



SOUTH AFRICAN AGRICULTURAL PRODUCTION STRATEGY

CONCEPT DOCUMENT



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South African Agricultural Production Strategy

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1 Executive Summary

For the past 2-3 years, midst a global threat on the availability and affordability of basic food products, plunging most countries into a threatening food crisis, governments debated and re-looked at the role agriculture plays both economically and socially. It is argued within the context of this document, further supported by the ANC's Polokwane resolutions, agriculture have a fundamental role to play in industrialisation and development, and that the role of agricultural production lies in:

1. the qualitative and quantitative production of food for the purpose of ensuring national food security;
2. the economic growth and development of agriculture, and in;
3. rural economic development.

It is within this context that the South African Agricultural Production Strategy seeks to position primary agriculture production for the purpose of improving the national food safety and security, and agricultural economic output in a profitable and sustainable manner, through a qualitative and quantitative improvement of South Africa's agricultural productivity, productive efficiency, trade and regulatory environment for all commodity groups. Given the scope and nature of agriculture and by achieving the aforementioned, rural economic growth and development can be fuelled to increase rural employment, alleviate the plight of the poor, who mostly reside in rural areas and stimulate off-farm industrial development. Investment in non-farm economic activities will also be stimulated due to the primary sector's strong backward and forward linkages.

Salient Features of the Sector

In order to put the South African Agricultural Production Strategy in perspective it is necessary to consider the salient features of the sector. The agricultural production environment is dualistic and has the following features:

➤ Commercial agriculture:

- Made up of less than 40,000 farming units;
- Covers a production area of approximately 82 million hectares;
- Is responsible for more than 99 % of South Africa's formal marketed agricultural output;

- There has been a significant increase in the concentration of farm holdings as a result of smaller and less efficient farms, unable to take advantage of increasing economies of scale, being forced out of the sector;
- Despite the decrease in the number of farming units, output from commercial agriculture has continued to grow, implying an increase in the efficiency of production;
- Export growth has exploded, especially in the horticultural sector. Trade figures show farm exports of South Africa increased from, R45 bn in 2008 to R46 bn in 2009 while imports decreased by 8,5 % to R35 bn in 2009.
- The sector has however become more sustainable in environmental terms.

➤ **Smallholder agriculture:**

- Consists of 1.3 million farming households;
- Farm an estimated 14 million hectares of agricultural land;
- Is concentrated principally in the former homeland areas of the country, thus marginalized into regions of poor productive land, with little or no infrastructural support, and water resources.
- The smallholder farmers thus typically have low levels of production efficiency, and engage in agricultural production to supplement their household food requirements, with surplus sold at local markets.
- Smallholder farmers' production inefficiency is further related to their lack in sufficient farm management skills e.g. natural resource management, production and infrastructural management etc.
- This is further exacerbated by poor support services directed at smallholder farmers e.g. financial services, technical support, access to transport and other support infrastructure.

➤ **Subsistent agriculture:**

- There is currently a lack of sufficient data regarding the subsistent sector.
- Subsistent farmers practice agriculture mainly for household consumption. However, recent studies have shown an increase in dependence on market purchases by both urban and rural households, in some cases reaching 90 % of the food supplies.
- Subsistence and smallholder agriculture can however play an important role in reducing the vulnerability of rural and urban food-insecure households, improving livelihoods, and helping to mitigate against high food price inflation.

➤ **Production:**

- Between 1990 and 2009, field crop production increased by 13 %, horticultural production by 62 %, and animal products by 29 %.
- The largest component of agricultural production currently is animal products.
- Data reflect the increasing importance of horticultural exports as a share of total agricultural output.
- Variations in crop production are largely derived from the variability in maize production, which is in turn influenced by climatic conditions, producers' willingness to plant, and in industry average yields.
- Farmers' willingness to produce, in turn, is influenced by the profitability of production, i.e. price offers, both domestically and internationally, and the suitability of the natural resource base. The tradeoffs between these factors influence the affordability and availability of food.
- Self-sufficiency levels are currently below domestic consumption requirements for most principled food commodities and are supplemented by increasing import levels. On average, agricultural production increased by 30 % over the mentioned period, while the population increased by 32 %.
- Research conducted by South Africa's competition commission further suggests that an increase in anti-competitive behaviour, negatively impacts food productivity, food availability and affordability within the country. High food prices may therefore not be a function of low levels of production, climate change and profitability alone.

➤ **Contribution to the economy:**

- Share of GDP \approx 3 % in 2005-2007 (down from 9.1 % in 1965). Its small direct contribution tends to overshadow the many other positive contributions this sector makes to the economy;
 - Secondary growth generation is approximately 20 to 30 %;
- Has some of the strongest backward, forward and employment multipliers in the economy;
- Provides a social welfare net to the most vulnerable in society, especially in rural areas;
- 8 % of total employment by primary agriculture. It is however concerning that agriculture has lost 50 % of its employment during 1970-95, especially in light of the fact that it has one of the strongest employment multipliers in the economy;

- The sector as a whole is a net earner of foreign exchange. However, cognisance must be taken that the processed food sector is a net importer.

➤ **Equity in the sector:**

- Although all agricultural strategies and programmes devised by the department since 1995 aimed to deracialise the sector via land and labour market reforms, the sector continues to wrestle with entrenched inequalities.

➤ **Support to the sector:**

- The commercial, smallholder, and subsistence farmers currently receive less support from the state than most of their counterparts in every industrial country in the world; these are also the markets where South African agricultural exports must compete;
- Measured in terms of the internationally accepted benchmark, namely the producer support estimate or PSE as calculated by the OECD, direct support provided to the agricultural sector in South Africa is similar to countries like Chile and Brazil. There is furthermore clear indication that these two countries are making efforts to increase support to their agricultural sectors in various ways. The level of support offered to these producers, including South Africa, is considerably lower than the OECD average of 26 %; and
- The total cost of support to the agricultural sector, measured as a percentage of the GDP, decreased from 1 % between 1995 and 1997, to 0.59 % between 2005 and 2007. This is considerably lower than the average of 0.97 % for developed countries. The difference in the total cost of support measured in value terms is significant if one consider the enormous difference between the GPP's of developed countries and that of a country like South Africa.

Problem Statement

Although all agricultural strategies and programmes devised by the department since 1995 aimed to deracialise the sector, via land and labour market reforms, the sector continues to wrestle with entrenched inequalities.

Despite the agricultural sector becoming more profitable and more productive, i.e.:

- The average return on investment generated by the agricultural sector increased from a low of 7 % in 1992 to a high of 19.5 % in 2002;
- Field crop production increased by 13 %, horticultural production by 62 %, and animal products by 29 %, between 1990 and 2009;
- More recent statistics show an average increase of 11.8 % in the volume of agricultural production, an increase of 19.7 % in the total gross value of agricultural production, and a R7.5 billion increase in net profit over 12 months ended June 2008.

..per capita production of food is currently at an all time low, i.e. production of principal foods are currently lower than consumption requirements and are supplemented by increasing levels of imports.

However, South Africa's self-sufficiency indices are influenced by farmers' decision to plant and export, which are in turn influenced by prices offered domestically vs internationally; the profitability of production; and climatic conditions. Farmers' decision-making process has thus far been poorly supported, due to the poor management and dissemination of required information. Furthermore, without the consumer and national food security as priority within this critical decision-making process, mitigation between these factors (food production, food availability, profitability of production, and affordability of food) has remained ad hoc.

Furthermore, South Africa's farming units have consolidated from 60,000 farms in 2002 to 40,000 currently, decreasing the competitiveness of the sector domestically. Increasing differences between farm and retail prices for certain products such as wheat, maize, and chicken further suggest that food prices are influenced by pricing and costing structure across the value chain. Although an in-depth analysis on pricing and costing structures across the production value chain is required, we would like to argue that there are disparities between production levels, food availability, and food affordability. This thus suggests that increased food prices are also a product of market costing and pricing structure, rather than solely a result of food demand and decreased production levels.

Purpose Statement

The South African Agricultural Production Strategy seeks to position primary agriculture by targeting subsistence, smallholder and commercial production for the purpose of improving national food safety and security and agricultural economic output in a profitable and sustainable manner, through a qualitative and quantitative improvement of South Africa's

agricultural productivity, production efficiency and trade and regulatory environment for all commodity groups. It furthermore seeks to stimulate rural economic growth and development.

The agricultural production sector, in adhering to national government priorities, will furthermore effect broad based black economic empowerment, and rural economic development, by addressing growing inequality and decreasing competitiveness within the agricultural production sector. This becomes the focal point of this strategy through the support of subsistence farmers, smallholder, and struggling commercial farmers. Improving and up-scaling government support to these farmers is central to improving the competitiveness and productivity of the sector, in turn stimulating rural economic development and influencing food availability and food affordability.

Strategic Goals

- To increase the entry levels into commercial agriculture;
- To improve the national agricultural economic output and national food safety and security through a qualitative and quantitative improvement of South Africa's agricultural productivity, productive efficiency, trade and regulatory environment, and the spatial management of information and knowledge systems for all commodity groups;
- To improve agricultural support services, the regulatory framework, and the competitive advantage for commodity sectors, according to their needs and requirements as stated in their respective commodity strategies;
- To stimulate rural economic growth and development, by stimulating spatial economic planning and implementation, further serving as an incentive for investment in rural areas.

Strategic Objectives:

- **Improve the food security, policy and legislative framework** to mitigate against high global food prices and market manipulation;
- To **improve the domestic and global competitiveness** of the South African agricultural sector;
- **Create formal platforms of interaction, between government and industry**, to serve as platforms of dialogue, during planning, monitoring and evaluation processes;
- **To improve national coordination and management of government support services** to farmers, and decentralised support services in the form of local **Agricultural Development Service Centres**;
- To address the decreasing production levels among the smallholder and subsistence food producers through **commodity-based experiential training and mentorship academies**, as a prerequisite to government financial support;
- To improve the government's planning capacity at national, provincial and local levels, through **the formulation and installation of knowledge and information management systems, e.g. decision support systems.**

These objectives will be achieved through the following Strategic Interventions:

Strategic Interventions

The Farmers Development Programme / Act

The aim of the Farmers Development Programme / Act is to improve the entry levels of smallholder farmers into commercial agriculture, to create space for smallholder farmers to grow their businesses where this suits their strategies, to ensure a growing and competitive commercial sector, and to counter the effect of a growing concentration of farms, through supporting:

- market development programmes with specially generated markets for smallholder farmers;
- infrastructure development programmes aimed at smallholder farmers;
- improved access to development finance for smallholder farmers;
- improved access to information, knowledge and training resources;
- improved planning and implementation of farming practices; and
- improved natural resource management, through spatial information management, and planning systems.

This strategy furthermore seeks to stimulate rural economic growth by stimulating agricultural development through a commodity based, value chain approach to spatial planning, both at a provincial and local level. Through the Farmers Development Programme / Act, spatial planning initiatives will:

- identify areas where key commodities (including maize, wheat, beef, dairy, sheep, fruit and aquaculture) are most suited for production at a local level, further informed by market and trade analyses;
- use the information on the agricultural land potential to further plan for infrastructural and market development within the respective areas;
- use Decision Support Systems (Knowledge and Information Management Systems) to support decision makers and planners of agricultural development, both within government and industry;
- list commodities identified for domestic production, as priority at a national and provincial level in terms of farmer support programmes offered.

While as national government we have a responsibility to provide a stimulating environment for industry to grow and prosper, we also carry the responsibility of ensuring that all South Africans

benefit from the economic growth of the country. Ensuring national food security is thus a priority, and forms part of government's national imperative and development indicators.

The Food Security Programme / Act

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Cotula, 2008). Although the Food Security Act / Programme lacks a policy framework, this strategy identifies five pillars of food security, i.e. food availability, affordability, stability of supply, access and utilisation. As primary agricultural production clearly affects food availability, affordability and supply, a legislative framework is required to ensure the proper mitigation between all factors impacting the availability, affordability and supply of principled foods, with the objective of realising national food security, and achieving the right to food, for all. The Act therefore aims to:

1. identify food insecure communities through knowledge and information management systems, able to provide continuous and updated analysis of the state of food insecurity at a national, provincial and local level.
2. ensure qualitative and quantitative production of principled food commodities within identified food insecure communities;
3. ensure that, where South Africa are unable to produce profitably, sufficient levels are imported;
4. ensure that, where South Africa are able to produce food efficiently and sufficiently, the domestic market does not strain under farmers' decision to export, and that exports are not at the expense of national food security;
5. ensure the profitability of production of identified priority commodities, in this way ensuring farmers are always to gain from the production of principled food commodities; and
6. to ensure that food prices and food affordability are not compromised at the expense of the above mentioned factors.

Furthermore, an interrelated dependency between agricultural production and agro-processing clearly affects performance of the agricultural sector as a whole, including food prices. A

commodity based, value-chain approach is thus required for ensuring a prosperous agricultural production sector, and to effectively mitigate against increasing food prices.

In devising the Agricultural Production Strategy, it is thus important that clear linkages are forged between agricultural production and agro-processing, which covers:

1. Market development
2. Food availability and affordability

2 THE ROLE OF THE AGRICULTURAL PRODUCTION SECTOR

The food price crisis of 2007/08 reopened the debate on the role of agriculture in social and economic development, a role that comes at a time when most countries are dealing with a 2-3 year plunge into a growing food crisis. Questions as to why most countries are experiencing a food crisis, have spurred governments to revisit the role agriculture plays both socially and economically. The fundamental role that agriculture plays in development has long been recognised by agricultural development scholars and practitioners. Agriculture has historically been seen as a source of contributions that helped induce industrial growth and a structural transformation of the economy (Byerlee, de Janvry, & Sadoulet, 2009; Timmer & Akkus, 2008). However, industrialisation policies often taxed agriculture, while integrated rural development policies aimed at the alleviation of rural poverty were difficult to implement. The result was a decades-long neglect of agriculture, despite the experience of China, where the benefits of agriculture-based growth could be seen clearly. In addition, globalisation, integrated value chains, rapid technological and institutional innovations, and environmental constraints have deeply changed the context for agriculture's role. This strategy argues that agriculture's multiple functions for development in triggering economic growth, rural development, reducing poverty, and in providing national food security, must be recognised.

Byerlee, et al., (2009) summarise the historical growth of the “classical view” on the role that agriculture plays in economic development. In the classical view industrial development was required for economic growth, and agriculture supported growth in the industrial sector. This approach was supported by empirical studies of the growth path of the Western economies and by the experience of the “Asian miracle” economies.

Despite broad acceptance of the structural transformation paradigm, recent studies reflect a need to rethink agriculture's role in development for two reasons outlined by Byerlee, et al., (2009). "First, the structural transformation models even with their more nuanced view of the role of agriculture still see agriculture as the "handmaiden" of industrialization" (Byerlee et al., 2009). Second, even within a broader paradigm of agriculture for development, the world in which agriculture operates has changed drastically due to globalisation, new technologies and institutions, and new more demanding markets has spurred rapid growth in the demand for agricultural exports, especially for higher value products, reducing developing countries' output of basic foods, and opening the potential to cheaper imported foods.

Some of these changes are favourable while others need to be guarded against. Expanded markets for labour-intensive non-traditional exports create new opportunities for farmers in developing countries, but they leave further challenges in the implementation of the development agenda, such as the dependence on global markets for cheaper imported foods, which left many countries that have chosen this route vulnerable to soaring, unstable global food prices.

Furthermore, the competitiveness of agriculture in developing countries and the viability of the smallholder, subsistence farmer are called into question by restricted access to proprietary technological innovations, economies of scale in provisioning more demanding supply chains, and a declining role and capacity of the state in servicing the small farm sector.

South African agriculture faces many of these same challenges. This strategy argues that, even in the dramatically changed context of the 21st century, agriculture remains critical to South Africa's development agenda in meeting four central strategic objectives as guided by the South African Agricultural Sector Plan:

1. Ensure increased access and participation in the sector
2. Ensuring household food security, and national food security, by ensuring food availability and affordability
3. Ensuring sustainable natural resource management
4. Ensuring sound agricultural economic growth that maximises positive spillover effects into the rest of the economy

3 SOUTH AFRICA'S AGRICULTURAL DEVELOPMENT STRATEGIES AND POLICIES

Policy interventions can affect the direction and rate of change in the performance of any sector, and also play a critical role in the production performance of agriculture. A detailed evaluation of the implementation of South African policies is, therefore, critical in the assessment and planning of South Africa's strategic interventions for improved agricultural production.

In this regard, a distinction can be made between sector-wide policies and those that affect agricultural production directly. The former includes the four main agricultural policy thrusts of the post-1994 era, which had both a direct and an indirect impact on agricultural production. In chronological order these were (Vink, Tregurtha and Kirsten, 2008):

- **First**, the liberalisation of agricultural trade under the Marrakech Agreement and its Agreement on Agriculture, along with South Africa's own trade liberalisation agenda in the period 1994-1996. During this period, South Africa moved away from the direct controls over the import and export of agricultural commodities that had characterised the era of the Control Boards, and put tariff equivalent protection in place. These tariffs were then subject to the agreed reductions under the Agreement. However, at the same time the government unilaterally liberalised the SACU tariff structure by reducing both the level and the number of tariff lines. The result is that agricultural producers in general have little protection (with significant exceptions such as red meat, wine, etc.), and face the typical structure of tariff escalation, whereby processed food products are more heavily protected than the raw materials.
- **Second**, government started to dismantle the elaborate structure of direct subsidies that had been in place, only available to predominantly white commercial farmers for decades (in many instances from before 1945). These subsidies took the form of assistance with on-farm infrastructure (e.g. dams, fencing, irrigation works), with conservation works (contouring, prevention of soil erosion, etc.) with general infrastructure such as grain silos, railroad spurs and sidings and so forth. Whilst the aim was to stop all government programmes which perpetuated racial discrimination, it is also clear that, in the process of dismantling such support programme that prospective black emerging farmers were too denied the same level of support. Government did subsequently try and put alternative support structures and services in place for

emerging farmers and for land reform beneficiaries in the form of the BATAT and CASP programmes, but these were unable to provide the required support at levels which could undo the legacies of apartheid, midst a changing market environment (see below).

- **Third**, government commenced with a range of programmes to regulate the use of land, water resources and farm labour which had considerable impact on farming. The aim of the land reform programme was to provide restitution to those who were disadvantaged under apartheid legislation, and to provide additional opportunities to those who were discriminated against under the previous regime. Unfortunately the land reform programme have not succeeded in providing the type and level of support required, and its failure has now placed additional strain on the agricultural sector. In short, while farmers were confronted with deregulated and liberalised markets for the products they produced (see below), they were also facing increasing regulation and other forms of state intervention in the markets for the goods and services they procure in order to produce.
- **Fourth**, the system of control over the marketing of agricultural products that had been put in place since the 1930s was dismantled in a so-called 'big bang' deregulation in 1997. The result was that, by early 1998, statutory intervention in agriculture had all but ceased, with a few exceptions such as the right of industry bodies to levy funds from farmers to pay for activities such as industry information, generic product promotion, research and empowerment activities.

Strategic Policies

Within the context of government's development agenda, N. Vink et al. (2008) identify five main strategic policy documents that shaped South African agriculture post 1994:

1. **Broadening Access to Agriculture Thrust (BATAT);**
2. **The White Paper on Agricultural Policy;**
3. **The Agricultural Policy in South Africa Discussion document;**
4. **The Strategic Plan for South African Agriculture, "Sector Plan"; and**
5. **The Accelerated and Shared Growth Initiative for South Africa (ASGISA).**

The key focus of these strategic policies was to tackle past economic and social inequalities since the end of white rule in 1994. While South Africa's policy changes allowed government to take up a number of initiatives to support subsistence and smallholder farmers, implementation thereof remained project based (Ruth Hall, 2009), with little or ineffective impact on output by the targeted "previously disadvantaged black communities".

In reviewing South Africa's strategic policies, we start with the Broadening Access to Agriculture Thrust (BATAT) of the mid-1990s included farmer support and production loans. However, this programme failed to materialise. The Farmer Settlement Programme (FSP), which was responsible for post-settlement agricultural support to land reform beneficiaries, had no dedicated budget until 2004. The FSP, now renamed the Livelihoods Development Support Programme, has limited reach and impact, rather than being a mechanism for restructuring the economic and market environment for smallholder and subsistence farmers (National Treasury, 2007; Ruth Hall, 2009).

Lacking a comprehensive approach to changing and providing an enabling environment in which smallholder and subsistence farmers could develop into viable commercial enterprises, the Comprehensive Agricultural Support Programme (CASP) was established in 2004. The function of this new programme is to support new farmers. CASP is currently allocated R750 million over the three-year medium-term expenditure framework (MTEF). However, implementation of CASP followed a similar path as that of FSP, mainly providing on-farm infrastructural support, lacking the comprehensive support it was intended to provide.

Recently, an evaluation of the implementation of the Sector Plan, which assessed the extent to which the intended objectives and outcomes had been realised over the past five years, was conducted (N. Vink et al., 2008). The accompanying performance scorecard suggested that good progress was made in some areas, such as sustainable resource management, while other areas, such as equitable access and participation, still required urgent attention (N. Vink & Kirsten, 2002).

Although all strategies devised by the department since 1995 state the importance of support for the commercial and small-scale farmers (smallholder and subsistence), currently they receive less support from the state than their counterparts in every industrial country in the world with the exception of New Zealand (N. Vink et al., 2008). Direct support to agriculture, as measured by the OECD, is expressed as a percentage of gross farming income (NAMC, 2008). This is referred to as the producer support estimate or PSE, and was as follows for the period of 2005

to 2007: Chile (4 %), Brazil (6 %), South Africa (6 %), China (9 %), Ukraine (9 %) and Russia (14 %) (NAMC, 2008). The level of support offered to producers is considerably lower than the OECD average of 26 % (NAMC, 2008).

Direct support to producers in South Africa shows a declining tendency over the period 1995 to 2001 (NAMC, 2008). The largest part of this support is in the form of price support, for example tariffs on some categories of imports (NAMC, 2008). However, it is worth mentioning that the price gap between international and national prices declined from 13 % between 1995 and 1997, to only 5 % for the period 2005 to 2007 (NAMC, 2008). In other words, the protection received by agriculture in general by means of tariffs substantially decreased (NAMC, 2008). Despite this, the value of support to agriculture in the form of general services (support that is not specifically linked to a commodity, such as extension services), has increased (NAMC, 2008). The largest amounts are linked to the implementation of the land reform programme (NAMC, 2008). The total cost of support to the agricultural sector, measured as a percentage of the GDP, decreased from 1 % between 1995 and 1997 to 0.59 % between 2005 and 2007 (NAMC, 2008). This is considerably lower than the average of 0.97 % for developed countries (NAMC, 2008).

Despite these challenges, performance data, as discussed in the following sections, indicate that the commercial sector has done relatively well since the early 1990s, with the real gross value of production of the commercial sector up from some R35 bn in 1994/95 to close to R50 bn in 2007 (in rand values from the year 2000), and a real net farm income has remained at around R10 bn, also in rand values from 2000. While changes in the contribution of subsistence and smallholder farmers to agriculture is unclear, there is some evidence that ineffective farmer support programmes have prevented land reform beneficiaries from contributing to total output, and have resulted in a decline in agricultural production in the communal farming areas, leaving these farmers more vulnerable to global market changes than the commercial farmer. Improving the design, planning and execution of *Farmer Support Programmes* thus becomes critical for increased production in the smallholder sector and for greater integration with the commercial farming sector.

In summary, government at this stage still lacks policy through which an economic and market environment can be provided for the transformation of South Africa's agricultural sector, whilst maintaining productivity and production efficiency for purposes of ensuring national food security.

Furthermore, uncoordinated implementation and planning by government further frustrated the effective impact of government strategy, with each programme designing its own implementation plan, leaving a fragmented scatter of projects across South Africa's landscape.

The realisation of the change we aim to effect through our strategies critically depends on our ability to translate policy objectives into effective strategic, implementation plans, and monitoring and evaluation systems. The poor performance of South Africa's strategic plans and policies may not lie in their content, but in the lack of effective implementation, continuous monitoring and evaluation of progress made, and resultant corrective action.

More importantly is the disjointed implementation of government strategies. Cooperative governance requires effective management across all three spheres of government, sector organisations, and farmers. Without an integrated approach and effective management of actions, roles and responsibilities, most strategies devised by the department will result in ineffective implementation.

To date, therefore, South Africa's agricultural strategies and policies have not succeeded in providing effective support on a meaningful scale for the smallholder and subsistence farmers, while the sector is still plagued by dualism between the two parts of the sector.

4 The Policy Framework of the South African Agricultural Production Strategy

The policy framework of the South African Agricultural Production Strategy falls within the broader policy areas as stated within the White Paper on Agriculture (NDA, 1995) and The Strategic Plan of South African Agriculture i.e. Sector Plan (NDA, 1995), in the following manner:

The Food Security Programme / Act's purpose to address national and household food security through the mitigation of factors contributing to increasing food prices, and the provision of household food security, through information management systems, and household production systems, is supported by the first policy area of the White Paper on Agriculture, stating that:

1.1 National and household food security are equally important and must be addressed from a multidimensional point of view.

The Farmer Development Programme / Act, which seeks to improve agricultural economic development and planning; improve and decentralise support services; forge stronger linkages between science and technology development, farmers and industry; improve and localise commodity specific research, training and mentorship packages; speaks to the following policy areas of the White Paper on Agriculture:

1.2 Agriculture is an important sector for social and economic growth and development in rural areas, and will be recognised and promoted as such.

1.3 The research and institutional infrastructure of South Africa is important for the development of agriculture in Africa.

1.5 Agricultural practices which take into account the highly variable weather conditions and limited agricultural potential of South Africa, will continuously be developed and applied in their local context.

1.6 Services to farmers will be rendered in an equitable manner which discourages existing and potentially discriminatory practices and allows the benefits of development to be more widely distributed, taking into account that access to resources, scale of production, use of purchased inputs and volume of marketable produce differ from farmer to farmer.

1.7 The regulatory framework for agriculture will be scale neutral and will facilitate participation in production and marketing by new entrants to farming.

1.8 Affirmative action programmes will be focused on South Africans with a low income who were previously denied access to opportunities in agriculture, and will ensure access to agricultural resources, credit and farmer-support services.

1.9 Government agricultural programmes should contribute to the independence and selfreliance of all participants in the agricultural sector.

1.10 Agricultural support programmes will be designed in such a manner as to improve the quality of life, skills and productivity of farmers and farm workers.

1.11 Government agricultural programmes will be aimed at specific objectives and will, subject to preassessment, evaluation and monitoring within predetermined time frames, operate on the basis of voluntary participation.

1.12 Agricultural support services will be rendered to farmers who participate in land-reform programmes.

1.13 Social subsidy programmes should not jeopardise the realisation of the economic viability of the agricultural sector.

The South African Agricultural Production Strategy furthermore speaks to the National Industrial Policy Framework (NIPF) of the Department of Trade and Industry (DTI). The main objectives of the NIPF are (DTI, 2007a):

- To facilitate diversification beyond our current reliance on traditional commodities and nontradeable services. This requires the promotion of increased value-addition *per capita*, characterised particularly by movement into non-traditional tradeable goods and services that are competitive in both export markets and the domestic economy.
- The long-term intensification of South Africa's industrialisation process, and movement towards a twenty-first century knowledge economy.
- The promotion of a more labour-absorbing industrialisation path with a particular emphasis on tradeable labour-intensive goods and services and economic linkages that catalyse employment creation.
- The promotion of a broader-based industrialisation path characterised by greater levels of participation by historically disadvantaged economic citizens and marginalised regions in the mainstream of the industrial economy.
- Contributing to industrial development in Africa, with a strong emphasis on building regional productive capabilities.

Under the Industrial Policy Action Plan, a range of policy actions for immediate implementation are identified. These include sectoral actions which identifies that "further strategy work needs to be developed within Agriculture and Agroprocessing" (DTI, 2007b). The sub-programmes Agro-Processing within DTI and Agricultural Production within DAFF, have therefore been tasked with developing strategies in their respective sectors.

There is, however, a policy gap which speaks to achieving the progressive realisation of the right to adequate food, within the context of agricultural production and national food security. It is therefore recommended that policies be developed for Agricultural Production and Food Security, which speaks to:

- The right to food as a tool to mitigate potential trade-offs between different factors influencing food affordability, distribution and availability (e.g. differences between farm

and retail prices, the importance of profitable production, climate coping strategies and food security needs). Policy is required that manages the interface between agriculture and food security.

- Knowledge and Information Management Systems on food security, crop yield and livestock production, and forecasting.
- Partnerships between national, provincial, and local research institutions, farmers and extension.
- The ability of the commercial sector to respond to increased market opportunities, which will ultimately determine any gains from global trade liberalisation.
- Community-based disaster risk reduction systems (e.g. national and sub-national early warning systems).
- Sustainable water management.
- Capacity-building and technology transfer.

5 SOUTH AFRICA'S NATURAL GROWTH POTENTIAL

Agriculture and its related activities is an important industry in any developing country. It is not only regarded as an economic asset, but it also assists with the creation of jobs and alleviation of poverty. However, a much more important factor is the crucial role that agriculture has to play in feeding a nation (Collett, 2008).

South Africa as a country is no exception to this fact. Unfortunately the harsh environmental conditions found in the country make it very difficult to produce crops with sustained high yields. The variance in the climate and types of soil places heavy demands on the producers, also bearing in mind that the country has a limited amount of high potential agricultural land for sustained crop production. This fact also does not include the impact of external factors on agriculture such as production management skills, cultivation practices and economic variances.

Knowledge of the land, the shortcomings and possibilities forms the basis of any successful and sustainable farming production. Over the years research in agriculture together with the practical experience gained by farmers has enabled South Africa, notwithstanding the harsh

environmental conditions, to become largely self-sufficient in its agricultural production and even resulted in surpluses being made available for export.

Sustainable farming practices is therefore of the utmost importance to ensure national food security. One of the most important components of sustainability is the effective management of natural resources.

The increased demand on the limited natural resource base carries a detrimental impact on the environment. This is mainly attributed to ineffective land use planning, subsequent ineffective management and implementation of land use plans, the excessive use of herbicides and pesticides impacting on the quality of the water resources, the use of selective cultivation methods that are not suitable for the area concerned, cultivation of areas that are not suitable for agricultural production, unsuitable irrigation practices, and the lack of soil conservation practices (Collett, 2008).

DEAT (2006) refers to a conference on the Human Environment, hosted by the United Nations (UN) in 1972, where it points out that economic growth, if not carefully monitored, would overshoot the earth's ability to renew and maintain its resources to ensure future life and development. This concern was confirmed by the fact that in 2001 the global ecological footprint (people's natural resource consumption) was 2.2 global ha per person, whilst the productive area of the biosphere was estimated at an average of 1.8 global ha per person – translating into the fact that earth's resources are being spent faster than they are generated (DEAT, 2006). The South African ecological footprint is currently 2.8 global ha per person, higher than the world's average, ranking South Africa 42nd out of 148 countries (DEAT, 2006). Between 1991 and 2001, there was an increase of the *per capita* footprint by 2 % and a decrease of the bio-capacity per capita by 4 % (DEAT, 2006). It can therefore be concluded that there is an increase in pressures on the environment.

A sustainable farm on the other hand is defined as “a farm where the existing and potential farming activities, considered in concert with the participants and the environment, are such that the farm remains viable in the foreseeable future and in harmony with its social and environmental context when operated on a standalone basis and without extraneous intervention (Aihoon, Cherry, & Kassier, 2007).

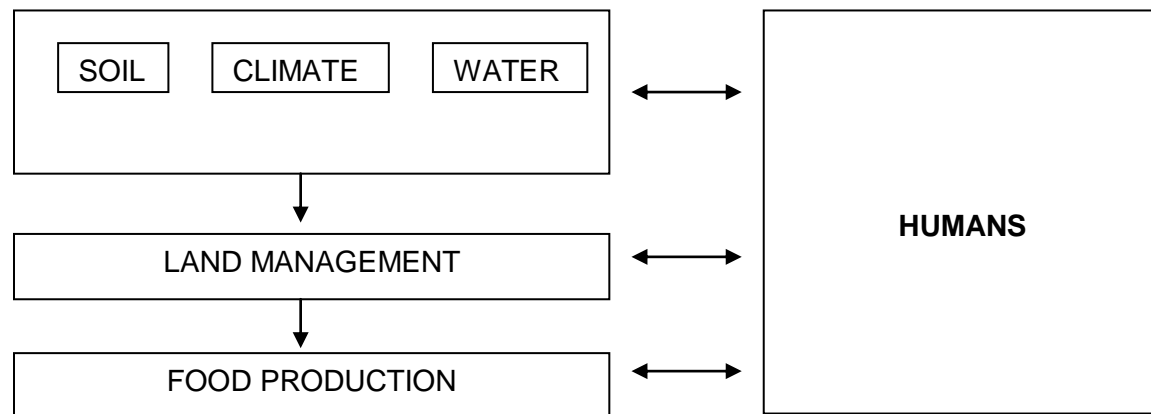


Figure 1: Interaction between humans and the environment

Ensuring national food security is the single most important factor that should drive agricultural production. Taking into consideration that South Africa has about 14 million hectares of arable land and that the international norm is 0.4 ha of arable land required to feed a person, it amounts to South Africa only being able to feed about 35 million people. However, not all the arable land is currently under production. Currently about 12.2 million ha is under cultivation. Figure 2 includes planted pastures (which do not directly contribute to food security). With this in mind, against a population of 48 million people, the present norm for South Africa is 0.25 ha per person, which is well below the international norm (Collett, 2008). The USA, by comparison, has 350 million people but enough arable land to feed 800 million people (Collier & Dercon, 2006).

Agriculture has to strive to make food more affordable to all households. This must be done through increased production by farming on suitable land, resulting in optimal utilization of the potential of the land and the limitation of production costs. Hence, in terms of ensuring national food security, it is crucial to identify suitable arable land and expand production to currently unused land (Collett, 2008).

5.1 Protection of Agricultural Land

Increased pressure on agricultural land for use other than agriculture makes it very important to protect especially high potential agricultural land for the exclusive use by agriculture. This is especially important if one takes into consideration the harsh environmental conditions of the country and the fact that only about 4 % of the country's land is regarded as high potential agricultural land. It should also be emphasised that a large percentage of the high potential

agricultural land has already been lost to other land uses and is therefore no longer available to agriculture.

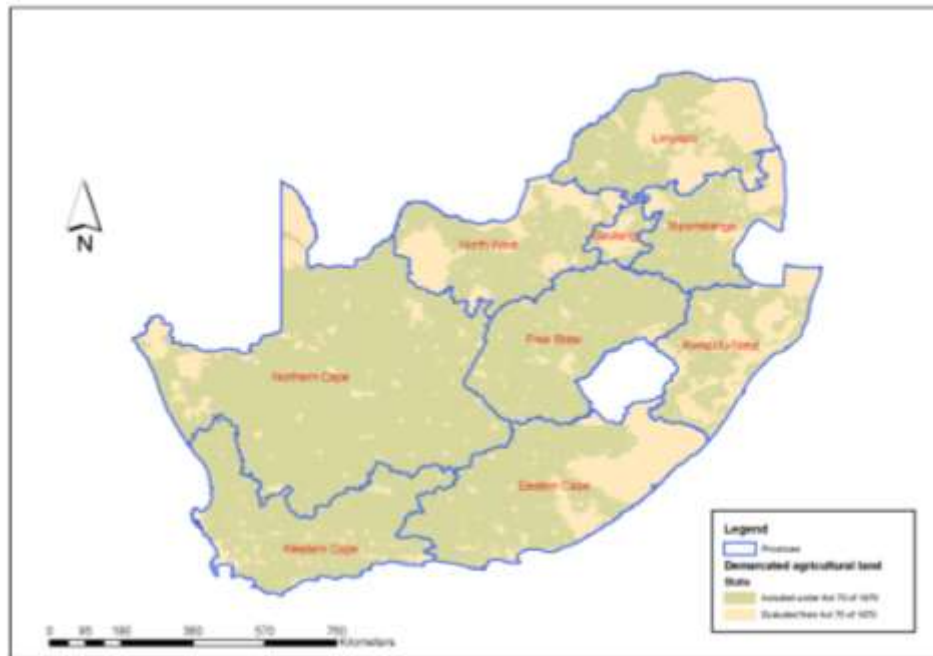


Figure 2: Demarcated agricultural land according to Act 70 of 1970

The nationally accepted definition of high potential agricultural land is defined as “the best land available, primarily from the national perspective, but with allowance of provincial perspectives; land best suited to, and capable of, consistently producing acceptable yields of a wide range of crops (food, feed, forage, fibre and oilseed), with acceptable expenditure of energy and economic resources and minimal damage to the environment (and is available for these uses)” (Schoeman 2004).

It is however important that this land be identified and protected for agricultural production purposes through legislation and policies.

5.2 Land Cover / Land Use

Land cover / land use defines the utilization of land within South Africa and provides an important tool in the effective management and protection of agricultural land. According to the 2000 National Land Cover Classification (calculated from the National Land Cover Map), the percentage area for the categories is as follows (DEAT, 2006):

- Bare and degraded areas 4.4 %

- Cultivated areas 10.5 %
- Grasslands 20.0 %
- Indigenous forests 0.4 %
- Mines 0.2 %
- Forest plantations 1.4 %
- Shrub lands and herb lands 34.6 %
- Urban areas 1.5 %
- Waterbodies 0.6 %
- Wetlands 0.7 %
- Woodlands and bush lands 25.7 %

Of the cultivated areas (10.5 % in total), 82 % is used for commercial purposes, 6.2 % is permanently under cultivation, whilst 85 % is under dry land cultivation (DEAT, 2006). Soil erosion has left 0.7 million ha degraded whilst 0.2 million ha has been degraded by mining activities (DEAT, 2006).

5.3 Status of Natural Resources

Human impact and the harsh climatic conditions have resulted in more than half of South Africa's land surface being under threat of desertification (see figure 3). It is estimated that the annual soil loss due to erosion is 2.5 tons, which exceeds the rate of soil formation of 0.31 ton ha/year by far (DoA., 2004).

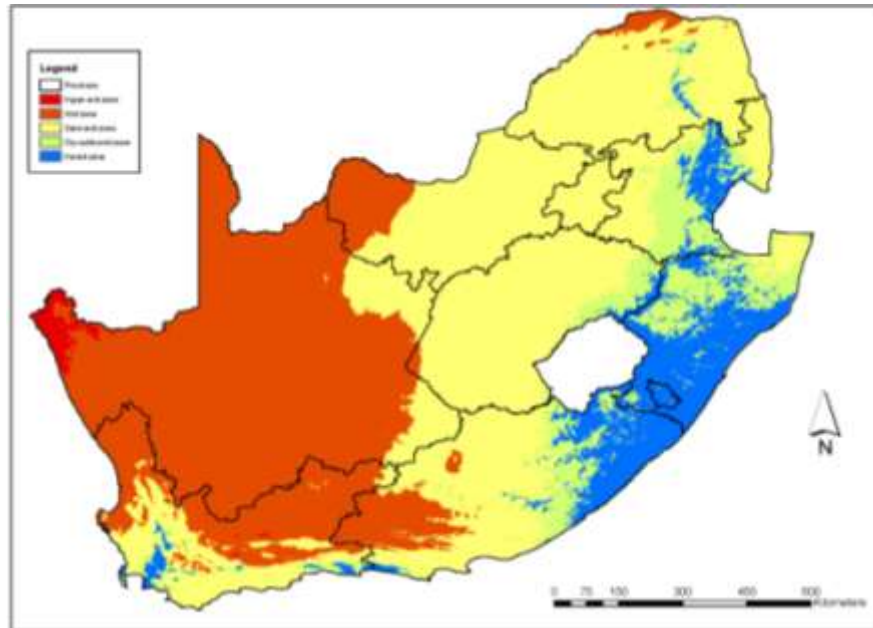


Figure 3: Aridity zones in South Africa

Rainfall

The mean annual rainfall in South Africa is less than 500 mm per annum, which is far below the world average of 860 mm (see figure 4). About a quarter of the country receives less than 200 mm rain per year. Only 35 % of the country receives more than 500 mm, which is regarded as the minimum rainfall needed for crop production. About 3 % of the country receives rain throughout the year (DEAT, 2006).

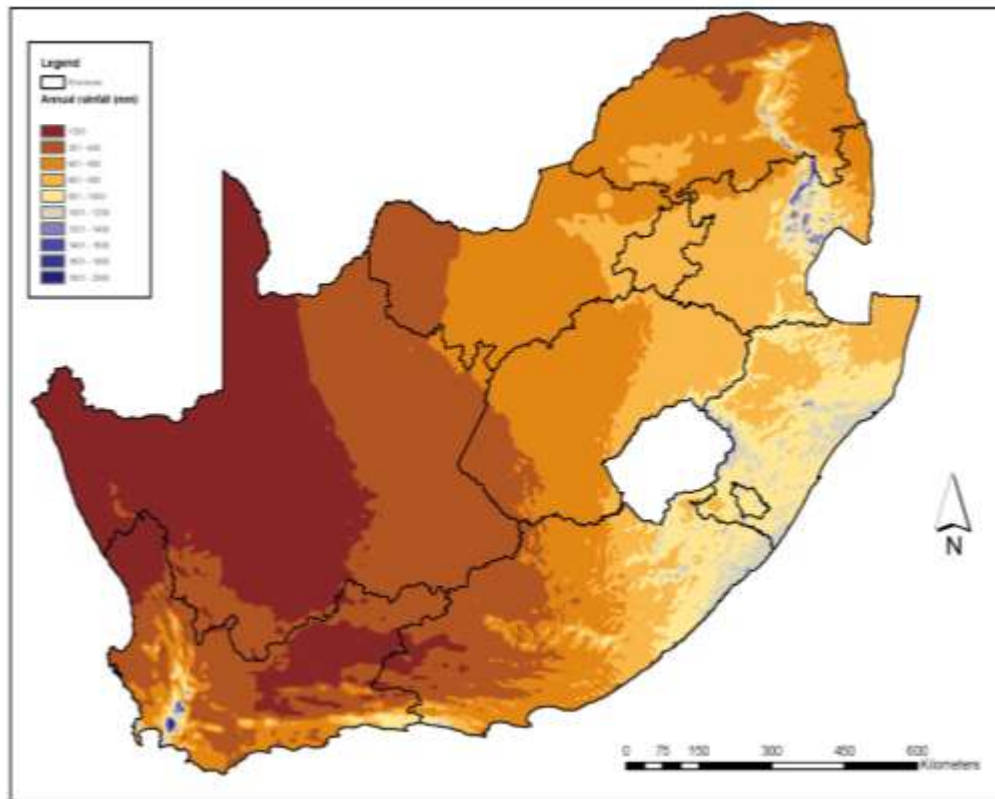


Figure 4: Annual rainfall

Soil and terrain

The soils in South Africa are categorised as the third major soil region of the world and differ highly from the other two soil regions, namely the very fertile soils found in the developed northern countries (North America and Europe) and the infertile soils of the tropical areas (DoA., 2006). The only significant moderate to high potential soils are found in the higher rainfall, humid to sub-humid areas in the east, as these areas have enough water needed for the weathering of rocks and formation of soils.

About 81 % of South African surface is characterised by shallow soils with about 30 % of the surface area regarded as sandy (less than 10 % clay) and much less fertile. Almost 60 % of the soils have a low productivity and are prone to land degradation due to the low organic content. Only 24 % of the country has soils with a favourable top- and subsoil structure that, depending on the climate, is suitable for crop production (ARC-ISCW, 2004).

The importance of terrain, particularly in cultivation of land cannot be underestimated. South Africa consists of relatively level land (70 %) (see figure 5), making it favourable for crop production pending the soil and climate variables.

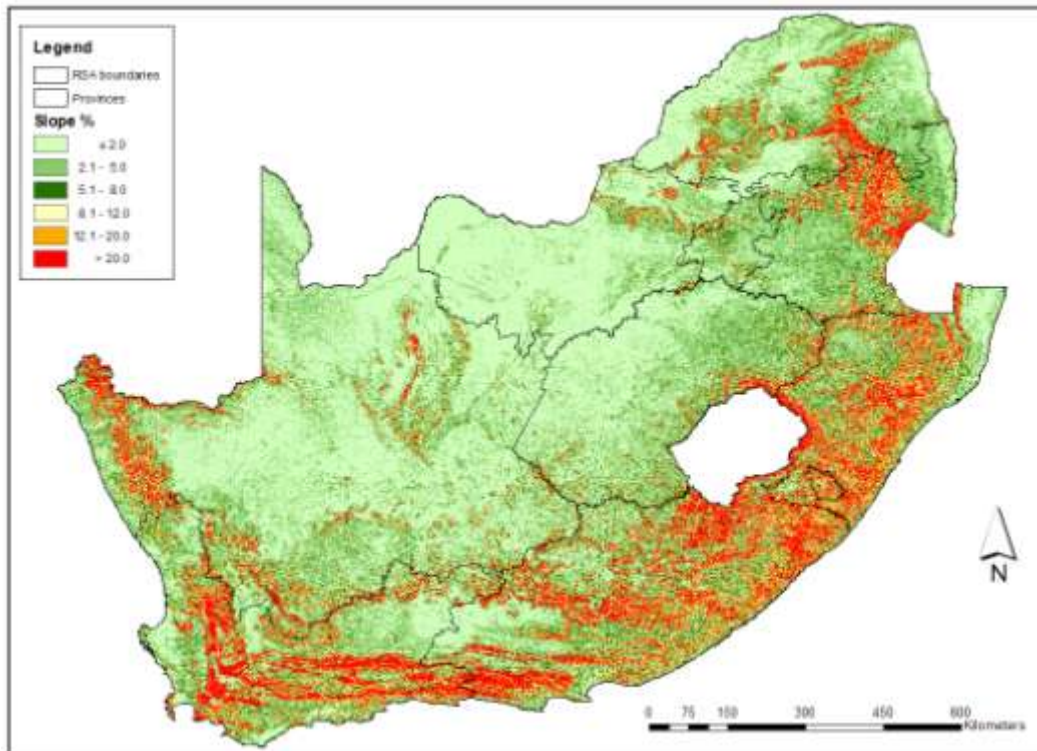


Figure 5: Slope Percentage

Livestock production

Livestock production can be dependent on either natural grazing or planted pastures. In the case of natural grazing though, large areas of the country are exposed to effective veld management in order to limit degradation of the veld.

The biggest portion of South Africa's rangelands is located mainly in areas with limited rainfall and very low potential soils (see figure 6). This combination therefore results in a low carrying capacity. However, the palatability and nutritional value of vegetation in dry areas are normally very high, provided that the veld condition is good. This land is thus very sensitive to overgrazing and degradation (DoA, 2006).

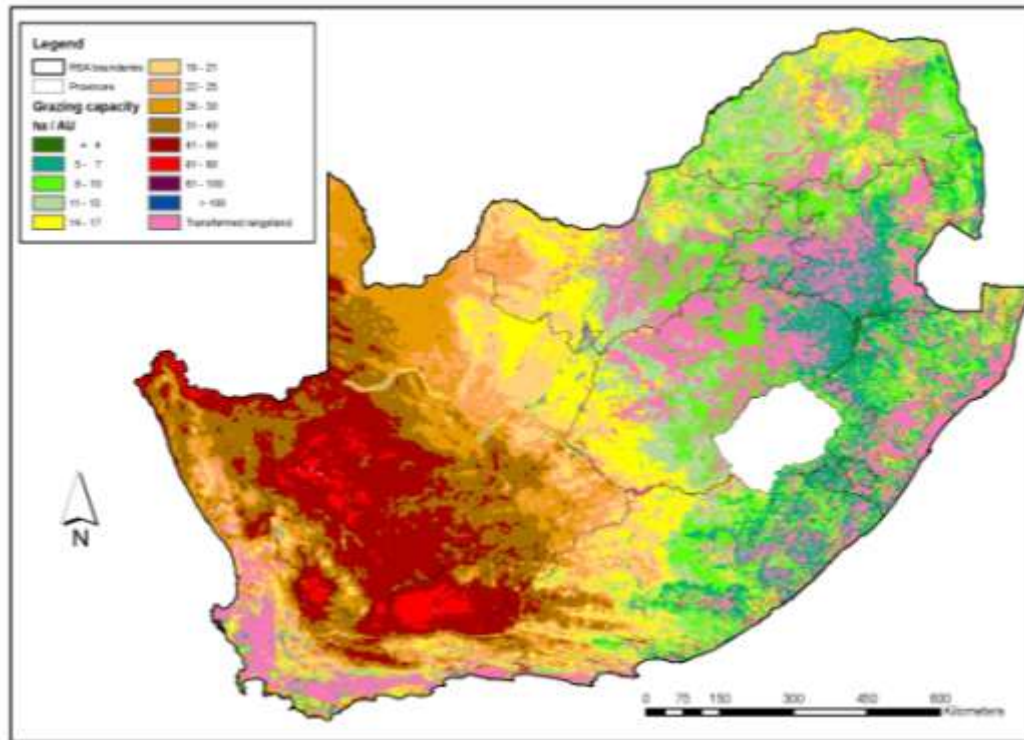


Figure 6: Grazing Potential

5.4 Land Capability

“Good policy decisions need to be based on timely, consistent and accurate information” (DEAT, 2006). This statement is one of the key building blocks in ensuring sustainable management of natural resources. It is nearly impossible to manage a resource without knowing the resource as well as its current status. In a society driven by information and knowledge, managers of natural resources must realise that it is the only way to achieve success.

Spatial economic planning, from a dry-land agricultural production perspective, is subjected to the capability and suitability of the natural environment to sustain adapted production systems. Land capability provides a framework that combines soil, terrain and climate factors to assess

the most intensive long-term use of land for rain-fed agriculture and at the same time indicate the permanent limitations associated with the different land-use classes.

Scotney et al. (1991) within the concept of land capability defines land capability as “the extent to which land can meet the needs of one or more uses under defined conditions of management, without permanent damage. Land capability is an expression of the effect of physical factors (e.g. terrain form and soil type), including climate, on the total suitability and potential for use for crops that require regular tillage, for grazing, for forestry and for wildlife without damage. Land capability involves the consideration of (i) the risks of damage from erosion and other causes, (ii) the difficulties in land use caused by physical factors, including climate and (iii) the production potential” (Scotney et al., 1991).

The current land capability data set that is used as the national norm indicates that there are little or no soils in South Africa that are not subject to limitations. Most of the country's soils have moderate to severe limitations largely due to limited soil depth or moderate erodibility, caused by sandy texture or slopes. Areas with a very good climate, such as in KwaZulu Natal and the former Transkei of the Eastern Cape, had to be degraded due to high slopes and limited soil depth. It was determined that nowhere in South Africa do best soil and good climate classes coincide (Schoeman, Van der Walt, Monnik, Thackrah, & Malherbe, J. and Le Roux, R.E., 2002).

Most of the arable land in the country is classified as Class III or IV. If Class IV is included, the total arable land in the country is 23.4 %, which is higher than the 12 % traditionally accepted. Classes I to III represent 12.4 %. Ninety eight percent (98 %) of South Africa (Class III – VIII) has severe limitations in terms of rainfall, terrain or soils. Unique farmland, especially in the Western Cape, is classified as Class IV and V mainly due to limited soil depth. Table 1 indicates the percentages of land capability classes in South Africa per province.

Table 1: Land capability classes for South Africa

| Province | Percentage of province occupied by various classes | | | | | | | | |
|---------------|--|------|------|------|-----------------|------|------|------|------|
| | I | II | III | IV | TOTAL I - IV | V | VI | VII | VIII |
| Eastern Cape | 0.1 | 0.9 | 6.7 | 9.9 | 17.6 | 10.4 | 25.3 | 27.7 | 19.1 |
| Free State | 0.0 | 0.3 | 17.3 | 28.7 | 46.2 | 25.3 | 15.7 | 4.9 | 7.8 |
| Gauteng | 0.0 | 20.4 | 35.3 | 5.6 | 61.3 | 3.4 | 21.9 | 1.6 | 11.8 |
| KwaZulu-Natal | 0.1 | 5.7 | 24.9 | 11.1 | 41.8 | 3.0 | 29.5 | 16.2 | 9.5 |
| Limpopo | 0.0 | 0.7 | 16.8 | 20.2 | 37.8 | 25.7 | 17.5 | 6.9 | 12.2 |
| Mpumalanga | 0.0 | 12.1 | 26.9 | 12.2 | 51.3 | 5.1 | 26.2 | 5.0 | 12.5 |
| Northwest | 0.0 | 0.2 | 14.0 | 21.7 | 35.8 | 19.8 | 16.8 | 19.7 | 7.9 |
| Northern Cape | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 4.0 | 78.6 | 14.7 |
| Western Cape | 0.0 | 0.2 | 6.9 | 6.8 | 13.9 | 4.7 | 14.6 | 39.7 | 27.1 |
| RSA | 0.2 | 1.8 | 10.6 | 11.0 | 23.4 | 10.5 | 15.5 | 36.1 | 14.4 |

Source: (Schoeman et al., 2002)

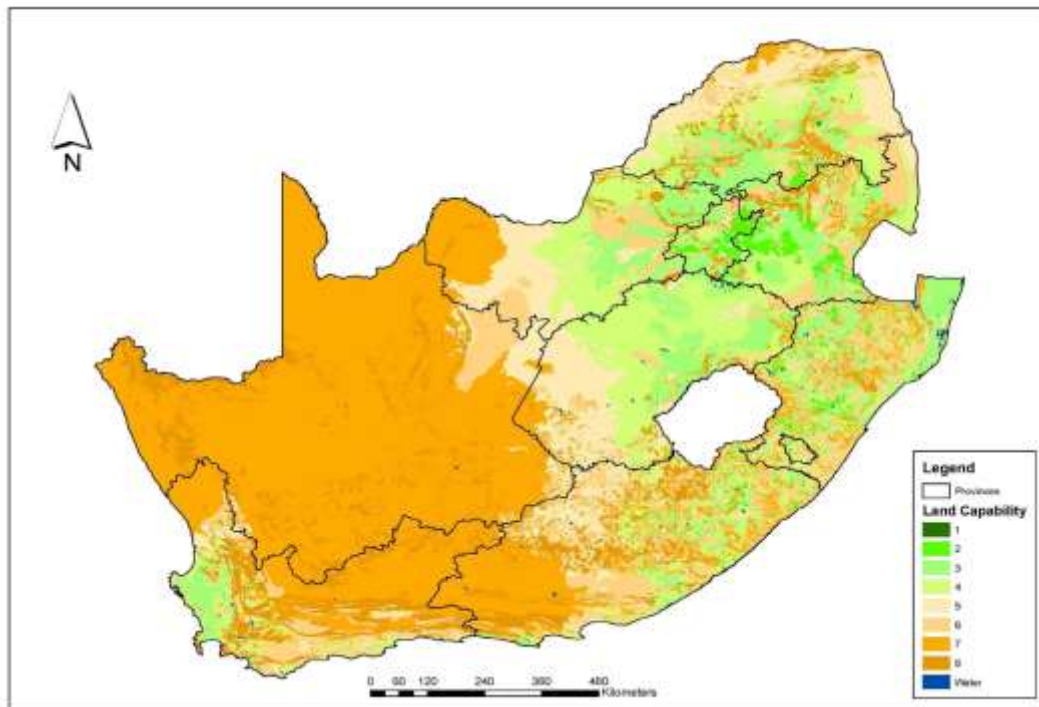


Figure 7: Land capability classification for South Africa

The development of the land capability data set was dependent on the availability of spatial data on a 1:250 000 scale. The soil and terrain data were mostly derived from the land type data set with a certain degree of modelling, whilst the climate data was based on the 10-day rainfall and temperature surfaces and climate hazard maps.

It was however realised that the scale of the land capability data set is not sufficient to take decisions regarding the protection of agricultural land. The Department has therefore embarked on a process to define Agro-ecological zones (AEZs) through the use of more detailed data sets and an advance spatial modelling exercise (see figure 8).

The approach followed was to first map land capability (see figure 7) after which a matrix was applied to determine agricultural zones, based on agricultural potential, land use / cover and current agricultural practices (see figure 8). The modelling approach can be described as “a

combination of deductive-knowledge and inductive-empirical methods” supported by various natural resource data sets. It made use of data variables, as well as derivatives and calculations from the variables. The data variables used focused on the soil, climate and terrain and were independent of crop requirements.

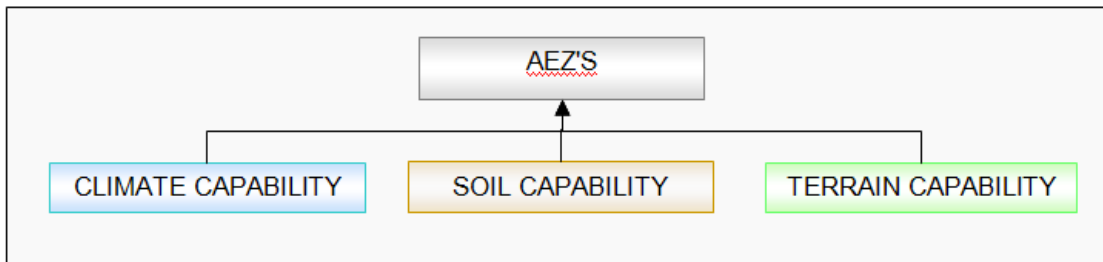


Figure 8: Spatial Data

To date this process has been completed for the Gauteng and Limpopo province and it is envisaged that it will be rolled out to the remainder of the country in the next two years.

The objective of this process is to identify agricultural zones and attached relevant norms and standards to the zones that will guide land user on the effective use of the zone, e.g. see figure 9.

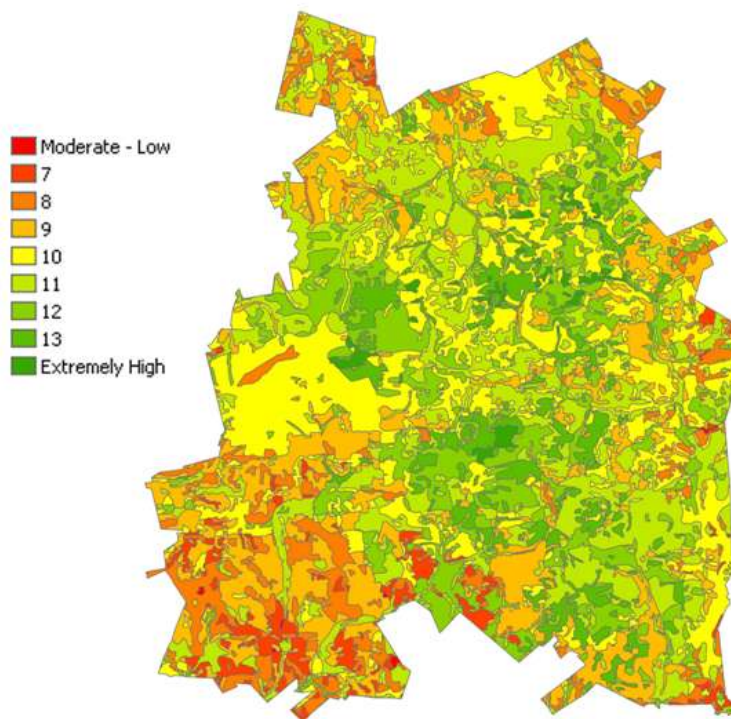


Figure 9: Agro-ecological zones for Ekurhuleni Metropolitan Municipality – Gauteng

5.5 Production Suitability

Land capability, however, focuses mainly on the capability of the natural resources. Agricultural potential includes additional factors, such as level of management, economic factors and crop selection or suitability. Economic factors are nonetheless subject to a specific time and place and are dictated by demand and supply. The same subjectivity applies to management requirements and crop suitability. Land may have a low potential for a specific crop, but be highly suitable for another crop, pending on the capability of the land. Incorrect crop selection or farm management may also result in a limited agricultural potential. However, should the situation be rectified through correct land use planning, management of the resources and correct production practices, a completely different outcome may be achieved. However, the capability of the land remains the same (Collett, 2008).

Based on the work conducted in identifying high potential agricultural land in identifying agricultural zones, further research must be done to determine crop suitability. This can be done through the use of the various soil, climate and terrain capabilities and the analysis of specific crop requirements in identifying suitable areas for a specific crop.

To date, a limited amount of identification of agricultural zones for selected crops had been done for the Gauteng and Limpopo provinces, based on the agricultural potential of the natural resources. This process needs, however, to be rolled out further to other provinces. External factors, such as economic viability, access to financial support, distance to markets, availability of water in the case of irrigation requirements, legally granted water-use permits, infrastructure, cultivar selection and management experience and knowledge can therefore further be integrated with these results to assist the land user in the correct selection of the most suitable crop.

A system capable of overlaying and updating this information, will be researched, tested, and implemented as a Decision Support System.

6 THE SOUTH AFRICAN AGRICULTURAL PRODUCTION SECTOR

6.1 Commodity Production Analysis

6.1.1 Maize Industry

Figure 10 below illustrates the production, consumption, and consumption *per capita* trends of the maize industry between 1990 and 2009.

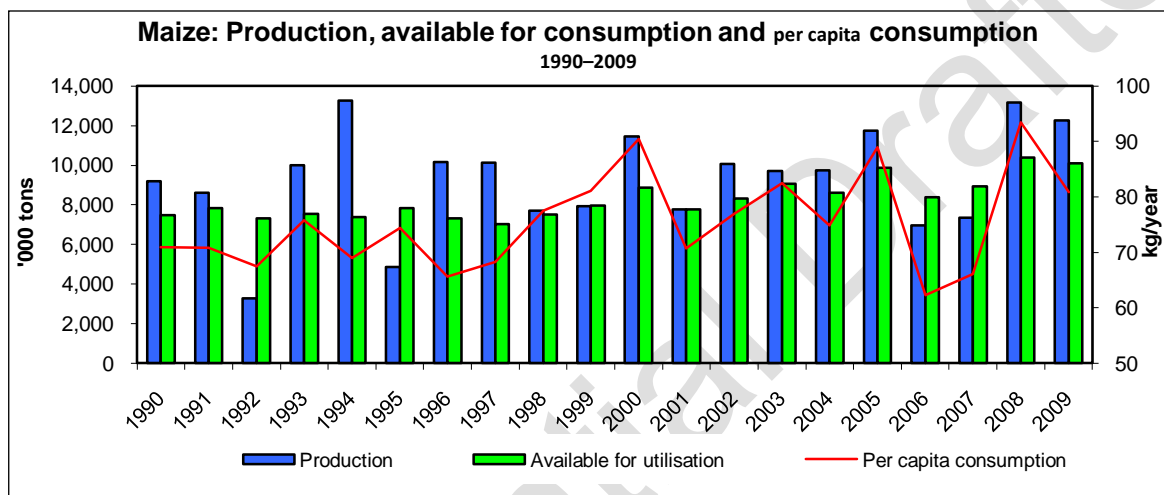


Figure 10: Maize Production and Consumption (DAFF, 2009a)

Figure 10 shows that the total production levels have generally been erratic between 2005 and 2009, with more stable levels between 2002 and 2004 (DAFF, 2008). **Figure 10** furthermore illustrates that South Africa moved from a net importer in 2007 to a net exporter of maize in 2009. The maize industry is thus currently an important earner of foreign exchange through the export of maize and maize products (DAFF, 2008).

Figure 11: Maize Exports and Imports (DAFF, 2008)

Figure 11 indicates that, in 1994, South Africa exported approximately 4,000,000,000 kg (DAFF, 2008). The industry exports mostly to BLNS (Botswana, Lesotho, Namibia and Swaziland) countries, Zimbabwe, Kenya, Mozambique, Zambia, and Mauritius and in some years, to Japan (DAFF, 2008).

Surpluses of maize in major maize producing countries like the USA and Argentina, and also low commodity prices, affect farmers' decision to plant, and caused a decline in maize exports during 1995.

The levels of maize exports by the country increased sharply in 1996, whereafter there was a downward trend, with 1999 and 2005 being outliers, until very low exports were reached during 2007. In 2008, exports rose sharply, with a small decrease in 2009 (DAFF, 2008).

Figure 11 further indicates that, during the period 1994 to 2009, South Africa's maize imports exceeded its exports only in 3 years, i.e. 1995, 2006 and 2007 to supplement local production. South Africa imports greater volumes of maize mainly from the African region and the Americas, mainly South America and NAFTA (particularly USA) (DAFF, 2008).

The strategy must be able to support and stimulate competitive production levels to supply both the domestic market and export of maize. However, the one cannot be promoted at the expense of the other. We cannot allow maize to be exported at the expense of higher food prices domestically, nor can we restrict exports at the expense of a prosperous industry. The mitigation between sufficient production levels, profitable production, food availability and food affordability becomes the function of the identified intervention, i.e. **The Food Security Act**.

6.1.2 Wheat Industry

Figure 12 below illustrates the production and consumption trends of the wheat industry between 1994 and 2009.

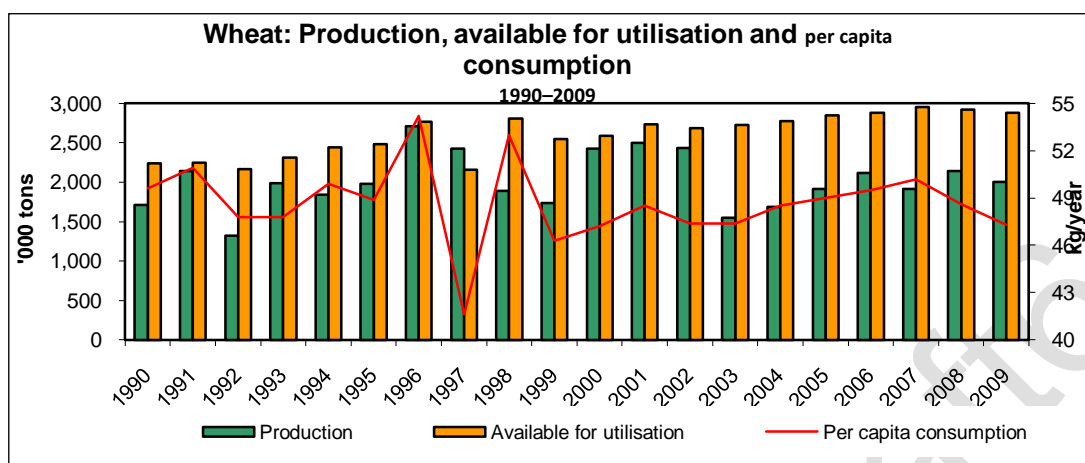


Figure 12: Wheat: Production, available for utilisation and, *per capita* consumption (1990-2009) (DAFF, 2009a)

Wheat in South Africa is produced mainly for human consumption, although small quantities of reduced-quality wheat are marketed as stock feed. Except for 1997, wheat production in the country during the past 20 years was constantly below total consumption, with production fluctuating a lot and consumption showing an upward trend (DAFF, 2008).

The shortage in production is mainly attributed to two factors: unprofitable production due to competitive international prices, which caused a decrease in the area planted over the period, and poor climatic conditions (DAFF, 2008). Finding a balance between profitability of production, food availability and food affordability thus becomes a priority for this sector.

Figure 13 below shows exports and imports of wheat from 1995 to 2009.

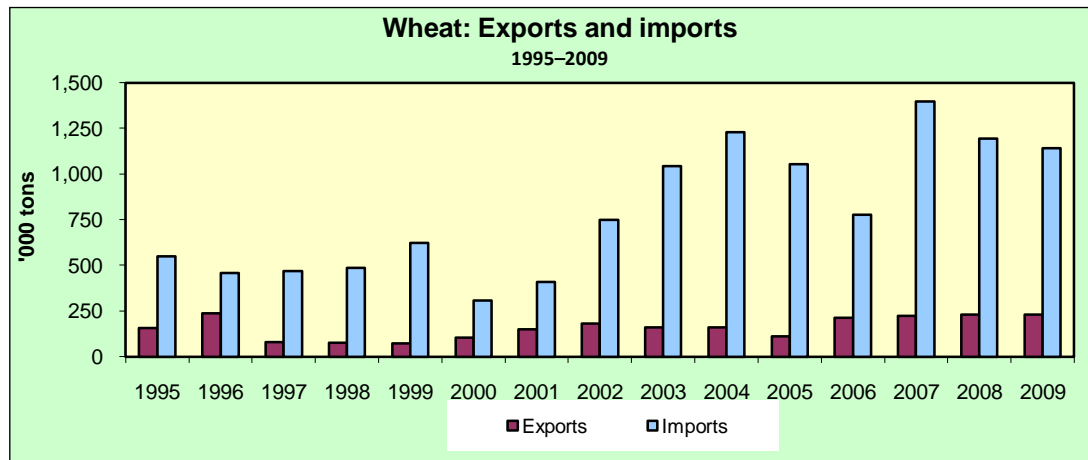


Figure 13: Wheat Exports and Imports (DAFF, 2008)

During the period 1995 to 2009, wheat imports by South Africa fluctuated between as low as 308,000 tons (2000) and as high as 1,4 million tons (2007). From Figure 13, it is evident that imports during the second half of the period were much higher than during the first half (DAFF, 2008). Imports during 2009 amounted to 1.14 million tons.

Exports were relatively stable during the period 1994 to 2009 and remained below 250,000 tons (DAFF, 2008).

Especially in the case of wheat, where exports are motivated by competitive global prices and unfavourable local climate conditions, mitigation between profitable production, food availability and food affordability must become the function of the **Food Security Act**. It is, however, important to note that in many cases (e.g. wheat and maize) exports go from places closer to export markets, e.g. Western Cape wheat is close to Cape Town harbour, some maize production is close to neighbouring countries). In these cases, it may be cheaper to export the product than to take it to South Africa's market (principally Gauteng) because of the long distances within South Africa, and to import to make up for Gauteng's needs if there is a deficit. Such are the factors that need to be mitigated in enhancing national food security.

6.1.3 Grain Sorghum Industry

Figure 14 below illustrates production and consumption trends of the grain sorghum industry between 1990 and 2009.

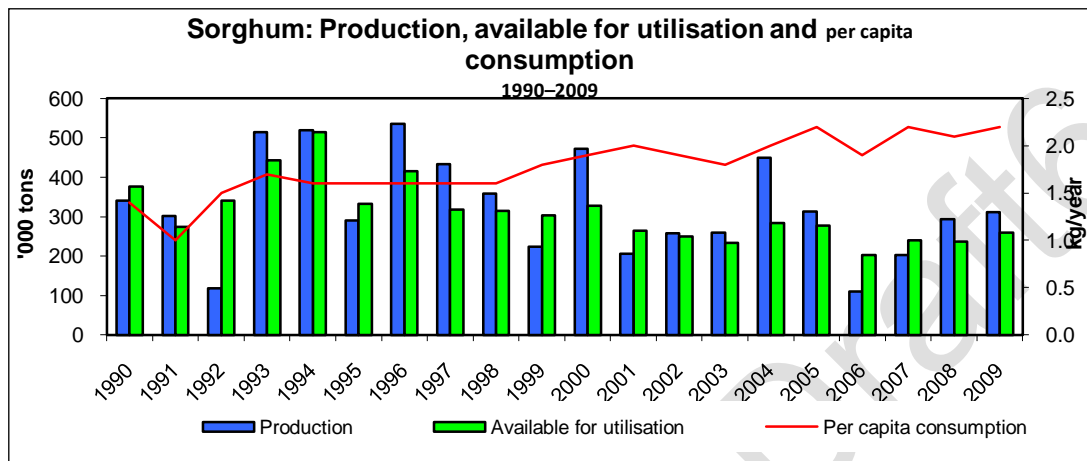


Figure 14: Sorghum: Production, available for utilisation and *per capita* consumption (1990-2009)
(DAFF, 2009a)

Between 1990 and 1992, sorghum production declined sharply, followed by a dramatic increase in 1993, stimulated by increased consumption in 1992 (DAFF, 2008). In 1994, both grain sorghum production and consumption were slightly above 500,000 tons, which then decreased to below 400,000 tons in 1995. In 1996, the total sorghum production in the country reached a peak well above 500,000 tons, followed by year on year decreases until 1998, however remaining above total consumption. The figure indicates that several fluctuations occurred with regard to both grain sorghum production and consumption during the period under review. However, on average the figure shows that South Africa's grain sorghum production has been slightly higher than the country's total consumption. In South Africa, most of the grain sorghum is consumed for malting purposes to make beer and as sorghum meal, which then decreased the use of sorghum for animal feed. South Africa is capable of producing grain sorghum for its own consumption; it is, however, also imported from the world to supplement the local consumption and supply.

Figure 15 below shows grain sorghum exports and imports by South Africa from 1995 to 2009.

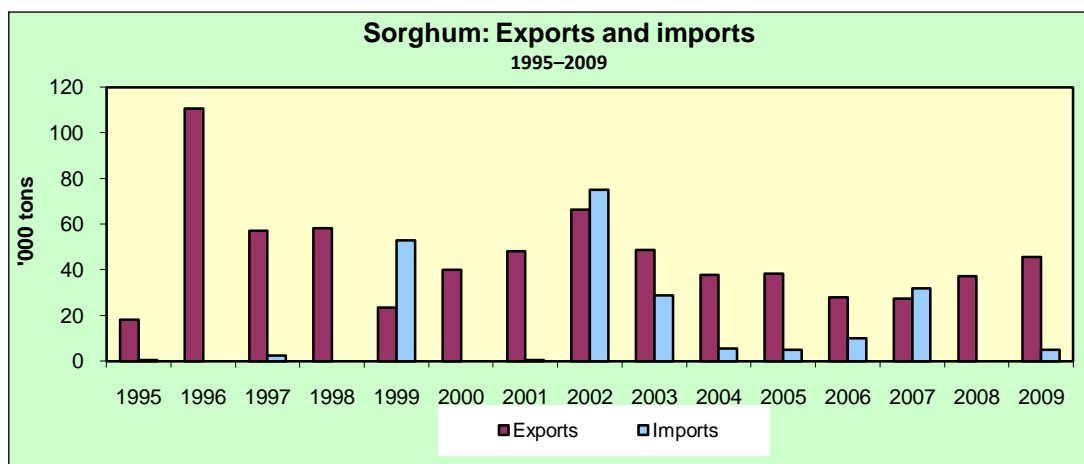


Figure 15: Sorghum: Exports and Imports (NAMC, 2009){226 DAFF 2008}{226 DAFF 2008}

Exports of sorghum are handled by means of contracts between buyers and sellers, subject to the requirements of the Agricultural Product Standards Act. South Africa exports sorghum mainly to the African region. Figure 15 shows that South Africa regularly exports grain sorghum, while very little, if any, is imported in most years. The figure indicates that there were a lot of fluctuations with regard to grain sorghum imports by the country throughout the periods under review, until a peak was attained in 2002 due to very low supply in the domestic market. The level of grain sorghum imports in the country continued to be above the country's grain sorghum exports until the period 2008.

6.1.4 Sunflower Seed Industry

Figure 16 shows the total sunflower oil production and consumption by South Africa for the past twenty years.

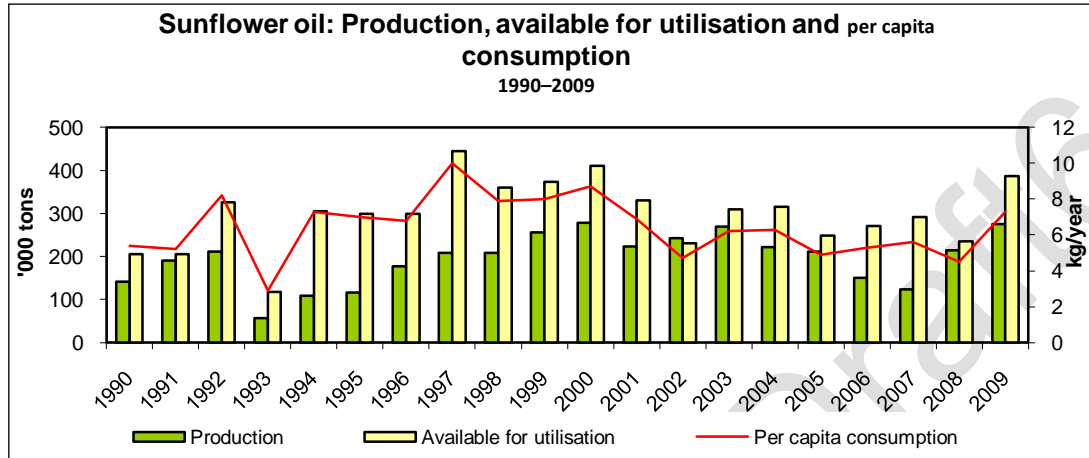


Figure 16: Sunflower oil: Production, available for utilisation and *per capita* consumption (DoA, 2008)

Except for 2002, sunflower oil production in the country during the past 20 years was constantly below total consumption, with both production and consumption fluctuating a lot. During the period 1994 to 1997, both the production and consumption of sunflower oil increased simultaneously. However, during the period 1997 to 1998, sunflower oil production remained virtually unchanged, while consumption in the country fell. From 2004 to 2007, production dropped for 4 consecutive years, while consumption remained relatively high, after which production rose steeply during 2008 and 2009.

The figure indicates that, on average, the country's total sunflower seed production is considerably lower than the total consumption. In South Africa, sunflowers are well adapted in both hot and dry climate.

Figure 17 below shows sunflower oil exports and imports by South Africa between the periods 1995 and 2009.

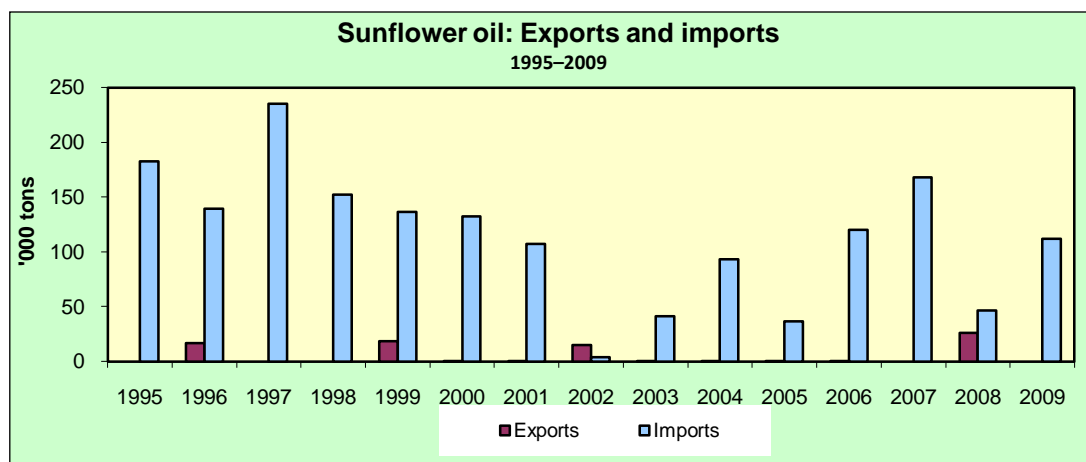


Figure 17: Sunflower oil: Exports and Imports (DoA, 2008)

Figure 17 shows that South Africa regularly imports sunflower oil, while exports rarely occur, and then only in small quantities, clearly indicating that South Africa is a net importer of sunflower oil.

6.1.5 Poultry Industry

Figure 18 below illustrates the production and consumption trends of the poultry industry between 1990 and 2009.

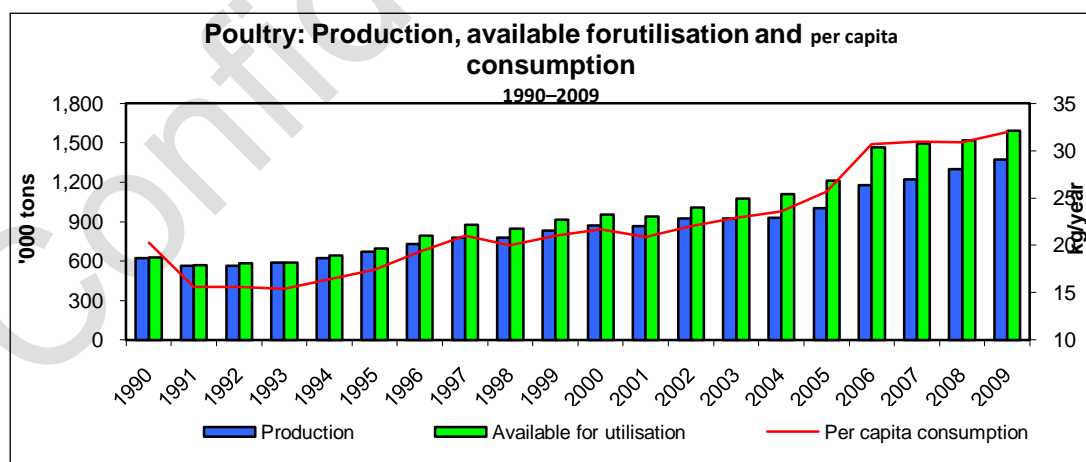


Figure 18: Poultry: Production, available for utilisation and *per capita* consumption (1990-2009) (DAFF, 2009a)

Poultry production increased exponentially during the past twenty years. The highest production quantity is for 2009 and that may have been caused by the increase in poultry producers locally. The poultry industry has also increased its efficiency during the past few years, especially in terms of use of technology and the reduction of input costs.

At the same time, poultry consumption also increased steadily over the past twenty years. In the domestic market, broiler meat is considered to be a substitute for other protein sources such as pork, beef and mutton. The generic reasons as to why the broiler meat industry has a competitive advantage in the domestic meat market against other South African meat sources are as follows:

- Breeding progress: faster than other livestock due to short breeding cycle;
- Nutritional progress: extensive research that has reduced cost of production;
- Level of support given by suppliers: their vested interest in helping producers survive ensures full support to every substantial buyer of their goods, feed, or services;
- Short production cycle of broiler compared to other livestock: leads to much faster genetic progress than other comparable industries.

Figure 19 below illustrates the exports and import trends of the poultry industry between 1995 and 2009.

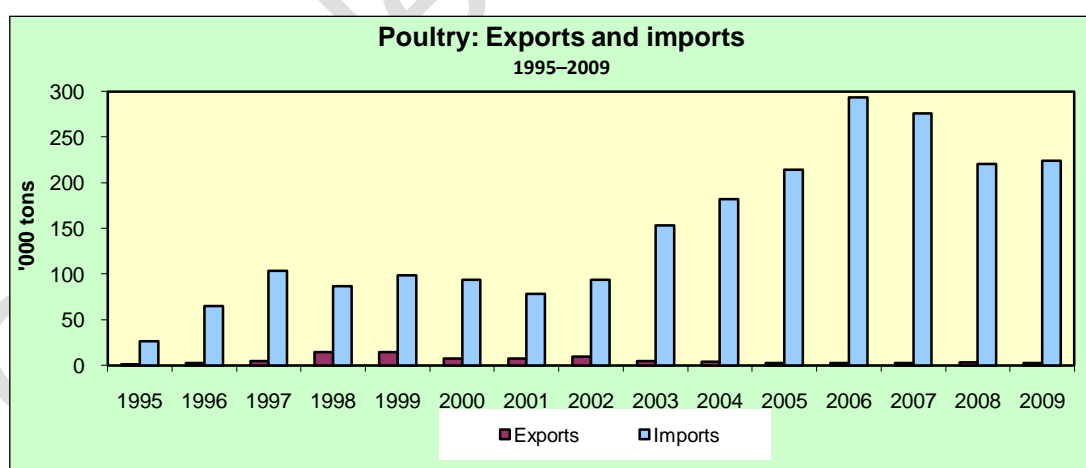


Figure 19: Poultry Exports and Imports

The trend of increasing import volumes compared to exports can be clearly seen in **figure 19** above. An important trend in the supply of broiler meat to South African consumers is the

increasing market share taken up by imports. According to the South African Poultry Association, these imports have been largely attributed to exchange rate movements and have been responsible for the displacement of local expansion possibilities in eight of the last ten years. The fact that cheaper cuts and offal are imported and sold into institutional and other markets adds to the indirect effect of these imports. Increasing domestic demand serves as an incentive to improve efficiency of production to international competitive levels. Again, the **Food Security Act** must be able to mitigate between ensuring a prosperous industry, production, food affordability and availability, for purposes of ensuring national food security. It is thus important that the strategy carries a long term goal of supporting a prosperous and growing industry.

6.1.6 Beef Industry

Figure 20 below illustrates the production and consumption trends of the beef industry between 1990 and 2009.

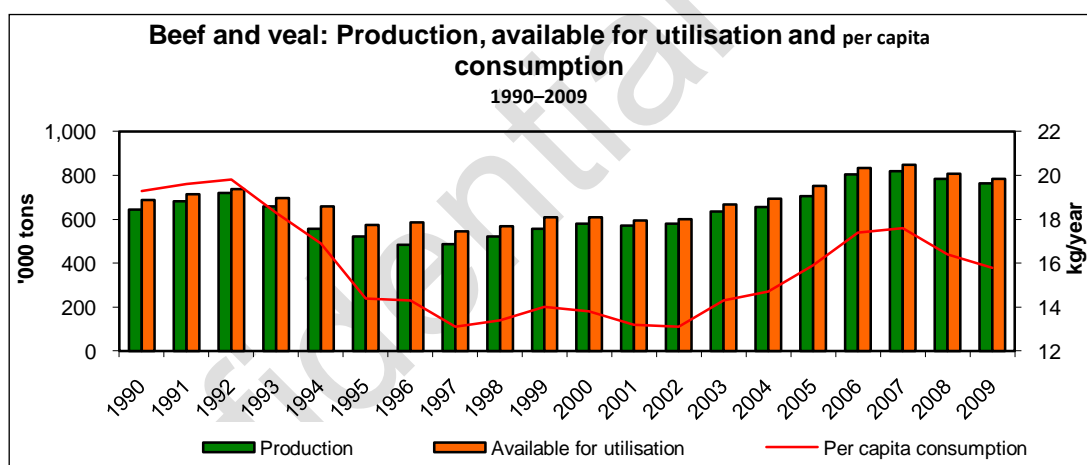


Figure 20: Beef: Production, available for utilisation and per capita consumption (1990-2009) (DAFF, 2009a)

Beef production increased steadily during the past ten years, with the highest production quantity recorded in 2007. At the same time, beef consumption has also increased. That may have been caused by an increase in disposable income of consumers. With an increase in disposable income, consumers tend to shift from cheaper sources of protein such as pork and poultry.

Figure 21 below illustrates the exports and import trends of the beef industry between 1995 and 2009.

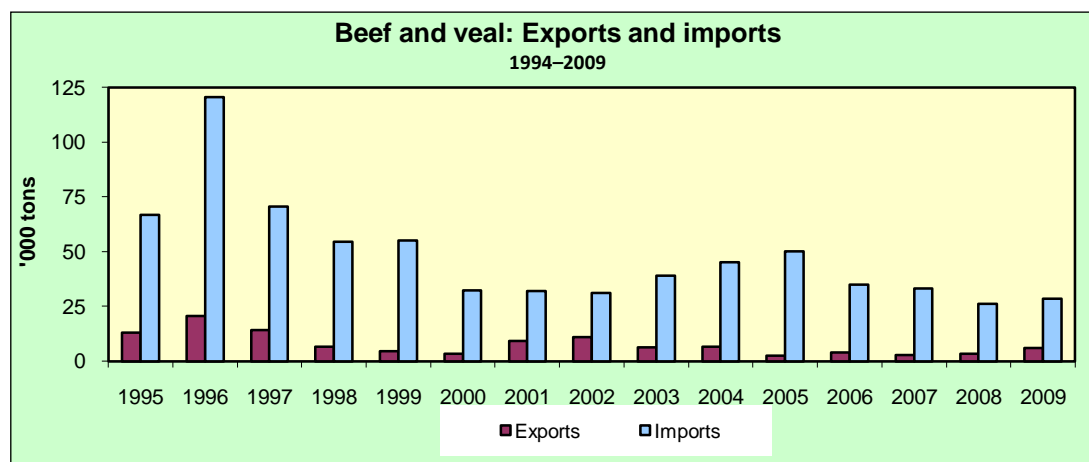


Figure 21: Beef: Exports vs Imports

Figure 21 shows that, on average, South Africa is a net importer of beef, and it mainly imports beef to supplement domestic production. However, several fluctuations occurred with respect to both beef imports and exports by South Africa between 1995 and 2009.

6.1.7 Mutton Industry

Figure 22 below illustrates the production and consumption trends of the mutton industry between 1990 and 2009.

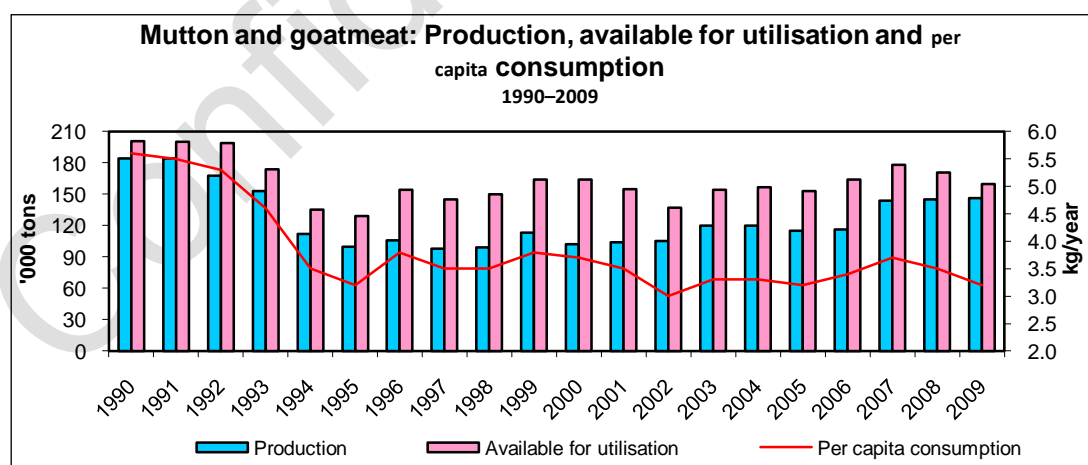


Figure 22: Mutton: Production, available for consumption and *per capita* consumption (1990-2009)
(DAFF, 2009a)

As illustrated above, the total production of mutton and goatmeat in South Africa was relatively stable over the past fifteen years, after having dropped sharply during the preceding few years. The lowest quantity was recorded during 1995, while the highest quantity was recorded during 2009.

At the same time, consumption of mutton was relatively stable during the fifteen year period. However, mutton consumption has been higher than production during the past fifteen years; hence it is supplemented with imports.

Figure 23 below illustrates the exports and import trends of the mutton industry between 1995 and 2009.

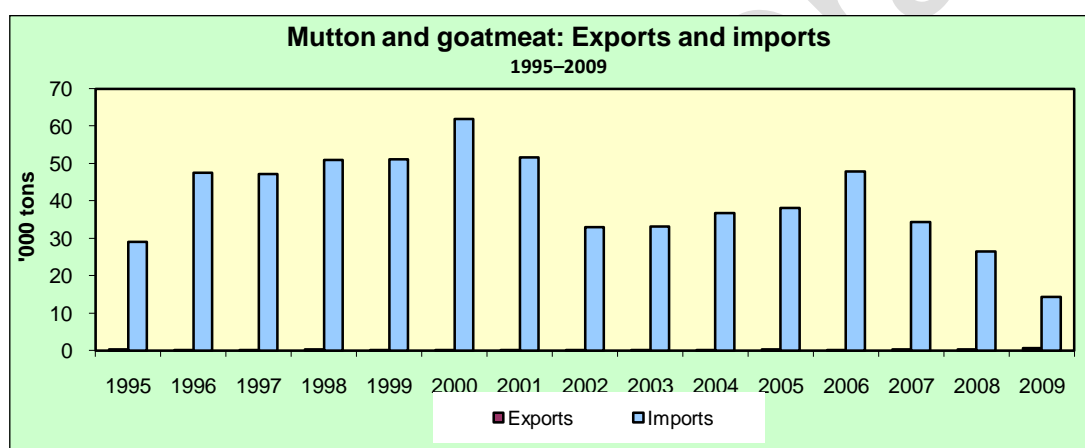


Figure 23: Mutton Exports vs Imports

As illustrated, the mutton industry is an import-lead industry with significant imports used to supplement the local industry. Export volumes are insignificant.

6.1.8 Pork Industry

Figure 24 below illustrates the production and consumption trends of the pork industry between 1990 and 2009.

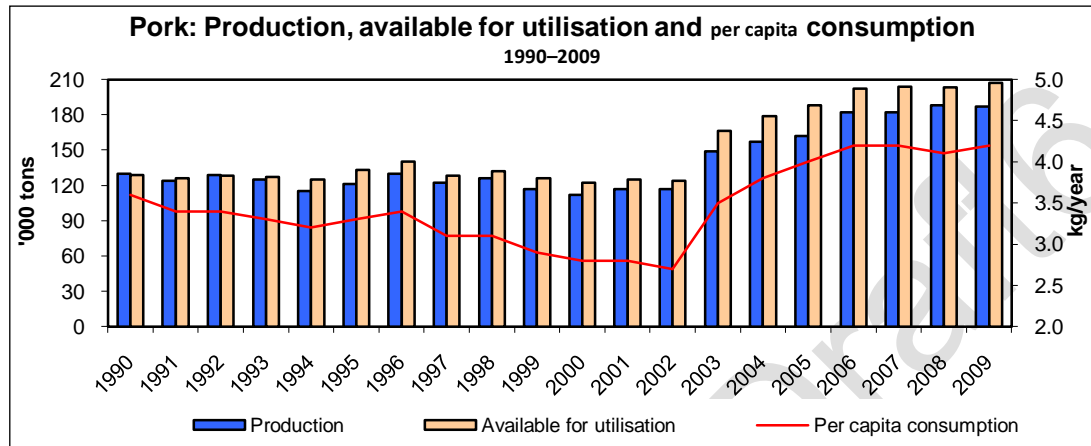


Figure 24: Pork: Production, available for consumption and *per capita* consumption (1990-2009)
(DAFF, 2009a)

Up to 1992, production and consumption of pork have, to a large extent, been in equilibrium. As illustrated above, the *per capita* consumption of pork decreased steadily, while both total consumption and production were relatively stable, up to 2002. In 2003, however, both production and total consumption, as well as *per capita* consumption, increased rapidly. Thereafter they continued to rise, although at a decreasing rate, except for *per capita* consumption, which decreased from 2007. Since 1993, total pork consumption has constantly been higher than production; hence it was supplemented with imports.

Figure 25 below illustrates the exports and import trends of the pork industry between 1995 and 2009.

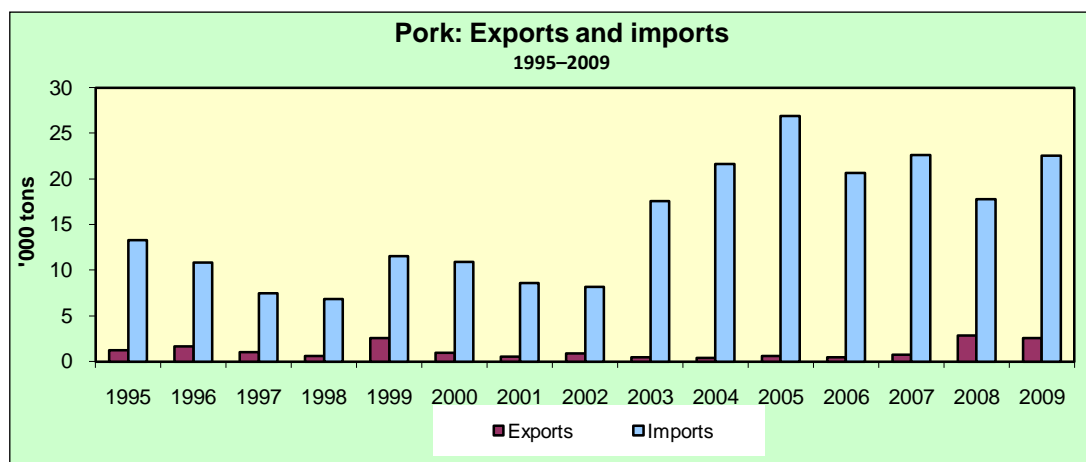


Figure 25: Pork Exports vs Imports

As illustrated on figure 25, the pork industry is an import-lead industry with significant imports used to supplement the local industry. Export volumes were generally insignificant.

6.1.9 Fruit Industry

Deciduous Fruit

The main deciduous fruit-producing areas of South Africa are situated in the Western and Eastern Cape provinces, mainly in areas where warm, dry summers and cold winters prevail (DoA, 2008). The area under production during the 2008 season is estimated at 74,202 ha (DoA, 2008).

Although some producers grow fruit both for canning and fresh consumption, it is estimated that in South Africa there are about 2,254 producers of fruit for fresh consumption, 1,174 producers for stone fruit, 954 producers for dry and table grapes and 700 producers for pome fruit (DoA, 2008).

The production of deciduous fruit increased by 2.9 %, from 1,649 million tons in 2008 to 1,697 million tons in 2009 (see figure 26) (DoA, 2008). Apples showed the biggest percentage increase, i.e. 7.1 %, followed by pears with 2.0 %. The production of apricots; peaches and nectarines; and plums dropped by 18.3, 10.4 and 4.5 %, respectively (DoA, 2008). The production of table grapes stayed virtually unchanged from 2008 to 2009 (DoA, 2008).

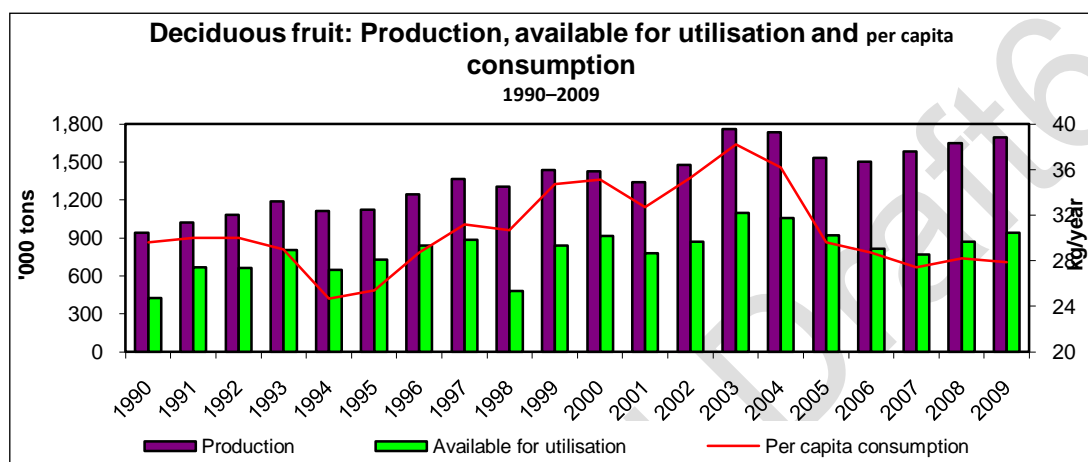


Figure 26: Deciduous fruit: Production, consumption and per capita consumption (DAFF, 2009a)

The exporting of deciduous fruit is a major earner of foreign exchange for South Africa (DAFF, 2009a). During the 2008/09 season (October to September), about 47.7 % of deciduous fruit was exported and approximately 83.1 % of the gross value from deciduous fruit came from foreign exchange export earnings (DAFF, 2009a). Total exports amounted to 797,259 tons (DAFF, 2009a). This represents an increase of 2.4 % compared to 778,343 tons exported during 2007/08 (DAFF, 2009a).

Figure 27, indicates deciduous fruit export destinations during 2008 (DoA, 2008).

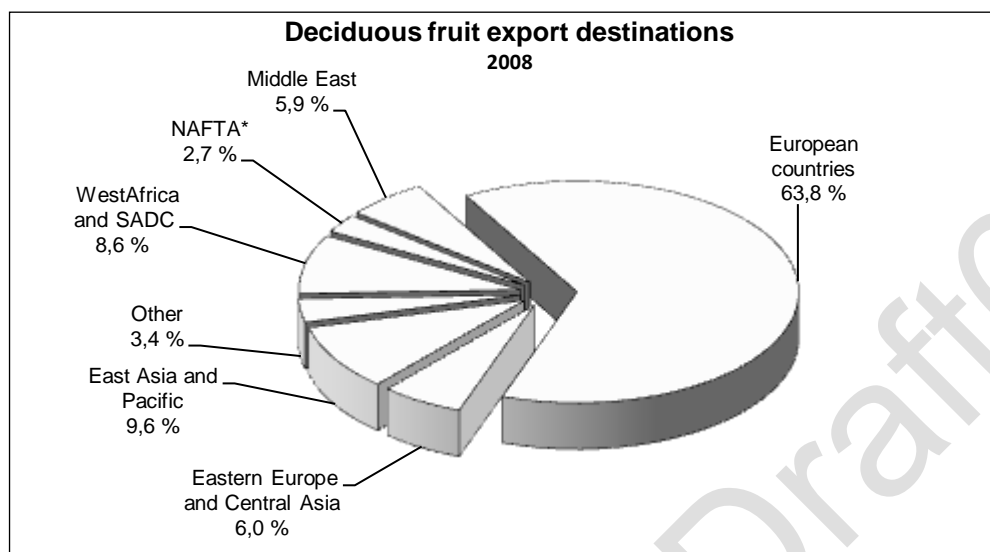
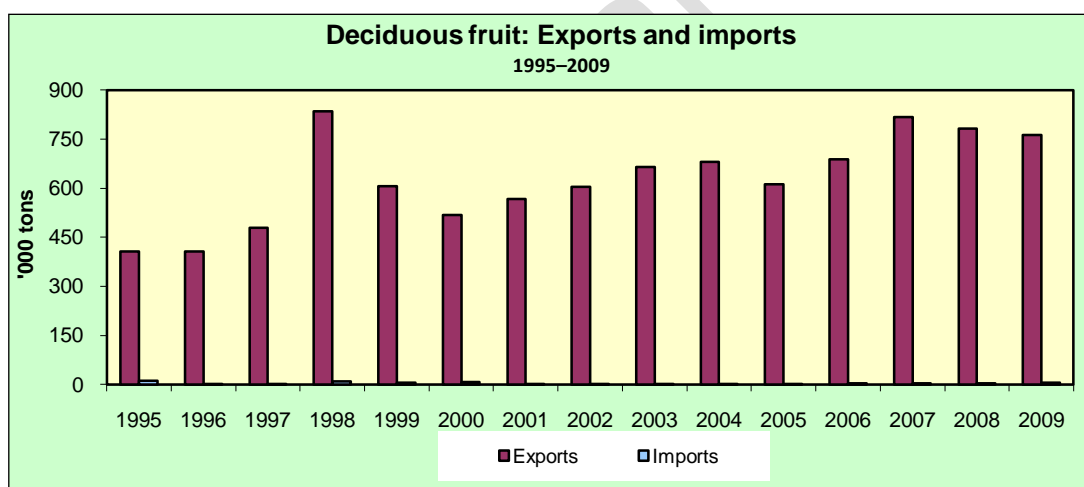


Figure 27: Deciduous fruit export Destinations (DoA, 2008)



Intake of Deciduous Fruit for Processing

During 2007/08, about 32,6 % of deciduous fruit produced was taken in for processing, an increase of 14,0 % compared to 2006/07 (DoA, 2008).

Figure 28 indicates both deciduous and subtropical fruit taken in for processing during 2007/08.

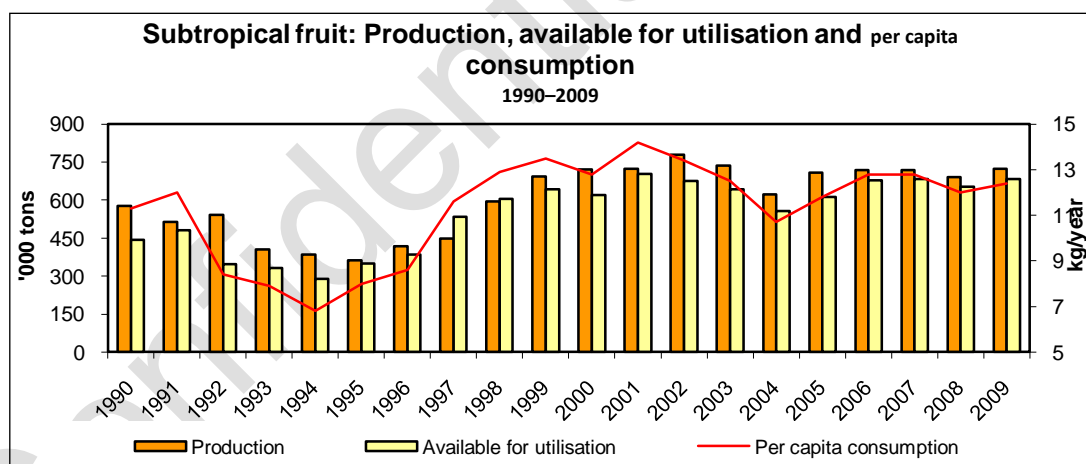
Over the past five seasons, most of the deciduous fruit was processed to juice, except for apricots and peaches, which were used mostly for canning (DoA, 2008). During 2007/08,

approximately 97,3 % of apples taken in for processing was used for juice and 2,7 % for canning, while 55,8 % of pears was used for juice and 44,2 % was canned (DoA, 2008). Producers received an average of R1 354 and R1 048 per ton, respectively, for apples used for canning and for juice (DoA, 2008). In the case of pears used for canning and for juice, producers received an average of R1 217 and R681 per ton, respectively (DoA, 2008).

Subtropical Fruit

The cultivation of some types of subtropical fruit is only possible in certain specific areas of the country because of particular climatic requirements. In general, subtropical fruit types need warmer conditions and are sensitive to large temperature fluctuations and to frost. The main production areas in South Africa are parts of the Limpopo, Mpumalanga and KwaZulu-Natal provinces. Fruit types such as granadillas and guavas are also grown in the Western Cape, while pineapples are cultivated in the Eastern Cape and KwaZulu-Natal.

The total production areas of pineapples, avocados, bananas, mangoes and litchis during 2007/08 are estimated at approximately 13 581, 12 000, 11 568, 7 500 and 3 350 ha, respectively.



The total production of subtropical fruit decreased by 3,6 %, from 719 330 tons in 2006/07 to 693 487 tons in 2007/08. The production of granadillas, pineapples, bananas, litchis and avocados dropped by 14,3, 9,4, 5,5, 1,7 and 0,9 %, respectively, while the production of papayas mangoes and guavas rose by 21,8, 7,2 and 2,2 %, respectively. Bananas, pineapples and mangoes contributed 48,6, 20,9 and 12,7 %, respectively, to the total production of subtropical fruit during 2007/08.

From 2006/07 to 2007/08, total exports of subtropical fruit increased by 8,1 % to 59 516 tons and the average export price increased by 1,1 % (see figure 28) (DoA, 2008). The main subtropical fruit type exported is avocados. During 2007/08, exports of avocados contributed 77,9 % to the total value of exports of subtropical fruit. Other types that were exported are mangoes, pineapples and litchis (DoA, 2008).

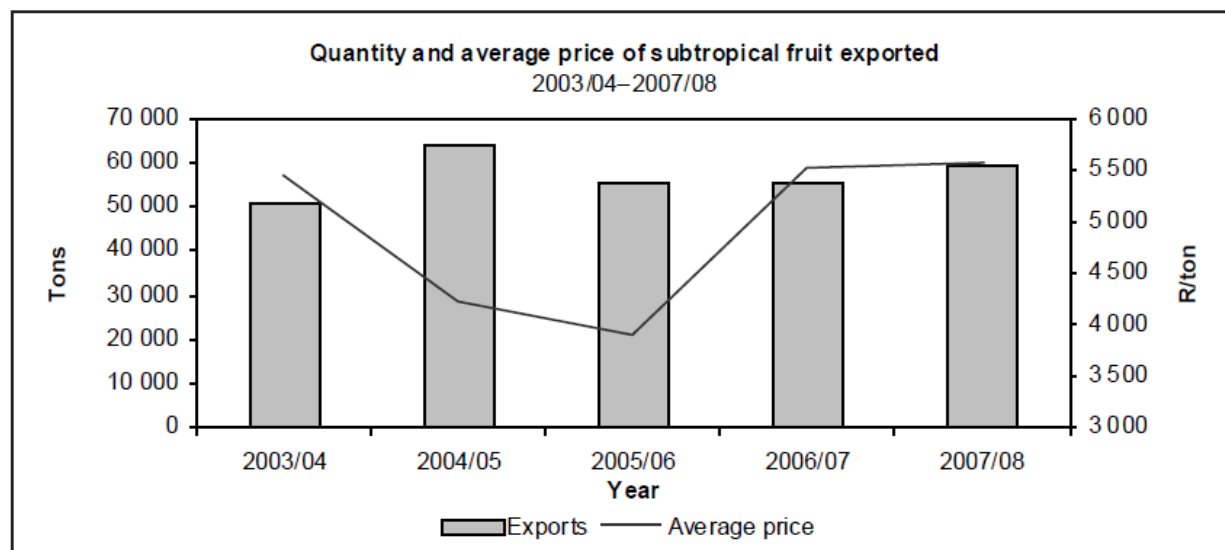


Figure 28: Subtropical fruit export (DoA, 2008)

6.1.10 Viticulture Industry

South Africa is the ninth-largest wine producer, contributing 3 % to the world's wine production. The area under vines is estimated at 101 957 ha (DoA, 2008). The wine industry is labour intensive and employs approximately 257 000 people directly and indirectly (DoA, 2008). The number of primary wine producers in South Africa is estimated at 3 999. Wine is produced mainly in the Western Cape Province and along parts of the Orange River in the Northern Cape Province (DoA, 2008).

Table 2 shows wine production, including rebate and distilling wine, juice and concentrate for non-alcoholic beverages, between 2003 to 2007. During 2007, the production of wine increased by 3,1 %. Approximately 34 % of the wine grape production was used for the production of red and 66 % for the production of white wine, juice and concentrate (DoA, 2008).

Table 2: Wine Production (2003 – 2007)

| Year | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------|----------------------|-------|------|-------|-------|
| | Gross million litres | | | | |
| Wine production | 956 | 1 015 | 905 | 1 012 | 1 043 |

Table 3 illustrates total quantities of wine exported during the past 5 years. During 2007, 42,8 % of the total wine produced, was exported, compared to 38,3 % during 2006.

Table 3: Wine Exports during the past 5 (2003 – 2007)

| Year | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------------------|-------|-------|-------|-------|-------|
| Wine grape production ('000 tons) | 1 234 | 1 312 | 1 171 | 1 302 | 1 351 |
| Income of producers (R million) | 2 576 | 2 811 | 2 625 | 2 636 | 2 907 |

6.1.11 Aquaculture Industry

Currently, the major freshwater species are trout, ornamental fish, koi carp and African catfish. The other freshwater species being cultured include tilapia, marron and waterblommetjies. On the other hand, the major marine species being cultured are mussels, oysters and abalone (integrated with the seaweed culture which is used to feed abalone). The other marine species being cultured include prawns, kob and yellowtail.

The total South African aquaculture production in 2008 was 4262.82 tons worth R449.4 million. **Table 4** below indicates the species farmed, tonnage produced and value of the produced species in 2008.

Table 4: Aquaculture Production in South Africa

| SPECIES | SPECIES TONNAGE 2008 | Value (R millions) |
|----------------------|----------------------|--------------------|
| Abalone | 1037.11 | 383.264 |
| Oysters | 226.62 | 12.99 |
| Mussels | 736.74 | 9 |
| Other marine species | 14.15 | 0.8 |
| African Catfish | 180 | 3.6 |

| | | |
|--------------------------|---------|-------|
| Koi Carp | 514.2 | 1.8 |
| Trout | 943 | 27.98 |
| Ornamental Species | 601 | 9.7 |
| Other freshwater species | 10 | 0.3 |
| Total | 4262.82 | 449.4 |

Source- Britz: 2009 and DEAT: 2009

If appropriate aquaculture sector support is provided, it is estimated that production could increase to over 90 000 tons in 10-15 years (Britz, 2007).

7 Production and Economic Performance, Profitability and Food Affordability

7.1 Production Performance – ensuring food availability

From 1990 to 2008 field crop production increased by 13 %, horticultural production by 62 % and livestock production by 29 %. Overall production thus increased by 30 % over the same period, and can mainly be attributed to increased production in the horticultural sector (see figure 29) (NAMC, 2008). Analysis show that field crop production is substantially larger than that for horticulture for 1989/90, and significantly less so from 1998. Data further reflect the increasing importance of horticultural exports as a share of total agricultural output.

The main changes in field crop production have been in the area planted, and in industry average yields. The area of maize planting has, declined by at least 40 % (from 5 million hectares in 1980 to some 3 million hectares 2007) over the past three decades (see figure 29) (N. Vink et al., 2008),(N. Vink et al., 2008){221 Norma Tregurtha 2008} and the area planted with wheat experienced a structural decline in the mid-1990s, from above 2 million hectares to around 1 million hectares or less since 1998/99 (N. Vink et al., 2008). This represents a decline of around 50 % in the area planted over the past three decades.

Variations in crop production are largely derived from the variability in maize production, which is in turn influenced by climatic conditions, because production is based in mostly rain-fed

areas, negatively influenced by the drought in the mid-1990s, affecting producers' willingness to plant maize (NAMC, 2008; N. Vink et al., 2008).

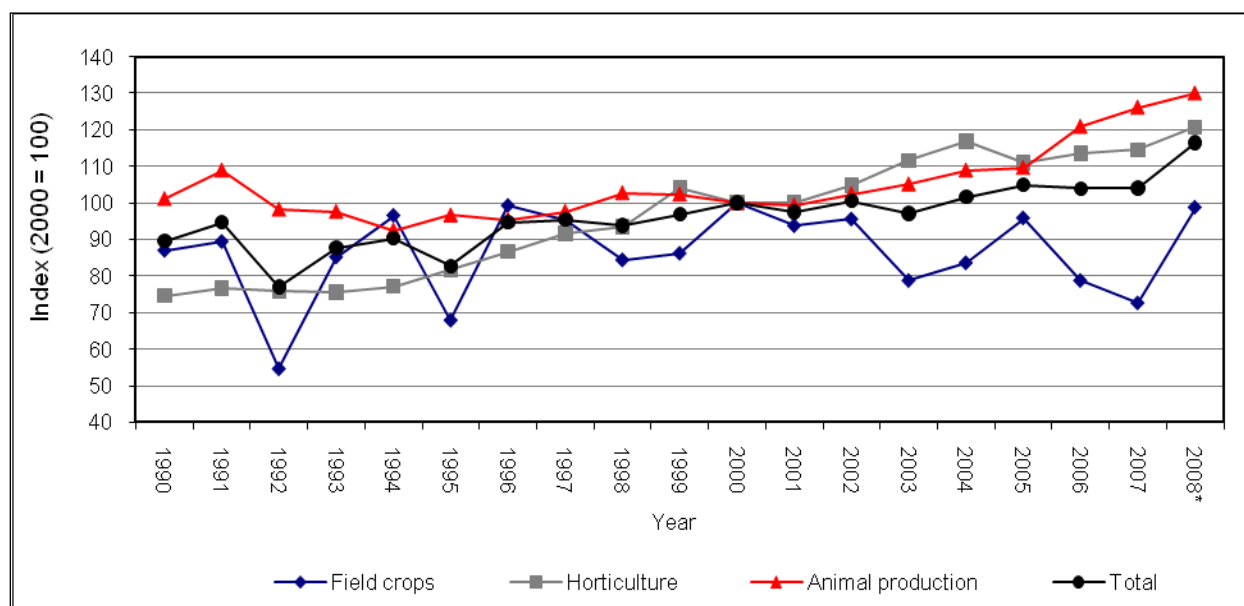


Figure 29: Indices of the Volume of Agricultural Production (NAMC, 2008)

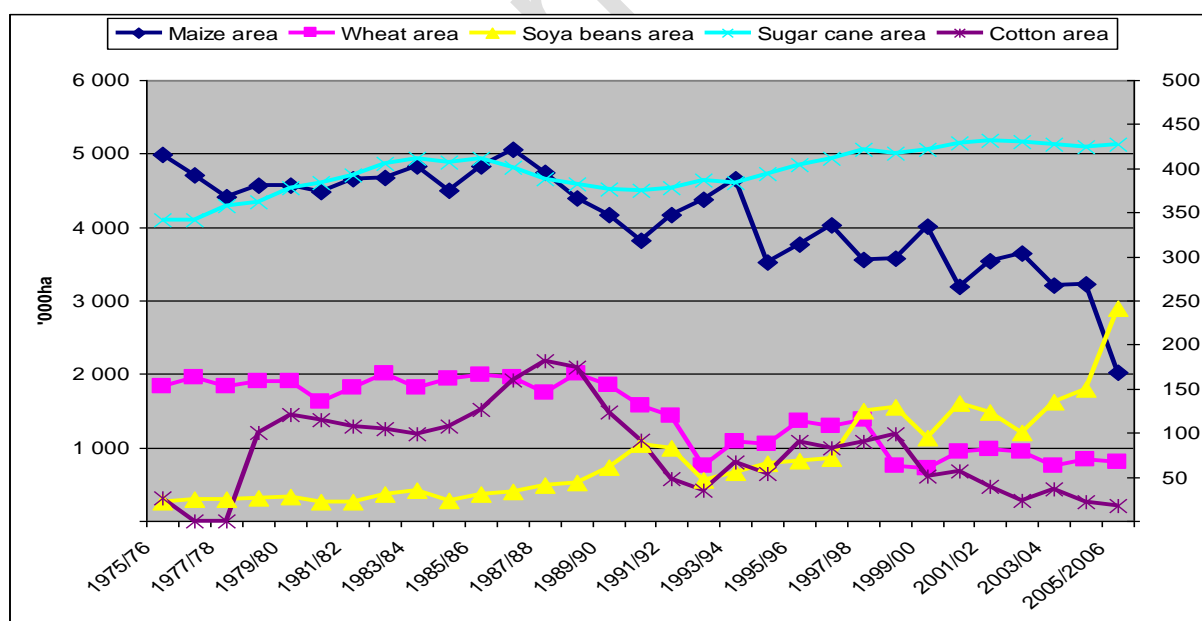


Figure 30: Area planted with the principal field crops (N. Vink et al., 2008)

Despite the decline in the area planted with maize and wheat, gross output of these commodities has generally increased (see figure 30). The reason for output increases is mainly attributed to an increase in yields (see figure 31), a reflection of increased efficiency of production within the commercial sector (N. Vink et al., 2008).

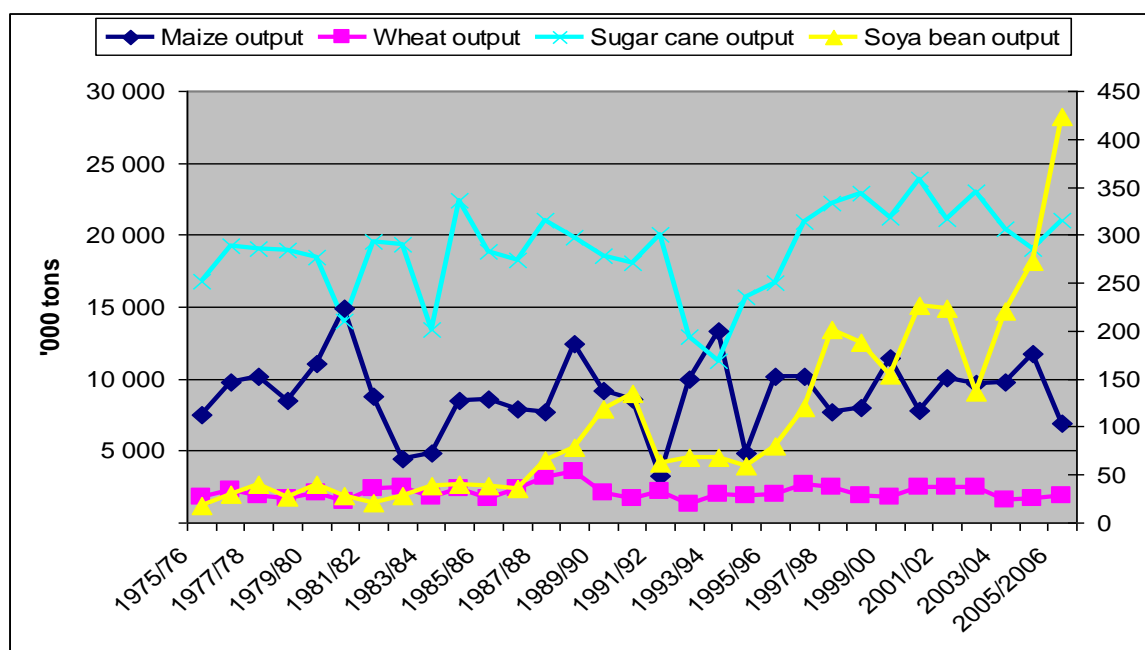


Figure 31: Total output of the principal field crops (N. Vink et al., 2008)

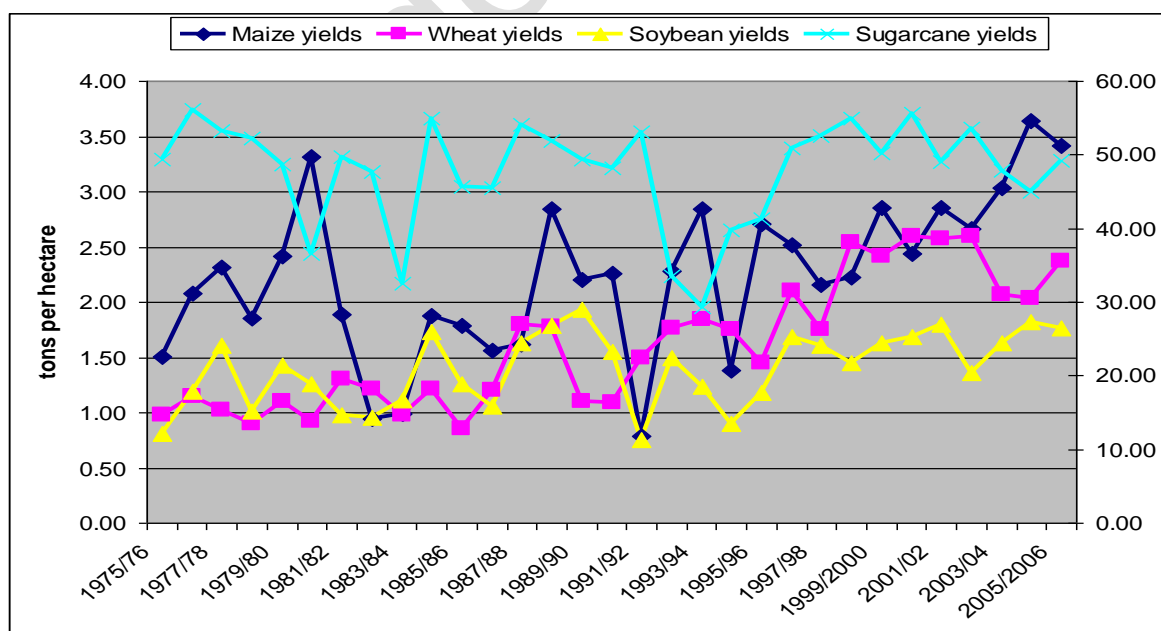


Figure 32: Yields of the principle field crops (N. Vink et al., 2008)

However, variations in field crop production poses a concern for national food security, and food crops such as field crops and livestock must therefore be prioritized by this strategy.

Figure 33 showcases that self sufficiency levels are currently below domestic consumption requirements for most principled food commodities. Declining production levels, can mainly be attributed to farmers' willingness to produce, in turn influenced by the profitability of production, i.e. price offers, both domestically and internationally, and the suitability of the natural resource base. The tradeoffs between these factors in turn influence the affordability of food.

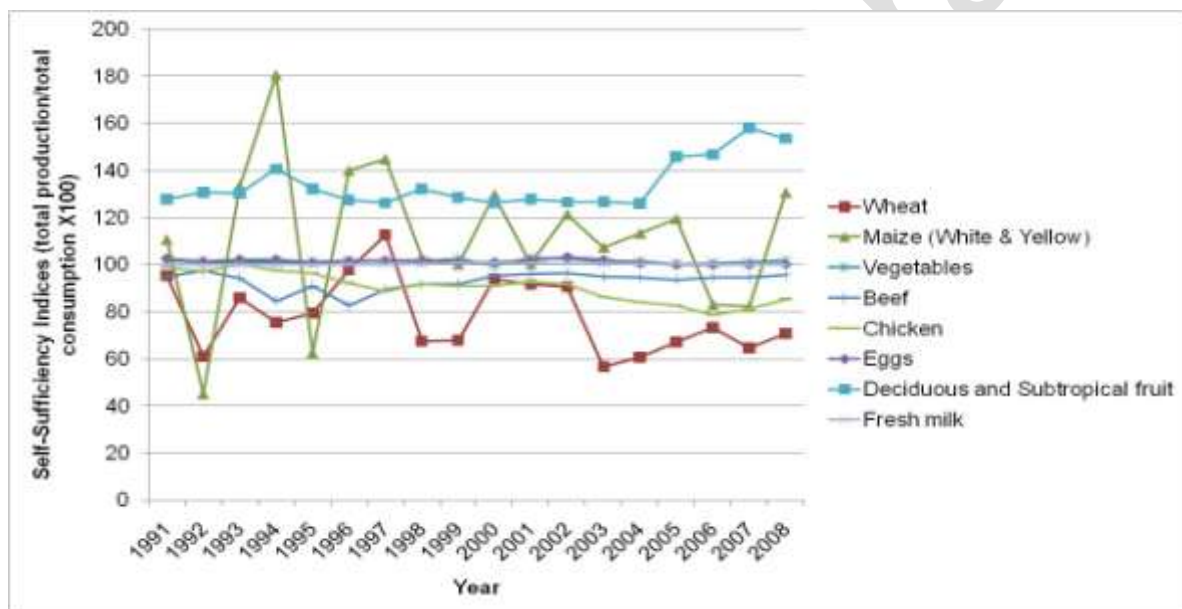


Figure 33: Yields Self-Sufficiency Indices of selected agricultural commodities (DAFF, 2009a)

On the other hand livelihoods and household food security in the Southern African region can be extremely vulnerable to the negative effects of climate stress (Archer, Mukhala, Walker, Dilley, & Masamvu, 2007). Climate change will result in irreparable ecological degradation and reduced agricultural productivity, with serious consequences for food production and food security (Shah, Fischer, & van Velthuisen, 2008). The impacts of climate change on agriculture may thus add significantly to the development challenges of ensuring national food security and reducing poverty, thus impacting on South Africa's development agenda. Climate prediction may prove a valuable resource in mitigating these effects. The implication is that government

through this production strategy must be able to mitigate climate changes, monitor production levels, and react appropriately to declining production levels of principal food crops.

Current knowledge and information management systems, such as early warning systems, or monitoring and evaluation systems, must improve in forecasting potential food gaps (i.e. food requirements vs levels of production) in order for government and industry to devise corrective actions. This strategy has thus identified a **Food Security Act, whereby the impact on national food security by climate change, market fluctuations and trade, is monitored and mitigated alongside food production, for purposes of ensuring national food security.**

7.2 Economic Performance of the Agricultural Production Sector

The primary agricultural sector has grown by an average of approximately 11,8 % per annum since 1970, while the total economy has grown by 14,9 % per annum over the same period, resulting in a decline of agriculture's share of the GDP from 7,1 % in 1965 to 2,7 % in 2008 (see table 5) (DAFF, 2009b). The value of agricultural production, more recently in South Africa was R129 112 million in 2008, while its contribution to GDP was approximately R56 billion (DAFF, 2009b).

Analysis by Vink and Tregurtha (2008) furthermore show that when comparing the major structural features of the economies of middle income countries as a whole with that of the South African economy, it becomes evident that the South African agricultural sector is considerably smaller, than other middle-income developing countries', while the manufacturing sector is relatively similar in size (see Table 6). Vink and Tregurtha (2008) furthermore argues that "relative to the rest of the economy, the GDP share of agriculture, forestry and fisheries declined steadily from 1965 to its current level of less than three percent", as is shown in figure 34.

Table 5: Sector contributions to GDP since 1965 (N. Vink et al., 2008)

| | Agriculture, forestry, hunting and fishing | Mining and quarrying | Primary sectors | Manufacturing | Wholesale and retail trade; catering and accommodation | Other | Value added at basic prices |
|---------|--|----------------------|-----------------|---------------|--|-------|-----------------------------|
| 1965-69 | 9.11 | 9.78 | 18.89 | 22.14 | 14.4 | 44.57 | 100 |

| | | | | | | | |
|---------|------|------|-------|-------|-------|-------|-----|
| 1990-94 | 4.32 | 7.91 | 12.23 | 21.81 | 14.22 | 51.73 | 100 |
| 1995-99 | 3.86 | 6.83 | 10.69 | 19.73 | 13.88 | 55.71 | 100 |
| 2000-06 | 3.37 | 7.68 | 11.05 | 19.09 | 13.97 | 55.89 | 100 |
| 2006 | 2.8 | 7.7 | 10.5 | 18.4 | 14.2 | 46.4 | 100 |

Table 6: GDP contribution, 1990 and 2004 (%) (N. Vink et al., 2008)

| | Agriculture | | Manufacturing | |
|---------------------------|-------------|------|---------------|------|
| | 1990 | 2004 | 1990 | 2004 |
| Middle income countries | 16 | 10 | 25 | 18 |
| South Africa: agriculture | 5 | 3 | 24 | 20 |

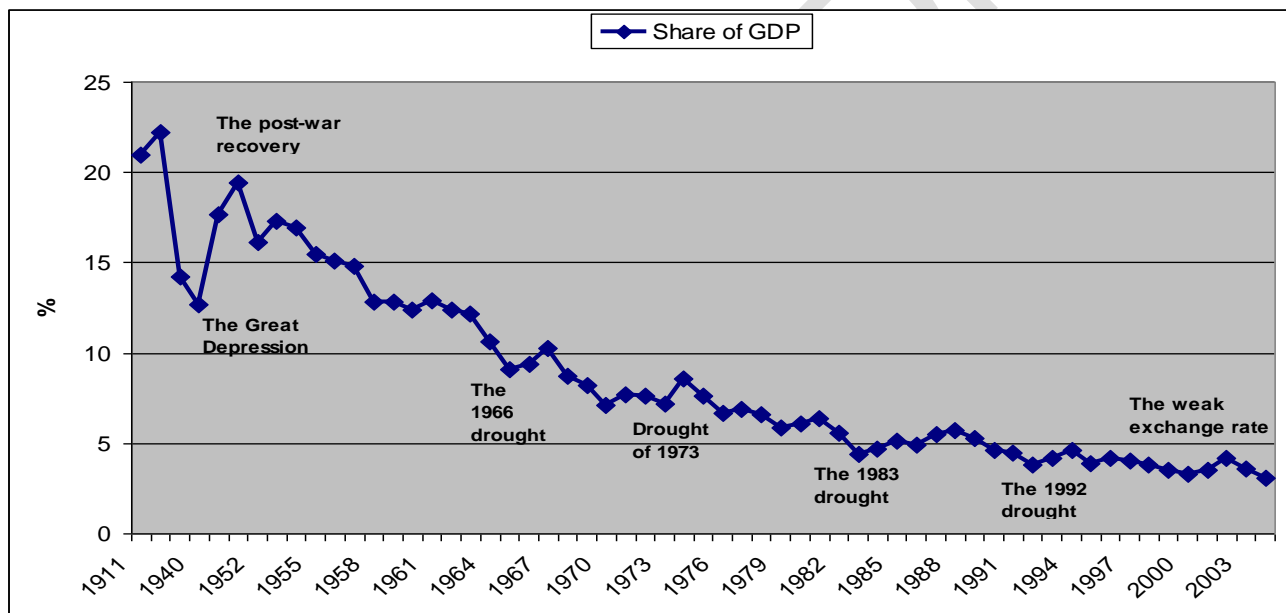


Figure 34: The contribution of agriculture to GDP since 1911 (N. Vink et al., 2008)

Vink and Tregurtha (2008) show that the decline in agriculture's contribution to GDP is largely the result of the modernisation of South Africa's economy, where especially the services sectors (finance, trade, tourism, government services) grow faster than agriculture.

7.3 Profitability of the Agricultural Production Sector

To further unpack the current status of agricultural production in South Africa, we look at the profitability of farms.

There has been a significant increase in the concentration of farm holdings (N. Vink et al., 2008). Vink and Tregurtha (2008) reports that in 1996, there were 60,000 farming units, but by 2002, this had declined to 45,000 units (or by 25 %). Over roughly the same period of 1994/95 to 2008/09, the area farmed declined by 30 %. This suggests a consolidation of landholding into larger units of ownership and production. Smaller and less efficient commercial farmers, unable to take advantage of scale-economies, have been forced out of the sector, and their farms were acquired and integrated into neighbouring units. Large agribusinesses have contributed to this concentration by buying up a number of farms within an area.

However, total gross value of agricultural production (total production during the production season valued at the average basic prices received by producers) for 2009 is estimated at R129 122 million, compared to R131 272 million the previous year, a decrease of 1,6 % (see figure 35).

The gross value of animal products, field crops and horticultural products contributed 48.7; 26.7 and 24.6 %, respectively, to the total gross value of agricultural production. Poultry meat made the largest contribution with 17,9 %, followed by the red meat industry with 14,7 % and the maize industry with 12,7 %.

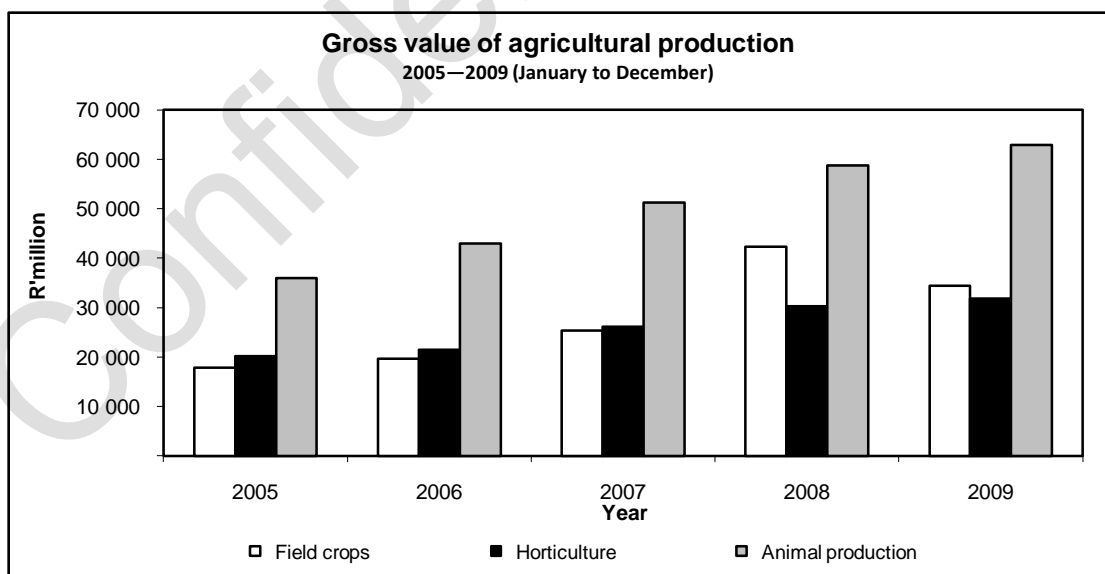


Figure 35: Gross Value of Agricultural Production, 2005-2009 (January - December)

(DAFF, 2009b)

The gross income of producers (the value of sales and production for other uses, plus the value of changes in inventories) for the year ended 31 December 2009 amounted to R126 297 million, compared to R129 253 million the previous year— a decrease of 2,3 % (see figure 35) (DAFF, 2009b).

The gross income from field crops decreased by 31.2 %, from R40 306 million in 2008 to R31 768 million for the year ended 31 December 2009 (DAFF, 2009b). This was mainly the result of a decrease in the income from maize, wheat and sunflower seed by 25.1, 45.1 and 38.6 %, respectively. These decreases are the result of both a drop in production and lower prices received by farmers (DAFF, 2009b).

The gross income from horticultural products increased by 4.7 % to R31 660 million, compared to R30 249 million for 2008 (DAFF, 2009b). Income from deciduous and other summer fruit increased by 9.5 %, from R7 342 million to R8 040 million, while the income from citrus fruit decreased by 20.7 %, from R5 835 million to R4 628 million. Income from subtropical fruit showed a slight decrease of 0.2 %, from R2033 million to R2 030 million (DAFF, 2009b). Income from vegetables amounted to R11 901 million—an increase of 19.3 % from R9 972 received in 2008 (DAFF, 2009b). Income from potatoes, which contributed approximately 34.1 % to the gross income from vegetables, rose by 12.1 %, from R3 621 in 2008 to R4 057 million in 2009 (DAFF, 2009b).

The gross income of R62 869 million from animal products in 2009 was 7.1 % higher than the R58 697 million in 2008 (see figure 36) (DAFF, 2009b). Red meat producers earned R12 808 million from cattle and calf slaughterings—an increase of only 1.1 % from R12 662 million in 2008 (DAFF, 2009b). The price that farmers received for beef rose on average by 4.1 %, while the number of cattle slaughtered showed a slight decrease. The income from slaughtered sheep rose by 2.4 % and amounted to R3 014 million, compared with R2 943 million in 2008. Income from poultry meat increased by 16.7 %, from R19 855 million to R23 165 million (DAFF, 2009b). The income from milk decreased by 5.2 %, from R9 639 million in 2008 to R9 138 million in 2009. The income from wool also dropped, by 4,0 % or R52 million to R1 235 million (DAFF, 2009b).

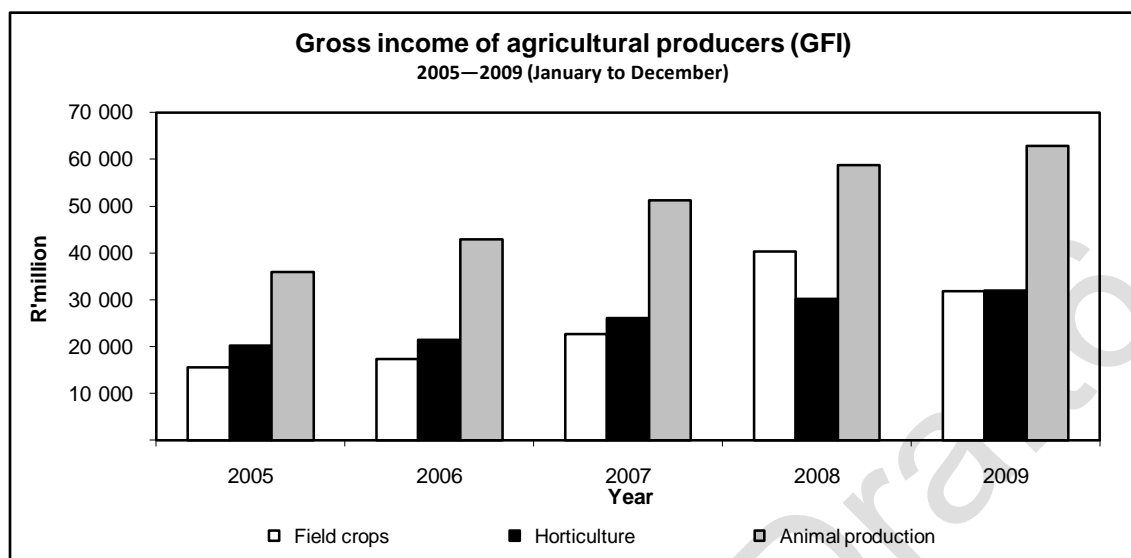


Figure 36: Gross Income of Agricultural Producers (GFI) 2005-2009 (January – December) (DAFF, 2009b)

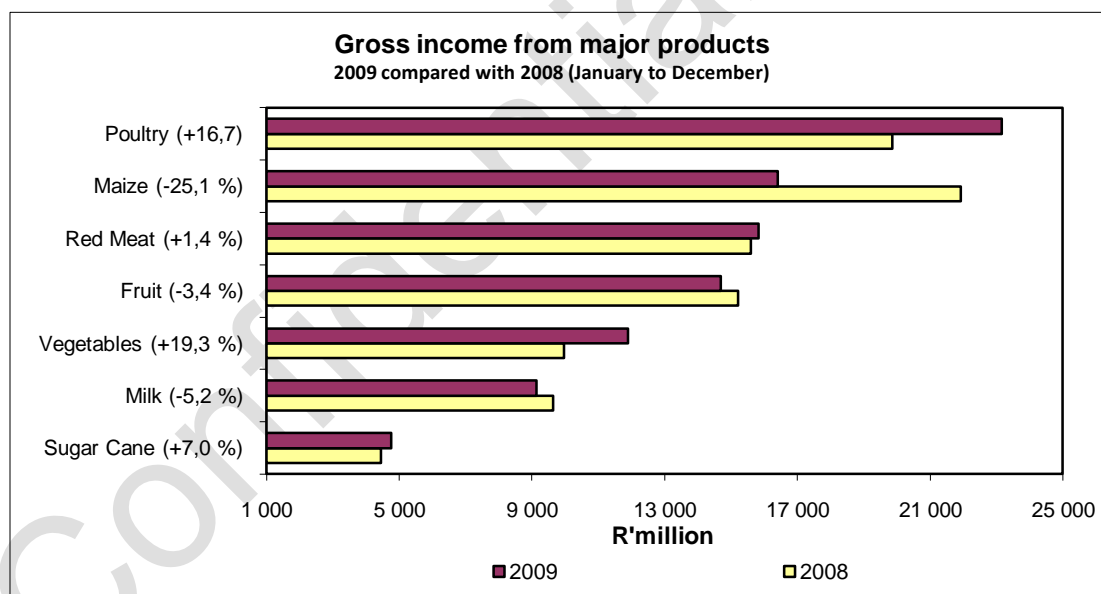


Figure 37: Gross Income from Major Products, 2009 vs 2008 (January to December) (DAFF, 2009b)

Figure 38 shows the trends in real gross and net farm income. As can be seen from the data, with respect to real gross farm income, three discernable periods can be distinguished. The

period from 1990 to 1995 was characterised by stagnating gross farm income, 1996 to 2002 was a period of relatively high gross income growth that subsequently flattened out from 2003.

Changes in real net farm income track gross farm income until 1997. The later part of the 1990s saw the cost of intermediate inputs rise sharply before stabilising for the period 2000-2004. The stabilisation in input costs, together with the rapid increase in the Producer Price Index for food products from 2000-2007, helped increase real net farm income (N. Vink et al., 2008). As a result, net farm income recovered to above R10 billion in the new millennium and is currently at R39 billion (2009) (DAFF, 2009b).

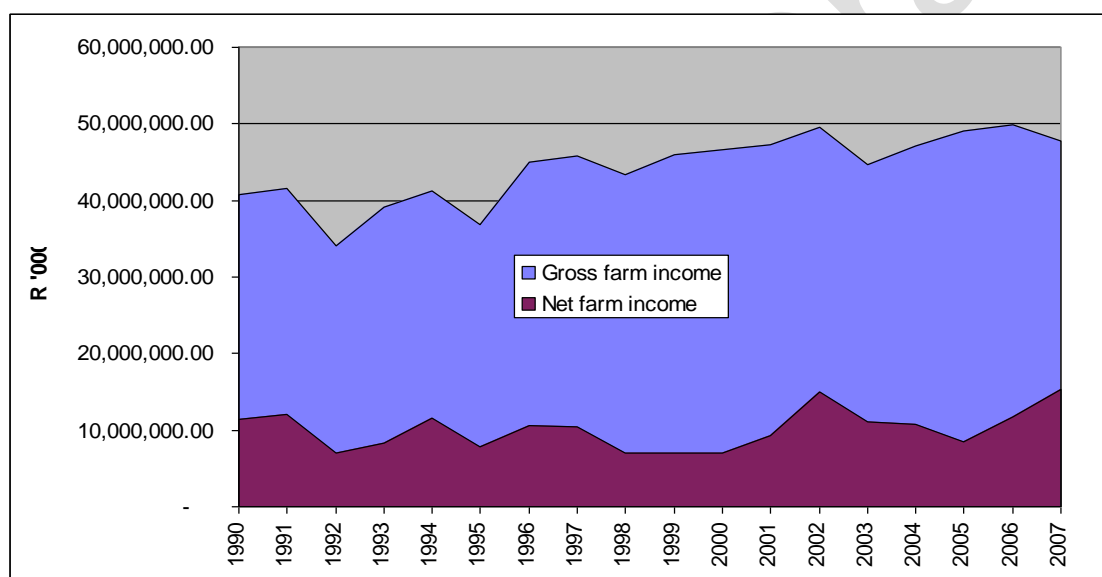


Figure 38: Real gross and net farm income 1990-2007 (N. Vink et al., 2008)

Net farm income should be viewed in relation to the level of investment required to generate the return. **Figure 39** below show net farm income as a percentage of total capital investment in agriculture from 1990-2007. These data show that over the whole period, the average return on investment generated by the agricultural sector was 11%, and ranged from a low of 7 % in 1992 to a high of 19.5 % in 2002 (N. Vink et al., 2008). Also shown is the average cost of capital to the agricultural sector (i.e. the average agricultural interest rate) (N. Vink et al., 2008). Theoretically this represents the opportunity cost of the capital invested. From 1990-2002, the return generated from farming activities was well below the opportunity cost of the investment,

subsequently it has managed to exceed the sector interest rate in most years. Agriculture as a sector has thus become more profitable (N. Vink et al., 2008).

Ruth Hall (2009) furthermore argues that the increase in growth and profitability of the sector is masked by rising inequalities within the sector. The distribution of income has grown more unequal, with 51 % of all farms earning a gross income below R300,000 a year (see figure 40), while just 8 agribusiness companies have a turnover above R1 billion a year (Ruth Hall, 2009).

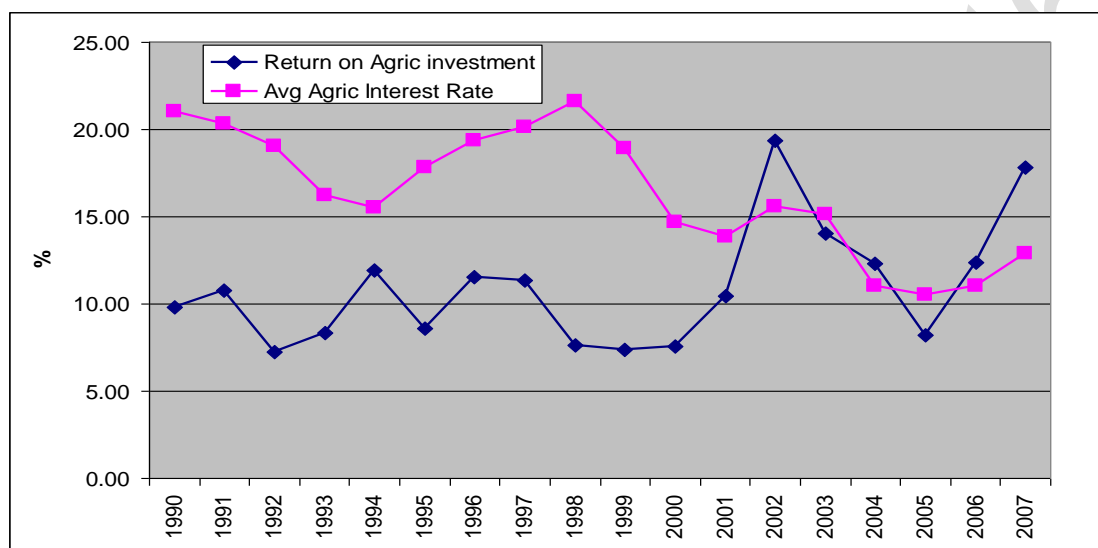


Figure 39: Average Return on Agricultural Investment 1990-2007 (DAFF, 2009b; N. Vink et al., 2008)

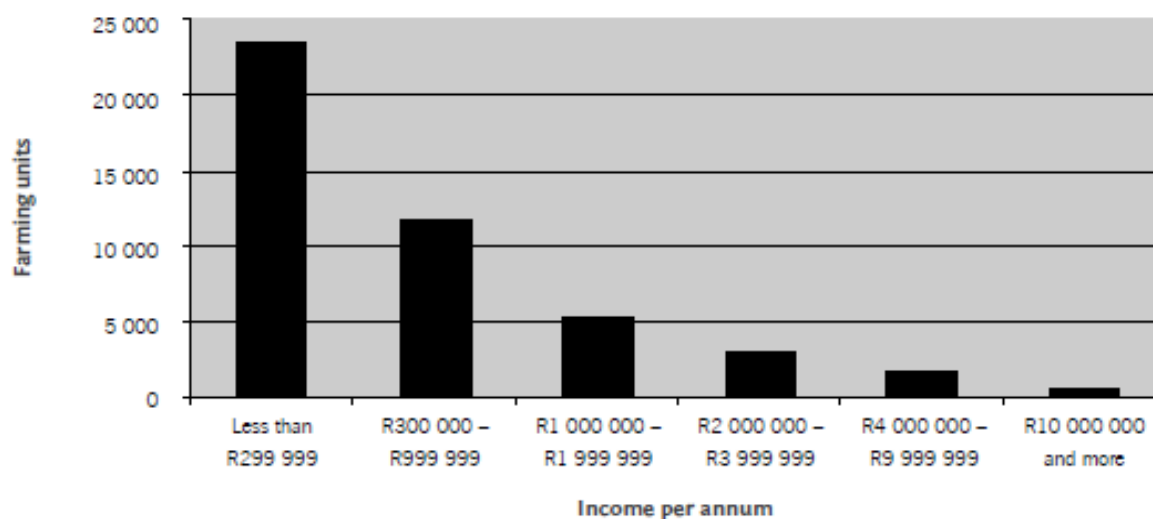


Figure 40: Distribution of income by farming units, 2002 (Ruth Hall, 2009)

A review of the literature on development of the last few decades reveals that economists' views of the trade off between efficiency (or growth) and equity (or distribution and poverty) have swung from one extreme to the other: from an early focus on growth and only secondary importance of distribution, to a more balanced view of the interdependence of growth and distribution (Bussolo, De Hoyos, & Medvedev, 2008; Collier & Dercon, 2006).

The agricultural production sector, in adhering to national government priorities, too requires to effect broad based black economic empowerment, and rural economic development. The most commonly used output markets by smallholder farmers are family and friends, the fresh produce markets as well as public stores (Senyolo, Chaminuka, Makhura, & Belete, 2009). Senyolo et.al. (2009) reveals that smallholder farmers are still substantially excluded from lucrative markets, and tend to sell their produce to public stores as most of these stores are close to the farming communities.

Addressing growing inequality and decreasing competitiveness within the agricultural production sector, thus becomes the focal point of this strategy through the up-scaling support to smallholder and subsistent farmers, as the entry level into commercial agriculture. Improving and up-scaling government support of the smallholder and subsistent farmers is central to improving the competitiveness and productivity of the sector, in turn stimulating rural economic development, and influencing food availability and food affordability.

Currently there are information gaps relating to the profitability of the aquaculture sector. However, the Department of Environmental Affairs and Tourism is currently conducting an economic study of the marine aquaculture industry. This study focuses on the abalone subsector and a survey was conducted which showed that there is a difference between the average price obtained in 2008 and the average total costs of producing abalone per kg (DEAT., 2009). The average results of the survey are presented in **Table 7** below.

Table 7- SA abalone farming 2008 – Profitability

| | Rand /kg |
|---------------|-----------------|
| Sale-price | 253,02 |
| Total costs | 183,73 |
| Profit margin | 69,29 |

(Source- DEAT: 2009)

The return on investment was also calculated based on the historical investment and on the given replacement value in 2008 of the capital invested. The return on assets was calculated to be around 15 %. These results indicate that the economic situation in the South African abalone farming subsector was very good in 2008. The profitability seems to have a generous margin, but will of course be vulnerable to the prices obtained in the market and to rising production costs especially energy (electricity and fuel) and feed costs (DEAT., 2009).

7.4 Food Affordability

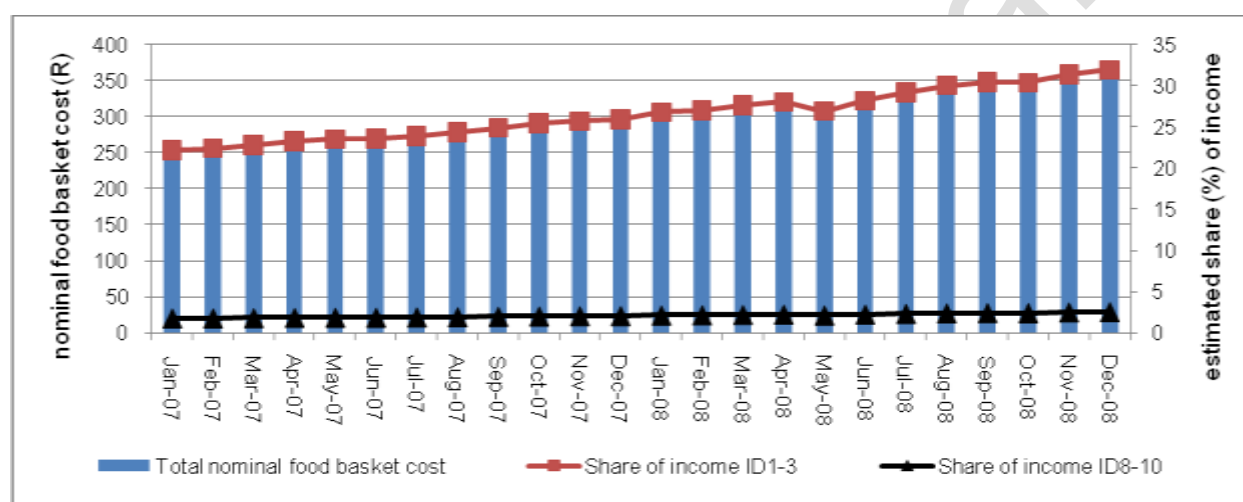
Determining whether food production levels and the profitability of the sector had any impact on food availability and consumption, we draw rough inferences by looking at the population growth which increased by 32 % between 1990 and 2008 while production increased by 30 % (NAMC, 2008). Without factoring in exports and imports, based on production levels alone, we notice that South Africa lags in producing enough food for its growing population. The NAMC (2008) correctly explains that “the increase in agricultural production was largely due to the increase in horticultural production”, the expansion of production in the field crop sector is thus reason for concern if one considers the trend in population growth and its importance in ensuring national food security.

With respect to consumer prices we see that the consumer price index (CPI) on all items has in fact increased by 11.5 % for the year ending 31 December 2008. The CPI of food increased by 13.9 % and that of nonfood items by 7.8 % (DoA, 2008a). Meat, grain products, vegetables and fruit prices increased by 8.0 %, 21.3%, 13.5 %, and 22.1 %, respectively. Dairy products and eggs rose by 18.7 % and sugar and related products by 22.9 % (DoA, 2008b). However wheat and maize prices have decreased remarkably for 2008/09, i.e. by 36.24 % and 12.19 % respectively (NAMC, 2009a). On average, the price of wheat and maize products decreased by 0.71 % and 5.31 % respectively for January to April 2009 (DAFF, 2009b; DoA, 2008).

Extracted from NAMC (2009) we look at the impact of food inflation on consumers. From January 2007 to December 2008 the cost of a basic food basket rose steadily by R110 (44 %) to R362 in nominal terms. The cost of the food basket expressed as a share of the average

monthly income of the poorest 30 % of the population increased from 22 % in January 2007 to 32 % in December 2008 while the cost of the food basket expressed as a share of the average monthly income of the wealthiest 30 % of the population only increased from 1.8 % to 2.5 % over the same period (see figure 41).

For further understanding of the effects of production on the consumer we have a look at farm-to-retail price spreads (FTRPSs). NAMC (2008) highlights FTRPs for four agricultural value chains, wheat to bread, maize to maize meal, dairy and chicken value chains, we will however look at one.



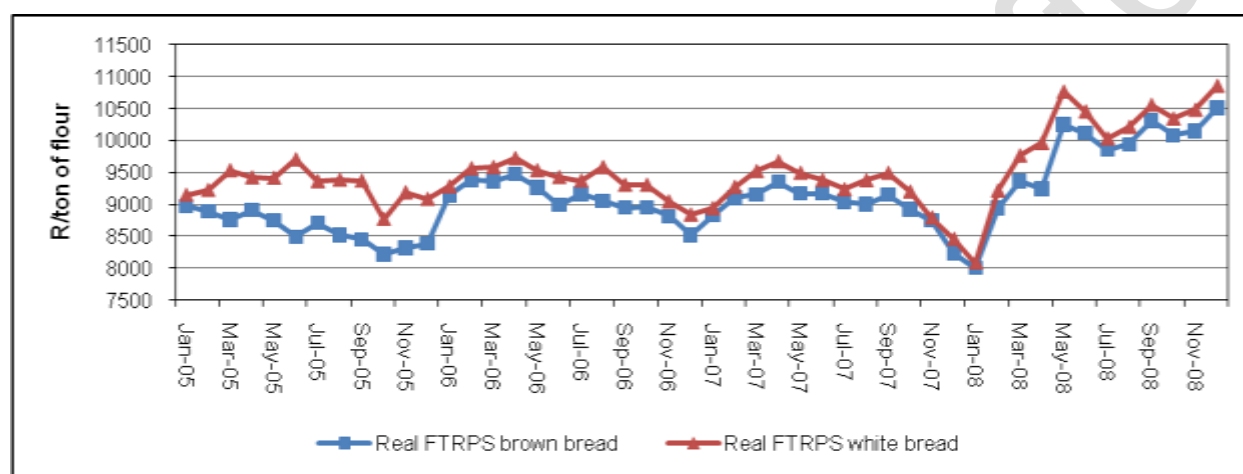
- The poorest 22 % of South African adults are classified into LSM segments 1 to 3, with an average household income as low as R1 071 per month for LSM 1 households.
- The wealthiest consumers are grouped into LSM segments 8 and 10, with an average monthly household income of R12 291 (LSM 8) and R23 102 for LSM 10 households.

Figure 41: The monthly cost of a typical consumer food basket for the period January 2007 to December 2008, expressed in nominal terms and as share of the average income of the poorest and wealthiest 30 % of households (Income Deciles [ID] 1 to 3 and ID 8 to 10) (NAMC, 2009)

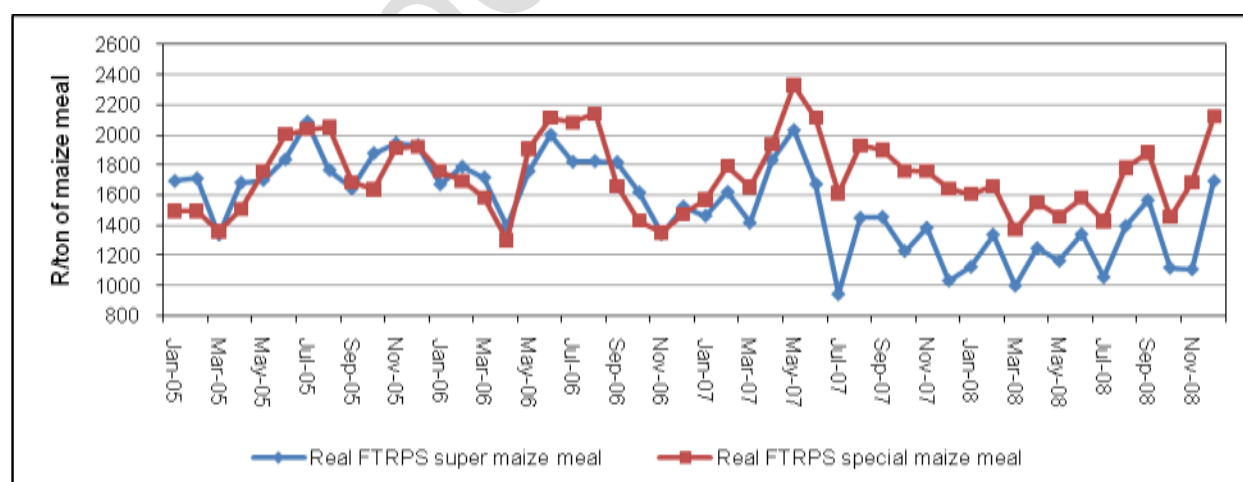
Taken from NAMC (2008), figure 42 shows the real FTRPS, which is the difference between the real farm value and the real retail value for brown bread and white bread between January 2005 and December 2008. In January 2005, the real FTRPS for brown bread averaged R8 614/ton, while that of white bread averaged R9 300/ton. They increased by 13 % and 8 % to reach R9 731/ton and R10 063/ton in 2008, respectively.

Although an average decrease of 29 % and 6 % is reported on the FTRPS for super and special maize between 2005 and 2008 respectively, a significant peak between July and December 2008 must however be noted (see figure 43).

The annual average real FTRPS for fresh full cream milk was R3.48/litre and that of fresh low fat milk was R4.39/litre in 2005. The real FTRPS's increased by 1 % and 3 % to reach R3.52/litre and R4.52/litre in 2008 (NAMC, 2008).



Source: NAMC, 2009. Calculations based on the wheat price from SAFEX and bread prices from Stats SA.
Figure 42: Real farm-to-retail price spread of brown bread and white bread (January 2005 to December 2008)



Source: NAMC, 2009. Own calculations using the maize price from SAFEX and maize meal prices from AC Nielsen.
Figure 43: Farm-to-retail price spreads of super maize meal and special maize meal (January 2005 to December 2008)

Although further analysis is required, we would like to note that one of the biggest changes that have taken place in the food market over the past fifteen years is the rise of supermarket chains particularly in developing countries (N. Vink et al., 2008). Supermarkets, Reardon and Gulati (2008a) argues (here referring to all modern retail, which includes chain stores of various formats such as supermarkets, hypermarkets, and convenience and neighbourhood stores) have now gone well beyond the initial upper- and middle-class clientele in many countries to reach the mass market. Within the food value chain, the effects of this trend touch not only traditional retailers, but also the wholesale, processing, and farm sectors (Reardon & Gulati, 2008b). In the developed world, supermarkets have been a feature since the 1930s; however, their role as the primary marketing channel for food products, and fresh produce in particular, was established within developing countries in the 1990s (Reardon & Gulati, 2008a). The areas most advanced in this trend include South Africa, among others such as South America, Mexico, East Asia outside China, parts of Southeast Asia such as Thailand, and much of Central Europe. These countries already see supermarkets moving to dominate the food sector, displacing traditional retail (Reardon & Gulati, 2008a). This trend has had a fundamental impact on the global food provenance (N. Vink et al., 2008). Firstly, the procurement catchment area of these chains has shifted from local or national suppliers to international suppliers. Secondly, rather than relying on a general wholesaler to supply them with product, supermarkets have switched to using specialised wholesalers and this has reduced the number of market entry points for agricultural producers (farmers) (N. Vink et al., 2008). Furthermore, to guarantee product volumes and quality, these specialized wholesalers have moved from spot market transactions with producers to implicit long-term contracts. Such long-term contracts are seen as necessary to enforce the large number of private standards supermarkets are demanding from their suppliers (Reardon & Gulati, 2008a)".

7.5 The Required Synergy between Food Production, Food Availability, and the Profitability of the Agricultural Production Sector, in order to ensure National Food Security

The scenario the above information sketches is that, between 1990 and 2008/09, although field crop production increased by 13 %, horticultural production by 62 %, and livestock production by 29 %, production of principled foods are lower than consumption requirements. Data further suggests that *per capita* production of food is at an all time low. Production of staple foods such

as wheat is influenced by farmers' decisions to produce (plant), which is in turn influenced by favourable climatic conditions, and available market prices. While government is responsible for upholding and stimulating a productive and profitable agricultural production sector, it does this for both economic reasons, and in fulfilling its responsibility to the consumer in ensuring and maintaining national food security.

Providing strategic leadership across these areas of interest i.e. food production, food availability, profitability of the sector, and food affordability, requires an understanding of what factors are at play, and how they influence the areas of interest of this strategy. Such an understanding however requires an in depth analysis of all factors at play within, and across the agricultural production value chain - information which is currently only available ending 2002.

There is thus a vital information gap, which is unable to inform required interventions in ensuring food affordability, through the mitigation of maintaining food production, food availability, food distribution, and the profitability of the sector. The strategy thus currently argues broadly around these issues understanding the need for detail, in order to identify specific and required interventions.

Currently guiding these broad arguments are increasing differences between farmer and retail prices for certain products such as wheat, maize, and chicken, suggesting that food prices are influenced by pricing and costing structures across the value chain. The prime focus of this strategy is thus to overcome disparities between food production levels, food availability, food distribution and food affordability, through a qualitative and quantitative improvement of South Africa's agricultural productivity, productive efficiency and regulatory environment for all commodity groups. It furthermore seeks to stimulate rural economic growth and development in this regard.

Furthermore, an interrelated dependency between agricultural production and agro-processing must be recognized as it clearly affects performance of the agricultural sector as a whole. This interrelated dependency furthermore affects the availability and affordability of food products. A commodity based, value-chained approach is thus critical in ensuring a prosperous agricultural production sector that is able to produce according to market demand and market requirements. In turn agro-processing must be able to adapt according to new produce available within the agricultural production sector.

In devising the Agricultural Production Strategy, it is thus important that clear linkages are forged between agricultural production and agro-processing, and covers the following fields of collaboration:

1. Market development;
2. Food availability and affordability

8 The South African Agricultural Strategic Plan

8.1 Key Challenges

The key challenges faced by South African agriculture today include:

- **An unregulated market environment** has left the domestic agricultural market vulnerable to fluctuating, and high global prices of agricultural staple foods, e.g. maize, wheat, and soya. Domestically produced products are impacted upon by the international market;
- **A growing Retail Supermarket Sector.** The procurement catchment area of supermarket chains has shifted from local or national suppliers to international suppliers both domestically and within the SADC region, and has decreased the number of market entry points for agricultural producers;
- **Increasing farmer to retail price differences** for certain food products such as bread and chicken, impact on food prices;
- **Growing food insecurity** contributed by increasing food prices;
- **Poorly skilled and marginalised i.t.o accessibility to natural resources (water and productive land, of subsistence and smallholder farmers,** translates into low production outputs, asset loss and land degradation;
- **Poor infrastructural support.** Infrastructural development allows for farmers and buyers to link, and in turn, boosts local sales; translating into local economic development;
- **Increasing input costs** (animal nutrition, seed, fertiliser, etc.)

- **Poorly defined economies of scale** leads to poor farm management, and local agricultural economic planning. **The number of commercial farms are decreasing while their farm sizes are increasing**, indicating a consolidation of the commercial farming sector.
- **Lack of, or poor agricultural spatial economic planning.** Agricultural planning has to be considered at local, regional, and national levels, to effect market flows, infrastructural requirements and rural development.
- **Poor information and knowledge management** for improving farming practices among smallholder farmers. All farmers require information and knowledge, to improve and address production challenges. The distribution, collection and storage of required information and knowledge is pivotal to the success of any agricultural sector.
- Although attempts have been made to improve the alignment between research and practice, **research and development planning** still bears little or no impact on the growth and development of South Africa's agricultural economy.

8.2 Strategic Goals:

- To increase the entry levels of smallholder farmers into commercial agriculture;
- To improve the national agricultural economic output, national food safety and security, through a qualitative and quantitative improvement of South Africa's agricultural productivity, productive efficiency, trade and regulatory environment, and the spatial management of information and knowledge systems for all commodity groups;
- To improve agricultural support services, the regulatory framework, and the competitive advantage for commodity sectors, according to their needs and requirements as stated in their respective commodity strategies;
- To stimulate rural economic growth and development, by stimulating spatial economic planning and implementation, further serving as an incentive for investment in rural areas.

8.3 Strategic Objectives:

- **Improve the food security, policy and legislative framework** to militate against high global food prices, and market manipulation.

- To **improve the domestic and global competitiveness** of the South African agricultural sector.
- **Create formal platforms of interaction, between government and industry**, to serve as platforms of dialogue, during planning, monitoring and evaluation processes.
- **To improve national coordination and management of government support services** to farmers, and decentralized support services in the form of local **Agricultural Development Service Centres**.
- To address the decreasing production levels among the smallholder and subsistent food producers through **commodity-based experiential training and mentorship academies**, as a prerequisite to government financial support.
- To improve the government's planning capacity at national, provincial and local levels, through **the formulation and installation of knowledge and information management systems, e.g. decision support systems**.

8.4 Focus Groups

- Subsistence farmers (producing for household consumption)
- Smallholder farmers (producing enough surplus for local market)
- Commercial farmers (product sales mostly for domestic and export markets)

8.5 Strategic Interventions

8.5.1 The Food Security Act / Programme

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Cotula, 2008). Although the Food Security Act / Programme lacks a policy framework, this strategy, identifies five pillars of food security i.e. food availability, affordability, stability of supply, access and utilization. As primary agricultural production clearly affects food availability, affordability, and supply, a legislative framework is required to ensure the proper mitigation between all factors impacting the availability, affordability and supply of principled foods, with the objective of realising national food security, and achieving the right to food, for all. The act therefore aims to:

7. identify food insecure communities through knowledge and information management systems, able to provide continuous and updated analysis of the state of food insecurity at a national, provincial and local level.
8. ensure qualitative and quantitative production of principled food commodities within identified food insecure communities;
9. ensure that, where South Africa are unable to produce profitability, sufficient levels are imported;
10. ensure that, where South Africa are able to produce efficiently and sufficiently, the domestic market does not strain under farmers' decision to export at the expense of national food security;
11. ensure the profitability of production of identified priority commodities, in this way ensuring farmers are always to gain from the production of principled food commodities; and
12. to ensure that food prices and food affordability are not compromised at the expense of the above mentioned factors.

More importantly, is the monitoring and evaluation of all legislative and policy impacts. Information gathered through such M&E processes will in turn inform future planning cycles.

8.5.2 The Farmer Development Act / Programme

South Africa's liberalized market environment has made it difficult for agricultural strategies and policies to provide effective support, on a meaningful scale, in which smallholder and subsistence farmers are able to be self reliant and to build their enterprises. The following thus aims to upscale and provide a comprehensive package of institutional and technical support. The Farmer Development Programme / Act aims to provide the support required both to beneficiaries of land reform and restitution programmes of the Department of Rural Development and Land Affairs, and to commercial, subsistent and smallholder farmers outside these programmes.

8.5.2.1 Agricultural Input & Infrastructural Coupon Programme (AIICP)

For immediate impact the Farmers Development Programme / Act / Programme, will provide affordable agricultural inputs through an **Agricultural Input & Infrastructural Coupon**

Programme (AICP), subsidizing the most expensive input material for selected production systems (those contributing most to household food security), including:

- tractors;
- fencing;
- repairs of equipment;
- different types of fertilisers;
- animal supplements;
- plant and animal disease control;

The coupon systems will be targeted at smallholder and subsistence farmers only, based on the size and level of production. The coupon system will furthermore act as a subsidy to what farmers themselves have already invested, **i.e. covering 80-90 % of the cost.**

8.5.2.2 Agricultural Academies (Centres of Excellence)

The agricultural academy programme will localize and prioritize skills development to extension officers, commercial, smallholder, and subsistence farmers, through the upgrading and expansion of existing commodity based agricultural academies.

Each academy will have a cooperative agreement with an identified Agricultural training college through which the farmers will graduate, and training facilities will be provided.

The training programmes will be certified, qualifying farmers for government support, i.e. the training programmes will act as a prerequisite for government financial support, followed by an incubated mentorship programme.

The incubation mentorship programme will provide day-to-day support and assistance from a mentor (retired farmers) for a specified period of time.

8.5.2.3 Agriculture Development Service Centres

DAFF will respond to the capacity-building needs of both the subsistence and smallholder farming sector through decentralized Agriculture Development Service Centres, with targeted support for:

- Improved farming practices (farm, financial and asset management)

- Improved access to knowledge and information, through a decentralized training facility
- Training and capacity building for producing for the export and domestic markets
- Mentorship programmes
- Entrepreneurial development

The Decentralized Agricultural Development Service Centres will act as the satellite stations of the academies, through which they further provide training and skills development programmes suited to the type of production systems most prevalent, as defined by the Agricultural Spatial Economic development programme.

The centres will further provide multi-level services including animal health, animal nutritional support, market information, marketing facilities (e.g. auctioneering), etc. The centres' primary function includes training and localizing government agricultural services based on commodities relevant to the region it operates in, e.g. cotton, grain, wool, cattle, dairy, etc.

Training and capacity building programmes will be done in partnerships with major educational and training institutions such as Universities, NGOs, Colleges and Research Institutions.

8.5.2.4 Agricultural Innovation System

Effecting an agricultural innovation system, allows Research and Development to target industry and farmer requirements, both technically and in terms of market requirements. Research and development furthermore opens market opportunities, through biotechnology and improves the value added impact of product quality.

8.5.2.5 Commodity Forums

In alignment with the international Agribusiness forum, resolutions, of which South Africa was a part of, this strategy too seeks to forge partnerships with industry. Partnerships per commodity or sector must take place at both national and provincial levels. These platforms of interaction between national and provincial government must be formalized and legislated.

It is only through an integrated, value-chain approach that South Africa could ensure a viable and prosperous agricultural sector for the future. These partnerships, whether they be Private to Private or Public to Private, will strengthen the agricultural industry as a whole. Representative forums where industry interacts with government, is required to improve communication and

delivery of government programmes. DAFF is however required to play a coordinating, secretariat role, devising the agenda, reports and implementation of decisions made.

8.5.2.6 Agricultural Spatial Economic Development System

Influenced by water availability, suitable land and infrastructural development, agriculture is one of the few sectors that operate completely as a “spatial economic” sector. Investing in, and improving our ability to plan agriculture spatially is pivotal for:

- Developing local agricultural economies.
- Facilitating provincial and local area based planning.
- In identifying viable agricultural business opportunities
- Planning infrastructural development
- Serve as an incentive for investment.
- Market infrastructure development planning and implementation
- Addressing poorly defined economies of scale
- Develop Market linkages

Furthermore, available agricultural land is slowly being used for industrial production, such as mining, property development, and foreign investment. Spatial Economic Planning furthermore allows for agricultural zoning, and protection against the uptake of limited agricultural land into the industrial sector.

8.5.2.7 Agricultural Decision Support System

It is pivotal for sustainable government interventions that agricultural development planning is based on evidence and social and economic requirements. It is furthermore important that Agriculture planning participates in local economic development planning process. An Agricultural Planning System will enable provinces, and municipalities to better analyse their land and economic potential, and allowing them to look at different alternatives within the framework of such an analysis.

Great importance must be attached to the importance of evidence based decision-support systems for Agricultural planning. This will further facilitate the successful implementation of well

informed projects and programmes at local levels and furthermore stimulate local agricultural economic development. The aims of an Agricultural Planning System are:

- To provide updated information and data on agricultural production at local and provincial levels.
- To provide an analysis of such information and data
- To provide alternative scenarios for growth and development of agriculture within the specified region.

9 Implementation Framework

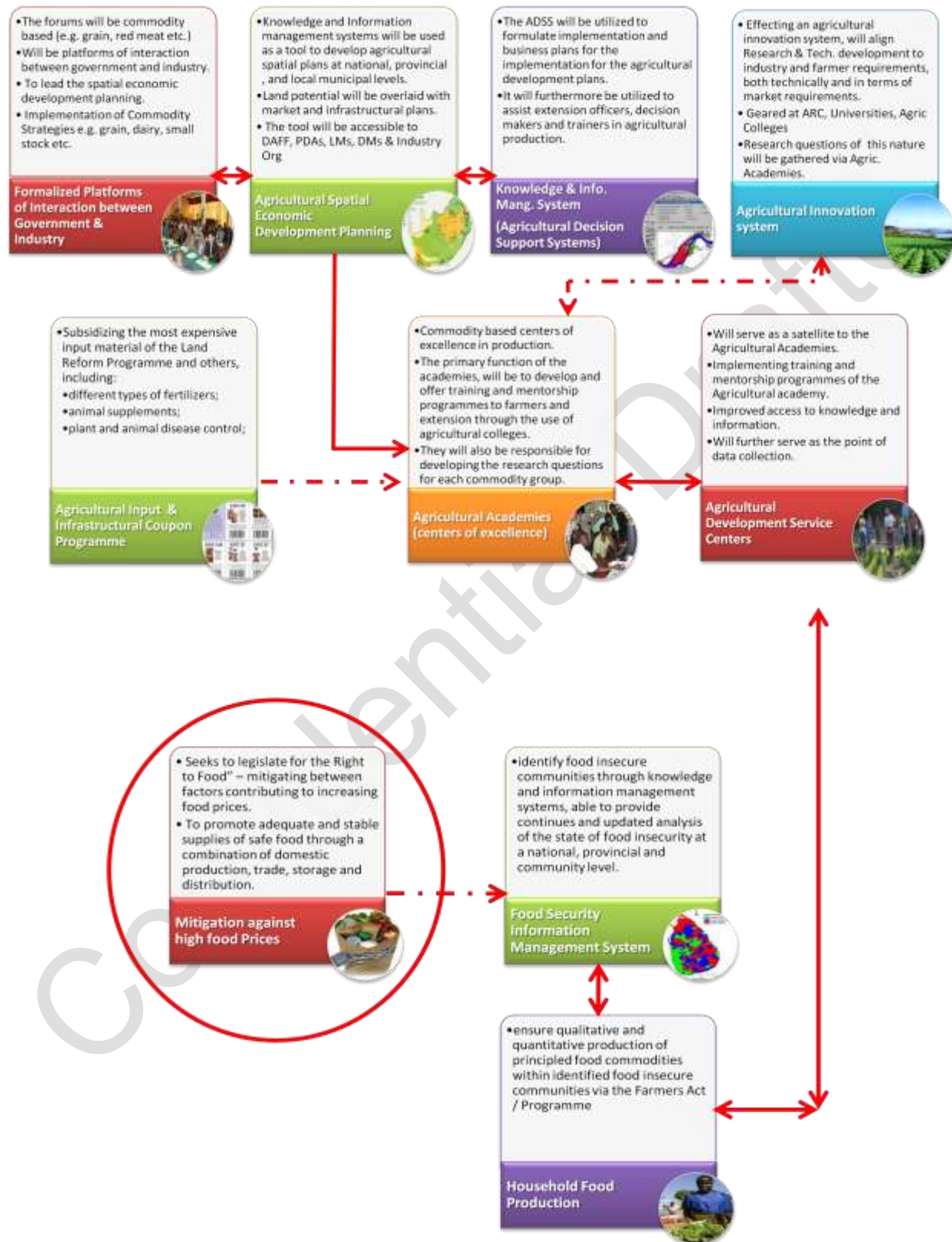


Figure 44: An Overview of the Strategic Plan

From top-left to right, of figure 44:

THE FARMERS DEVELOPMENT PROGRAMME / ACT

Commodity Forums (Formalized Platforms of Interaction between Government and Industry)

- The commodity based forums will be responsible for leading the agricultural spatial economic development planning. Identifying key commodities to be concentrated on by government support programmes, with the aim of ensuring national food security and the prosperous, equitable growth of the sector.
- These plans will be reviewed annually, and as deemed necessary, to adjust and tweak according to market requirements.
- These forums will furthermore be responsible for providing oversight to the management of the commodity-based academies. Thus each commodity forum will have an academy to oversee.
- The forums will also be responsible for the implementation of Commodity Strategies, e.g. grain, dairy, small stock, etc.
- With all these functions, DAFF will act as the administrative and secretarial support.

Agricultural Spatial Economic Development System

- The agricultural spatial economic development programme, will be a knowledge and information management system, used as a tool to develop agricultural spatial plans at a national, provincial, and local municipal level.
- The system will be able to overlay agricultural land potential with market potential to determine and map out the different “production zones”, and use this analysis to develop an infrastructural development programme, for marketing, transport, distribution, export, etc.
- The system will furthermore be able to identify the most viable areas of production for any new product on the market.
- The system will have the research and data collection and analysis support from the specific research institutions such as the ARC, and certain universities who will be responsible for the collection, analysis of required data.
- The Agricultural Spatial Economic Development Programme, will be managed by DAFF expanding its capacity to keep the system updated, and accessible to all of DAFF,

PDA's, LMs, DMs & Industry Org, to be used to develop their own agricultural development plans.

Agricultural Decision Support System (ADSS)

- The ADSS will be utilized to formulate implementation and business plans for the implementation of the agricultural development plans, per province and local government.
- It will furthermore be utilized to assist extension officers, decision makers and trainers in their daily challenges such as a knowledge on pest management, nutritional management, breeding, etc.
- The Agricultural Decision Support System, will too be managed by DAFF expanding its capacity to keep the system updated, and accessible to farmers, extension officers, DAFF, PDA's, LMs, DMs, & Industry Organisations.
- The Agricultural Decision Support System will too require a designated partner responsible for data collection and statistical analysis.

Agricultural Innovation System

- Research questions will be gathered by the Agricultural Development Centers, and communicated to DAFF via the Agricultural Academies. The purpose is to identify challenges requiring research intervention.
- The role of DAFF will be to be to package the research questions into research strategies aimed at investigating the identified challenges and for devising solutions. These questions will be geared at all research institutions such as the ARC, Universities, Agricultural Colleges, etc. via DAFF.
- Primary to this intervention will be a partnership with the Department of Science and Technology.

Agricultural Academies

- The Agricultural Academies will be commodity based centers of excellence in production.
- Such centers exists to various degrees for different commodity groups, e.g. the Sugarcane Research Institute of the South African Sugar Association, with both research and training capacity.
- The strategy however seeks to upscale and elevate the training capacity of these institutions, to develop training material and training of trainers capacity, as the primary function of the academies, will be to develop and offer training and mentorship programmes to farmers and extension through the use of agricultural colleges as a resource base.

- They will also be responsible for developing the research questions for each commodity group, providing clear directive as to what the focus of research within their respective fields should.
- A further function of the Agricultural Academies would be to disseminate training material to, and train trainers of the Agricultural Development centres.

Agricultural Development Service Centres

- The Agricultural Development Service Centres, will serve as the “arm” of DAFF, and PDAs with respect to services offered to farmers and the public, including training, e.g.
 - Animal registration
 - Veterinary Services, etc.
- Provision of the required capacity to offer these services, will be done via one office within DAFF and the PDAs.
- The centers will furthermore provide on-farm training relevant to, and in line to the local Agricultural Spatial Economic Plan.
- It will too have access to the Agricultural Decision Support System and the Agricultural Spatial Economic Development System, to improve access to knowledge and information.
- The centers will furthermore serve as points of data collection, managed by extension services.

THE FOOD SECURITY PROGRAMME / ACT

The food security programme / act, seeks to:

- Ensure household food security, and to
- Mitigate against increasing food prices

The programme seeks to mitigate between conflicting factors operating within and across the production value chain, ensuring food affordability, by mitigating between factors mostly impacting food prices. These factors broadly includes:

- food availability
 - whether produced domestically vs imports;

- food distribution
- profitability of production
 - increasing costs of production (farmers will only produce for profit);
- Export vs domestic sales;

This intervention requires a collaborative approach with the Department of Trade and Industry, Agro-processing.

Household food security will be support through training and the Agricultural Input Coupon Programme, via the Agricultural Development Service Centres.

MANAGEMENT OF IMPLEMENTATION PLAN



Figure 45: Implementation Framework

- The strategy will require a particular programme / branch within DAFF that will be responsible for the strategic oversight of the SA Agricultural Production Strategy.
- This programme / branch within DAFF, will thus be responsible for implementing a:
 - project management system;
 - monitoring and evaluation system, and be responsible for overall reporting on the progress and impact of the strategy.
- Identifying roles and responsibilities for implementing the strategy is furthermore key in ensuring effective management thereof. It would thus be pivotal to the success of this strategy that DAFF coordinates an implementation planning session with stakeholders (more importantly the implementing agents) i.e. Provincial and Local government, industry, SOEs, etc. to devise the implementation plan for the SA Agricultural Production Strategy.
- The implementation plan will be done by proper project management principles, a method which must be adopted by all implementing agents of the strategy.
- This methodology will therefore encompass a national monitoring and evaluation system, through which all implementing agents will report to DAFF.
- The policy and legislative elements of the strategy must be administered and managed by DAFF.

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