, which is 43,2% less than the 520 000 tons of the previous sea-

TABLE 9: Estimated plantings and final production estimate of summer crops for the 2006/07 season

Crop	Estimated plantings for the 2006/07 season	Change from the 2005/06 season		Final production estimate for the 2006/07 season	Change from the 2005/06 season	
	Ha	Ha	%	Tons	Tons	%
Total maize	2 551 800	-1 209 800	59,47	6 901 900	283 900	4,29
White maize	1 624 800	-667 000	57,29	4 127 400	-60 000	-1,43
Yellow maize	927 000	-542 800	63,43	2 774 500	343 900	14,15
Sunflower seed	316 350	12 480	-33,04	300 000	-220 000	-42,31
Soybeans	183 000	90 570	-23,93	205 000	-219 000	-51,65
Groundnuts	40 770	8 550	-16,02	58 000	-16 000	-21,62
Sorghum	69 000	-49 350	85,73	165 875	69 875	72,79
Dry beans	50 725	5 580	-7,57	39 545	-27 705	-41,20

Source: Directorate Agricultural Statistics

son. The area planted to sunflower seed is 316 350 ha, which is 33,0% less than the 472 480 ha planted the previous season. The yield is 0,95 t/ha compared to 1,10 t/ha the previous season. In the case of soybeans, the crop is 205 000 tons, which is 51,7% less than the 424 000 tons the previous season. The area planted to soybeans is 183 000 ha, which is 23,9% less than the 240 570 ha planted the previous season. The yield is 1,12 t/ha compared to 1,76 t/ha the previous season. The groundnut crop is 58 000 tons, which is 21,6% lower than the 74 000 tons the previous season. For groundnuts the area estimate is 40 770 ha, which is 16,0% less than the 48 550 ha planted the previous season. The yield is 1,42 t/ha compared to 1,52 t/ha the previous season. The production estimate for sorghum is 165 875 tons – 72,8% higher than the 96 000 tons of the previous season. The area planted to sorghum is 69 000 ha, which is 85,7% more than the 37 150 ha planted the previous season. The expected yield is 2,40 t/ha compared to 2,58 t/ha the previous season. In the case of dry beans the production estimate is 39 545 tons – 41,2% lower than the 67 250 tons the previous season. The estimated area planted is 50 725 ha, or 7,6% less

than the 54 880 ha planted last season. The expected yield is 0,78 t/ha, compared to 1,23 t/ha the previous season. Table 10 summarises the results of the first intentions to plant summer crops for the 2007/08 season, which is based on inputs received from a sample of producers, seed companies and Provincial departments of Agriculture. The expected area planted to maize is estimated at 2,669 million ha, of which 1,595 million ha (60%) is for white maize and 1,074 million ha (40%) is for yellow maize. The survey from a sample of producers, which is undertaken by the Department of Agriculture, gives an indication of the intentions of commercial farmers to plant summer crops at the end of August 2007. The impacts of widespread rains, after the end of August, on the planting intentions have not been taken into consideration. Besides the rainfall, other factors can, however, still influence these intentions up until planting time. The survey shows that producers intend to plant 29 800 ha (1,8%) less white maize and 147 000 ha (15,9%) more yellow maize than in the previous season. The plantings of sunflower seed, groundnuts, and sorghum show increases of 64,4%, 22,6% and 15,9%, respectively. However, the expected area planted

TABLE 10: First intentions to plant summer crops for the 2007/08 production season

Crop	First intentions as at the end of August 2007	Area planted 2006	2007 vs. 2006
	Ha	Ha	%
Total maize	2 669 000	2 551 800	4,59
White maize	1 595 000	1 624 800	-1,83
Yellow maize	1 074 000	927 000	15,86
Sunflower seed	520 000	316 350	64,37
Soybeans	150 000	183 000	-18,03
Groundnuts	50 000	40 770	22,64
Sorghum	80 000	69 000	15,94
Dry beans	42 000	50 725	-17,20

Source: Directorate Agricultural Statistics

TABLE 11: Estimated plantings and third production forecast of winter crops for the 2007 season

Crop	Estimated plantings for the 2007 season	Change from the 2006 season		Third production forecast for the 2007 season	Change from the 2006 season	
	Ha	Ha	%	Tons	Tons	%
Wheat	632 000	-132 800	-17,36	1 714 950	-390 050	-18,53
Malting barley	73 200	-16 580	-18,47	195 910	-40 090	-16,99
Canola	33 200	1 200	3,75	33 200	-3 300	-9,04
Sweet lupines	14 000	-2 000	-12,50	11 200	-3 200	-22,22

Source: Directorate Agricultural Statistics

to soya-beans and dry beans shows decreases of 18,0% and 17,2%, respectively.

Table 11 summarises the estimated plantings and third production forecast of the most important winter crops for the 2007 production season. The expected winter wheat crop is 1,715 million tons, which is 18,5% or 390 050 tons less than the 2,105 million tons of the previous season. The estimated area planted to wheat is 632 000 ha, which is 17,4% less than 764 800 ha planted the previous season. The expected yield is 2,71 t/ha as against 2,75 t/ha of the previous season. The expected production forecast for the Western Cape is 780 000 tons, with an expected yield of 2,40 t/ha and for the Free State it is 430 000 tons, with an expected yield of 2,00 t/ha. The production forecast for malting barley is 195 910 tons, with the area planted estimated at 73 200 ha and the yield at 2,68 t/ha. The production forecast for canola is 33 200 tons, while the area planted to canola is also 33 200 ha and therefore the yield is 1,00 t/ha. The 2007 production estimate for sweet lupines is 11 200 tons, which is a decrease of 22,2% from the previous season. The area planted to sweet lupines is 14 000 ha and the yield is 0,80 t/ha.

5.5 A short overview of climate change and its impact on agriculture

Climate change – an increase in average global temperatures – is increasingly becoming a global threat, prompting environmentalists and agricultural scientists to mount pressure on governments to act quickly to stem carbon emissions responsible for climate change. Climate change is linked to an increase in the concentration of greenhouse gases such as carbon dioxide CO₂ and methane in the atmosphere. Although such gases are generated through natural processes, they are also attributed to human activities such as exhaust gas emissions from vehicles, deforestation and burning of fossil fuels for energy. Scientists suggest that agro-ecological systems are the most vulnerable sectors and agriculture in low latitude developing countries is expected to be especially vulnerable because climates of many of these countries are already too hot. Further warming is consequently expected to reduce crop productivity adversely. The five main climate change related drivers which are temperature, precipitation, sea level rise, atmospheric carbon dioxide content and incidence of extreme events may affect agriculture through: reduction in crop yields and agricultural productivity; increased incidence of

pest attacks; limited availability of water; exacerbation of drought periods; reduction in soil fertility; low livestock productivity and high production costs and also by limiting availability of human resources(CEEPA, 2007). Reports indicate that climate change could jeopardise food supplies and increase the risk of hunger for about a billion poor people around the world. According to the International Crops Research Institute, South Asia and Africa will be the hardest hit by food shortages, which could shift the world's priorities away from boosting food output per year to bolstering the resilience of crops to cope with warm weather. The institute further reports that one billion of the world's poorest are vulnerable to the impact of climate change on agriculture with India accounting for about 26% of this population, China for about 16%, other Asian countries making up 18% and sub-Saharan Africa the remainder. Southern Africa faces prospects of severe drought and the staple food for the region, maize, is particularly susceptible to drought. According to a team of international scientists currently studying the impact of climate change on the Thukela catchment in KwaZulu-Natal, commercial farmers in South Africa are already experiencing the effects of climate change and farmers stand to lose a great deal if they are not adequately prepared (Farmers Weekly, November 2007). There is a great need for researchers to concentrate on "drought-proofing" crops and developing heat-resistant varieties to cope with the problems as scientists warn that the world is rapidly nearing its tolerance threshold for rising temperatures.

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7. ACKNOWLEDEMENT OF INTERNAL (DOA) CONTRIBUTORS

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