

# The Impact of global and local realities on Food Security in SA

### by

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#### Introduction

- South Africa is unlikely to feature at the top of the agenda at any international dialogue on food security.
- The country is a net exporter of agricultural commodities.
- The country has a high per capita income, even for an emerging economy.
- There are no tight foreign-exchange constraints.
- The country is not landlocked.

## Food ought to be available and accessible in South Africa at all times.

#### Introduction

- The confusing reality is that despite all the favourable indicators and South Africa's national "food-secure" status, between 14% and 52% of the households, depending on the source, are regarded as food insecure.
- Statistics suggest that food insecurity is most severe in rural areas, where an estimated 85% of South Africa's poor reside.
- Rural agricultural development has been prioritized by government as a way of eradicating poverty and ensuring food security.

### Contextualisation of food security

#### What is food security?

"all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food
 preferences for an active and healthy life" (FAO).



### Contextualisation of food security

- Cognisance must be taken of:
  - Strong linkage between food security and poverty.
  - Food self-sufficiency versus food security versus sustainability of agricultural value chains.
  - Global vs national vs regional vs household.

## The global realities .....

- Population, income growth and the changing consumer base
- The uncertain international trade environment
- Changing power position in the global economy,
  - China
  - Brazil
  - India
- Climate change
- Energy availability
- The global economic problems
- Etc....





U.S Census Bureau (International Data Base), 2010



http://www.cru.uea.ac.uk/cru/info/warming/



Source: Nakícenovic, Grübler and McDonald, 1998

### Impact of the global realities .....



### The fundamentals (strength) .....

- Increase in area dedicated for growing crops for biofuels;
- The growth of the world population;
- Economic development and income distribution in highly populated countries;
- Stronger governmental programmes;
- Migration and urbanisation;
- The impact of oil prices on agricultural inputs and the distribution cost of food;
- Exchange rate variability and in particular the devaluation of the US Dollar;
- Production shortages as a result of adverse climate and financial conditions, water and climate change impacts; and
- Investment funds operating in agricultural commodity markets.

# Change in the composition of diets and nutritional value and availability



For example, the demand for grain for use in intensive livestock production can increase to more than 50% of total grain production.

Source: Keyzer et al., 2005.

Source: http://www.grida.no/publications/rr/food-crisis/page/3559.aspx

Food availability in developing countries will need to increase almost 60% by 2030 and to double by 2050, equivalent to a 42% and 70% growth in global food production, respectively.

And this is just addressing availability issues

• Goal 1: Eradicate extreme poverty and hunger by reducing the % of people living on less than \$1.25 a day

Region	1990	1999	2005	2008	2010	2015
East Asia and Pacific	56.2	35.6	16.8	14.3	12.5	5.5
Europe and Central Asia	1.9	3.8	1.3	0.5	0.07	0.4
Latin America and the	12.2	11.9	8.7	6.5	5.5	4.9

Africa's slower poverty reduction is due to

#### its lower economic growth elasticity of poverty than in the other the regions.

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South Asia	53.8	45.1	39.4	36	31	23.2
South, West, East and Central Africa	56.5	58	52.3	49.2	48.5	42.3
Total	43.1	34.1	25	22.7	20.6	15.5

- Goal 2: Achieve universal primary education
- African countries continue to progress on primary school enrolment
- Aggregate net primary school enrolment rose from 64% in 2000 to 87% in 2010 in the 29 countries with available data
- Excluding North Africa, enrolment rose markedly, from 58% to 76%, an annual increase of 1.5%, considerable given the continent's high population growth
- While low completion rates are due partly to poor quality education, late entry into schools; gender, location and income also play a role.

 Goal 3: Promote gender equality and empower women



Goal 4: Reduce child mortality



- Goal 5: Improve maternal health
  - Despite some progress in the maternal mortality ratio from 1990–2010 with a 42% reduction from 745 deaths per 100,000 live births to 429 deaths, Africa still has the world's largest burden of maternal deaths with 56% of the global burden in 2010.
  - Africa accounts for the 10 countries with the highest ratios.
  - South Africa was named as one 10 countries in Africa that made no progress in terms of maternal health since 1990

- Goal 6: Combat HIV/Aids, malaria and other diseases
  - Southern Africa and Central Africa remain the regions most severely affected by HIV/AIDS, with nearly 1 in 10 adults living with HIV
  - An important aspect of reducing infections is eliminating them among children by 2015.
  - Africa has seen substantial progress in reducing prevalence, incidence and death associated with malaria and, to a lesser degree, tuberculosis (TB)
  - But Africa's malaria burden is still enormous.
  - The continent accounted for about 81 per cent of the estimated 216 million malaria episodes in 2010 and about 91 per cent of the 655,000 malaria deaths

- Goal 7: Ensure environmental stability
  - Africa is making progress on Goal 7, but achieving environmental sustainability remains a challenge overall
  - Globally, the indicator on sustainable access to water has been met, with the 88 per cent target surpassed by a percentage point. But while the world as a whole is on track, Africa is not



- Goal 8: Develop a global partnership for development
  - Establishing a global partnership for development is critical for realizing the MDGs.
  - Specifically, providing official development assistance to developing countries is an important source of finance for the MDG interventions, and thus their progress.
  - However, as Europe continues to struggle with its sovereign debt crisis and inflation rates increase, official development assistance to developing countries has fallen.
  - Greece, Ireland, Portugal and Spain accounted for the sharpest reductions in real terms.

# What is the situation back home?



### Food security in South Africa

- SA food secure at the national level
- However, results pertaining to household food security show a different situation.
  - Deep levels of food insecurity exist in rural areas with 85% of rural households unable to afford even the 'below average dietary energy costs' (Jacobs, 2009).
  - Hunger scale proxy show that in 2007 12.2% of children and 10.6% of adults experienced hunger (Aliber, 2009).
  - Hunger scale index show that 51.6% of population experienced hunger and 33% are at risk of hunger (Labadarios *et al.*, 2008)

# Distribution of household consumption expenditure by main expenditure groups, 2005/06



Source: StatsSA, 2008

Percentage distribution of annual household consumption expenditure by main expenditure group and type of settlement



Source: StatsSA, 2008

### Expenditure patterns



#### SA expenditure on food



The cost of a basic food basket expressed as a share of the average monthly income of the wealthiest 30 % of the 3.0 population 2.8 2.9 % 2.6 2.4 2.2 2.3 % 2.0 Jan-10 Apr-10 Apr-11 Jul-08 Oct-08 Jan-09 Apr-09 Jul-09 Oct-09 Jul-10 Oct-10 Jan-11 Jul-11 Oct-11

### Availability ....

#### National Food Self-Sufficiency Index (National Food Security)





Source: DAFF

## Availability (Some comments)...

- Major grain crops
  - Hectares down but yields up – productivity up
- Potential exists to increase domestic supply
  - All sub-sectors
- Area potential
  - SA constrained ....
  - But ....



- Arable land capable of sustaining intensive to moderately well adapted cultivation amounts to about 12.6% of South Africa's land
  - Of this, only 2% (2 446 million hectares) is prime agricultural land
  - A further 11% can be added

With constrained resources SA is doing well on the production front ..?!?..

## Production productivity: Maize



### Production productivity: Wheat

cont....



### Production productivity: Soybeans

cont....



Source: Own calculations based on data from DAFF, 2011

### Production productivity: Sunflower





Source: Own calculations based on data from DAFF, 2011

### Production productivity: Beef

cont....



### South African Agriculture, Output, Input & TFP Indices -1948 to 2010



Source: Liebenberg, 2011





### FOOD PRICES – COUNTRY LEVEL

The impact of high food prices at a country level includes, amongst others, the following:

- Social unrest and food riots.
- "Panic buying" by some net importing countries to secure adequate supplies and build domestic stocks of major cereals.
- Widening current account deficits for net importing countries.
- Threat to macroeconomic stability and overall growth, especially of low-income, net-importing countries.
- More food-insecure households and hence increased pressure on governments to expand their social welfare programmes.

### FOOD PRICES – HOUSEHOLD LEVEL

At the household level the consequences include, amongst others, the following:

- Substitution of more expensive sources of protein and other nutrient-rich foods for low-cost high-energy foods to maintain a minimum level of productivity.
- Compromise on health care, education and other non-food household expenditures.
- Selling off assets, e.g. livestock.
- Increased reliance on social programmes.
- Eat fewer and less nutritious meals per day.

### International Prices



Source: FAO, 2013

### **International Prices**



Source: FAO, 2013

### World grain and oil seed price trends



### World meat price trends



Source: IMF, 2013

### SA maize price trends



### SA sorghum price trends



### SA wheat price trends



### SA beef price trends

#### SA Beesvleisprys tendense



### SA beef production and consumption trends



### SA poultry price trends



#### SA poultry production and consumption trends



### SA mutton price trends

Plaaslike skaapvleispryse (s/kg)



Source: ABSA, 2013

### Important trends: Inflation and farming profitability



## SA primary agriculture, food manufacture and retail food price inflation



### Important cost drivers

 Administered and regulated prices (e.g. Fuel & Oil; Electricity)

Year	Price of electricity	Estimated usage in GWh	Total estimated cost		
2009/10	R336,000	5485.384	R1 843 088 871		
2010/11	R415,000	5567.723	R2 314 502 390		
2011/12	R523,000	5651.298	R2 955 628 921		
2012/13	R658,000	5736.128	R3 777 240 239		

- Freight costs
- Fertilizer





### Trends in regulated/administered input costs: All stages of the supply chain

Non-food inputs that are used at almost all stages of the food value chain are inputs such as fuel, electricity, labour and water.

All of these items fall within the category of administered and regulated prices, and showed the following price trends between 2010 and 2011:

- The regulated **minimum wages** for primary agriculture **increased by 4.5%**. **A further wage increase of 9.3% was announced for 2012/13**.
- 0.05% sulphur **diesel increased by 25.3%** in Gauteng and by **25.1%** at the coast.
- Electricity prices increased by 25.8%. In 2009, the total cost of electricity for the primary agricultural and forestry sectors amounted to approximately R1.8 billion. If the planned electricity costs over the next three years are taken into account, the cost of electricity is estimated to increase to nearly R3 billion if electricity usage by the primary agricultural and forestry sector remains at more or less current levels. A further increase for 2012?

### The Terms of Trade for Primary Agric: Input cost trends



#### From 2010 to 2010/11

- The farming requisite price index increased by 6.3%
- Machinery and implements
  6.7%;
- Fertiliser 11%;
- Animal feed prices **1**6.2%
- Fuel prices **†**3.4%.
- The terms of trade at primary agricultural level declined further in the first six months of 2011.

#### The rationale for agriculture

#### The negatives

- Decline contribution to GDP
- Labour shedding
- Slow on transformation
- Ineffective land reform
- Exacerbating urbanization
- Declining former homelands
- Environmental sensitivities
- Welfare trap

#### The positives

- Labour absorption capacity
- Influences human settlement patterns
- Africa expansion potential
- Little recourse in rural areas
- Can address homeland questions
- Must assist in land reform
- Regional growth

- Deregulation and liberalisation were distinctive features of the agricultural sector of South Africa during the 1980 - 90s.
- Most important policy initiatives taken subsequently include:
  - Focus on emerging farmers,
  - Land reform,
  - Institutional restructuring in the public sector,
  - Promulgation of new legislation,
  - Trade and labour market policy reform.

### • These reforms were intended to:

- Correct the injustices of the past,
- Direct the agricultural sector towards a less capitalintensive growth path,
- Enhance the sector's international competitiveness.



And ultimately increase food security for all!

- An estimated 90% of land reform projects have failed on an estimated 5.9 million ha.
- Expand irrigation potential through increasing irrigation efficiency and better water loss control.
- A further expansion potential of ±3 million ha of arable land.
- Some of this includes high potential land in former homelands.

- Policy changes created a number of pressures on farm profits.
- Farmers adapted to these changes by;
  - decreasing their level of input use,
  - by increasing output from a constant level of input use,
  - or by a combination of these approaches.
- Forced farmers to increase productivity (efficiency) and resulted in the marginal farmers to exit or differentiate
- This coupled with international competition makes smallscale farming very difficult
- This makes agricultural R&D crucial

- Technological development will change the world we know.
- Political environment in South Africa will continue to be "messy" bringing with it major challenges and...potentially lots of opportunities.
- Socio-economic issues in South Africa will continue to dominate the local political agenda.
- Business in South Africa including agriculture will continue to have to adapt to new world developments (trends) while, in many cases, having to deal with a very different local environment.

- The ability of agriculture to provide the basic needs for the poor, enables this sector to address poverty.
- Agriculture is regarded as the most important sector to ensure food security in SA.
- However, SA's investment in Agric R&D is considerably less than in other developing nations.

#### Conclusion

- To ensure food security in South Africa, agriculture needs to be expanded in an efficient and sustainable manner.
- Some opportunities in the agricultural sector include, amongst others, are:
  - Expanding irrigation agriculture, bearing in mind the ever looming water crisis.
  - Bring under-utilized land back into commercial production over time.
  - Identify the sectors and regions that have the highest potential for growth and development and invest time and money in these sectors.
  - Support employment development in the up- and downstream industries.
  - Find creative combinations between these opportunities.

### Conclusion

- What about centralized institution(s) with a specific responsibility in a set (information and research?) agenda?
  - Combine funds and capacity (secondments?)
  - Combine decision making and governance.
  - Set priorities.
  - Develop a strong voice based on research and facts.
  - Make use of existing strengths.
  - Role of current information/research institutions and universities?
  - Role of practical training agricultural colleges
  - Regional and/or national?
  - More institutions with specific niches?
- Cooperation can be more than lip service We need to start somewhere

### Conclusion

- Food security is multi-dimensional.
- South Africa is not isolated.
- Gearing for food security is not only at national level (National policy must link to provincial and local government spheres).
   IMPLEMENTATION WITHIN THE AMBIT OF SUSTAINABILITY
- Issues to address
  - R&D in the food sector
  - Legislation (from Competition Commission to others)
  - Green paper (land size)
  - Infrastructure
  - PPP programmes
  - Implementation of policies and strategies
  - Competitiveness of agriculture
  - Agricultural development

### Thank you

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