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## FOREWORD

Considering South Africa's position, role and economy within the context of global realities, we are a developing country, also popularly referred to as an emerging economy.

From a socio-political (developing) and economic (emerging) perspective, the agri sector is one of the cornerstones of the well-being of our nation. Many of our people are dependant on this sector for their livelihood and even more for the down-stream impact it has on the economy at large. The demise of this sector will have a devastating effect on the lives of 40 million plus people in South Africa; not even considering the effect a demise in the South African agri sector will have on the peoples of sub-Saharan Africa.

However, the people living and working in this sector are not well educated, are poor, are generally older and have little vision of "a better life for all". At the same time, they are the people who will have to be innovative, who will have to advance technologically in production and management processes, will have to ensure that our international footprint of products and produce is well established and expanded. They (all farmers, processors and suppliers to the sector, large and small) will have to ensure that the reform of agricultural land is productive, adding value, sustainably.

We need to develop the people of our sector to ensure that it is dynamic and responsive to national and international demands; to ensure that the sector is cost effective and productive; to ensure that it is a generator of wealth and not a net consumer thereof; that it becomes an employer of first choice not as a last resort. We need to develop the capacity of all in the agri sector.

It is my belief that this Sector Skills Plan focuses our minds on those strategic objectives and actions necessary to, in the next five years make a meaningful impact on the capacity of those working and living in the agri sector. This Sector Skills Plan has been scripted carefully to ensure that the task of AgriSETA is clear and that we do "the right things" – being effective. From this Sector Skills Plan will flow annual Business Plans – the instrument we use to make sure that we are also "doing things right" – that AgriSETA's contribution to development is also efficient.

AgriSETA presents this Sector Skills Plan to the agri sector, Government, stakeholders and other economic sectors as our strategic plan. Peruse this living document, criticize us, give us your inputs – we are receptive and responsive. We most certainly plan to, through the medium of skills development, create a better living for all.

This Sector Skills Plan is endorsed by the Governing Board of AgriSETA.

**JACK VANDYK**  
(Chairperson: AgriSETA Governing Board)

This first update of the 2005-2010 Sector Skills Plan (SSP) developed by AgriSETA in 2005 has given us the opportunity to refine the initial SSP (which largely combined the SSP's of the former SETASA and PAETA). Further research conducted during the year enabled us to submit an improved and better integrated plan.

If we reflect back over the past five years it becomes glaringly obvious how little we achieved. We may have met our National targets and in doing so, done our bit to implement the National Skills Development Strategy. In doing it we started to become deeply involved in our sector – and realised that if we are to make a real impact, our effort in the next five years will have to increase exponentially.

The agri sector is a vast sector. Combined with this realisation is the fact that from day one, AgriSETA has accepted its responsibility towards the total sector – not just to the levy payer. Equal to our responsibility to the larger commercial enterprise – the levy payer – we have a responsibility towards the emerging farmer, the land reform beneficiary, the subsistence farmer, small processor, the small supplier. This is an enormous task for which we will require extensive NSF support.

Our strategic options have been identified much more clearly and our objectives are crisp. Whilst we always knew that we cannot be everything to everybody, we are much clearer on where our capacity can take us, where to set the boundaries, how to identify and focus on the priorities.

The management and staff were given an opportunity to make inputs to the SSP; we understand its contents and the implication thereof. As a small SETA, we have learnt how to deliver with the minimum of human and financial resources. This SSP sends a clear message to the Board and staff of AgriSETA – we must do more.

Strategies recorded in this SSP have been developed in a practical and consultative manner. These will be operationalised through our annual business plan. We trust that this SSP is clear and logical for any person studying the contents – we believe that it is useful not only to us but to others who have a responsibility to develop skills in our sector. This SSP will be internalised by the staff of AgriSETA. Should there be a need for more information, you are welcome to contact us – we will be glad to assist.

This SSP is for usage by all in the agri sector and beyond. We hope it will guide our enterprises (large and small), our providers and other stakeholders to set their own internal strategies – collectively, we will make a difference.

**MACHIEL VAN NIEKERK**  
(Executive Officer: AGRISETA)

## EXECUTIVE SUMMARY

### 1. INTRODUCTION

Since the 2005-2010 AgriSETA SSP was developed shortly after the merger of the former PAETA and SETASA into a new amalgamated AgriSETA (and it was difficult to develop a fully integrated plan), this annual updating exercise thus provided an ideal opportunity to develop a more integrated plan for the agri sector as a whole.

The purpose of this Sector Skills Plan is to;

- Firstly, guide the AgriSETA Governing Board in their strategic positioning of AgriSETA,
- Secondly, enable the management of AgriSETA to develop clear business plans which has one main focus – to deliver on the strategic objectives as set out in the SSP, and
- Thirdly, guide the Department of Labour (DoL) to use AgriSETA's strategic objectives for consideration and incorporation when determining national strategies, targets and Service Level Agreements (SLA).

AgriSETA has the responsibility to implement the Skills Development Strategy for the period 2005 – 2010 and within the framework of the objectives set out in the National Skills Development Strategy. This 2006 update of the SSP reviewed the above Strategy against the possible changes and developments that have since occurred within the agri sector towards ensuring that new skills needs and requirements demanding attention have been identified and are addressed.

This SSP, whilst sector driven, is aiming to satisfy the following five objectives during the 2006 /-10 cycle;

- Skills planning and delivery within the agri sector will be aligned to national priorities for growth and development (amongst others to support the implementation of AsgiSA and JIPSA).
- Especially in the case of primary agriculture, it is of paramount importance to support objective 3: “Promoting employability and sustainable livelihoods through skills development” – with the land reform processes under way, there is a dire need to develop the new enterprises in the sector and to address the low levels of education in agriculture.
- Specific focus will be given to the development of suitable black candidates for appointment into senior management and ownership positions towards attainment of the AgriBBBEE strategy and targets.
- It will be a focus to assist new entrants into the labour market as large number of rural youths are without jobs and their academic schooling qualifications does very little to assist them – through its own discretionary funds and support from the NSF, AgriSETA will engage in this objective on a large scale.
- It will be one of the pillars of AgriSETA's strategy for the next five years to ensure that its skills delivery fraternity has the capacity and know-how to implement relevant and quality learning programmes.

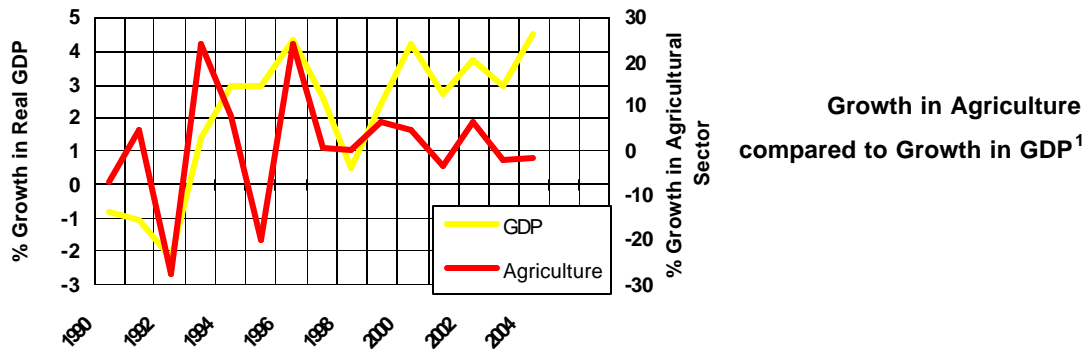
### 2. PROFILE OF THE AGRICULTURE SECTOR

The agri sector in South Africa has changed dramatically over the last five to ten years. During this period the sector has increased in diversity in terms of product offering, skills requirements and type of enterprises. It has been gripped by various environmental disasters including drought, floods and fires. On a number of cases the sustainability of agriculture (in the continent and in South Africa) has been questioned and many agri sector enterprises seem to be engrossed in a perpetual struggle to survive and adapt to an ever changing and challenging environment.

Some of the key developments, including policy and regulatory changes, demanding high priority attention by the sector and which were specifically explored in this SSP include:

- Deregulation of markets and pressures of global markets,
- Burgeoning international markets (the key issues demanding attention being international health and safety standards and export controls),
- Changing labour dispensation and labour relations,
- Land reform,
- The under-resourcing of a large number of agri enterprises and the need to especially support emerging farmers
- The imminent AgriBBBEE strategy and the need to facilitate and support the agri sector to attain BEE targets

Large components of the agri sector forms part of the resource centred part of the economy, and like mining, are dependent on the location of the primary resources. It is however also the first point of development for many economies and historically plays a very important role in a country's development. In South Africa primary agriculture has and still plays a key role and anchor in the economy and a direct correlation between the growth in the agricultural sector and growth in the economy exists, the correlation factor between Agriculture and GDP being 0.51.



Over the last few years the consumer spending patterns have also been radically affected by:

- *Increased information flow*: information about production and generally about products has been key in offering consumers more accessibility and transparency.
- *Greater participation in the global village*: consumers can and do buy from all over the world – they are no longer constrained by geographical boundaries.
- *Greater consciousness of lifestyle and health* – consumers are looking for products that integrate into their lifestyles and at least provide a clear indication of the health risks they face – hopefully improving their health.

Technological progress also had its impact on primary agriculture – access to information improved dramatically and so did communications. Large numbers of farmers are however still excluded from this progress as electricity and telephones is not available in many rural areas.

Land reform is one of the key areas investigated in this SSP. The fact that by 2014 a total of 30% of agricultural land will have been reformed has a priority effect on any strategy to be developed and implemented by AgriSETA. To this end considerable focus is placed on the skills development needs of the estimated 650 000 emerging farmers deemed to be a key beneficiary target group of the AgriSETA (which incorporates the above indicated Land Reform Beneficiaries)

<sup>1</sup> Stats SA, P0441Quarterly reviews 2000 -2004, last being P04414thQuarter2003.pd

South Africa has become well known for its participation in certain international markets such as deciduous fruit, citrus and selected flowers. Generally speaking the global markets have however been more difficult to enter and the following are key challenges and changes that have occurred:

- Greater emphasis on food safety,
- More co-opetition from producers,
- Increased product diversification,
- Continual search for new markets and new trade agreements, and
- Reliability, predictability and produce quality requirements.

After wide consultation in the sector, good progress has been made with the AgriBBBEE strategy and its implementation is now imminent. Whilst it is heartening to note that there has been widespread support for the strategy within the agri sector, it is concerning that consultation with key roleplayers in the sector revealed that too little action is being taken to ensure that suitable BEE candidates are being developed for promotion and appointment to positions of ownership and/or senior management. In this regard the AgriSETA has an important role to direct and focus funding support in initiatives that will encourage and assist employers to be pro-active and to increase such training efforts – which will enable them to meet their BEE targets at the time when it will come into force.

The high prevalence and impact of HIV/AIDS in South Africa is dramatic. Agriculture, fishing and forestry are of the hardest hit industries. Whilst the prevalence of HIV/AIDS in the agricultural sector is not fully quantified it is estimated to be as high as 22%. In addition other killer diseases (such as TB), which affects the poorer section of the population directly, also has a dramatic impact on the agri sector's labour force.

### **3. DEMAND FOR SKILLS**

From an AgriSETA perspective the agri sector can be grouped into the following four key target groups to be served:

- The commercial farming sector (primary agriculture) with an estimated 925 000 employees – of whom a considerable percentage (350 000) are employed on temporary basis (seasonal or contract workers).
- The emerging farming sector (primary agriculture) with an estimated 650 000 beneficiaries needing support to improve their efficiency and profitability and grow and expand their ventures into commercially viable enterprises.
- The secondary agricultural enterprises (upstream and downstream enterprises) with approximately 300 000 employees.
- The Department of Agriculture – particularly support needed in the development of their Extension Officers and in addressing scarce and critical skills categories within the national, but in particular provincial agriculture departments.

Whilst the past couple of years have shown a relative stabilisation of the labour force in the agri sector, within the commercial farming sector there has been continued job losses over the past three years. Disconcerting is the fact that many of these losses were in the so-called “skilled” job categories. Statistics in this regard seem to support the notion that the agricultural sector serves as a training ground for new and first time job seekers (from especially the rural areas) and that they subsequently leave the sector for better opportunities elsewhere in the economy when such become available. Whilst the contribution made by the agri sector in providing trained labour to the economy at large is recognised and valued for such, it is not in the interest of the sector and measures need to be taken to negate the negative impact of such losses. In this regard employment conditions (especially in the primary sector) should receive attention and a possible need exists for additional funding support via the NSF to increase the investment in training and/or to compensate the sector for the training undertaken on behalf of other sectors.

The following were identified as high priority training needs to be addressed:

In the *commercial sector* the following skills requirements stand out:

- A large percentage of employees are semi-literate and a need exists for ABET programmes to improve their educational base as a platform for further learning.
- There is a need to improve management and entrepreneurial skills – both of farm owners and managers in the primary sector and a particular need to develop BEE candidates for senior management in both the primary and secondary sectors.
- Courses currently exist but are under-funded and a sustainable funding model for the provision of such courses needs to be found.
- There is a dire need in the secondary sector for engineering, technician and trade related skills (focussed on servicing and maintaining processing machinery and equipment).
- An urgent need exists to develop skills related to global food safety and quality standards (including aspects such as traceability, organic farming, etc.).

In the small-scale and *emerging sector* the following can be highlighted as priority needs:

- Farm management, leadership, entrepreneurial and business management skills (including resource management, financial planning and record keeping, project management).
- Analytical and problem solving skills (incorporated are a range of ABET programmes to provide an educational base through to computer literacy and information management programmes) – developing the ability to analyse, address and overcome problems and constraints (such as a lack of transport and infrastructure, entry barriers into markets, etc).
- Marketing and processing skills (developing a marketing channel and/or identifying or gaining access to a suitable marketing channel; tapping into and understanding market information; understanding the auction process, etc.).
- Raising money – understanding the various credit facilities available, what the costs of credit are and how to choose the appropriate credit structure.
- Wide range of technical and production knowledge and skills (more scientific farming methods, mechanisation, production and resource management, etc.).
- Mechanical knowledge (farm infrastructure and equipment maintenance and repairs).

In the *Department of Agriculture* the following priorities exist:

- The need to re-train and upgrade a large number of Extension Officers to better serve the needs and requirements of especially emerging farmers (agricultural economics, farm management, business and financial management and technical management).
- The need to overcome skills shortages within the DoA in occupations such as agricultural engineers, agricultural economists, statisticians, veterinarians, agricultural food technologists, pasture scientists, etc.

#### 4. SUMMARY SKILLS SUPPLY

There is a well developed and established education and training sector capable of servicing the needs of the agri sector. The existing capacity can be summarised as follows:

- At General Education and Training Level (*GET*): Approximately 150 secondary schools offering agricultural subjects and a further 30 specialised Agricultural Schools.
- At Further Education and Training Level (*FET*):
  - A total of 11 Agricultural Colleges with an enrolment capacity of 1 500 learners
  - A total of 50 FET Colleges with close to 200 campuses or delivery sites and an enrolment capacity of 400 000 students. Of these a total of 21 colleges will offer agri sector programmes as from 2007
- At Higher Education and Training Level (*HET*): A total of 6 Universities of Technology and 8 Universities that offer agri programmes (with a combined enrolment capacity of 9 000 students in the agricultural learning fields). In addition to the agri programmes they also offer

the full range of management, business, engineering and administrative programmes needed in especially the secondary sector.

- Other **Accredited Providers:** AgriSETA has a total of 120 accredited providers offering a wide range of learnerships and Skills Programmes. These providers have a combined capacity to offer approximately 25 000 learning opportunities per annum.
- **Informal** and non-accredited training: From the submitted Annual Training Returns (ATR's) it is evident that approximately 50% of the total workforce within the agri-sector have receiving some form of on-the-job and informal training during the 2004/2005 financial year.

From the above it is evident that there is more than sufficient education and training capacity to meet the training demand in the agri sector. The following are however concerns regarding the relevance and quality of supply that demands attention:

- The quality of training at Agricultural Colleges need to be improved – it is proposed that selected Colleges be upgraded into functionally “Specialised Centres of Excellence”.
- The FET and HET institutions need to be guided and directed to address scarce and critical skills within the sector – a shift from the large number of students enrolled for generalised programmes to those areas where shortages exists – e.g. Agricultural Economists, Agricultural Engineers, etc.
- Increased need for decentralised training to take training on-site and to farms (also the need for a mentorship approach to the training of especially emerging farmers).

## 5. SKILLS DEVELOPMENT PRIORITIES AND STRATEGIC PLAN

Based on the above the updated Strategic Plan of the AgriSETA for the period 2006 – 2010 is as outlined below (linking and integrating priority needs and subsequent focus areas to specific programmes and interventions – and reflecting how these in turn relate to the relevant NSDS Objectives).

AGRISETA PRIORITY FOCUS AREAS	SPECIFIC PROGRAMMES TO ADDRESS NEEDS	BROAD NSDS OBJECTIVE LINK
Development of general human capacity as basis for sectoral growth: <ul style="list-style-type: none"> <li>- Ability and willingness to learn (employees and staff of both commercial and emerging enterprises)</li> <li>- Increased educational levels as platform for further capacity building and lifelong learning and development initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• ABET</li> <li>• Problem solving</li> <li>• Numeracy</li> <li>• Literacy</li> <li>• Initiative, flexibility</li> <li>• Diversification</li> </ul>	Objective 2, focus on indicator 2.7 Objective 3, focus on indicator 3.2
Management and agri business skills to increase profitability and viability and address AgriBBBEE targets: <ul style="list-style-type: none"> <li>- Specifically target land reform beneficiaries and emerging farmers and enterprises</li> <li>- Upgrade Extension Officers to services above target groups</li> <li>- Increase efficiency of commercial enterprises</li> <li>- Target BEE candidates for development</li> </ul>	<ul style="list-style-type: none"> <li>• Farm management and leadership</li> <li>• Business and financial management</li> <li>• Marketing (local and international market)</li> <li>• Environmental management</li> <li>• Information technology</li> </ul>	Objective 2, focus on indicator 2.1 Objective 2, focus on indicator 2.8  Objective 3, focus on indicator 3.2 Objective 4, focus on indicator 4.2 Objective 4, focus on indicator 4.3

<p>Develop readiness, ability and capacity of sector to realise global market opportunities:</p> <ul style="list-style-type: none"> <li>- Meet international food safety standards</li> <li>- Develop export readiness and capacity</li> <li>- Markets and marketing knowledge and skills</li> <li>- Direct FET and HET providers to produce relevant researchers, technicians and technologists</li> </ul>	<ul style="list-style-type: none"> <li>• Food safety standards</li> <li>• Produce traceability</li> <li>• Information technology</li> <li>• Environmental standards</li> <li>• Phytosafety/Animal welfare</li> <li>• Marketing and processing skills</li> <li>• Develop, recruit and retain Lab Technicians, Biotechnologists, Food Inspectors, etc.</li> </ul>	<p>Objective 2, focus on indicator 2.8                  Objective 4, focus on indicator 4.1                  Objective 5, focus on indicator 5.1                  Objective 5, focus on indicator 5.3</p>
<p>Guide and direct the Provider Sector to offer relevant programmes (focused on scarce and critical skills) and of the required quality:</p> <ul style="list-style-type: none"> <li>- Specific focus on skills needs of AsgiSA projects and programmes</li> <li>- Address identified scarce skills of DoA and the agri sector at large – JIPSA priorities</li> <li>- Through Centres of Excellence render specialised, high quality training</li> <li>- Address production skills needs of especially emerging farmers</li> <li>- Address technical and maintenance skills needs of especially secondary sub-sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Production knowledge and skills</li> <li>• Skills needed for implementing AsgiSA programmes and projects (e.g. biofuels, livestock programme, etc.)</li> <li>• Training and supply of graduates to address scarce skills in occupations such as Agricultural Engineers, Agricultural Economists, Horticulturists, Production and Process Engineers, Financial Experts, etc.)</li> <li>• Training and supply of range of technicians, artisans and maintenance staff</li> </ul>	<p>Objective 1, focus on indicator 1.1                  Objective 1, focus on indicator 1.2                  Objective 2, focus on indicator 2.9                  Objective 4, focus on indicator 4.1                  Objective 4, focus on indicator 4.2                  Objective 4, focus on indicator 4.3</p>

## CHAPTER 1: SECTOR PROFILE

### 1.1 INTRODUCTION

This chapter of the SSP provides a descriptive overview of the agri sector in terms of its current status, how it has changed over time and further attempts to identify or anticipate future changes. The chapter thus reflects the profile of the sector (including its various sub-sectors and occupational profile), the drivers of change, sectoral strategies and other external factors that will influence the demand for skills and the subsequent education and training supply strategy required to address such needs.

#### 1.1.1 THE AGRISETA AMBIT AND SCOPE OF COVERAGE

AgriSETA came into existence in July 2005 following an amalgamation of the former PAETA (Primary Agriculture Education and Training Authority) and SETASA (SETA for Secondary Agriculture). The merger came about as a result of a need to rationalise and consolidate the large number of SETAs that existed prior to 2005, and a realisation that the two SETAs functioning in the agri sector fragmented the sector and that a single integrated SETA could serve it better.

Against the above, the merged AgriSETA thus serves both the primary and secondary sub components of the agri sector. The rule of thumb for identifying activities of the primary agricultural sector are “those activities that occur between the boundaries of a farm fence”, whilst the secondary component in turn focuses on those agri activities providing services to the farmer and the immediate activities once the produce leaves the farm for further processing.

A functional demarcation of the sector served by AgriSETA is as follows;

- Growing of cereals and related crops.
- Growing of vegetables, horticultural specialities and nursery products.
- Sugar plantation including sugar cane and sugar beet, etc.
- Growing of fruit, nuts, beverage and spice crops.
- Farming of cattle, sheep, goats, horses, asses, mules, hinnies and dairy farming.
- Other animal farming not elsewhere classified.
- Ostrich farming.
- Game farming.
- Growing of crops combined with farming of animals (mixed farming).
- Agricultural and animal husbandry services, except veterinary services.
- Growing of trees as second crop by farmer s.
- Fishing, operation of fish hatcheries and fish farms.
- Growing of coffee and tea (incl. coconuts, cocoa, nuts, olives, dates, etc.).
- Fibre (wool and cotton).
- Fruit Packing and Processing.
- Grain handling and farming requisites.
- Milling.
- Pest Control.
- Poultry and Eggs.
- Red Meat.
- Seeds.
- Sugar
- Tea/Coffee/Cacao
- Tobacco

- The National Department of Agriculture (DoA) and the 9 Provincial Departments of Agriculture. (Whilst not listed and categorised by SIC code, the Departments of Agriculture form part of AgriSETA's scope of coverage).

Within the context of this introductory section the following are provided as definitions for some of the terms loosely used in agriculture and which create confusion. The following definitions<sup>2</sup> were agreed on for purposes of this SSP:

Subsistence Farmer:

People who produce just enough to (partly) sustain themselves – no product goes to market.

Emerging Farmer:

New farmer – is normally a farmer from a previously disadvantaged community and/or a new investor in the farming sector with the intent to produce surpluses for commercial purposes.

Small-scale or Under-resourced enterprise:

In essence an enterprise that cannot get ahead. An operation that is underperforming with respect to its potential, repeatedly showing no growth, development or advancement as a result of resource limitations that include:

- Lack of finance,
- Lack of knowledge,
- Lack of skill, and
- Poor business practices.

## 1.2 THE MACRO SOUTH AFRICAN ECONOMIC AND SOCIO-POLITICAL ENVIRONMENT

An understanding of the dynamics of the larger South African economy and the macro socio-political and employment environment and context is important since this environment has an important bearing and impact on the agri sector and its role and contribution within the larger economy and society – which in turn influences the education and training strategies and interventions to be embarked upon.

### 1.2.1 ECONOMIC PROFILE AND TRENDS

South Africa is the economic powerhouse of Africa, with a gross domestic product (GDP) four times that of its southern African neighbours and comprising around 25% of the entire continent's GDP.

The country leads the continent in industrial output (40% of total output) and mineral production (45%) and generates most of Africa's electricity (over 50%). Its major strengths include its physical and economic infrastructure, natural mineral and metal resources, a growing manufacturing sector, and strong growth potential in the tourism, higher value-added manufacturing and service industries.

South Africa's economy has been in an upward phase of the business cycle since September 1999 - the longest period of economic expansion in the country's recorded history. During this upswing - from September 1999 through to June 2005 - the annual economic growth rate averaged 3.5%. In the decade prior to 1994, economic growth averaged less than 1% a year. According to the South African

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<sup>2</sup> The definitions used are not necessary adopted by all and there is currently a much needed ongoing debate to develop generally accepted definitions. The definitions used here are thus for the purposes of this SSP and to ensure that common language and terms are used throughout the AgriSETA strategy.

Reserve Bank, there is no sign of this period of expansion coming to an end. Gross domestic product (GDP) growth was running at an annualised 4.8% in the second quarter of 2005 (compared to 3.7% in 2004 and 2.8% in 2003).

Consumer inflation has been on a downward trend since 2002, when consumer prices increased to an average 9.3% following the September 11 tragedy in New York. Consumer inflation averaged 6.8% in 2003 and 4.3% in 2004 - compared to 9.8% in 1994. At the same time, prudent fiscal management has seen South Africa's budget deficit come down from 5.1% of GDP in 1994 to 2.3% of GDP in 2004. In the first quarter of 2005, this figure fell to 1.6%, with the SA Revenue Service collecting nearly US\$3.5-billion more than expected.

The table below offers selected key economic indicators to the status of the economy.

SA: SELECTED ECONOMIC INDICATORS					
	2001	2002	2003	2004	2005
Real GDP	2.7 %	3.6 %	2.8 %	3.7%	4.3 %
CPI	5.7 %	9.2 %	5.8 %	1.4 %	3.9 %
CPIX	6.6 %	9.3 %	6.8 %	4.3 %	4.3 %
Unemployment	29.5 %	30.5 %	28.2 %	26.2 %	25.3 %
National Debt (% GDP)	41.4 %	37.1 %	35.7 %	35.8 %	35.1 %
External Current Account balance (% GDP )	0.1 %	0.7 %	- 1.5 %	-3 .2 %	-3.7 %
External Debt ( % GDP )	26 %	29.5 %	22.4 %	19.8 %	19.1 %
Gross Reserves( in month of total imports)	2.9	2.8	2, 2	3.1	3.7
Int. Liquidity of SARB (in US \$ billion)	-4.8	-1.6	4.8	11.4	19.8
US\$ Exchange Rate (in Rand)	12.13	8.64	6.64	5.64	6.34 *

**Table 1.1:** Selected SA Economic Indicators, 2005<sup>3</sup>

Increased exports have been one of the main contributors to the economic upswing with exports growing at an average of 5,5% per annum during the 1991-2000 period. In this regard manufacturing and services related exports increased substantially whilst exports in the primary sectors (mainly mining) declined by 1,5%. Exports to Africa have grown dramatically (by more than 500%) - with the bulk of exports going to SADC countries.<sup>4</sup> These developments have triggered structural changes across the economy – with many relevant and appropriate sectors and industries (including agriculture) gearing themselves to become more export oriented.

All of the above had the effect that South Africa was rated the most competitive economy in the sub-Saharan region and the most attractive country in Africa to invest in by the World Economic Forum's 2004 annual Global Competitiveness Index.

The above economic growth also had a positive impact and effect on *employment creation*. South Africa's economy created 658 000 new jobs between September 2004 and September 2005 (SA Statistics Labour Force Survey). This represented a marked increase of 5,7% following sluggish growth in previous years.

However, despite this growth in employment, an increase in the country's economically active population (many due to legal and illegal immigrants and work seekers from neighbouring countries), meant that South Africa's unemployment rate was virtually unchanged at 27% (with some analysts predicting that real unemployment could even be as high as 40%). Whilst most sectors showed an increase in employment, the formal agricultural sector continued a downward trend – refer to section 1.3 below for further details.

<sup>3</sup> IMF Country Report on South Africa, 2005 – \* note that the figure for 2005 US\$ to Rand exchange rate has been added from own sources

<sup>4</sup> State of Skills in South Africa Report, Department of Labour; 2005

An important finding from Stats SA's figures is that the national labour force is becoming skills oriented – with 28% of the additional 1 120 000 jobs created between 2001 and 2005 falling in the more skilled occupations – again the agricultural sector is the exception with a reported loss of skills – refer section 1.3 below.

A further encouraging aspect related to the skills profile of the economy is the intensive drive embarked upon the government to harness and improve the skills in the form of Jipsa (Joint Initiative on Priority Skills Acquisition). This initiative aimed at identifying and addressing scarce skills within the economy is planned to run over a period of three years and promises to give impetus and support to the efforts of the various SETAs in meeting the scarce and critical skills within their respective sectors.

In summary it can thus be stated that South Africa has shown a stabilisation and upward trend in its economic growth. With the recently announced Accelerated and Shared Growth Initiative for South Africa (AsgiSA) aiming at achieving a six percent growth rate, it is believed that the South African economy will be resilient and it is expected overall that:

- The standard of living should improve for South Africans, with people gaining more disposable income.
- Although there will be an initial phase of job losses associated with the strengthening of the Rand and other factors, more people will find employment although not necessarily in the formal economic sector.
- It is harder for companies to compete on the strength or weakness of the Rand and the more competitive and resilient industry players will survive.

The largest threats to the South African economy are however not solely economic but rather of a socio-political nature (refer section 1.2.2 below).

## 1.2.2 THE SOCIO-POLITICAL CONTEXT

South Africa has a complex socio-political structure and can be described as a society in transition. In the domestic arena focus is on transformation and various initiatives focused on economic empowerment and redistribution has been embarked upon to facilitate such. South Africa is also increasingly becoming an active member of the global community and competing on global markets – numerous initiatives focussed on integrating the country into the global market place and enabling it to meet international standards and gain global market share is also evident.

Two principal areas of reform have spearheaded the transformation:

- Political Reform (or democratisation), which has encompassed:
  - Development, maintenance and guardianship of the constitution and constitutional process.
  - Establishment of a credible electoral process and the consequent representative government (additional capacity has and is still being built at local government level).
  - Restructuring of state assets and the civil service.
  - Affirmative action within all spheres of the economy.
  - Redistribution and broader-based welfare programmes.
  - Institution of greater transparency and accountability measures within the state and also within the policy making processes – encouraging greater participation.
  - Addressing social disparity.
- Economic Reform, which focus on:
  - GEAR, which focussed on generating greater growth within the economy (some will argue its effectiveness).

- AsgiSA – the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) is the newly adopted strategy to put South Africa on a sustainable growth path. The objectives (and requirements for the attainment thereof) are a six per cent growth rate per annum and a halving of the poverty and unemployment by 2014.
- Controlled privatisation and greater competitiveness/effectiveness of state owned enterprises.
- Liberalisation of the economy – removal of trade barriers and regulations.
- Black economic empowerment.
- Improved labour legislation and labour relations.
- Skills development and training policies.
- The impact of hunger and famine on vast numbers of our people

Further indications of the complex socio-political dynamics within the South African society are evident from the interplay between the following key tensions/imbances, namely:

- **Wealth and Poverty** – In terms of the expanded definition for unemployment (i.e. those within the economically active population group who are not working) approximately 60% of South Africa's working population is effectively unemployed<sup>5</sup>. The total wealth within the country is held by 50-55% percent of the population. The inequality of the wealth distribution is measured by the GINI coefficient (an equal distribution having a score of 0, and 1% of the population holding 100% of the wealth scoring 1) South Africa has a GINI Coefficient of 0.6. The inequality of wealth distribution is also higher within the black population than the white population. In addition, in a reasonable estimate of poverty lines it is clear that 47% of South Africans live below poverty lines. (Note although a smaller percentage of people live below poverty lines than in the early 1990s, more people live below the poverty line.) With respect to this issue South Africa needs to address both concerns around the distribution of wealth and the levels of poverty.<sup>6</sup>
- **Capital and Labour** – Every enterprise needs both capital to operate and people to do the work and manage the enterprise. Internationally there is a continual tension around building a profitable enterprise and a capital base for the organisation whilst simultaneously meeting the needs of workers and finding ways of adequately recognising and rewarding them for their time, effort, energy and skills contributed. However within South Africa, where the historical racial dispensation has resulted in an unequal distribution of both capital and skills/education the situation is further exacerbated. Whilst it can be said that there is positive developments in this regard, many black entrepreneurs still suffer from a poor educational base and have difficulties in accessing finance.
- **Liberty and Equality** – Liberty (freedom from control, freedom of choice, opinion and action) and equality (having the same status or rights) are not often seen opposing one another. But this juxtaposition is best illustrated in terms of gender equality in that women in South Africa have the liberty to pursue any career they wish, however they are not guaranteed the same recognition or acceptance as their male colleagues. South Africa is however making great strides at equalising recognition, pay and promotional opportunities available to all people crossing both gender and race barriers.

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<sup>5</sup> Stats SA September 2003 Labour Force Study P0210September2003.pdf

<sup>6</sup> Breaking the grip of Poverty in South Africa 2004-2014, Commissioned by the Ecumenical Foundation of South Africa contributors include JP Landman, Dr Haroon Borhat, Prof Servaas van den Berg, Prof Carl van Aardt

- **Privatisation and Socialisation** – This conflict is most noticeable in the opposition to the privatisation of state assets. Privatisation does hold the promise of increased efficiency, lower costs to the end user, money in the state coffers, reduced state expenditure and better service delivery. It however also reduces the opportunities for employment the state can offer, brings with the transaction retrenchments and less job security for employees.
- **Growth and Redistribution** – Growth creates jobs, it lifts the income levels of the population and normally brings along with it sustainable livelihoods and more economic opportunities for more of the population and overall it fights poverty effectively. Growth however also tends to make the rich richer and does very little to address the wealth distribution discussed above. The focus to date has really been to promote a fair demographically relevant distribution of wealth between all races and between the genders. It is however increasingly clear that the divide between the rich and poor is continuing and even increasing. A sustainable quality job improves the livelihood of a family and comes with growth. Redistribution tends to do little for the individuals living in poverty but does ensure that biases get eliminated. In addition the redistribution of income through services such as welfare grants, effectively a “social wage”, also demands higher growth to sustain the increased government spending.<sup>7</sup>
- **Globalisation and Protection** – In the past South Africa has protected key industries by imposing import tariffs and limiting the amount of international competition to South African producers and manufacturers. This meant that businesses competed on an unequal playing field – occasionally not even having to compete but establishing internal market dominance without developing the appropriate skills and competitive management. Although internationally there is still some form of subsidisation for the agricultural industry at a national level, the global market is moving away from such a protectionist arena and approach (with the focus shifting to the ability of producers/organisations to compete as individuals in an open market). Interestingly the deregulation of markets in South Africa has shown a net increase in trade of agricultural goods.

Trends and changes that have indelibly defined the characteristics of the South African social, political and economic environment can be grouped into constructive influences and destructive influences and include:

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<sup>7</sup> Breaking the grip of Poverty in South Africa 2004-2014, Commissioned by the Ecumenical Foundation of South Africa contributors include JP Landman, Dr Haroon Borhat, Prof Servaas van den Berg, Prof Carl van Aardt

## Decisive Socio -Political Trends<sup>8</sup>

Constructive Trends	Destructive Trends
<ul style="list-style-type: none"> <li>○ <b>Deepening of democracy</b>/ Strengthening of Civil Society – there is greater opportunity for participation in government processes and the actions of government have become more transparent and officials have to meet greater requirements of accountability. In addition increased opportunity for discourse on and disagreement about government policy/actions.</li> <li>○ <b>Formation of de-racialised middle class / sharing of income</b> – black economic empowerment and other initiatives encouraging the participation within the economy have allowed South Africa to create a middle class spread across all races and no longer confined to whites (this process still needs to continue).</li> <li>○ <b>Developing a stronger economy</b> – South African businesses have become more competitive internationally, the South African Rand is becoming more stable and the economy is growing beyond its emerging economy status with increased stability and diversity in the opportunities offered.</li> <li>○ <b>Growing policy consensus</b> – Ideological and political agreement on the priorities for the country are being reached. It is clear that there is agreement on the critical issues needed for South Africa to survive and thrive and there are fewer objections to the actions and legislation being passed with greater understanding for the intended outcomes of such legislation.</li> <li>○ <b>Compromising (marginalisation) of the left</b> – the political stability of the country has also brought with it a less radical approach to the reform of the South African economy. The key to maintaining this stability is however continued efforts to address the basic needs of individual citizens in terms of housing, employment, education, healthcare and recognition of participation as South Africans. The speed with which such issues are addressed influences the extent to which the marginalisation of extreme views will be attained.</li> <li>○ <b>International / African partnerships</b> – partnerships offer South Africa new opportunities for trade, influence in the international arena and access to new technology and other capacity.</li> <li>○ <b>Trade-offs</b> – have opened new markets to products previously blocked from being traded internationally, they have also brought about the opportunities for technology and skills exchange between similar enterprises and in certain cases guaranteed social investment / growth investment from foreign multinationals trading in SA.</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Increase in absolute poverty</b> – the issue of poverty and an increase or decrease in poverty is difficult to define. Though the net effect in South Africa is that there are more people living below poverty lines requiring assistance (approximately 22 million people or 46% of the population).</li> <li>○ <b>Unemployment</b> – the net employment rate in South Africa has decreased. Less people are economically active than before in South Africa.</li> <li>○ <b>HIV/AIDS</b> – one of the biggest crises facing Southern Africa is HIV/AIDS. HIV/AIDS is depleting the workforce in numbers, increasing the burden of work on those who remain employed and is placing an enormous burden of care on the economy. The grip this disease holds, and the seeming inability of our communities and government to come to terms with the disease also creates a sense of despondency and lack of responsibility amongst sufferers.</li> <li>○ <b>Crime and corruption</b> – factors such as HIV/AIDS, abject poverty, low educational levels, unemployment and a destruction of social structures within South African society have all contributed to a sense of desperation, lawless bravado and disrespect for others. In addition the ineffectiveness of the South African Judicial System and the under-resourcing of the police services have meant that an insufficient disincentive is created for crime and corruption.</li> <li>○ <b>Moral degeneration</b> – the destruction of the South African family and community structures has been well documented. The impact of migrant labour, an inability of parents to provide for their families and now the impact of HIV/AIDS destroying an entire generation has eroded the values and principals normally enforced and encouraged through family and societal norms.</li> <li>○ <b>Administrative inefficiencies</b> – Whilst numerous programmes were put in place to address the inequalities created by the past, provide welfare assistance and general upliftment of the population, it has unfortunately been plagued by an inability to deliver (due to insufficient delivery channels, bureaucratic processes, corruption and other logistical hurdles, etc.).</li> <li>○ <b>Landlessness</b> – this issue is discussed in greater detail in “Land Reform”. But associated with the issue of land tenure and ownership rights is the fundamental concept of the issue of self-sufficiency, belonging and security.</li> <li>○ <b>Flight of Skills</b> – there has been a considerable loss of high level skills caused by immigration. This negative trend is however been addressed by JIPSA.</li> </ul>

<sup>8</sup> Adapted from Socio-political Environment: Trends, challenges and prospects, Oct 2003, Willie Estherhuyse, Metlife

### 1.2.3 THE EMPLOYMENT CONTEXT

From the employment statistics it is clear that significant portions of the South African population is still economically inactive, and have never held a permanent position.

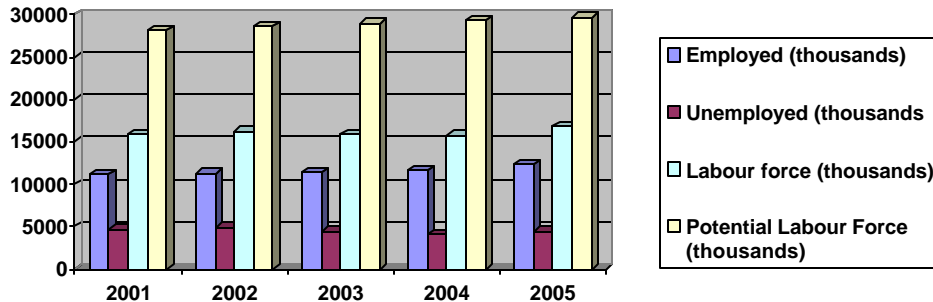


Figure 1.1: Employment figures for people of Working Age (16-65)<sup>9</sup>

From the above figures the following significant aspects are highlighted:

- Official unemployment has remained relatively unchanged at 26,7 %
- A very high percentage of the potential labour force (people in working age 15-65) is Not Economically Active. In this regard there is a large number of discouraged work-seekers and it is believed that the extended or unofficial unemployment rate could be as high as 60%

Whilst not projected in the above graph, the following are further key observations with regard to the labour market in 2005:

- There seems little gender variation in the unemployment figures
- Whilst there has been a marked improvement in the number of black people in employment, they are still bearing the greatest burden in terms of unemployment

From the latest unemployment statistics it is further clear that one of the best ways of improving economic activity within communities is to improve the educational level (see Figure 1.2 below). It is important to highlight that education does not lead to employment but it does provide access to more opportunities for employment and normally allows people to become more economically active through their own initiative.

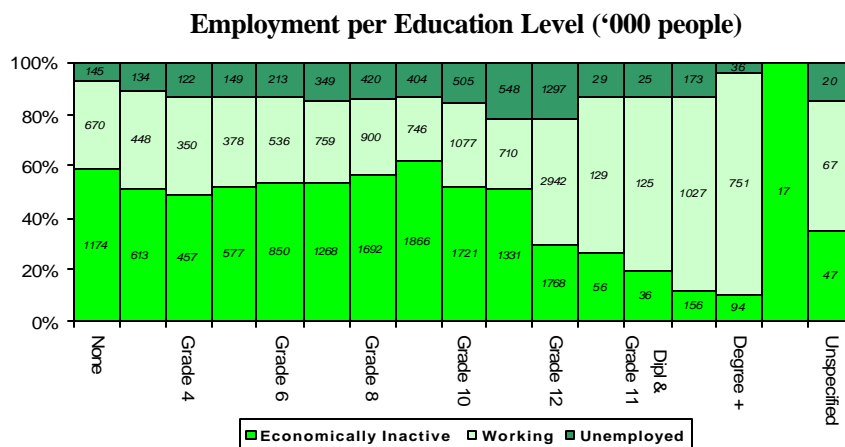


Figure 1.2: Employment levels as per Education Level<sup>10</sup>

<sup>9</sup> Stats SA September 2005 Labour Force Study P0210September2005.pdf

### 1.3 AGRI SECTOR PROFILE AND REVIEW

The value of commercial agricultural production in South Africa was R 67 billion in 2005 with a GDP contribution of around R 30 billion. Nominal growth in agricultural production has been 11,5% per annum since 1965, while the economy as a whole grew at 14,4% per annum over the same period – resulting in a decline of agriculture’s contribution to GDP from 9,1% in 1965 to 2,6% in 2004<sup>11</sup>. There is thus a secular decline in the economic contribution of agriculture. Despite its relatively small share of the total GDP, agriculture is an important sector in the South African economy. It is a major earner of foreign exchange. It further remains an important provider of employment, especially in the rural areas, and in this regard its socio-economic contribution in terms of supplementing household income and/or contributing towards food supply for more than 2,5 million rural households is invaluable and can not be under estimated.

In South Africa the agricultural sector still plays a key role and anchor in the economy and a direct correlation between the growth in the agricultural sector and growth in the economy exists, the correlation factor between the agricultural sector and GDP being 0.51.

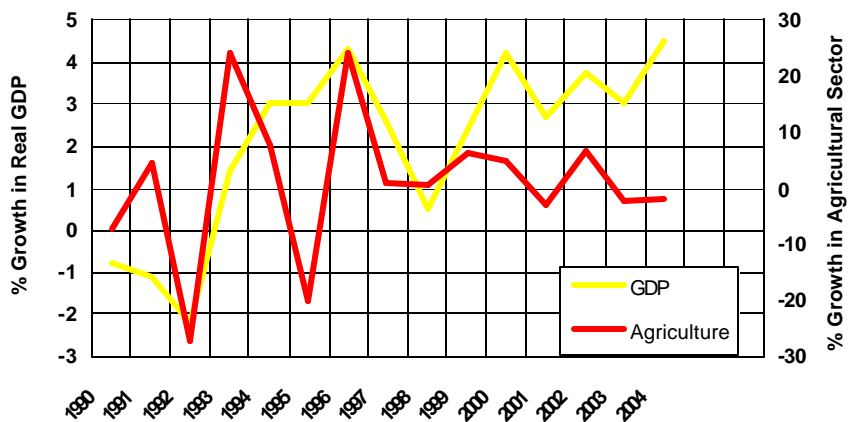


Figure 1.3: Growth in agri sector compared to Growth in GDP<sup>12</sup>

Agriculture’s strong indirect role in the economy is a function of backwards and forward linkages to other sectors. Purchases of goods such as fertilisers, chemicals and implements form backward linkages with the manufacturing sector while forward linkages are formed through the supply of raw materials to industry and the food supply chain in general. About 70% of agricultural output is used as intermediary products in other sectors. Agriculture is therefore a crucial sector and an important engine of growth for the rest of the economy.

<sup>10</sup> Stats SA September 2003 Labour Force Study P0210September2003.pdf

<sup>11</sup> Economic review of South African Agriculture, 2005 – Publication of the Department of Agriculture

<sup>12</sup> Stats SA, P0441 Gross Domestic Product Annual Estimates 1993 – 2004 (October 2005)

### 1.3.1 OVERVIEW OF THE PRIMARY SUB-SECTOR

The following Agricultural Sector Review was developed by the SA Department of Agriculture and published in the 2004 Strategic Plan for the Department of Agriculture. Since the review provides a very good background and macro overview of the primary agricultural sector, the following selected sections are quoted and/or extracted directly from the Strategic Plan.<sup>13</sup>

More than 80% of the total land mass of South Africa is suitable for agriculture. Of the total agricultural land 12 million ha (14%) is deployed for arable farming; 84 million ha (84%) for extensive grazing and 2 million ha for forestry and nature conservation. Only 1,35 million ha (less than 2 %) of the agricultural land area is irrigated.

Whilst more than 70% of the total land area in seven of the nine provinces is used for agricultural purposes, high potential arable land is concentrated on the eastern seaboard of the country (KZN and Mpumalanga provinces), while the Western Cape, Eastern Cape and the Free State provinces have medium-potential agricultural land. Large parts of the country (most of the southern and western interior) are semiarid and suitable for extensive livestock production only. The highveld is suitable for producing field crops such as maize whilst vegetables are grown in the lowveld.

The total population of the country amounts to 44 million people – 54% residing in the urban areas whilst the remaining 46% (more than 20 million people) live in the rural areas. Of the total rural population an estimated 5 million live in the commercial farming area, 7 million live in the communal areas while the remaining 8 million (40%) live in densely populated informal, tenancy and mission settlements.

The agricultural sector is generally classified by racial, spatial and scale features. The stark contrasts that exists in the sector is evident from the following:

- Approximately 60 000 commercial farmers who are predominantly white are found in almost 87% of the total agricultural area that is highly developed and produces more than 95% of the marketed output.
- In contrast an estimated 2,4 million small scale farmers (with an average farm size of less than 2 ha) form part of the 15 million black people who are mostly settled in the communal areas that make up 13% of the agricultural land area. Agricultural activities are of such small scale that farming only contributes about 10% to their total annual household income.

Agricultural production and the import/export situation are as follows:

- Livestock production – the country is a net importer of meat (mostly from neighbouring Botswana and Namibia).
- Field crops – most important crops are maize, sugar, wheat and oilseeds. The country is a net exporter of maize and sugar whilst a net importer of wheat.
- Horticultural production – consists of all the major fruit groups (deciduous, citrus and subtropical), vegetables and flowers. Most of the fruit produced is exported whilst less than 5% of vegetable production is exported.
- According to 2005 export values the most important export products were wine, citrus, grapes, sugar, apples, pears and quinces. Rice, wheat, poultry meat and soya-bean oil where the major import products.

Whilst agricultural exports have grown rapidly since 1990 (mainly in the horticultural field due to a re-entry into the international markets following democratisation), agricultural imports have grown even faster (mainly due to a decline in field crop production) – resulting in a substantial decline in the ratio of exports to imports. In 2004 the agricultural sector contributed about 7,6% towards the total South African exports and about 5,4% towards total South African imports. Estimated 2005 agricultural export values amounted to R 25 500 million. As such it is a major earner of foreign exchange.

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<sup>13</sup> Strategic Plan for the Department of Agriculture, 2004

The latest figures from Stats SA is that there are 925 000 people employed within the formal agricultural sector and it is estimated that a further 2,4 million people are in some way or another involved in agricultural production – this second group termed as the so-called “informal sector” – ranging from and including homestead producers, subsistence farmers and small-scale emerging farmers. Whilst training and other support services traditionally focussed on the needs of the formal or commercial agricultural sector, a wider focus incorporating the emerging farmer is now urgently required. In this regard the government’s policy related to land reform and the intention to distribute 30% of agricultural land to previously disadvantaged South Africans by 2014 (having only redistributed 3% by 2005) holds particular implications for the agricultural education and training system. A need exists to ensure that such land reform beneficiaries have the skills and competencies to utilise the land productively – which will demand particular focus and attention from both the DoA (incorporated in their AET Strategy) and from the AgriSETA.

The long-term trend in farm employment has been negative (whilst the decline was slower than elsewhere in the economy). However, since the introduction of minimum wages in the sector there has been a drastic decline with an almost 24% reduction in employment over a period of 2 years. What is particularly disturbing is that the September 2004 Labour Force survey suggests that the loss of employment has primarily been amongst skilled agricultural workers (refer Chapter 3 for details). Whilst the long-term trend reflected a growing practice in the farming sector to substitute permanent workers with temporary and seasonal workers and a shift to the use of labour contractors, the recent spate of farm killings and a growing perception that there is a safety risk on farms suggests a more recent favouring of trusted long-term employees. It is further important to note that whilst the wages of less-skilled workers rose faster than average wages in the remainder of the economy since the mid-1980s, this has not been the case in the primary agricultural sector – with the unit cost of labour remaining stable. This could be attributed to the fact that minimum wages were not applicable to the agricultural sector until two years ago and might be one of the reasons why less-skilled farmwork was not popular amongst work seekers.

### **1.3.2 OVERVIEW OF THE SECONDARY SUB-SECTOR**

As indicated earlier the secondary component of the agri sector focuses on those agricultural related activities and services that are either inputs to the farmer; and/or the immediate activities, services and processes once the produce leaves the farm for further processing or beneficiation.

Agriculture’s strong indirect role in the economy is a function of backwards and forward linkages to other sectors. Purchases of goods such as fertilisers, chemicals and implements form backward linkages with the manufacturing sector while forward linkages are formed through the supply of raw materials to industry and the food supply chain in general. About 70% of agricultural output is used as intermediary products in other sectors. Agriculture is therefore a crucial sector and an important engine of growth for the rest of the economy

The growing importance of value adding to primary agricultural produce (from both a local market perspective and an export perspective) has sparked a considerable interest in the establishment of numerous types of agri-businesses (ranging from small-scale value adding activities on farms to large industries in the secondary sub-sector).

The democratisation of South Africa, accompanied by the liberalisation of foreign and domestic markets, not only created market opportunities in traditional commodities and in traditional markets for traditional suppliers, but also paved the way for a more diverse range of commodities and value-added products to be sold into a more diverse range of markets. It has thus created more and an expanded range of opportunities for farmers and businesses throughout the supply chain.

The secondary component of the AgriSETA is highly diverse and organised into different sub-structures, each of which has its own goals and objectives which may in themselves be highly diverse. It should also be noted that some components of the secondary sector falls within the scope and ambit of other SETAs – e.g. the Food and Beverages sector which incorporates tobacco and pet foods and the MERSETA which incorporates aspects such as agricultural machinery. This anomaly exists due to the fact that the Skills Development Act opted for a different demarcation than the Standard Industrial Classification generally used for economic analysis (e.g. by Statistics South Africa). This demarcation has also made it particularly difficult to develop accurate figures regarding the size of the so-called secondary sub-sector.

Many of the functions and activities performed in this sub-sector shows a likeness with those in other sectors such as wholesale (storage and distribution e.g. by cooperatives); the manufacturing sector (processing) and the food and beverages sector (processing and beneficiation of produce). The size and scope of many of the organisations in the secondary sub-sector is also of such a nature that they demand a range of high level managers, administrative and financial staff found in all large organisations. The scarce and critical skills demanded in the secondary sub-sector is thus quite similar to that of larger organisations in the other sectors indicated above.

Whilst Statistics South Africa initially indicated that they could assist in the collection of employment information pertaining to the secondary sub-sector, it proved unattainable at this point in time. In developing the employment data reflected in the table below, extensive use was subsequently made of employment data received from SARS (reflecting employment in businesses and employers registered with SARS and allocated to the SIC codes used for levy purposes). The statistics obtained from SARS were matched with information obtained from key information sources within the industry and expanded or adjusted where applicable (refer sources and notes reflected in the table).

From the information collected it is estimated that the secondary sub-sector employ approximately 313 000 people.

SIC Code and Sub-sector		Number of Employees	Source or Notes
11140	Seed production and marketing	3 042	SARS database
11141/11220	Production of animal products (including dairy farming)	58 287	SARS and MPO
11142/62208	Manufacturing, processing, dispatching tobacco products	6 037	SARS database
11220	Other animal farming and production of animal products n.e.c.	8 287	SARS database
30111	Slaughtering, dressing and packaging including poultry	36 083	SARS and SAPA
30114	Poultry and egg production including dressing and packing	34 813	SARS and SAPA
30115	Production, sale and marketing of agricultural products	405	SARS database
30117	Slaughtering, dressing, packaging of livestock	3 000	SARS database
30132/30133	Fruit packaging in cartons, fruit juice drummed and export	28 503	SARS database
30300/30332	Manufacture of grain mill products, (including starches)	2 205	SARS database
30311	Manufacture of flour and grain mill products	4 565	SARS database
30313	Handling and storage of grain	18 824	SARS database
30330	Manufacture of prepared animal feeds (including Poultry)	6 900	SARS and SAPA
30331	Manufacture of pet foods	797	SARS database
30420	Storage, processing and manufacture of sugar (including syrup)	85 000 *	Industry - see note
30493	Processing and marketing of coffee and tea	964	SARS database
61210	Wholesale trade in agricultural raw materials and livestock	3 734	SARS database
61502	Wholesale and retail trade in agricultural machinery	3 032	SARS database
74136	Transport of livestock	607	SARS database
87120	Agricultural and livestock research	6195	SARS database
99003	Pest control	1 121	SARS database
30118	Grading, ginning and packing of wool and cotton raw material	500	Industry estimate
<b>TOTAL</b>		<b>312 901</b>	

\* Note – this figure is substantially higher than the SARS figure of 17 570

### 1.3.3 IMPACT OF POLICY RELATED CHANGES

There have been a number of significant shifts in agricultural policies and regulations over the past decade. Some of the key regulations affecting the agricultural sector include:

- Land reform – for which there has been a huge buy-in from the agricultural sector and requires careful skills planning to optimise benefits (especially in view of the anticipated acceleration of the process over the next few years).
- The Agriculture Broad Based Black Economic Empowerment (AGRIBBEE) strategy – for which there has also been considerable buy-in but now need a wide range of pro-active initiatives for implementation.
- The deregulation of the agricultural markets.
- The introduction of Land Tax, and
- The revised labour legislation, including skills development.

Whilst the above affects the primary sector directly, it can naturally be expected to have a knock-on effect on the secondary component of AgriSETA<sup>14</sup>. A further analysis of how these changes effect the sector is as follows:

#### 1.3.3.1 Impact of the Deregulation of Agricultural Sector markets

The introduced deregulation and liberalisation measures resulted in a sector that receives little support from the state. Today commercial and small-scale farmers receive less support from the State than their counterparts in other industrial countries. This has had both positive and negative impacts on the sector with output from commercial agriculture continuing to grow (export growth in particular) and an increase in productivity, whilst simultaneously creating “winners” and “losers” amongst commercial farmers – resulting in a substantial number who had to leave the sector. The historically disadvantaged farmers (black farmers spanning the spectrum from commercial to emerging and small scale farmers) have also not yet fully benefited from the range of resources now available to them (in the form of land, credit, information, etc.) since the state continues to face challenges in providing them access to such.

The realised impact of the deregulation of the agricultural markets includes<sup>15</sup>:

- Sustained real farmer gate prices – farmers have adapted by reducing input costs.
- More focus on the downstream component of the supply chain also becoming competitive – e.g. the increase in bread prices not ascribed to production only but also other players (e.g. Millers).
- Less collaboration between local growers especially in oversupply conditions.
- The informal trade in red meat is increasing.
- There is still a lack of transparency in terms of pricing in the supply chain from farmer to retail.
- Some anecdotal evidence that there is an increase in small business activity.
- Overall employment has decreased, most of the time affecting less skilled workers
- Wages of skilled workers have improved.

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<sup>14</sup> It must be noted that whilst it is not always understood this way, the increased legislation and (de)regulation of the agricultural industry aims to improve the competitiveness and stability of the South African agri sector in the long-term. The deregulation of the markets has forced enterprises to become more stable, labour legislation and land reform have improved the ethical trading standards South Africa can subscribe to and minimises the threat of land grabs.

<sup>15</sup> NAMC Study on the Deregulation of markets supplemented with findings from the NAMC Study on the Deregulation of the Meat Market (released March/April 2004)

Employment within the agri sector has been impacted by the deregulation of the market in that:

- Number of regular workers has dropped (with the exception of the horticultural sector).
- Number of Seasonal workers employed increased overall – highest in the field crops and horticultural sector, decreased in animal production and mixed farming.
- Number of contract workers has increased especially in the skilled worker arena<sup>16</sup>.

### 1.3.3.2 Impact of Land Reform

The perceived threat of land reform in South Africa seems higher than the real threat this process poses at the moment. It is encouraging to continually have the openness and willingness of the agric sector to participate in this programme reinforced. The latest being the Markinor study indicating that over 75% of commercial farmers are willing to engage in and encourage land reform.<sup>17</sup> It is however of critical importance that the land reform beneficiaries have the skills and competencies to utilise the land productively.

### 1.3.3.3 Issue of Land Rights

The issue of land ownership and land rights is not a simple one in the (South) African context – in most western societies land ownership is held by individuals, however in South Africa (and other parts of Africa) land rights are also held within communities and other social structures. It is also important to realise that land rights are not confined to issues of ownership but also extends to:

- Access / Management rights – that is, the right to decide how land will be accessed and used,
- Exclusion rights – the right to decide who do not have access and rights to use the land, and
- Transfer rights – the right to sell, lease or mortgage land.

Delivery by the Land Reform Programme for Agricultural Development and key statistics in this regard are illustrated below.

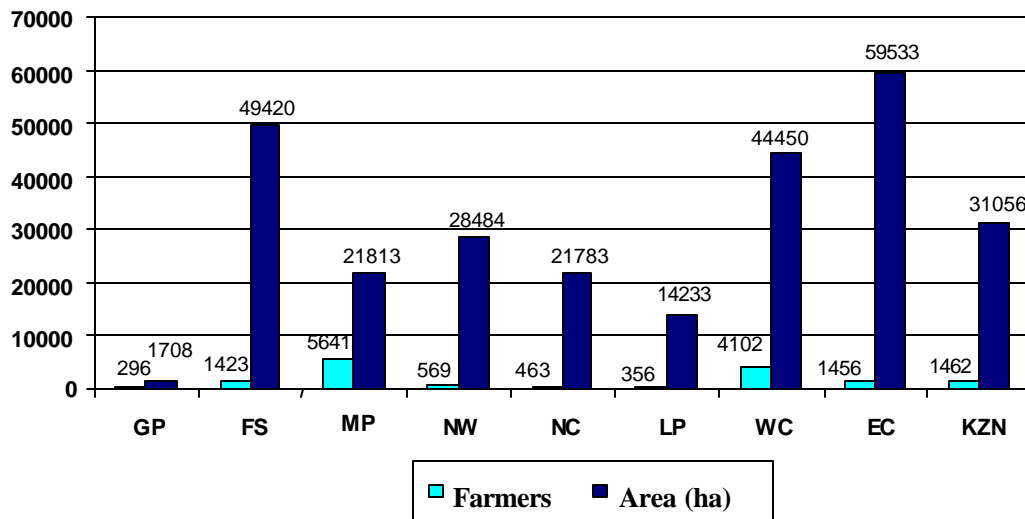


Figure 1.4: Number of beneficiaries and hectares of land distributed for each province<sup>18</sup>

<sup>16</sup> The larger a company, the more likely they are to employ part-time staff. For example: Only 11% of all companies in the secondary sector with 150 or more employees do not employ any part-time employees. Eighty percent or more of the companies in the Sugar, Fibre/Tea/Coffee, Fruit and Tobacco sectors employ part-time staff. Sugar, Fruit and Tobacco industries employ the most part-time employees per company as they are very seasonal

<sup>17</sup> SAPA press release published on news24.co.za on 8 June 2004

<sup>18</sup> National Department of Agriculture Annual Report for 2003

Currently the land reform programme makes use of a willing buyer willing seller principle, which is proving reasonably successful. Within his State of the Nation Address earlier this year president Mbeki however indicated that this principle is under reviewed and currently open for debate.

There has been a definite increase in the number of women benefiting from the land reform programmes and in addition, more and more community projects and cooperatives are being formed which are indicating direct benefit to the community.

A key concern has been the viability of these programmes and the transfer of skills to new owners. The commercial agricultural sector has repeatedly indicated that it is prepared to act as mentors although the logistics of such a mentorship programme and the mismatch between provider and recipient expectations have not yet been addressed. Current support programmes make extensive use of the Agricultural Colleges within the different provinces. There is however doubt if these institutions are suitably geared and capacitated to render the range of services required (especially in the field of farm and business management skills).

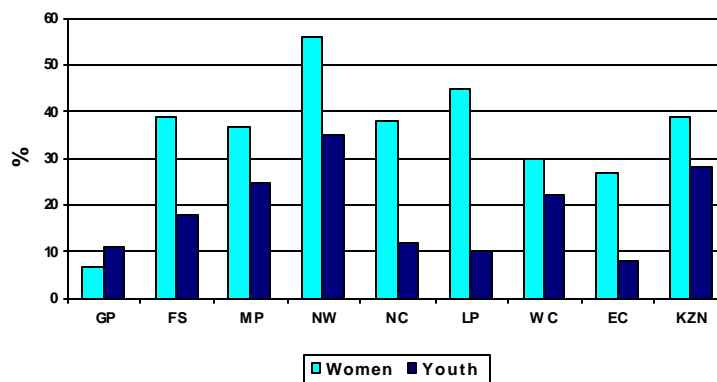


Figure 1.5: Support Training provided<sup>19</sup>

### 1.3.3.4 Black Economic Empowerment<sup>19</sup>

On 2 November 2005, the DOA released the Draft Transformation Charter for Agriculture. This charter applies to the entire value chain in the South African Agricultural Sector, including all activities relating to provision of agricultural inputs, services, farming, processing, distribution, logistics and allied activities that add value to agricultural products. It therefore blankets the AgriSETA, FoodBev SETA and components of the W&R SETA.

The objectives of AgriBBBEE are to facilitate broad-based economic empowerment in the agri sector by implementing initiatives to include Black South Africans at all levels of agri related activities and enterprises along the entire agri value chain by:

- Promoting equitable access and participation of Black people in the entire agric value chain,
- De-racialising land and enterprise ownership, control, skilled occupations and management of existing and new enterprises,
- Unlocking the full entrepreneurial skills and potential of Black people in the sector,
- Facilitating structural changes in agri support systems to assist Black South Africans in ownership and the running of enterprises,
- Socially uplifting and restoring the dignity of Black South Africans in the sector,

<sup>19</sup> Broad Based Black Economic Empowerment, Draft Transformation Charter, AgriBEE Steering Committee, 2 November 2005

- Increasing the extent to which communities, workers, cooperatives and other collective enterprises own and manage existing and new agri enterprises, increasing their access to economic activities, infrastructure and skills training,
- Increasing the extent to which Black women participate in the above,
- Empowering rural and local communities to have access to the above.

The above mirrors the NSDS II very well.

### 1.3.4 IMPACT OF OTHER INTERNAL FACTORS

Two further important factors that have a serious impact and effect on the agri sector are the following:

#### 1.3.4.1 HIV/AIDS<sup>20</sup>

The high prevalence and impact of HIV/AIDS in South Africa is dramatic. Agriculture, fishing and forestry are of the hardest hit industries. The core of the impact of HIV/AIDS is in terms of its impact on the labour force. The implications for the South African labour force include:

- Employers will no longer be able to assume an unlimited labour supply.
- People most affected by HIV/AIDS are the most productive of society.
- People affected by poverty, typically unemployed are hardest hit by HIV/AIDS.
- Prevalence of HIV/AIDS in the agricultural sector is not fully quantified but could be as high as 22%.

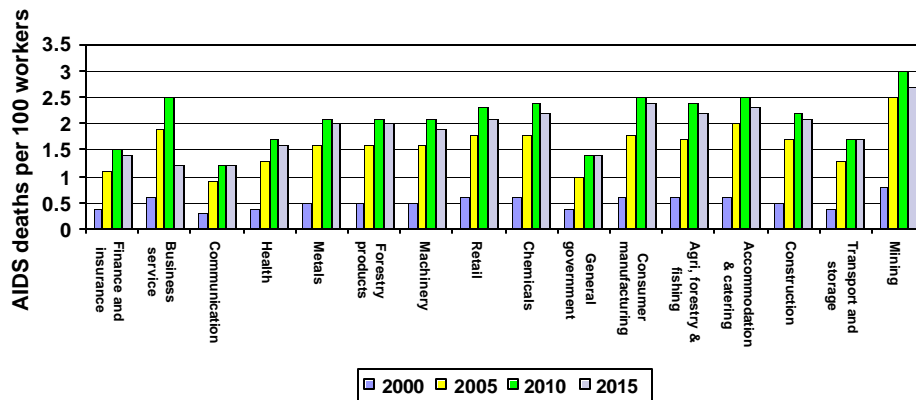


Figure 1.6: Aids Deaths Per 100 Workers for different industry segments<sup>19</sup>

It is often believed that the threat and impact of HIV/AIDS reduces significantly with an increase in education and skill level; unfortunately this is not yet the case in South Africa.

Equally important as understanding the risk of an organisation being affected by HIV/AIDS, is dealing with the impact HIV/AIDS has on the workforce in general. Not only is the workforce decreased through mortality but there are also secondary impacts that have more devastating effects on productivity and economic growth in South Africa.

<sup>20</sup> Figures sourced from HSRC HRD Review published late 2003

The Human Resource Development implications of HIV/AIDS for the Labour Market in South Africa are:

- **Replacing skills** needs to happen more frequently and is no longer only a long term consideration for an organisation.
- Replacing skilled worker **costs** approximately 8 times given experience and training costs.
- Replacing low-skill workers is increasingly more difficult and more costly than anticipated because the majority of unemployed people have not worked since leaving school and have no work ethic or cultural experience of entering the work environment.
- In addition the occurrence of HIV/AIDS within the unemployed is typically 30-50% higher than the employed – i.e. there will not be an unlimited **resource pool**.
- Mortality rates within the student population are also high – increasing the number of **drop-outs** and eventually decreasing the demand for education (but not for skills from the workplace).
- Companies are currently not budgeting for increased training and recruitment **costs** as a consequence of HIV/AIDS.
- Companies need help with strategies that prolong the period of **productivity** and increase the productive output of those affected by HIV/AIDS.

#### 1.3.4.2 Farm Safety and Security

Farm safety and security in South Africa has been a topical issue for a number of years, with statements being investigated that farm murders are a form of genocide and that these are racially motivated. At this point the economic desperation of many in the rural areas and the vulnerability of farmers seem to be the most common indicators to the disproportionate amount of farm attacks. As indicated earlier it holds implications for employment patterns as indicated in section 1.3.1 above (i.e. whilst the long-term trend reflected a growing practice in the farming sector to substitute permanent workers with temporary and seasonal workers and a shift to the use of labour contractors, the recent spate of farm killings and a growing perception that there is a safety risk on farms suggests a more recent favouring of a reduced workforce consisting of trusted long-term employees – which implies the need for multi-skilling of such workers).

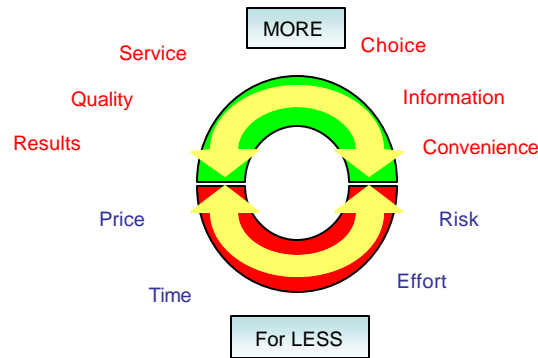
### 1.3.5 OTHER LOCAL AND INTERNAL MARKET FACTORS

#### 1.3.5.1 Consumerism as a driving force within the Agri Sector

Over the last few years the consumer spending patterns have been radically affected by:

- Increased **information** flow: information about production and generally about products is key to greater accessibility and transparency to consumers.
- Greater participation in the **global village**: consumers can and do buy from all over the world – are no longer constrained by geographical boundaries.
- Greater consciousness of **lifestyle and health** – consumers are looking for products that integrate into their lifestyles and at least provide a clear indication of the health risks they face – hopefully improving their health.

This has resulted in the following dynamic:



**Figure 1.7: Changing Consumer Demands<sup>21</sup>**

In this regard consumers are also making their decisions less and less based on price (except for lower income groups). Additional factors consumers consider in their product decision include (ranked according to importance):

Rank	Europe	South Africa
1	Convenience	Convenience
2	Taste	Appearance
3	Appearance	Sell-by-date
4	Sell-by-date	Brand
5	Brand	Taste
6	Healthy version	Healthy version
7	Non genetically modified	Free range
8	Home grown	Organic
9	Free range	Ingredients
10	Ingredients	Home grown
11	Assurance	Assurance
12	Organic	Non genetically modified

**Table 1.2: Consumer Choice Parameters<sup>22</sup>**

### Impact of consumerism on agri management

The roles and requirements within the agri sector are subsequently changing and production and processing has changed to incorporate factors of:

- Managing supply availability,
- Sourcing and negotiating customised inputs,
- Making use of contract agents,
- Incorporating IT into their businesses and also exploring the value of e-Platforms,
- Management of information roles and flows,
- Greater vertical integration, facilitation and coordination of such mechanisms, and
- Continually managing the identity of the enterprise.

<sup>21</sup> Adapted from The Greenery – Gezonde Ideeën

<sup>22</sup> Prof David Hughes, Imperial College London and various retailers in Johannesburg

More emphasis is also being placed on non-tangible values such as:

- Marketing and brand building,
- Risk management and market information driven, and
- Value chain management – especially forward integration

Some of the requirements for the future of agri enterprises include:

- Strategies to avoid competing solely on price, or the ability to produce low priced commodities,
- Development of supporting industries,
- Closer links with research and training to develop alternative products and alternative suppliers,
- Development of local consumers,
- Greater participation and more competitive participation on the global market,
- Further development of a lobby group able to campaign for the right government policies, and
- Upgrading the standards of production.

### **1.3.5.2 Technology**

The following information technology solutions are offered in South Africa (directly relevant to the agri sector):

- Internet banking,
- Online commodity and futures trading,
- Online procurement,
- Packages and online services supporting financial recording and financial management, including comparative sector analysis and ratio analysis of an enterprise.

Although a number of sophisticated services are available in South Africa, it is evident that only a small percentage of farmers have access to and/or have the ability to utilise this technology effectively in their operations, due to lack of infrastructure and non-supportive technology (farm telephone lines, lack of electricity, etc.) This is especially true for the new and emerging rural farmers. Whilst the larger secondary enterprises (as is the case with larger farming enterprises) have the infrastructure to use IT as a business imperative, it is equally true that small firms in the secondary sector (such as small pesticides firms, small category E and F abattoirs and small chicken producers) are lacking the necessary infrastructure.

### **1.3.5.3 Global Markets and Participation**

South Africa has become well known for its international activities in certain markets such as deciduous fruit, citrus and certain flowers. The global markets have in general however been more difficult to enter for certain segments. Key changes in the global markets include:

- Greater emphasis on food safety,
- More co-opetition from producers,
- Increased product diversification,
- Continual search for new markets and new trade agreements, and
- Reliability, predictability and quality of product provided.

One of the key concerns the agri sector currently has, especially when dealing with Europe and the United States, is the use of food safety and other production standards frequently perceived as barriers preventing entrance by producers from the developing world.

### ***Food Safety***

Food safety has become a real concern in the international market, especially in Europe and North America. Unfortunately South Africa has not yet been able to build a consistent image in terms of food safety across all industries. Challenges faced by the industry include:<sup>23</sup>

- The complexity of international trade agreements (SPS and TBT standards).
- Harmonisation of global food standards (e.g. MRL's – EU 2008 and Integrated Quality Management Systems)
- Traceability (e.g. EU 2005 Standard).
- The threat of Bio-Terrorism, such as September 11, January 2004 (food scare), Pick 'n Pay (poisoned food).
- International Quality Management Systems, of which the most important are EUREPGAP, HACCP, BRC, ISO 22000,
- General Management Organisations.

### ***Co-opetition***

Co-opetition offers a unique opportunity to harness international markets. The shared risk and support offered by cooperation between individual farmers to form an export organisation, or even more far reaching by cooperating across the industry and/or creating trade blocks with other countries, harnesses key benefits for the industry as a whole. The focus of co-opetition is to collaborate to increase the size of the pie while still competing for a slice.

### ***International Trade Barriers***

A strong view is that new regulations and trade standards are a new form of trade barrier. The experience within the meat industry highlights the following being used as soft trade barriers:

- Questionable sanitary standards (hormone ban, disease restriction and zero tolerance),
- Technical accountability (burdensome paper trail with slow approvals processes),
- Anti-dumping measures (both in the developed and developing world),
- "Positive discrimination" – capitalising on food safety fears of the public, and
- Imported food is typically perceived to be of lower quality.

Some of the other factors that are important to address towards more successful international trade are:

- Producing food that meets market demands and tastes,
- Transport and logistics costs in South Africa,
- Ensuring that production remains reliable even through poor cycles, and
- Improving competitiveness of production to be able to compete without subsidies.

### ***Market Share (Local Food Market)***

The local food market is growing in sophistication on the higher end of the market, but the majority of growth is still seen in informal trade (especially for basic products such as tomatoes and potatoes). The formal retail sector has remained remarkably steady although there has been an increase of larger retail groups and larger farming enterprises reaching agreements directly and the role of agents and cooperatives diminishing. The local market is also starting to show less seasonality, although this is more determined by the overall price of foods.

Key skills that are often lacking in smaller/emerging operations are<sup>24</sup>:

- Lack of access to markets/market channels,
- Gaining access to market information,
- Interpreting market data,
- Understanding price determination mechanisms, and
- Lack of understanding of the auction process

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<sup>23</sup> Gerrit Bruwer - PPECB

<sup>24</sup> Adapted from the NAMC Evaluation of Fresh Produce Markets and substantiated by the RPO

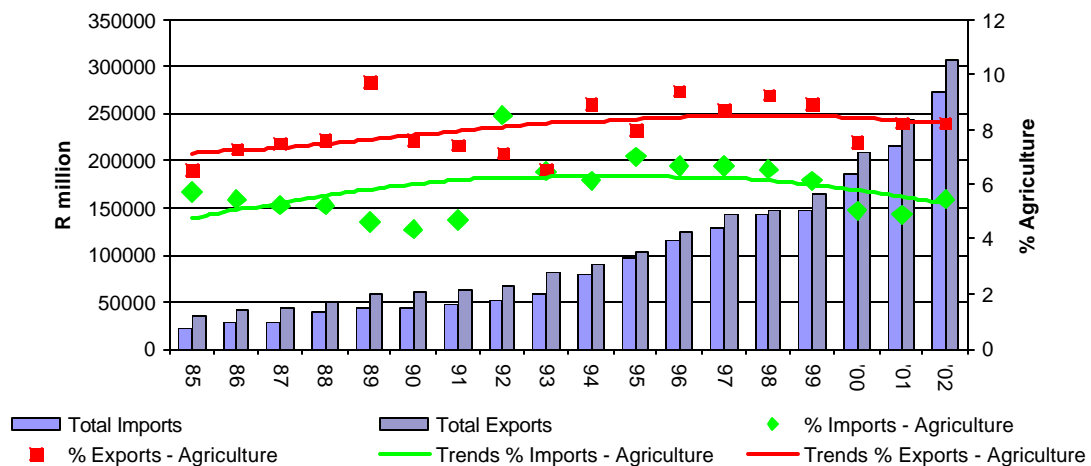
Fresh produce markets also have soft barriers of entry to emerging farmers such as the way the floor space is allocated and limited auctioneers and auction support staff.

**Market Share (Import and Export)**

South Africa has been steadily growing its export market over the last 10 years. Although at this point the primary destination is Europe for most commodities, this is changing. It is interesting to note that trade with Africa, the Middle East and Far East is growing.

Figure 1.8 below provides an overview of SA import and export figures. Important notes in this regard are the following:

- South Africa has consistently remained a net exporter in Rand value.
- Both imports and exports are showing a strong growth trend overall.
- This trend is also seen in the agric sector.
- The contribution from the agric sector to imports and exports fluctuates between 6 - 10% for exports and 4 - 6% for imports.
- There is a greater diversity in products being exported and the destinations seem to be evenly spread across the world. This is a good indication in terms of the risk-profile for agricultural exports.



**Figure 1.8: South African Import and Export Figures<sup>25</sup>**

The success in growing market share for products such as citrus fruits, deciduous fruits, wine, and grapes has come from increasing the product varieties and trying to match those more closely with the international markets - e.g. wine cultivars being grown now appeal more to the European market; lemons have never really sold in Europe but are becoming a key export product to the Middle East and Japan is becoming a key market for navel oranges.

In terms of exports NEPAD and SADC agreements have led to greater exports into Africa and in the US. The African market remains under-exploited. One of the key concerns in terms of building market share in the developing world is the impact of food aid. Other issues in terms of trade in Africa are a lack of road / rail infrastructure and the need to educate the consumer to accept more nutritious products. Figure 1.9 below reflects the export of agricultural produce.

<sup>25</sup> Stats SA P0441 GDP Figures

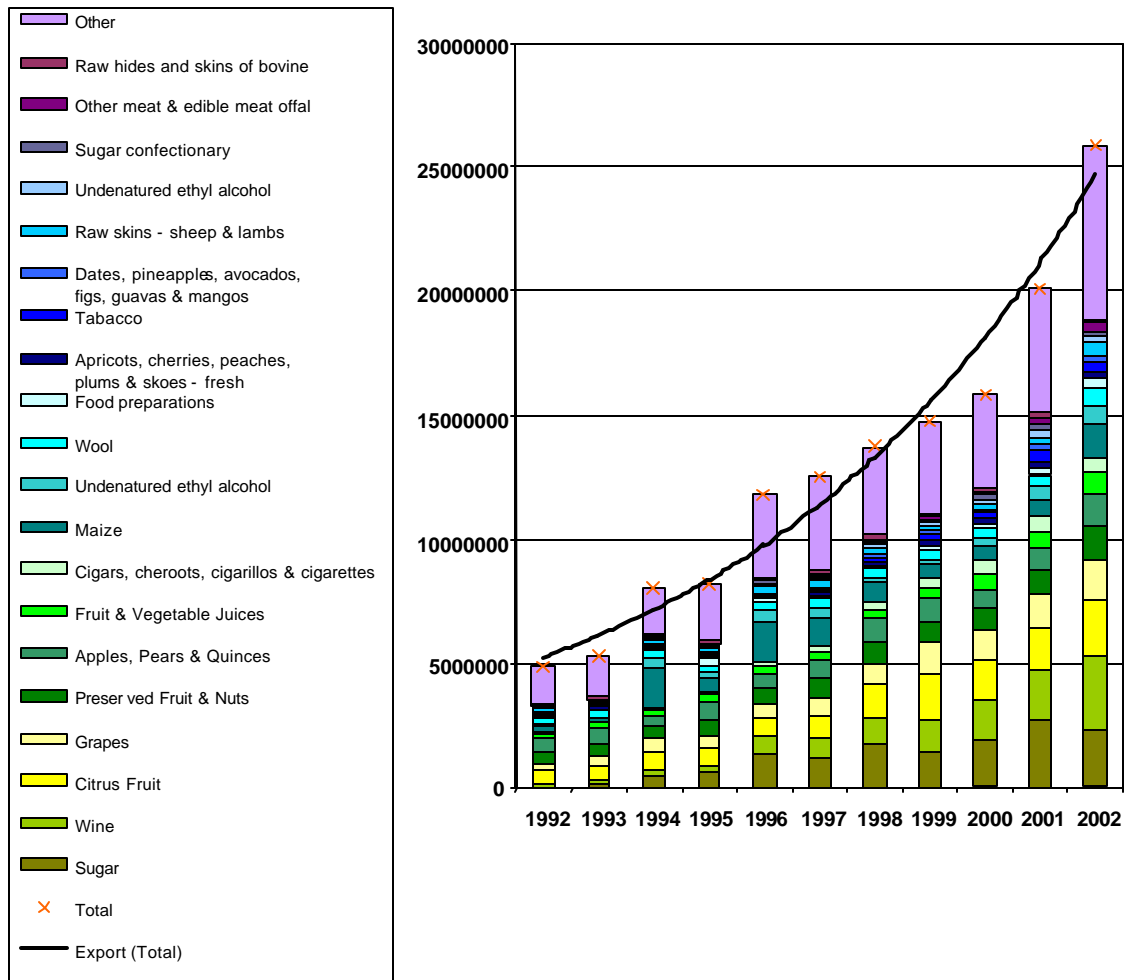


Figure 1.9: Top Agricultural Products being exported <sup>23</sup>

## 1.4 SUMMARY OF AGRI SECTOR PROFILE

The agri sector has undergone a great deal of change in attitude, execution and operational environment over the last decade. The most significant of these are the deregulation of the markets and the resultant orientation to the market and subsequent increase in competitiveness.

In a number of ways Agri-Business in South Africa has started taking greater control for:

- Focussing on the market and attempting to deliver products in line with market expectations.
- Organising itself into buyers and sellers groups in order to manage the supply chain and its channels to market.
- Being far more aware of the risks taken and more readily employing risk mitigation strategies.
- Keeping a continual watch on environmental risks and consequences for farming and agribusinesses.
- Choosing crops / livestock more appropriate to the specific environmental parameters they contend with.

Although there has been a significant increase in overall competitiveness of the agricultural sector, this has not happened uniformly. The smaller and emerging farmers and businesses are not experiencing the benefits of this revitalisation. In most instances they struggle to move out of a survivalist pattern of operation. The primary reasons for this entrapment include:

- Lack of farm management skills (including financial skills)
- Lack of marketing management skills (marketing, market understanding and marketing channels).
- A lack of resources to move out of the survivalist pattern and poverty spiral – most are trying to service debts or have such poor cash flow that they spend most of their time worrying about getting the next payment to the bank. Very few have an understanding of the capacity they can leverage within unions, commodity organisations and government.
- Insufficient technical information to make appropriate product decisions
- Lack of sufficient support services such as extension services.

The sector is showing a fundamental willingness to adapt to the new policy environment and has accepted the realities of the labour legislation, land reform and black economic empowerment. Unfortunately the agri sector at large do not always see themselves having the capacity to comply. In the case of land reform the willingness to participate is overwhelming but the logistics and administration of the programmes seems to hamper action. It is however encouraging that the targets are to have settled 95-100% of land claims during 2004/2005.

Positive trends in the agricultural sector include:

- Increase in export.
- Product diversification both on the local and in the export market.
- Readiness and gearing up to comply with all the international food safety requirements.
- Increased control (at least in terms of partnerships) of the channels to market.
- Increased control of the supply chain.
- Progress made with respect to land reform.

Negative trends in the agri sector include:

- A continued divide between employers and employees (with little devolution of power)
- A high level of debt.
- A decrease in farm income and cash flow.
- Impact of HIV/AIDS both in terms of the market for staple foods and the workforce.
- Farm security.
- Lack of support services to especially the land reform beneficiary.

### 1.4.1 PESTEL ANALYSIS

As an integral component of the sector profile summary, the major trends and patterns are analysed using a PESTEL analysis grid. Note factors are rated by **impact** in terms of time, type, dynamics and **relative importance**. These rankings are according to the following scale or as noted in the grid:

#### Impact

<b>IMPACT in TIME</b>	Impacts affect an organisation at different TIMES from now into the future:	
	Impact now and likely to reduce / stop inside 6-12 months	N
	Impact now and in the future beyond 6-12 months	N / F
	No impact now but at some time in future beyond 6-12 months	F
	Impact intermittent over time	I
<b>IMPACT by TYPE</b>	Impacts have different TYPES of effect:	
	Positive impact	+
	Negative impact	-
<b>IMPACT by DYNAMICS</b>	Impacts have different DYNAMICS:	
	Impacts of increasing significance	>
	Impacts of unchanging significance	=
	Impacts of reducing significance	<

#### Relative importance of implications of external factors

<b>CRITICAL</b>	Factors that threaten the continuing existence of the organisation or seriously compromise or require review of its mission or core values.
<b>VERY IMPORTANT</b>	Factors that are likely to promote significant changes in the scope of an organisation's activities, operational structure, external relationships and its establishment (staff, premises, legal status etc) without compromising its mission or core values.
<b>IMPORTANT</b>	Factors that are likely to promote limited changes in any or all of the scope of its activities, its operational structure, its external relationships and its establishment (staff, premises, legal status etc) without compromising its mission or core values.
<b>SIGNIFICANT</b>	Factors that bear on an organisation's operation without seriously affecting the scope of its activities, its operational structure, its external relationships and its establishment (staff, premises, legal status etc) without compromising its mission or core values.
<b>UNIMPORTANT</b>	Factors that do not affect an organisation in any significant manner.

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
<b>Political</b>						
Land reform	Land reform is the first step of addressing the inequalities of land ownership and control in South Africa. This enables SA to compete in more markets and also introduces new farmers, breaking some of the patterns formed by tradition. Overall Land Reform is one of the steps that <b>improves the competitiveness of South African Agri sector.</b>	One of the critical factors required for successful transfer of ownership, in that effective agriculture continues post the ownership is a large requirement for core support, training and mentorship programmes. The specific funds allocated by the DOA allows <b>AgriSETA to assist and benefit from extracting a core agricultural training programme and developing a mentorship model.</b>	6-24 months	+	<b>Reducing significance</b> if addressed effectively, increasing significance if not addressed	Signi
Black economic empowerment	The restructuring and promotion of equality throughout the agribusiness value chain is critical for the <b>continued stability</b> of the agri sector. In addition it again allows for the opportunity of re-examining the practices and power structures within the sector – <b>allowing the value chain to be restructured more competitively and with greater efficiency</b> – eliminating the inefficiencies that have evolved to date.	Again this restructure allows AgriSETA to <b>play a more constructive role in the sector and allows it to entrench training and development as part of the core of agri business development.</b> AgriSETA should integrate the requirements of NSDS II and the proposed Transformation Charter for the Agri sector – not only at the level of farms but also supporting the up- and down-stream agri business sector.	2004-2014	+	<b>Reducing in significance</b> as 2014 approaches of buy-in and implementation of the programme is maintained	Signi
Decoupled support	For the sector this means that there are multiple sources of support and it places the responsibility for ensuring adequate support is maintained on the individual. It also means that multiple channels can be harnessed to aid the agri environment. It does however decrease the <b>efficiency with which support can be accessed</b> , although it can <b>improve the quality of advice and assistance secured</b> , makes the <b>sector more self reliant</b> and less dependent on government support.	Means that AgriSETA needs to remain on top of all the different support structures used and cannot rely on a single channel to market their services. It however introduces more innovation and opportunity to cross pollinate which AgriSETA can channel. It opens a unique opportunity to access the same market through different channels and facilitate the continued skills development through campaigning different support organisations.	Intermittent	-	<b>Reducing in significance</b> as sector develops to account for the reduced government support	Impo
Dualism of the agri sector	Currently there are two sets of structures that support commercial agri sector and those that support emerging enterprises (normally from disadvantaged communities). In addition the improvements in terms of trade and competitiveness are not being realised equally across the sector. The dualism creates a “them and us” scenario and does not promote adequate respect and growth in both groups. It also leads to an inefficiency in terms of communication, representation and lobbying. In	Reduces the efficiency with which AgriSETA can campaign and motivate the sector – leading to duplication of effort. Also complicates the social dynamics within the agri sector meaning it is harder to assess the true impact skills development is having.	6-24 months anticipating further consolidation within the	-	<b>Increasing in significance</b> if not addressed	Impo

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implications			
			Time	Type	Dynamics	Relative
	addition it creates a negative perception of agriculture.		sector			
Trade barriers	Free trade agreements have opened international markets for South African producers and processors, however the continued use of soft trade barriers (food safety requirements, negative marketing, etc.) within the developed and developing world effective bars sustainable and profitable entry to essential markets.	A key requirement is to be able to overcome some of the soft trade barriers - this requires an increase in skill, marketing ability and technique. Providing an opportunity for AgriSETA to motivate for further skills development within the sector and embed capacity development.	Now and Future	–	<b>Increasing significance</b>	Signi
Limited unionisation	Workers within the agric sector (especially in the primary sub-sector) are not well organised and unionised, this leads to minimal representation and implementation of good labour practice – often allows workers to be exploited through poor traditional practices.	A lack of unionisation means it is difficult for AgriSETA to gain access to a workforce perspective on activities. It also means that it is difficult to ascertain the reality of skills and training at the ground level which is a critical outcome of the NSDS.	Now and Future	–	<b>Unchanging significance</b>	Critic
<b>Economic</b>						
Changing channels to market	Currently there are limited channels to the market and not all players within the agri sector have equal channels to the market. The advent of e-Commerce and globalisation has also lead to more frequent evaluation and optimisation of the channels to the market. This means that the sector needs to maintain significant influence in the channels to the market and be able to optimise across the entire delivery chain in order to eliminate a automatic adjustment between retail and producer process. It is also important that all players in the value chain add value and the entire value chain remains optimised.	With channels to market continuously changing the related skills need to be tailored it also means that it is important not to slip into one-size-fits-all training but rather focus on developing adaptive and learning skills. It also means that agri training cannot focus purely on technical skills but need to incorporate key marketing and business development skills including negotiation and contracts management.	Now and Future	+	<b>Increasing significance</b> with increased globalisation and greater competitiveness	Very Impo
Marginal industry	Increased operational costs and reduced support from government in addition to the adjustments to a less regulated market have meant that the sector has become a highly geared industry, which often plays a high risk high reward game. This means it is important to employ the correct risk mitigation strategies.  In addition the highly competitive nature of commodities within the sector means that it is important to compete on factors other than price or become so efficient and be able to harness effectively economies of scale to produce low cost high volume products.	Again this broadens the scope of required skills within the sector to include: <ul style="list-style-type: none"> <li>• Cost optimisation (important to differentiate from but include cost control),</li> <li>• Risk management and mitigation,</li> <li>• Financial management and sourcing of funding,</li> <li>• Product differentiation and value add,</li> <li>• Marketing, and</li> </ul>	Now and future	?	<b>Increasing significance</b>	Critic

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
		<ul style="list-style-type: none"> <li>Supplier management.</li> </ul>				
Supply chain management	Increasing cost focus and rising input costs within agri sector have necessitated more intense control and ownership of the supply process. The continued requirement for new products also means that suppliers need to provide new products.	<p>The establishment of buyers groups, and more intense supplier interaction has little implication for the AgriSETA except reiterating the importance of skills such as contract management, negotiation, and knowledge integration.</p> <p>Regularly producers and processors are in an opposing position to each other – <b>the AgriSETA, especially via the SSC structures are in a good position to facilitate closer cooperation</b> – at least in the field of skills development, which may over time, spill over to other areas of business contact.</p>	Now and Future	+	<b>Increasing significance</b>	Importance
Trade agreements	International trade agreements have increased international trade opportunities and made entry to these markets easier. These agreements also favour some of the agri products produced in South Africa and offer SA agri sector the opportunity to engage in product specialisation which is not viable if only servicing a local market e.g. Indigenous flowers, medicinal herbs, etc. It also means delivering products according to international quality standards which means improving production management and control and ethical trade standards.  Also likely to increase regionalism, increasing the trading ability of an entire region.	Increased product differentiation and requirements of reliable quality production means creating a framework for introducing new research into the sector, improving quality and production management standards, workplace and worker management, general accountability and management. Aside from meaning that AgriSETA continually needs to improve and increase the skills base within the agri sector it can also play an important facilitation role ensuring that new knowledge is continually fed into the skills development framework taking on the role of knowledge curator for the sector.	Now and Future	+	<b>Increasing significance</b>	Critical
Consumer power	The changing market has shown that the consumer is keen to assert their power of choice and want to be able to select products on more factors than price. They also require greater variety and more convenience. In addition they have more information at their disposal informing their product, health and lifestyle choices. This means offering a product is more than production but also about marketing, understanding health benefits, product packaging and presentation and differentiation.	Again this broadens the scope of skills required within agribusiness. In addition it is also important to facilitate and enhance the roles played by commodity organisations and other partnerships, which means the skills development cannot only focus on farmers and their employees but needs to incorporate skills at commodity organisations, marketing (research and implementation) organisations and the various up- and downstream organisations linked directly to agriculture (those that	Now and Future	+  and  -	<b>Increasing significance</b>	Critical

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implications			
			Time	Type	Dynamics	Relative
		were formerly defined as SETASA.)				
<b>Social</b>						
HIV/AIDS	<p>The HIV/AIDS pandemic affects the agri sector in 2 critical ways:</p> <ol style="list-style-type: none"> <li>1. It reduces the market for staple foods in South Africa, and</li> <li>2. It reduces the size of the workforce and labour pool.</li> </ol> <p>In addition the social dynamics of people returning from the cities to die and be cared for in rural areas increases the burden of responsibility carried by rural communities. Associated with the disease is also an increased cost to the organisation through cost of care, absenteeism and other factors.</p>	<p>It is critical that AgriSETA remain aware of the impact of HIV/AIDS on the workforce. HIV/AIDS is also a social crisis and requires continued and consistent education to all on how to cope with HIV/AIDS, how to treat HIV/AIDS and how to prevent HIV/AIDS.</p> <p>Additionally the depletion of the labour pool does not receive enough attention and there is a shortage of people within the unemployed sector that have worked before and have developed the social skills to work in an organisation and hence become available to address attrition within the sector.</p>	Now and Future	–	<b>Increasing significance</b> over the next decade	Very Impo
Farm safety and security	<p>The continuation of farm attacks on both white and black farmers is very worrying. It has created a perception of farming as a high risk occupation. It is also acts as a barrier to introducing new players to farming. The most effective means of providing security has been the active involvement of farming communities. In few cases has the plight of the worker however been considered and the loss of livelihood and lives is significant in this respect.</p>	<p>Encouraging new entrants into primary agriculture is difficult given the current publicity surrounding farm security. The safety strategies which hardly include workers and the often variable relationship between farmers, their workers and their surrounding communities is also a matter to be addressed.</p> <p>The key impact for AgriSETA is to focus on improving labour relations and generating economic activity within the unemployed, often lacking in hope, in rural areas.</p>	Now	–	<b>Unchanging significance</b>	Signi
Increased Poverty (in numbers, decrease % of population)	<p>Subsistence agriculture plays a significant role in fending off the ravages of poverty for any family. In addition one of the key roles of agriculture and its down-stream activities is one of feeding the nation and increased poverty means an increased demand for low cost staple foods.</p>	<p>As with the above AgriSETA needs to allocate some of its resources to improving economic activity of the unemployed. Means facilitating programmes focussing on sustainable employment generation either through support of new farmers or specific rural community projects.</p>	Now	–	<b>Unchanging significance</b>	Impo

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
		It is furthermore necessary that there are proper backward linkages from the processing environment in order to create sustainable farming operations through procurement processes which are in support of BBBEE principles.				
Ethical trading	Conditions of ethical trading mean improving labour relations, interacting with local communities and creating a long term social investment strategy for the sector. This requires a radical mind shift and need not be an negative but can be used to gain market share and improve the sustainability of the enterprise.	Improving labour relations, improved training and devolution of power to the workforce. Requires a change in mindset in the sector and support from AgriSETA in terms of creating career options and paths for employees within agribusiness. It also means a general improvement in employment conditions and a more favourable labour dispensation within the industry.	Now and Future	+	<b>Increasing significance</b>	Critic
Education	The Agri sector is considered a low skill employer but this is changing within the industry and higher skills are needed to complete the jobs. Importantly however is the overall level of education in SA is rising meaning increased requirement of self determination and accountability within the workplace it also means employment working towards a negotiated agreement between employer and employee and more job mobility by the employee. This means the industry needs to adapt to providing careers rather than jobs if they want to retain resources.	The entry level education for job seekers is improving. The education level of the workforce is also improving this means a more flexible approach is required to skills recognition, training and development. It also means that people with work experienced need to be channelled into appropriate recognition and career development paths. However, for the foreseeable future the AgriSETA will have to focus on ABET as the total sector is still crippled by poor education levels.	Now and Future	+	<b>Decreasing Significance</b> if addressed	Critic
<b>Technological</b>						
New products	In order to remain competitive all production needs to be market focussed this also means marketing new products that meet the consumers needs more effectively. An additional impact of continually having new products is that these need to be trial led and integrated into the mainstream production activity. This requires each enterprise to have a process through which new products are evaluated and implemented.	Keeping abreast of new products and the associated changes in techniques, markets and practices is important. The most important aspect of new products for AgriSETA is enabling organisation or encouraging skills and knowledge transfer mechanisms that enable this process.	Now and Future	+	<b>Unchanging significance</b>	Signi

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
Market information	Agribusiness has become more market centric and proactive in its production. This requires reliable market information and the ability to perform such analysis to identify market opportunities and develop appropriate product offerings. Information on the market has become more prolific and is available to most people thus the ability to identify market opportunities has become an essential skill. In addition the ability to anticipate market demand on the basis of information is critical.	Market information for each of the commodities is collated and channelled through each of the commodity organisations. The ability to interpret and develop an action plan on the basis of this information is critical. Thus creating learning structures (need not be formal) that facilitate the transfer of skill and knowledge are critical – with specific reference to using e-communication.	Now and Future	+	<b>Unchanging significance</b>	Signifi
New techniques and practices	Productivity levels in the sector are regarded to be low. As with new products new techniques and practices bring improved efficiency and increased productivity. It is important that enterprises keep re-evaluating their processes to maintain optimal effectiveness. New techniques, practices and technologies also give rise to new competitors who may require less infrastructure etc.	The ability to evaluate new techniques and practices and often introduce new competitive advantages opens the door to new and emerging enterprises in some cases – enabling them to compete on existing markets with less risk. Creating learning structures that facilitate the transfer of skill and knowledge are critical.	Now and Future	+	<b>Unchanging significance</b>	Signifi
Research and development	Linking to research and development organisations reduces the costs and risks associated with research and development within the enterprise. In addition an untapped research pool often sits inside the suppliers' infrastructure and significant advantage could be gained through a more collaborative approach.	The collation of good practice and channelling of new R&D into emerging/small enterprises who would otherwise be prevented from such information is key, here creating a referral centre and information service could be significant in terms of the offering of AgriSETA to the sector. AgriSETA will have to facilitate research as the level thereof is perceived to be low.	Now and Future	+	<b>Unchanging significance</b>	Signifi
Skills and knowledge transfer	Key to keep updating skills and expanding the sectors knowledge base. Disciplines has also become more multidisciplinary so it is important to understand how to integrate new disciplines into the sector. One of the key skills is to allow the knowledge to filter down to all levels of the organisation. This is critical for improving the sustainability, viability and stability of the agricultural sector – it also has positive impacts in terms of increased productivity and proactive behaviour.	The continued change within the industry requires a continued revision of education and training requirements and deliverables. It is also important to encourage the development of agribusiness as a knowledge driven activity and showing the benefits of ongoing staff development.	Now and Future	+	<b>Unchanging significance</b>	Critic

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
<b>Legal</b>						
Minimum wage	Increases the cost to the enterprise but the sector also is reshaping itself to remain competitive without remaining on poor salary scales. The majority of workers are still working on minimum wage. It is hoped that with the improvement in economic futures this will improve. It is important to understand the impact of no income or limited income on staff morale.	A low wage and limited career development opportunities leads to a low morale within the workforce – sometimes increases the lack of positive response to training. In addition it is important to understand the worldview of individuals affected by training in order to ensure maximum benefit from programmes initiated (and overcome a sense of hopelessness).	Now	+	<b>Decreasing significance</b> with increased profitability and responsibility	Critical
Skills development	Intends to improve the quality and overall skills base of the workforce, encourages training and development and should have associated improvements in productivity and quality and reduce the burden of management – often viewed purely as an expense.	Defines the roles and responsibility of AgriSETA, also provides the mandate for encouraging training in the sector.	Now	+	<b>Decreasing significance</b> once practices established	Critical
Occupational health and safety	Increases cost but also improves working conditions and overall safety of workers reducing the long-term liability of the enterprise.	Need to consider occupational health and safety training as part of the skills development required within agriculture	Now and Future	+	<b>Decreasing significance</b> once practices established	Important
<b>Environmental</b>						
Traceability	Accountability of the entire value chain to the consumer has increased the requirements of traceability. This has increased the demand on infrastructure, skill and administration costs but it also promotes implementation of good practice and a market focus that eventually improves the credibility of agriculture.	Engenders a culture of quality control and management that can be transferred to learning processes.	Now and Future	+	<b>Increasing significance</b>	Very important
Climate change	The changing climate has meant that production patterns and crops being produced need to be re-evaluated. The threat to some indigenous flora as a result of the climate change has also triggered a re-evaluation of the natural resources available in South Africa and agricultural production that is more in tune with weather, land and water conditions.	No impact – just need to take into account skill of managing weather information.	Now and Future	?	<b>Unchanging significance</b>	Significant

External factors affecting the sector	Implications for the sector	Implications for AgriSETA	Relative Importance of the Implication			
			Time	Type	Dynamics	Relative
Resource management	Improves sustainability and viability of the enterprise also allows for best products and practices to be selected in response to current resources available leading to better more effective product selection.	Incorporating techniques and promulgating attitudes of building (adding value to) resources both natural (water and land) and people is critical. It also moves the workforce into an important part of the chain of value creation rather than a necessary expense.	Now and Future	+	<b>Increased significance</b>	Signifi
Food safety (could also be classified under “techno-logical”)	Again the accountability to the consumer and assurances of safety has become critical to continued product sales. The ability to respond to international guidelines for handling food and the ability to account for food handling and production is important to address public phobia about genetic manipulation, food safety etc.	Again engenders a culture of quality control and accountability which is positive in terms of the ability to extend this attitude to other aspects of the organisation.	Now and Future	+	<b>Increasing significance</b>	Impoi
Lack of Infrastructure	A number of rural areas and emerging farmers and agribusinesses don’t have access to basic infrastructure making it impossible to service more than their local market. Also, not being exposed to basic workings of auctions or produce market make it difficult to gain access to such services.	Lack of infrastructure means lack of access to training and information and it is critical that innovative solutions be crafted to get development of core skills to people in remote areas – traditional training will not address this issue.	Now	-	<b>Decreasing significance once infra. is established</b>	Critic
Natural disasters	Have a negative effect on production and production capacity, land recovery period, loss of capital and the need for processors to import rather than acquire raw product locally.  This is to include diseases such as HIV/Aids, and other killer diseases.	Incorporate disaster management in learning programmes	Now	-	<b>Increased significance</b>	Impoi

## CHAPTER 2: DEMAND FOR SKILLS

### 2.1 INTRODUCTION

This chapter provides an analysis of the demand for skills in the agri sector. This demand was determined for the following three distinctly different groups:

- **The Commercial sector:** Those enterprises (including commercial farmers that produce for the market), who are levy payers and participate in skills development through the NSDS and AgriSETA (information contained in the WSP's and ART's were provided by this target group).
- **Small-scale and emerging enterprises and farmers:** This group includes
  - Farmers on the continuum from homesteads with food gardens to subsistence farmers to emerging farmers (often unregistered) that are embarking on farming as their primary livelihood.
  - Small scale agri-business enterprises (often unregistered) within the agri value chain.
- **The Public Sector:** The demand for skills identified within the Department of Agriculture (both the National Department and Provincial Departments) is also addressed.

An attempt was made to cover and integrate the needs of the agri sector in its totality (i.e. both its primary and secondary sub-components). Whilst it is acknowledged that primary agriculture (production) stands at the core of the agri sector, the role and importance of the secondary sector (both up- and down-stream industries) are recognised for its valuable contribution and as such the needs of both sectors have been addressed in an integrated manner (if and where possible).

Please note that this chapter on demand is firstly based on the salient findings of Chapter 1: Sector Profile, and must further be read closely with Chapter 4: Skills Development Priorities – where the priority development needs and key Scarce and Critical Skills have been specified.

### 2.2 EMPLOYMENT WITHIN THE COMMERCIAL SECTOR

#### 2.1.1 TRENDS AND PATTERNS

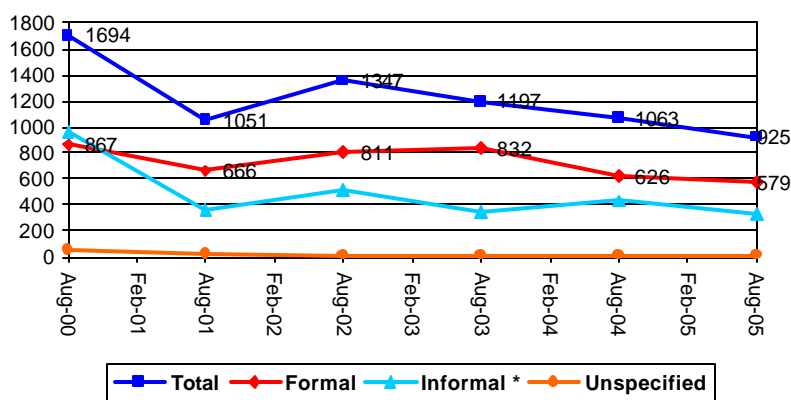
**General Employment Trends:** As a point of departure it must be noted that it is very difficult to obtain reliable statistics on labour in the agri sector (for both the primary and secondary sub-sectors). Problems experienced are the following:

- In a report prepared by the HSRC for the Office of the Presidency in 2005 termed “A Review of Employment & Remuneration in Selected Sectors in the SA Economy”, it is clearly indicated that there is not reliable statistics on employment in the **primary** agricultural sector, and it is suggested that a new and improved method and approach for agricultural censuses be established to obtain more reliable statistics. The Report continues to compare different results from various surveys and sources over the past 15 years (varying considerably in its employment estimates) and attempts to develop an “aggregate” figure for the sector from the various sources – such data is unfortunately only provided up to 2002 and is thus not useful in providing an employment figure for the present. Given the central role that the Department of Agriculture plays in collecting statistics for the sector, in consultation and liaison with Statistics SA, we have subsequently decided to base our employment estimates on these latter two sources.
- Considerable problems also exist in establishing reliable labour statistics for the **secondary** sub-sector. In this regard the secondary component of the AgriSETA is highly diverse and organised into different sub-structures, each with its own goals and objectives which may in themselves be highly diverse. As a result some components of the secondary sector fall within

the scope and ambit of other SETAs – e.g. the Food and Beverages SETA and the MERSETA. This anomaly exists due to the fact that the Skills Development Act opted for a different demarcation than the Standard Industrial Classification generally used for economic analysis (e.g. by Statistics South Africa).

**Primary Agricultural Employment:**

From the National Labour Force Studies conducted by Stats SA on a six monthly basis the employment trends outlined in Figure 2.1 below was established. In terms of these statistics agricultural employment in 2005 (within the formal/commercial sector) amounted to 925 000 people. This labour force can be grouped into permanent or regular employment (580 000) and temporary or seasonal/contracted workers (345 000). These figures correlate reasonable well with the estimate of the Department of Agriculture – which is of the opinion that there are currently 700 000 permanent workers (including contracted workers) and a further 250 000 seasonal workers employed in the formal agricultural sector.



**FIGURE 2.1:** Number of People ('000) Employed as Agricultural, Fisheries and Forestry Workers (Skilled and unskilled) <sup>26</sup>

- Whilst there have been considerable job losses in the sector over the past 6 years, employment numbers of the permanent employees within the agricultural sector seem to have stabilised over the past two to three years.
- Within the agricultural labour sector as a whole (both permanent and temporary workers) it is estimated that approximately 69% of the workforce fall below the “skilled” category and there has been a disturbing loss of skilled workers (87% of job losses over the past 5 years were in the “skilled” category” – for details refer to section 3.2 of the report where the current skills profile is outlined).
- Job growth or losses in the agricultural sector is primarily as a result of financial realities of the enterprise. This is confirmed by the red meat sector having undergone the largest job losses (1999-2002) in the meat industry and the reasons for the job loss having been identified as (in order of priority)<sup>27</sup>:
  - Output price increased more slowly than the input prices – cost-price squeeze phenomenon,
  - Lower prices for red meat,
  - Number of animals slaughtered at lowest point, and
  - Introduction of labour legislation and minimum wages

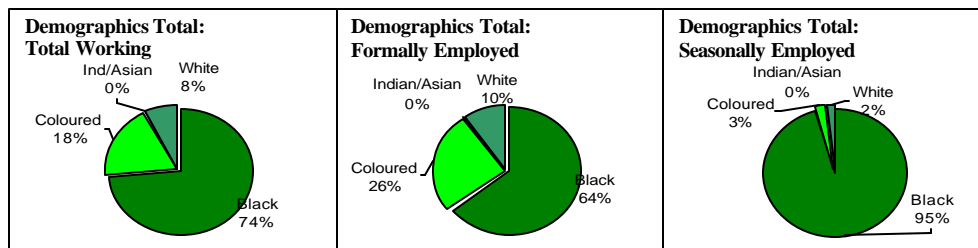
<sup>26</sup> StatsSA Labour Force Surveys (2000 to 2005) \* Note: Discussions with various stakeholders in the industry suggest that the term “formal employment” should rather be substituted with “permanent employment” and the term “informal employment” substituted with “seasonal or contract workers” – for the purposes of this SSP we have treated the figures as such.

<sup>27</sup> NAMC Study on Deregulation of the Meat Industry – April 2004

**Current Demographics:** In terms of the current demographic distribution of the agricultural workforce, the following trends could be deduced.

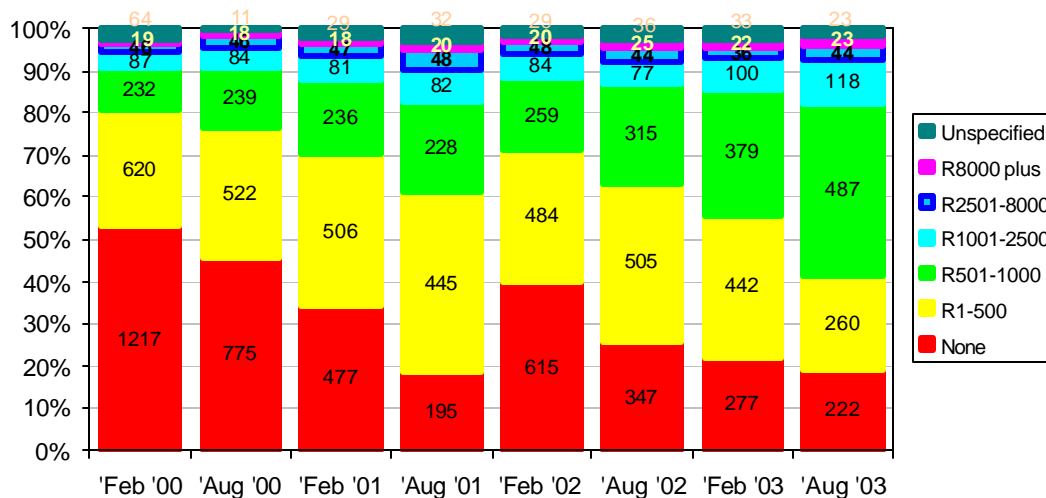
- Black men represent the largest number of people employed in the agricultural, fisheries and forestry sector (596 000) most of whom are employed as permanent workers (382 000), whilst 205 000 are employed as temporary or seasonal workers.
- This is a change from February 2000 where the majority of people employed were black women and the majority were employed in temporary capacity.
- Coloured people fill the next most number of positions

These employment trends suggest that the overall stabilisation of the agricultural sector has also reached the employees – now filling formal positions.



**FIGURE 2.3:** Demographics of the Agricultural, Fisheries and Forestry Workforce, August 2003.

**Levels of Income:** Although the wages of agricultural workers are still very low it is important to note the following improvements from August 2000 to August 2003



**Figure 2.4:** Income Levels for Agricultural Workers 2000-2003

Although the wages of agricultural workers are still very low it is important to note the following improvements from February 2000 to August 2003:

- 995 000 fewer people are working without a salary (Feb '00 – 1 217 000, Aug '03 – 222 000)
- 260 000 fewer people less are working R1-500 (Feb '00 – 620 000, Aug '03 – 260 000)
- 255 000 more people are working for R501-1000 (Feb '00 – 232 000, Aug '03 – 487 000)
- 31 000 more people are working for R1001-2500 (Feb '00 – 87 000, Aug '03 – 118 000)

- The distribution across the entire workforce has also improved:
  - In Feb '00 53% of the workforce was not being paid. In Aug '03 19% was not paid.
  - In Feb '00 10% of the workforce was paid R501-1000. In Aug '03 a total of 41% was paid R501-1000
  - In Feb '00 4% of the workforce was paid R1001-2500. In Aug '03 a total of 10% was paid R1001-2500

However, relative to the workforce in other sectors:

- Agriculture remains the poorest payer.
- Skilled agricultural workers receive the poorest wage of all.

For graduates, diplomats or people with FET certificates salary levels in Agriculture have remained fairly constant, the majority of people earning between R2 500 and R8 000.

**Decline in Demand:** There has been a systematic decline in the number of organisations in agriculture, the greatest impact being felt by organisations employing 1 to 4 people. It is encouraging that there has been a slight increase in the number of larger organisations (10-19, 20-49 and larger). This indicates greater sophistication and the development of the organisation.

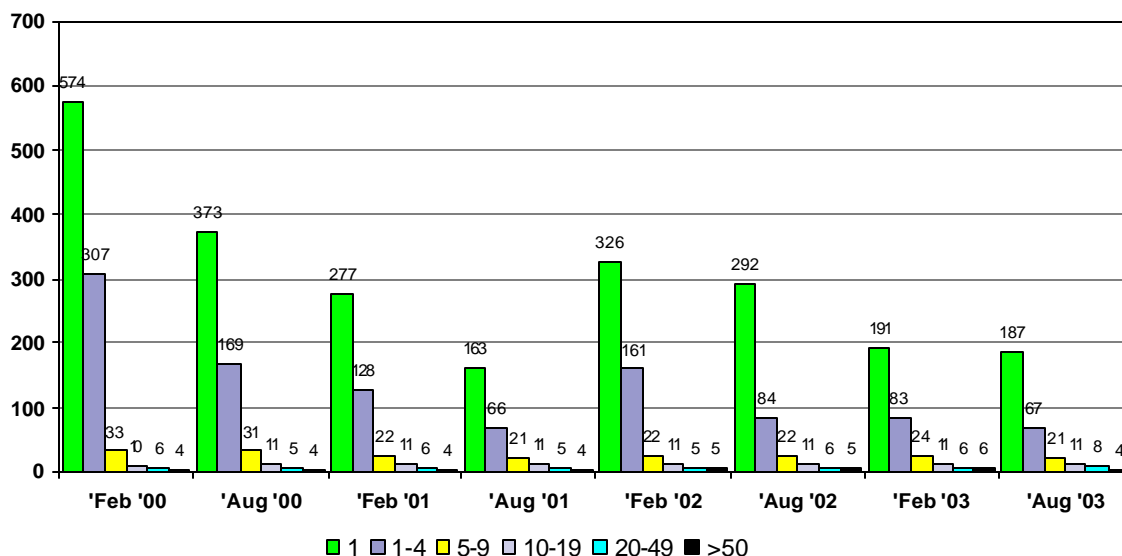


FIGURE 2.5: Number of Organisations in Each Size Category.

## 2.2.2 CURRENT EMPLOYMENT

**Occupational Breakdown:** Information consolidated from the WSP's submitted for the 2005/2006 period indicates that a total of 195,699 people are employed by the more than 1 000 organisations in the commercial sector that submitted WSP's. The participation rate is sufficient to be a representative sample of commercial enterprises of both the primary and secondary sub-sectors and the table below thus provides an adequate indication of the occupational breakdown and trends for the sector as a whole.

When African, Coloured and Indian workers are combined it is evident that 88% of the total number of jobs is filled by previously politically disenfranchised population groups, whilst females represent 43% of workers at all levels. Managerial and professional posts are mainly filled by whites, a balance is struck between black and white employees in the Administrative and Services and Sales Worker categories. Black employees are dominant in Skilled Agricultural and Fishery worker occupations with black workers filling almost all the positions in the elementary and labourer occupations.

Seasonal workers represent 22% of the all workers and 42% of all job opportunities are at the lower end (elementary / labourer occupations). Together these two groups represent 65% of the all workers.

OCCUPATIONAL GROUP	Black (%)	White (%)	Male (%)	Female (%)	Disabled (%)	% Of Total
Legislators, Senior Officials and managers	27.29	72.71	83.49	15.19	1.32	3.29
Professionals	24.11	75.89	70.73	28.65	0.62	1.41
Technicians and Associate Professionals	39.96	60.04	73.41	26.00	0.59	2.42
Clerks	44.01	55.99	37.47	61.90	0.63	5.89
Service and Sales Workers	54.91	45.09	71.65	27.94	0.41	3.01
Skilled Agricultural and Fishery Workers	93.05	6.95	61.71	33.69	4.60	6.85
Craft and Related Trades	68.64	31.36	80.44	18.48	1.08	2.80
Plant and Machine Operators and Assemblers	96.75	3.25	89.75	8.32	1.93	9.54
Elementary Occupations	99.48	0.52	53.86	44.35	1.79	42.66
Seasonal workers / Contractors	99.12	0.88	35.04	64.94	0.03	22.14
<b>TOTAL</b>	<b>88.35</b>	<b>11.65</b>	<b>55.65</b>	<b>42.94</b>	<b>1.14</b>	

**TABLE 2.1:** A summary of employment figures in participating companies

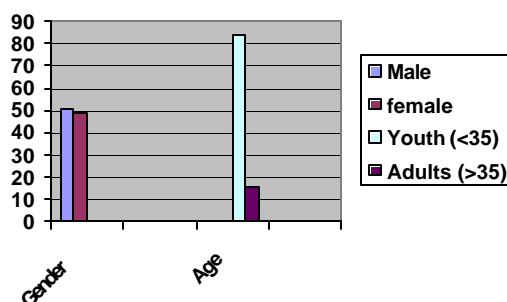
The shaded areas in Table 2.1 reflect occupations where there is a strong racial or gender dominance and thus serves as a guide to identify areas demanding specific attention to redress imbalances caused by historical racial and/or gender discrimination. In this regard it is evident that at managerial level whites dominate the sector. Female and disabled representation is also well below the norms adopted by the NSDS. It is therefore clear that not only in terms of demand, but also in terms of social justice, the sector has to invest heavily in both the horizontal and vertical development needs of its marginalised worker population. Within the context of the AgriBBBEE strategy a particular need exists for the identification, development and promotion/appointment of BEE candidates to positions of ownership and/or senior management in the sector’s organisations and enterprises.

As shown in the PESTEL Analysis the sharp increase in agricultural exports and the resultant growing need to meet international food safety requirements, demands that considerable focus be given to capacitate the sector with such knowledge and skills. These needs, together with the above indicated need to advance candidates from the black population groups into managerial positions (in both the primary and secondary sub-sectors), poses not only a considerable challenge to the agri sector but also presents an opportunity to rectify the historical imbalances.

## 2.3 THE SMALL-SCALE AND EMERGING SECTOR

The National Education and Training Strategy for Agriculture and Rural Development in South Africa, estimates that there are 2,4 million small-scale farmer in South Africa (including homesteads with food production and the “subsistence” farmers). Based on provincial surveys, as well as a national Land Reform Study undertaken during 2003 for PAETA, it is estimated that of the 2,4 million subsistence farmers, in the order of 650,000 farmers can be referred to as small-scale and emerging farmers. *For the purpose of this AgriSETA SSP we have particularly focused on this smaller target group of “emerging farmers”.*

**Gender and Age:** Whilst it is difficult to provide accurate statistics for this specific (and substantially large) demarcation of the agricultural sector in South Africa, studies have indicated that just more than half (51%) of the 650,000 small-scale and emerging farmers are male. It is further estimated that only 15% of such farmers could be classified as youth (below 35 years of age), indicating that the majority of the target group are older citizens and implying that the training delivery mode to be used should be appropriately adjusted to suit this age group. Since these beneficiaries are older it also implies that they will have a particular demand for appropriate technology to optimise their labour and to help them to remain active and productive farmers or enterprise members over the long term. The aging profile further demands special efforts to attract more youths to the sector. It is a known fact that older people are less susceptible to change and the introduction and cultivation of modern sustainable management practices in agriculture will demand open-minded individuals who are willing to implement new and improved production and management practices. The absence of a sufficient core of young and capable managers in agriculture could thus be regarded as a scarce skill.



**FIGURE 2.6:** Gender and age distribution in the small-scale and emerging sector<sup>28</sup>

**Educational Profile:** The educational level of beneficiaries is generally low with approximately 30% of the emerging/small scale farmer target group having received little or no formal education. Of this group approximately 50% is illiterate. The majority of the target group falls into the category that has attended school at primary school level (Grade 1-7) – thus literate but with a basic education. A very small percentage advanced to secondary school level and beyond. This educational profile holds specific relevance for the AgriSETA since it demands learning programmes designed and geared towards the specific needs of the target group. It is for instance envisaged that Adult Basic Education and Training (ABET) will be required by a large component of small-scale and emerging farmers and/or agri-business enterprises and that ABET should form a major component of any skills development intervention undertaken by training providers. It is also noteworthy, that the older participants tend to be the group who are illiterate and who have had little or no formal education with the younger participants boasting better qualifications. Again this provides a platform for career progression opportunities given the correct training interventions.

**Existing Skills Base:** Information obtained for the above-mentioned group revealed very concerning information regarding their existing skills base. It was found that most beneficiaries have never received any formal agricultural training. Whilst the majority have some farming experience, this was obtained whilst employed on commercial farms as labourers (some as foremen) or through previous involvement in subsistence farming. Whilst they thus have a working knowledge of agricultural production in the various sectors, it is at farm worker level and they seriously lack knowledge and skills in the management, marketing and financial fields. It is therefore evident that small-scale and emerging farmers have a limited skills base and that a considerable amount of training will have to be provided to enable them to become emerged in the main stream agricultural economy. A positive aspect is that the participants are generally keen to undergo training and skills development programmes.

<sup>28</sup> Land Reform Study undertaken for PAETA by Manstrat and Upstart, 2003

**Growth Trends:** Statistics on the trends within this sector is poor, mostly due to the nature of agriculture being practiced by the specific group (dynamic fluctuation of farmers). However, it was indicated during 1993 that an estimated 1.2 million subsistence farmers were active within the borders of South Africa. Considering current estimates of 2.4 million, it is possible to deduce that there was considerable growth within this sector of South African agriculture (an additional 1.2 million farmers over a period of 12 years) with a potential increase of 100,000 new farmers per annum. This phenomenal growth could be ascribed to a loss of job opportunities (increased unemployment) within the economy as a whole (particularly in the mining sector) – necessitating more people to participate in subsistence farming for survival. From a positive perspective it could also be ascribed to the many opportunities created by the South African Government (e.g. the Land Reform Process), as well as increased access to funding by small-scale farmers for development in the agricultural sector.

## 2.4 SKILLS REQUIREMENTS (DEMAND)

### 2.4.1 THE COMMERCIAL SECTOR

An analysis of the proposed/planned training interventions in the commercial sector for the 2005/2006 financial year (Table 2.2) shows that substantial progress will be made to promote (vertical) and develop (horizontal) the sector’s labour force.

- The Agri sector intends to train a very high percentage of its working population – with the proposed training interventions exceeding 90% of the total labour force.<sup>29</sup>
- Most provision is made for new recruits and at the lower level occupations.
- Where new persons are recruited or earmarked for promotion, it is important to note that the vast majority of training expenditure will be to the benefit of Black people.

OCCUPATIONAL GROUP	Total Employed	Proposed number of training interventions	Interventions aimed at new staff and/or for Promotions	Number of Blacks to be Trained	% Training aimed at Black candidates
Legislators, Senior Officials and managers	6,438	7,204	766	2,596	36.04
Professionals	2,750	2,946	196	793	26.92
Technicians and Associate Professionals	4,735	5,854	1,119	2,461	42.04
Clerks	11,529	12,382	853	5,552	44.84
Service and Sales Workers	5,891	6,762	871	3,559	52.63
Skilled Agricultural and Fishery Workers	13,401	13,087	230	12,210	93.30
Craft and Related Trades	5,475	6,281	806	4,418	70.34
Plant and Machine Operators and Assemblers	18,660	21,573	2,913	20,862	96.70
Elementary Occupations	83,491	95,448	11,957	94,860	99.38
Seasonal workers / Contractors	43,329	13,149	470	12,913	98.21
<b>TOTAL</b>	<b>195,699</b>	<b>184,686</b>	<b>20,181</b>	<b>160,224</b>	<b>81.87</b>

**TABLE 2.2:** Proposed training efforts stated in WSP’s submitted for 2005/2006 <sup>30</sup>

<sup>29</sup> This figure should be interpreted with caution since these figures mainly reflect informal, unstructured and on-the-job practical training that is non NQF aligned. There is further a tendency to over-state demand since it wrongly perceived by employers as a means to obtain a 100% return on their levy contributions.

<sup>30</sup> AgriSETA WSP and ATR Database (2005/2006)

From Table 2.2 it is evident that whilst the majority of training opportunities will be aimed at training black candidates, a very small number of the planned training interventions aimed at developing senior management and professional have been earmarked for black candidates (only 34% of planned senior management and professional training is for black candidates). This reveals that the agri sector does not yet fully understand the urgent need to appoint or promote substantial numbers of black staff members to such positions in meeting the AgriBBBEE targets. A need thus exists for the AgriSETA to stimulate and guide the sector towards such strategic training interventions by directing their training investment to these fields.

It is also noteworthy that in some occupations the number of planned training interventions exceed the actual number of employees in such occupations – this should be interpreted that an incumbent will be exposed to more than one training intervention during the course of the year – which in principle is positive since it shows that certain individuals have been earmarked for development against set requirements of a post or occupation (e.g. for promotion purposes).

Needs analysis consultation and meetings with representatives of various sub-sectors revealed the following as specific training demand issues within the commercial sub-sector (please also refer to the additional needs and critical and scarce skills listed in Chapter 4):

***The Floriculture industry:***

- Is faced with insufficient numbers of trained workers to service the market – this includes the basic training of pruning, cutting, planting etc.
- Courses currently exist but are under funded and a sustainable funding model for the provision of such courses needs to be found.
- New and emergent farmers are currently serviced through an *ad hoc* form of skills provision
- Worker interaction is currently not standardised.

***The wool industry:***

- The wool industry is facing a decline in their market and need to compete very strongly on price – especially with facing strong competition from synthetic fibres.
- The key concern producers have is how to compete in a marginal market & optimise their costing.
- Volatility of the wool market also results in an increased skill requirement in marketing the product and fine-tuning the predictive capability of producers or commodity organisations.
- In terms of skills requirements, there is a scarcity of Wool Classers, Farm Managers, Shearers, Clerks and Administrative Staff.

***The citrus industry:***

- The citrus industry is expanding into new markets and finding a need to continually introduce more products particularly those that optimise a convenience and taste factor.
- In addition the quest of dealing with international food safety concerns make quality control and management and ever increasing skill for these producers.
- The industry face an increased emphasis on cost control and require an improved relationship with customers.
- The industry experiences a shortage of Pickers, Packers, Sorters and Pruners and there is an urgent requirement for skills development in Food Safety, HACCP and Quality Management.

***The grain industry*** has two key opportunities open to itself at the moment:

- Improving its value chain management: to extend the support services to producers and customers and adhering to stricter codes of practice.
- More reliable less risky crop production & prediction of such crops (this requires better anticipation of weather & climatic conditions and improved cultivation techniques).
- Additionally a key risk to the grain industry is the overall decrease in technical skill within the industry sector.
- There is an urgent need for Silo Workers, Grain Samplers, Graders and SAFEX Traders.

*The fruit industry* needs to be enabled to:

- Conform to the international trade requirements.
- Improved capacities relating to efficiency, support measures, infrastructure, risk management.
- Being market driven instead of production (supply) driven.
- The industry experiences a shortage of Pickers, Packers, Sorters and Pruners and there is an urgent requirement for skills development in Food Safety, HACCP and Quality Management.

*The dried pulses producers* face the following opportunities:

- Ensuring the preferred pulses are available.
- Consistent production – even during poor price cycles.
- Offering competitive prices.
- The skills related to these opportunities include production techniques, market assessment and cost optimization through cost engineering.

*The meat industry* identified the following as key development needs:

- Consumer education & marketing.
- Cost optimization.
- Addressing food safety concerns through appropriate audit practices.
- A move towards healthier production techniques.
- The skills required in this industry include Specialist Management, Food Safety, Feedlot Management, Skilled Trade Workers, Veterinarians and Factory Process workers.

Similarly *the milk industry* needs to address issues and develop skills related to:

- Food safety.
- New product development and product differentiation.
- Consumer education & marketing.
- Cost optimization.
- Contract negotiation and market development.
- Management in the Industry
- Parlour Operators
- Maintenance of equipment
- Artificial Insemination
- Animal Health and Nutrition

The *game farming industry* experiences a range of problems at levels below NQF 4. The skills development requirements in this industry relates to:

- Game Ranch Management
- The handling of carcasses, including slaughtering, skinning and processing, all related to the Trophy Hunting industry.

The *potatoes producers* have made remarkable strides in terms of the yield per hectare and reducing the risks faced by potato producers – but if the trends continue it is likely that even less hectares will be under production in the years to come but demand will not be declining. In addition the informal market plays an important role in the overall market. Some of the key skills critical for the future of the potato producers relate to:

- Increased support and development of informal traders
- Increased improvement of production techniques
- Cost optimisation
- Product packaging and supply

The **tomato producers** need to continue improving:

- Production reliability
- The matching of supply to market demand & capacity
- Improve access to fresh food markets
- Develop the informal trade market
- Offer more product choice and better quality

The **fibre, tea and coffee industry**:

- General decline in the tea industry resulting in job losses
- General shortage and lack of experienced auctioneers
- Low salaries in tea industry makes it difficult to recruit people
- Difficulties in replacing graders

The **pest and seed industry** – specific needs identified as being in short supply are:

- Lack of CA's and other financial management staff
- General need for computer literacy
- Poor morale and orientation at worker level – need for value systems
- Lack of drivers licenses constrain small enterprises

The **tobacco industry**

- Lack of technicians (total range) is serious constraint
- Computer literacy for workforce in general

The **milling industry**:

- Need less generally trained workers and more workers to be multi-skilled
- Professional people like animal nutritionists in short supply
- Serious shortage of grain graders
- Shortage of quality assurance people
- General difficulty in filling technical posts – candidates from colleges do not have required competencies

The **poultry industry**

- Shortage of people with strategic planning and management ability (especially amongst smaller enterprises)
- Lack of learning material that covers new developments in industry
- Difficulty in recruiting chicken catchers – unpopular job and poor working conditions

The **sugar industry**

- Difficulty in recruiting cate cutters – unpopular job with poor working conditions
- General shortage of skilled and experienced technical maintenance staff
- Shortage of processing operators
- Lack of experienced and competent management in the industry (at middle management level)
- Lack of scientists for the industry

Based on the WSP's submitted for 2005/2006, skills development priorities have been categorized as indicated in Table 2.3. These figures indicate that management related training (including the ability to solve problems) is the highest priority followed by technical production skills at farm and enterprise level.

PRIORITY GROUP	Percentage
Technical knowledge and skills	34.7 %
Problem solving skills	25.8 %
Business Management	22.7 %
Management and Leadership	10.6 %
Marketing and processing	2.2 %
Mechanical Knowledge	4 %

} Management related training (62%)

**TABLE 2.3:** Skills priority groups as identified in the WSP's for 2005/2006.

## 2.4.2 SMALL-SCALE AND EMERGING FARMERS

It was indicated earlier that Small-scale and Emerging Farmers have a weak skills base and that their skills repertoire is mainly focused on technical production related skills. A national survey of the skills requirements of such farmers indicated that an urgent need exist for training and development in the non-production related aspects of agriculture. Table 2.4 provides a summary of the training needs identified for this target group during the development of the AET Strategy of the DoA.

TYPE OF TRAINING REQUIREMENT	PROVINCIAL RESPONSES REGARDING DEMAND FOR SUCH TRAINING									
	KZN (%)	EC (%)	FS <sup>31</sup> (%)	GP (%)	LIM <sup>30</sup> (%)	MP (%)	NC (%)	NW (%)	WC (%)	National Average (%)
Business Management	5	17	*	34	*	17	28	40	33	25
Marketing and processing	5	-	*	10	*	18	2	6	20	9
Management and Leadership	9	20	*	-	*	44	10	-	-	12
Problem solving skills	13	-	*	-	*	-	3	11	-	4
Technical knowledge & skills	27	61	*	56	*	21	57	43	45	43
Analytical skills	23	-	*	-	*	-	-	-	2	4
Mechanical Knowledge	18	2	*	-	*	-	-	-	-	3

**TABLE 2.4:** Training requirements of Small-scale and emerging farmers<sup>32</sup>

Although lacking in information for the Limpopo and Free State Provinces (see footnote below), it is still evident that the bulk of training requirements identified by such beneficiaries are focused on the management, financial, and marketing aspects of farming and/or agri related enterprises.

A more detailed analysis revealed the following specific skills development requirements amongst small-scale and emerging farmers (Table 2.5). The projected number of learners indicated in the table has been based on an estimated total of 2.4 million small-scale and developing farmers (which includes the full range of subsistence farmers and homestead producers through to land reform beneficiaries and emerging BEE farmers). However, as motivated in Section 2.3 of the Report, from an AgriSETA perspective specific focus should be placed on the 650 000 farmers classified as emerging/small scale farmers and who view farming as their career and primary livelihood.

The skills development requirements reflected in Table 2.5 are based on needs expressed by those farmers who were consulted during the provincial research assignments as part of the development of the AET Strategy, as well as the findings of the consultants who undertook a training needs analysis study amongst a representative group of Land Reform Beneficiaries (study undertaken for PAETA in 2003). The demand figures (number of required training interventions) were estimated through applying the response rates to the total number of farmers in each of the target groups.

<sup>31</sup> Comparable information related to training priorities for the Free State and Limpopo Provinces were not captured in the AET Strategy reports and is thus not reflected here

<sup>32</sup> Provincial Reports used in the development of the AET Strategy of Department of Agriculture, 2005

MAIN TRAINING REQUIREMENTS	POTENTIAL NUMBER OF LEARNERS (2,4 million subsistence and homestead producers – DoA responsibility)	POTENTIAL NUMBER OF LEARNERS (650 000 emerging farmers as beneficiary target group of AgriSETA)	DETAILED TRAINING REQUIREMENTS
Business Management	600,000	162,500	<ul style="list-style-type: none"> <li>• Basic record keeping</li> <li>• Farm management</li> <li>• Financial planning and management</li> <li>• Project management</li> <li>• Business plan development</li> </ul>
Marketing and processing	216,000	58,500	<ul style="list-style-type: none"> <li>• Processing and packaging</li> <li>• Transport management</li> <li>• Marketing produce, including branding</li> <li>• Knowledge of markets</li> </ul>
Management and Leadership	288,000	78,000	<ul style="list-style-type: none"> <li>• Entrepreneurship</li> <li>• Conflict resolution and management</li> <li>• Group cohesion</li> <li>• Labour relations</li> </ul>
Problem solving	96,000	26,000	<ul style="list-style-type: none"> <li>• Problem-solving skills and techniques</li> <li>• Decision-making skills and techniques</li> <li>• Computer literacy</li> </ul>
Technical knowledge and skills	1,032,000	279,500	<ul style="list-style-type: none"> <li>• Production management (specific enterprise)</li> <li>• Demonstration of production techniques</li> <li>• Natural resources management</li> </ul>
Mechanical knowledge	72,000	26,000	<ul style="list-style-type: none"> <li>• Farm maintenance</li> <li>• Repairs of machinery and equipment</li> <li>• Electrical maintenance and installation</li> </ul>
<b>TOTAL</b>	<b>2 400 000</b>	<b>650 000</b>	

**TABLE 2.5:** Specific skills development needs established for small-scale/emerging farmers.

In addition to the above training needs, the following were identified as critical skills development priorities to be addressed:

**ABET Programmes:** As indicated throughout the report, a very large percentage of these farmers are illiterate and/or have had very little formal education. A big and widespread demand thus exists for literacy programmes towards developing the reading and writing skills of participants - thus preparing such candidates for further learning. A need also exists for other ABET programmes of a family planning and family care nature. HIV/AIDS awareness training should also be included in all programmes.

**Occupational Health and Safety:** The lack of knowledge in this area has been widespread. Most farmers are exposed to hazardous machinery, implements and chemicals on a daily basis with little understanding of neither the dangers, nor the safe practices associated with the utilisation of these components and commodities. It is of critical importance that training is provided in these aspects.

## 2.4.3 THE PUBLIC SECTOR – AGRICULTURAL EXTENSION

The Department of Agriculture has identified its key training and development needs (the AET Strategy 2005) to fall within the following four main fields:

- Agricultural Production
- Agricultural Engineering
- Agricultural Economics
- Agricultural Development, and
- Veterinarians

A particular need for training and development also exists in the upgrading and development of its Extensionists. The DoA currently has a complement of approximately 2 800 Extensionists with the Extension worker to farmer ratio varying between the different Provinces. The extension/client ratio is 1:21 for commercial farmers and 1:857 for subsistence farmers which compares with ratios elsewhere in SADC countries. The size of the South African extension services is therefore not the primary issue, but rather the capacity to deliver.

Based on a provincial study undertaken during 2003 in the Limpopo Province, the following development needs were identified amongst Extensionists of the Department of Agriculture:

- **Access to information:** Most extensionists have little or no access to sources of information (i.e. internet) resulting in a lack of knowledge regarding new and appropriate technology.
- **Computer literacy:** Extensionists find it difficult to gather and analyse data, write reports or to prepare presentations resulting in a less than efficient service provided to farmers.
- **Planning skills:** Extensionists indicated that their planning abilities can be described as poor resulting in the ineffective application of resources, poorly executed projects and a low success rate amongst farmers.
- **Economic aspects of farming:** It was evident that most extensionists have a considerable amount of knowledge regarding subsistence farming operations but that they seriously lack knowledge regarding economically viable farming enterprises.
- **Illiteracy of farmers:** Extensionists experience considerable difficulty to train illiterate farmers.

It is further particularly important to note that Extensionists qualifying from university or college usually have had no exposure to farming on a commercial basis and as such will not have the experience to assist farmers with business and management related needs. It is subsequently proposed that on completion of their training they be provided with practical experience and exposure over a period of at least one year within a controlled and supervised environment (e.g. in the form of an internship).

## 2.5 SUMMARY OF DEMAND

### 2.5.1 COMMERCIAL AND SECONDARY ENTERPRISES

Skills requirements in the agri sector has to be summarised from two separate perspectives, which are related but often kept separate in the worldview of those involved in Agriculture. The two perspectives include that of the worker or overall workforce and that of the viability and growth of the organisation.

**Management:** In terms of the development of managers, the following should be noted:

- Most people involved in farm or enterprise management have received training at the Agricultural Colleges or at the Universities and Universities of Technology. In the case of the secondary sector, 86% of managers were exposed to higher education and training – with “on-the-job” training and experience still viewed as critical to building the required experience and skills base.
- There is a growing demand for managerial and supervisory training because more enterprises are making use of team structures where team leaders and supervisors are not provided with sufficient management skills development.
- Time management seems to be a key problem area for many managers.
- A critical change in the agri sector today is the growing importance of marketing and technology and the associated skills helping to plan, adapt and manage their enterprises in a more market centric approach.
- In down-stream enterprises the largest demand is for General Managers, Financial Managers, Technical/Manufacturing Managers and (especially) Quality Management.

**Professionals, Technicians and Associate Professionals:** Within this group, the main focus should be on:

- Machine and Plant Engineers
- Technicians (over the full spectrum)
- Accountants and bookkeepers

**Skilled agricultural and fishery workers as well as Crafts:** Key development areas within this specific group should focus on:

- Horticulturalists
- Maintenance staff
- Agricultural equipment technicians, mechanics, fitters, boilermakers
- Machine operators

**Skills requirement of the workforce:** Some of the concerns of the sector include:

- Overall a very low level of education within the sector (generally primary school or less).
- Little indication of the emergence or development of a career path.
- Little evidence for benefits accruing with increased skill and training.

Part of the worldview of the current sector that needs to be addressed includes:

- A perception by both employer and employee that the employee does not add real value, but is only employed to do menial labour and is therefore dispensable.
- An exclusion of the workers in the planning, management and control activities of the operation (this is slowly changing) as a result a lack of ownership in the process by employees.
- A perception that there is an infinite labour supply – the costs of appointing someone new or reallocating work is often not understood – although there is still a large pool of unemployed people in South Africa most of them have never worked and do not have the social experience of working (in a team or otherwise).

- Whilst there is widespread buy-in for the AgriBBBEE strategy, there is still too little proactive planning and initiatives to meet BEE targets. The industry is experiencing an increasing need for expanded and more competent management structures – ranging from BEE representatives at top management, to production management and operational team leaders, coordinators and supervisors. The sector has a tendency to merely thrust the better performers into such positions where they then experience performance problems. The identification, development and promotion/appointment of suitable BEE candidates to positions of joint ownerships and senior management must receive urgent attention.
- The increased focus on value adding via agri-businesses and the processing of primary produce creates a further need for training of farmers and managers in these fields.
- Improvement of basic literacy and numeracy and exposure to more technical knowledge of the business (the rationale not just the operational instruction) is a large need within the commercial agri sector.
- Improved occupational proficiency through the development of occupation health, safety and development frameworks.

Skills required by management to support these include:

- Organisational management and control.
- Team development and management.
- Delegation of authority.

## 2.5.2 SMALL-SCALE AND EMERGING FARMERS

The following have been identified as learning needs that should be addressed towards ensuring that small-scale and emerging farmers become productive and that agricultural projects are operated and managed in an economically viable and sustainable manner: These needs pertain specifically to the approximately 650 000 emerging farmers to be served by the AgriSETA.

**Farm Management:** Since the majority of small-scale and emerging farmers have been exposed to agriculture at a farm worker level only, they seriously lack farm management knowledge and skills. It is believed that the lack of suitable and relevant management skills serve as the most prominent constraint on many smaller agricultural projects. The range of management skills needed is:

- Farm planning
- Production planning and management
- Financial planning, budgeting and control
- Project management
- Organisational management and human resources management
- Conflict management

**Business Skills:** Due to the nature of their previous exposure to farming (namely as workers without joint financial responsibilities), a serious void exist in the current ability of new farmers to manage their farms as businesses. It has been identified that knowledge and skills should be developed amongst beneficiaries in the following fields:

- Marketing and pricing (and a knowledge of markets)
- Basic Bookkeeping and Farm Administration
- Entrepreneurship
- Distribution
- Computer Literacy

**ABET Programmes:** As indicated throughout the report, a very large percentage of farmers are illiterate and have had very little formal education. A big and widespread demand thus exists for literacy programmes towards developing the reading and writing skills of participants - thus preparing such candidates for further learning. A need also exists for other ABET programmes of a family planning and family care nature. HIV/AIDS awareness training should also be included in all programmes.

**Occupational Health and Safety:** The lack of knowledge in this area has been widespread. Most farmers are exposed to hazardous machinery, implements and chemicals on a daily basis with little understanding of neither the dangers, nor the safe practices associated with the utilisation of such implements and commodities. It is of critical importance that training is provided on these aspects.

**Production Related Training:** To overcome the indicated lack of sound agricultural production knowledge and skills of many farmers (given that they obtained only a limited and narrow band of knowledge at farm worker level), a range of production skills training courses is required. It is important that project staff is exposed to appropriate knowledge and an understanding of the production of crops and/or animal husbandry to facilitate decision-making at a farm-owner level.

Whilst the type and range of skills required at individual project level need to be investigated further before implementation (since skill requirements will differ from project to project), the following were identified as production skills training that are common to a relatively large number of projects:

- **Crop Production Training:**
  - Soil preparation and planting
  - Fertilization
  - Crop maintenance
  - Control of pests and diseases
  - Harvesting
  - Crop rotation
- **Horticulture Training:**
  - Soil preparation and planting
  - Fertilization
  - Irrigation
  - Orchard management
  - Crop maintenance
  - Control of pests and diseases
  - Harvesting
  - Crop rotation
  - Packaging
  - How to set up a nursery
- **Animal Husbandry Training:**
  - Small and Large Livestock:
    - Range management
    - Pests and disease control
    - Feeding and Care
    - Breeding
  - Poultry:
    - Broiler production
    - Egg production
    - Control of pests and diseases
    - Packaging

**Technical Training:** One of the most apparent consequences of a lack of farm-owner level knowledge is the incorrect utilisation and poor maintenance of equipment, machinery and farm infrastructure. It is of crucial importance that knowledge and skills are developed in this area to ensure that farmers actually utilise the machinery and equipment at their disposal and that the machinery and farm infrastructure is maintained. In this regard a wide range of courses covering the following fields are required:

- Operation and management of farm implements and equipment
- Irrigation maintenance (including windmills and boreholes)
- Fencing skills
- Mechanical and electrical maintenance (including welding skills)

**It should be noted that whilst this SSP has focussed primarily on the 650 000 farmers that fall within the “Emerging Farmer” constituency and thus exclude the approximately 1,7 million subsistence farmers, an urgent need exists to support subsistence farmers since they make a significant contribution in addressing the food requirements of the poorest of the poor and further serve as the feeding ground from where Emerging Farmers are identified and developed. Whilst this larger constituency is the primary responsibility of the DoA, it is believed that the AgriSETA could and should assist the DoA in meeting some of their training requirements and that joint venture initiatives with funding from the NSF should be pursued.**

## 2.5.3 THE PUBLIC SECTOR

The following are recommended as the range of training courses and programmes that extensionists require towards assisting small-scale farmers to become productive and that their agricultural projects are operated and managed in a sustainable and economically viable manner: Whilst not exhaustive, the specified range of skills and expertise were specifically selected because they cover the farming ventures and practices deployed by the majority of emerging and small-scale farmers.

### 2.5.3.1 Production Related Technical Training

- **Animal Husbandry:** Courses in animal husbandry should include training in both large and small stock production and the following topics should be presented:
  - Range management
  - Control of diseases
  - Feeding and care
  - Breeding
  - Marketing
  - Economics related to stock production
- **Poultry:** Focus should be provided to broiler production and the following topics presented:
  - The management of broiler production systems
  - Control of pests and diseases
  - Packaging and marketing
  - Economics related to broiler production
- **Crop Production:** Crop production should focus largely on maize. The following topics should be presented:
  - Soil preparation and planting
  - Fertilization
  - Irrigation
  - Crop maintenance and rotation
  - Control of pests and diseases
  - Harvesting
  - Economic aspects related to maize production

- **Horticulture:** Horticultural training should focus on the following crops:
  - Vegetable Production (beans, cabbage and spinach, beetroot, onion, pepper, sweet potato)
  - Tomato production
  - Citrus
  - Ornamental plant production

The training courses in horticulture should include the following topics:

- AVCASA course in the use of agri-chemicals for the control of pests and diseases.
- Soil preparation and planting
- Fertilization
- Irrigation
- Crop management
- Crop rotation
- Harvesting
- Packaging, value adding and marketing
- Economic aspects related to horticultural production
- Plant ID

### **2.5.3.2 Agricultural Economics**

The skills and knowledge demands include the following topics:

- Agricultural marketing
- Branding
- Packaging
- Distribution

### **2.5.3.3 Agricultural Management**

The proposed training to address skills and knowledge shortfalls should focus on the following topics:

- Farm management
- Farm planning

### **2.5.3.4 Community Development**

The proposed training to address skills and knowledge shortfalls should focus on the following topics:

- Communication skills
- Conflict management
- Facilitation skills

### **2.5.3.5 Business Skills**

The proposed training to address skills and knowledge shortfalls should focus on the following topics:

- Business plan development (including economic viability)
- Basic financial management (including Business Plan Development)
- Human resources management
- Project management (including project viability)

### **2.5.3.6 Research Skills**

The proposed training to address skills and knowledge shortfalls should focus mainly on the development of computer literacy amongst extensionists of the Department and include the utilization of the MS Office package.

## CHAPTER 3: SUPPLY OF SKILLS

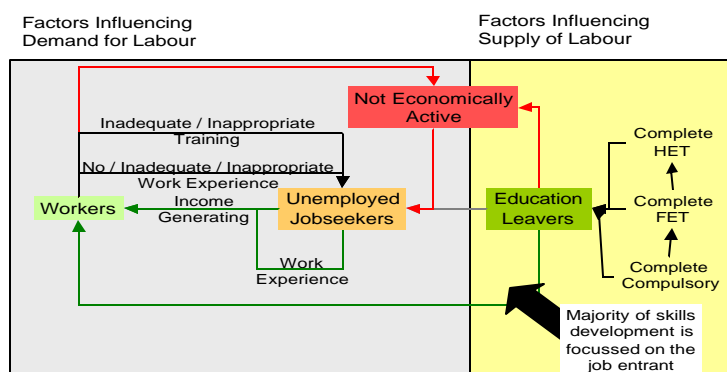
### 3.1 INTRODUCTION

This chapter aims to firstly reflect on the current skills levels of the economically active population in the agri sector (expanding on Chapter 1: Sector Profile), and then considers the adequacy thereof in meeting the general demand for skills (thus linking closely with Chapter 2: Demand for Training).

The chapter further evaluates the supply of skilled labour via the education and training system (both formal and non-formal education and training provision). This information is essential to draw conclusions on whether the existing system has the capacity to meet the demand and/or to develop recommendations on how and where additional capacity should be created.

Extensive consultation with stakeholders has taken place in obtaining the information. In addition to the consultations undertaken by the researchers who developed the SSP, wide use was made of the information collected and collated by the Department of Agriculture as part of its research (and the extensive consultation process embarked upon with all stakeholders) in the nine provinces since 2002 towards developing the National Education and Training Strategy for Agriculture and Rural Development in South Africa (AET Strategy)<sup>33</sup>.

Prior to considering the specific dynamics and details of the supply of skills and education and training services within the agricultural sector, we would like to offer the following as the broad context within which such human resource development is taking place and to facilitate an understanding of the flow of skills in the South African Labour market. The diagram below depicts the flow of skills.



**FIGURE 3.1:** Human Resource Development Dynamics within the South African Labour Market<sup>34</sup>

From the diagram it is evident that the majority of funds spent and resources utilised, are focussed on developing school leavers and assisting first time job entrants. Some of the concerns raised about the current HRD provision system include:

- A misalignment between training offered and industry requirements
- Very little emphasis on vocational and occupational training
- Little or no opportunity for economically inactive and unemployed individuals to enter the job market if they have not been employed for a while.
- Concern must also be raised at the low levels of functional literacy and numeracy of school leavers.

<sup>33</sup> National Education and Training Strategy for Agriculture and Rural Development in South Africa; AET Strategy of the Department of Agriculture, 2005.

<sup>34</sup> Source: Changes in the South African Education System: In search for economic growth, *J Erasmus and SC Steyn (2002)*

The remainder of the chapter subsequently provides a more detail analysis of the dynamics in the education and training supply system within the agricultural sector.

### 3.2 CURRENT SKILLS PROFILE OF THE SECTOR

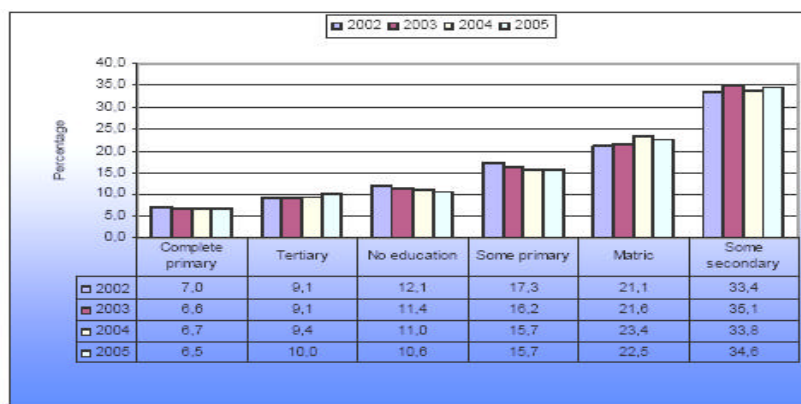
The South African labour market is categorised by a large number of people who enter the market (and employment) prior to having completed the compulsory schooling phase. The reasons for such early school leavers exiting the formal education system are varied but are often due to the following:

- Historical policies (persons who were victims of the earlier political and economic dispensation – such restricting policies have received urgent attention over the past decade and has fortunately an ever decreasing impact and effect),
- Societal norms and traditions (which is fortunately also changing and has a diminishing effect)
- Insufficient funds at household level (which is still a large factor amongst the very poor and a primary reason why a significant number of children are denied a sound education beyond the compulsory schooling phase)

Statistics on levels of educational attainment are currently the best available indicators of the level of skills in the labour force. These are determinants of an economy’s capacity to compete successfully in world markets and to make efficient use of rapid technology advances. They are also a factor in determining the employability of workers.

South Africa and its economy is historically characterised by a relatively small percentage of qualified people who are subsequently employed in the so-called more skilled occupations (i.e. managers, professionals and semi-professionals including technicians).

In this regard a more recent report of Statistics SA<sup>35</sup> revealed that whilst there was a notable improvement in the overall educational profile of the population, it is still relatively poor when compared to the developed countries. Particularly relevant is that only 10% of persons have completed a tertiary education with a further 25% who have attained a matric. The remainder of the population have only attained some secondary qualification (35%) and/or a primary education (20%) whilst approximately 10% of the population have had no formal education.



**FIGURE 3.2:** Highest level of education attainment (Stats SA July 2005 GHS)

<sup>35</sup> StatsSA General Household Survey, July 2005

The above situation is seemingly further exacerbated by the lack of training provided to the potential workforce. In this regard information presented in the Labour Force Survey for September 2004 reflect that only 9% of the total labour force (13% of the economically active population) have received structured work related skills training (refer Table 3.1 below)

Did or did not receive Training	Sept 2004 Total Potential Labour Force	Sept 2004 Not Economically Active	Economic Active (Sept 2004)		
			Total	Workers	Unemployed
Number of People	29 917 000	13 725 000	16 192 000	11 622 000	4 570 000
People who received training	9%	3%	13%	14,5%	9%
People who did not get training	91%	97%	87%	85,5%	91%

**TABLE 3.1:** Structured work related training received<sup>36</sup>

It is important to note that early school leavers are primarily confined to employment opportunities of a manual labour nature and jobs that demand little or no educational qualifications. Typically such opportunities exist in the mining and agricultural sectors and in many of the labourer categories in the other economic sectors (refer to Chapter 2 for the large number of elementary and labour occupations and opportunities available in the agricultural sector).

The impact and effect of the above is that the agricultural sector still has a large component of its workforce that is illiterate or semi-literate. Whilst stakeholders in the industry also identified an isolated advantage for the large number of uneducated employees in the sector (namely that of keeping wages and production costs relatively low – which is deemed especially important where farmers have to compete with international markets), the majority perceive this low educational profile as having the following disadvantages or negative impacts:

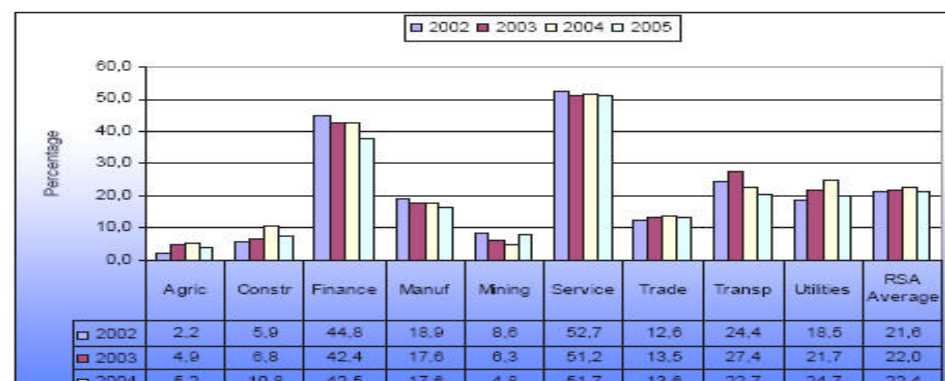
- The low level of education places a restriction on people to progress and advance through the ranks and their ability to take on higher-level functions and responsibilities
- The lack of vision and interpretation skills and ability of such poorly educated employees and/or farm and business owners has a huge hidden cost – caused by and manifested in unnecessary mistakes made by such employees/farmers and/or their inability to realise opportunities that present itself
- It negatively impacts on the general outlook and motivation of such employees – many lacking a sense of self-worth and pride as a result of not having attained an educational achievement (and which historically effectively ruled out progress within the notion of life-long learning)

It should further be noted that the above indicated “uneducated” profile is not only confined to farms (the primary agricultural sector) but also extends to many lower end occupations in the up- and down-stream enterprises within the sector (agric inputs, agric processing and agric outputs). Whilst the general education profile of employees in these sub-sectors are somewhat better than that in the primary sector, employees in the labourer categories are generally poorly educated or have lower levels of education.

In view of the limited statistical information available to develop a comprehensive educational profile of persons employed in the agri sector, selected data were collected and collated from various sources towards developing a skills profile. In this regard the following were used:

<sup>36</sup> Labour Force Survey for September 2004

- Information from Statistics SA <sup>37</sup>, which reveals that in 2005 only 4% of employees in the agricultural sector, fell within the so-called ‘*more skilled*’ occupations (i.e. managers, professionals, semi-professionals and technicians). This is alarmingly low when compared to other sectors (with the average of all sectors being 21% - refer Figure 3.3 below). This figure confirms the general perception that the agricultural sector has the lowest skill levels of all the sectors and this profile is one of the contributing reasons why the sector has a relatively poor image amongst work seekers and why the sector finds it difficult to compete in the market place for skilled employees.



**FIGURE 3.3:** Percentage of staff employed in more skilled occupations <sup>5</sup>

- Information collated from various Statistics SA sources <sup>38</sup>, which indicates that in September 2001 the category “skilled agricultural workers” comprised 44% of total employment in the agricultural sector and that this figure reduced to 33% in September 2005. Over this period the sector shed a total of 253 000 employment opportunities (whilst almost all other sectors had employment gains). What is particularly disturbing is that 219 000 of the lost jobs fell in the “skilled agricultural worker” category (87% of the job losses) – which implies that the pool of “skilled agricultural workers” were reduced by 42% over this period. This holds particularly alarming implications for the sector and AgriSETA in particular since c. 200 000 additional people need to be trained to a level where they are termed as “skilled” merely to restore the skills base to where it was in 2001. The above figure further implies that (given that an additional 4% fall in the category ‘*more skilled*’), approximately 69% of the labour force in the agricultural sector falls below the “skilled” category. (It must however be stated that a number of stakeholders expressed doubt over the accuracy of the 2002 figures presented by Statistics SA and believes that it is an over-estimation – they are of the notion that the sector’s employment remained relatively stable for the period 2001 – 2004 around 1 200 000 people and that the indicated loss of jobs were thus much lower than that reflected in Table 3.2 below). Even so a total of 39 000 skilled job losses occurred during 2004 – 2005

Occupation	Sep 01	Sep 02	Sep 03	Sep 04	Sep 05	Change Sep 01–Sep 05
Total Agriculture employment	1 178 000	1 420 000	1 212 000	1 063 000	925 000	
Total Job Losses / Gains		+ 242 000	- 207 000	- 150 000	- 138 000	- 253 000
Total <b>Skilled</b> Agriculture employees	521 000	706 000	341 000	329 000	302 000	
<b>Skilled</b> Job Losses		+ 185 000	- 365 000	- 12 000	- 27 000	- 219 000

**TABLE 3.2:** Labour Force Survey, September 2005 (Stats SA P 0210) <sup>39</sup>

<sup>37</sup> StatsSA General Household Survey, July 2005

<sup>38</sup> Labour Force Surveys for September 2001 and September 2005 (Reports P0210)

<sup>39</sup> It should be noted that many key stakeholders doubt the accuracy of the figures of Statistics SA for 2002 and believes that there was an “over-count” for that year

Organised industry is of the opinion that some of the job losses in the 2004/2005 period are a result of the poor rainfalls during these years and the introduction of minimum wages within the primary agricultural sector – which prompted many farmers to reduce their labour force. It is important to note that this loss of skilled workers to the other sectors implies that the relatively poor agricultural sector makes an important training contribution in supplying skilled labour to the economy at large. In this regard it is generally recognised that agriculture is a natural entry point into the world of work for many persons from the rural areas – who have never worked before see the agricultural sector as its first step towards other formal sector employment.

The indicated loss of skilled workers further holds an important training implication in that the “reduced” workforce on farms now need to be more flexible in performing a wider range of tasks – which in turn demands training for such workers to be multi-skilled.

Consultation with stakeholders in the secondary sub-sector revealed interesting information confirming that the industry demands much higher levels of education and skills than what is currently available. Table 3.3 below reflects the qualifications expected in various occupational groups within this sub-sector.

The pattern emerging from the expected qualifications is typical of resource-based industries where high levels of education are required at managerial level and little or no educational qualifications are demanded at many of the entry-level occupations. This table should be read with the earlier information (Chapter 2) referencing the distribution of employment whereby the vast majority of employment is at lower occupational levels.

Despite the above it must however be noted that many of these uneducated workers have in their own right become skilled through the knowledge they have acquired and developed through work experience and on-the-job training – often overcoming the initial challenges of illiteracy and innumeracy through self-determination. Historically such workplace training has not received a great deal of recognition and the intangible knowledge base stored within individuals and enterprises were not defined or acknowledged in any way. Traditionally only qualifications obtained through FET and HE institutes i.e. Colleges, Universities of Technology and Universities were recognised. What is often left unsaid is the fact that work experience can also serve as a springboard into these training institutions and the continual development of lifelong learning need not only be confined to the realms of the academic world but also the extension of workplace experience and theoretical exposure to attain a qualification. Through the Recognition of Prior Learning process this is now fortunately being addressed and becoming a reality for many employees.

**SPECIAL NOTE:**

*The following table reflects the qualifications expected in various occupational groups in the secondary sector of AgriSETA. Whilst the general trend is believed to be similar, the demand for better educational levels is generally higher in the secondary sector than in the primary sector.*

Occupational category	Below LI	General education	Further education	Higher education and training	Don't know / N/A
	%	%	%	%	%
Managers and owners	>1	3	13	<b>80</b>	3
Professionals	0	1	8	<b>64</b>	27
Technicians and Associate Professionals	0	3	<b>23</b>	<b>51</b>	23
Clerks & administrative workers	1	9	<b>57</b>	<b>22</b>	11
Service and Sales workers	0	9	<b>49</b>	13	29
Skilled Agricultural & Fishery workers	1	13	<b>34</b>	18	33
Skilled workers, craft and related trades	2	<b>21</b>	<b>40</b>	9	28
Plant & machine operators and assemblers	3	<b>37</b>	<b>40</b>	3	17
Labourers & Elementary occupations	<b>26</b>	<b>54</b>	11	1	8

**TABLE 3.3:** Desired Qualifications – needs expressed by secondary sub-sector representatives <sup>40</sup>

### 3.3 SKILLS SUPPLY VIA THE EDUCATION AND TRAINING SYSTEM

This Section evaluates the current *supply* of skilled labour via the education and training system (both formal and non-formal education and training provision).

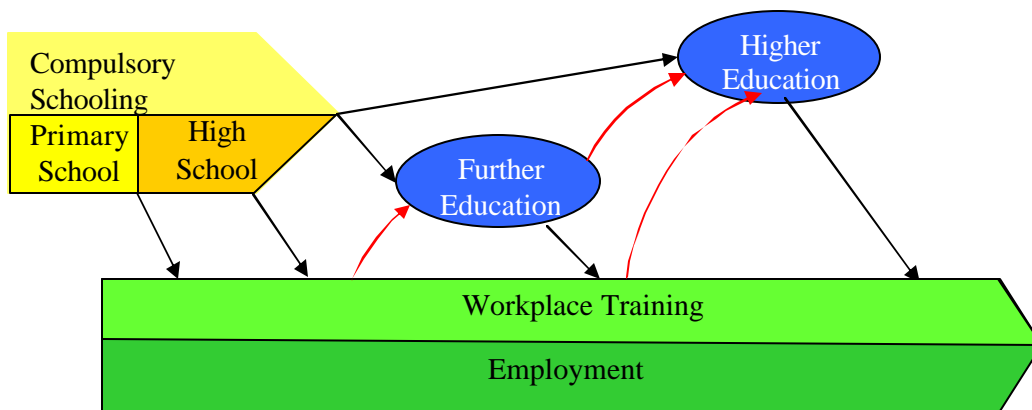
Information was obtained from various sources that included the following:

- A review of a range of statistical reports (e.g. the HDRC HRD Review Report, the State of Skills Report, the DoA Report on Agricultural Enrolments and Graduates Trends, etc.)
- The Consultancy Reports of the individual research teams that undertook research during 2002 in each of the nine Provinces (towards the development of the DoA AET Strategy, 2005)
- Statistical information requested and collected via questionnaires and requests from the Agricultural Colleges, the FET Colleges and HET institutions (via the DoA and the DoE respectively)
- Consultation with various Providers in establishing their views on supply issues

<sup>40</sup> Results obtained from questionnaires completed by Secondary sub-sector representatives in 2004

The supplier chain of skills development in South Africa as outlined in Figure 3.4 below reveal that for a complete picture of skills supply in the agri sector one must consider education, training and development provision from the following range of providers:

- Schools (secondary schools and especially from the agricultural schools)
- Training providers and institutions that offer non-formal and non-accredited training (including workplace training)
- Training providers accredited at AgriSETA (those offering SAQA accredited learning programmes)
- Further Education and Training providers (FET Colleges including the Agricultural Colleges)
- Higher education and training institutes (Universities and Universities of Technology)



**FIGURE 3.4:** Skills Development in South Africa

For organisation purposes the various providers are grouped into the following categories in accordance with their offerings on a NQF level:

- General Education and Training Providers (GET level)
- Further Education and Training Providers (FET level)
- Higher Education and Training Providers (HET level)
- Providers of Non-Formal Education and Training programmes and services

Prior to discussing the level and type of provision at each of the above tiers it is important to note that these tiers do not function in isolated compartments but that there are linkages and a degree of articulation between them (which was one of the key objectives of the restructuring efforts within the FET and HET landscapes over the past 5 years).

### 3.3.1 GET PROVIDERS AND THEIR OFFERINGS

The GET landscape within a formal agricultural education and training context consists of the following main providers:

- Academic Schools (primary and secondary schools),
- Specialised Agricultural Schools

#### 3.3.1.1 Academic Schools

Whilst there is considerable scope for improvement and expansion, schools have a very important role and function in orientating children towards agriculture. Primary and secondary schools fall under the jurisdiction and control of the Department of Education and whilst agriculture as a subject has been removed from the curriculum at primary school level, it can still be included via the OBE system. In this regard Curriculum 2005 makes provision (within the context of the *Natural Science Learning Area*) for exposing learners to agricultural oriented topics and subjects such as:

- “Understanding the Soil”
- “Growing Crops”
- “Investigating Soil Erosion”
- “Investigating Plant Growth”

It is however at *secondary school level* that agricultural education is provided in varying degrees of sophistication. Selected secondary schools (high schools), particularly those located within rural or strong farming orientated communities, offer agriculture as a formal subject (elective). Unfortunately the overwhelming majority of schools do not have practical farming units and the learning is thus of theoretical nature only. Information obtained from the provincial research undertaken for the DoA towards developing the AET Strategy estimate that there are approximately 1 500 schools offering agricultural subjects. The following are figures for some of the provinces where specific statistics were cited in these reports<sup>41</sup>):

- In the KZN Province more than 500 schools offer some agricultural orientation and 94 schools offer Agricultural Science as a learning field at Higher Grade
- In the North West Province more than 160 schools
- In the Eastern Cape Province close to 300 schools

These secondary schools offer agriculture as a subject or as a learning field in the subject combinations outlined in Table 3.4 below:

Provision at Secondary Schools	Core Subjects of Combinations of Learning Fields
Secondary Schools (High Schools) offering agriculture as a learning field or subject	Agricultural Science plus Natural Science
	Agricultural Science, Natural Science plus Mathematics
	Agricultural Science plus Commercial Science
	Agricultural Science, Natural Science plus Commercial Science
	Agricultural Science, Commercial Science plus Mathematics
	Agricultural Science, Natural Science plus Social Science
	Natural Science, Commercial Science plus Mathematics

**TABLE 3.4:** Options for taking Agriculture as subject at selected Secondary Schools <sup>42</sup>

<sup>41</sup> Research Reports of consultants who undertook provincial research studies towards development of the DoA AET Strategy, 2005

<sup>42</sup> Provincial Report on Education and Training for Agriculture and Rural development in the North West Province; A Masigo and C Matshego, 2002 (part of DoA AET Research studies).

Whilst the schooling system, in theory, is thus reasonably geared to deliver AET at NQF levels 2-4, an overall evaluation by the Department of Agriculture of such delivery is that it is “poor”<sup>43</sup>. This Report states the following as reasons for such poor delivery:

- The awareness of the importance of agriculture has remained low
- Few primary school teachers have training in agriculture and supporting learning materials are not readily available
- High schools offering agriculture as subject are mostly ill equipped (both in terms of qualified teachers and facilities and equipment for practical training)
- Failure rates in these subjects are high (especially amongst previously disadvantaged groups where there is a punitive association with studying agriculture)

### 3.3.1.2 Agricultural Schools<sup>44</sup>

Specialised agricultural high schools were also established in the various provinces. These schools have as specific aim and target population those pupils who want to make a livelihood from farming and as such pupils are required to take at least two or more agricultural subjects. To ensure linkages and articulation into further and higher educational institutions the agricultural schools also offer a range of non-agricultural subjects which is wide enough to enable scholars to obtain university entrance qualifications. The agricultural schools normally have an economic farming unit that provides sufficient agronomy and livestock facilities and material for demonstration and practical training purposes.

There are more than **30 specialised public Agricultural Schools** established throughout the country. These include: Augsburg Agricultural Gymnasium, Bekker High School, Boland Agricultural High School, Morgenson Landbou Akademie, Gelukwaarts Agricultural And Hotel School, Hendrik Potgieter Agricultural High School, Itokisetseng Combined School, Jacobsdal Agricultural High School, Kgotso Agricultural Secondary School, Kroonstad Agricultural High School, Kuschke Agricultural High School, Marlow Agricultural High School, Martin Oosthuizen High School, Merensky High School, Middelburg High School, P H Moeketsi Agricultural High School, Nampo Agricultural Secondary School, Niekerksrus Agricultural School, Northern Cape Agricultural High School, Oakdale Agricultural High School, Phandulwazi Agricultural High School, Sannieshof High School, Seotlong Agricultural And Hotel School, Settlers Agricultural High School, Suikerland Agricultural High School, Umzimvelo Agricultural School, Unicom High School, Wagpos High School, Weston Agricultural School, Winterberg Agricultural High School.

In addition to the above public schools there are a number of semi-private agricultural schools and institutions catering for Grade 8 to Grade 12 pupils – examples of such schools include: Vryheid Agricultural High School, Harry Oppenheimer Agricultural High School, Weston Agricultural College, Zakhe Agricultural College, etc.

The core subjects and choice of subjects at the specialised Agricultural Schools are usually as follows:

- Mathematics and languages
- Science Subjects (physics, biology)
- Nature studies
- Animal husbandry
- Field/Crop and horticulture
- Agricultural science

<sup>43</sup> Department of Agriculture AET Strategy, 2005

<sup>44</sup> Source Department of Agriculture, unless otherwise specified

### 3.3.2 FET PROVIDERS AND THEIR OFFERINGS

The FET landscape within an agricultural education and training context consists primarily of the following providers:

#### 3.3.2.1 The Agricultural Colleges

The Agricultural Colleges were established as specialised training institutions under the management and control of the Department of Agriculture (national and provincial departments). These Colleges serve prospective farmers and extension officers as primary target groups and thus prepare people for both self-employment and formal employment. Strong focus is placed on practical agricultural production aspects (with practical training taking up approximately 50% of total training time – the balance being devoted to lectures and demonstrations). Some of the colleges specialises in crops that are unique or more prevalent in their respective geographic areas. Standard offerings from the Colleges are multi-year programmes leading to either Diplomas or Higher Certificates in Agriculture – with attention also being paid to training in farm economics and farm management. In addition to the diploma courses, special and short courses are also offered where a demand exists. The following table reflects learning programme and enrolment information obtained from the eleven long standing and recognised agricultural colleges in the country:

Name of the College	Programmes Offered	Enrolment 2004
Cedara College of Agriculture	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture.	159
Elsenburg College of Agriculture	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture: Cellar Technology. 3. Diploma in Agriculture. 4. NQF 1 – NQF 5 Learnerships	167
Fort Cox College of Agriculture and Forestry.	1. Diploma in Social Forestry. 2. Diploma in Agriculture: Animal Production. 3. Diploma in Agriculture: Crop Production. 4. Diploma in Agriculture: Agribusiness	254
Glen College of Agriculture	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture.	189
Grootfontein Agricultural Development Institution.	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture.	63
Lowveld College of Agriculture	1. Higher Certificate. 2. Diploma Plant Production	212
Madzivandila College of Agriculture	1. Diploma in Agriculture: Animal Production. 2. Diploma in Agriculture: Plant Production.	43
Owen Sithole College of Agriculture	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture 3. Higher Certificate in Home Economics 4. Diploma in Agriculture: Home Economics.	54
Potchefstroom College of Agriculture	1. Higher Certificate in Agriculture. 2. Diploma in Agriculture. 3. B Tech Agricultural Management	244
Taung College of Agriculture	1. N4 Certificate in Farming Management. 2. N5 Certificate in Farming Management. 3. N6 Certificate in Farming Management.	114
Tompi Seleka College of Agriculture	1. Diploma in Animal Production. 4. Diploma in Resource Utilization.	No new students.
<b>TOTAL</b>		<b>1 499</b>

**TABLE 3.5:** Programme levels offered at different Colleges of Agriculture<sup>45</sup>

<sup>45</sup> Research Report on Agricultural Enrolments and Graduate trends, Directorate of the Education and Training in the Department of Agriculture, 2006

Combined, the Agricultural Colleges had an enrolment figure of **1 500 students** in 2004 (with a total of 668 students graduating from the colleges and entering the labour market in 2004). A racial and gender breakdown of enrolments reflects that male enrolments constitute 74% of total enrolment and that black students make up the majority of students (60% of all students).

In addition to the above NQF aligned programmes leading to qualifications, most of the Colleges also offer short courses. It is however believed that the Agricultural Colleges have the capacity to offer a great deal more short courses and a specific need exists for the offering of more unit standard based Skills Programmes. The survey undertaken by the DoA reflected the following with regard to the offering of short courses:

- Horticultural Crops feature strongly in the provision of short courses
- Majority of skills provision still focuses on training individuals who are about to enter commercial agriculture
- There has been a dramatic shift in student demography - most colleges now show a majority of black students with the female contingent growing steadily
- Most popular courses are short courses.
- Class sizes vary between 17-20 people
- There is a repeat of short courses about 6 times a year
- Most courses vary between 1 – 2 weeks in duration

Whilst the Agricultural Colleges serve as critical and essential providers of education and training services to the sector (especially in the training of Agricultural Extension Officers), it is important to note that numerous problems and constraints are being experienced at a number of the Agricultural Colleges – resulting in the outputs not fully meeting the demand and/or expectations. In this regard the uncertainty regarding the future of Agricultural Colleges, a debate that has been ongoing for the past 5 years, has contributed significantly to deteriorating standards and services at these institutions. Within the context of the new FET and HET landscapes, numerous arguments for and against the transfer of the agricultural colleges to the Department of Education (DoE) have been made. A lack of direction and decisions in the above regard over the past five years, which in turn resulted in limited financial investments in these institutions over this period, have left many of the institutions with diminishing morale and ever deteriorating infrastructure. Whilst an official announcement was made in October 2004 that the Agricultural Colleges will be “transferred” to the Department of Education (towards facilitating an articulation and integration of qualifications with other FET and Higher Education institutions and their qualifications) no concrete actions to implement the decision has taken place as yet.

The above state of affairs has resulted in numerous problems experienced by and at the Agricultural Colleges. Some of these highlighted by the Higher Education Quality Committee <sup>46</sup> are as follows:

- Whilst all the qualifications are registered on the NQF, only 25% of colleges evaluated in 2004 were awarded full accreditation.
- Most colleges were found to:
  - Offer programmes that do not fully address the skills shortages in the sector (e.g. the need for science, engineering and technology)
  - Provide too little or no practical or workplace training.
  - Employ under qualified lecturing staff.
  - Have poor or nonexistent library facilities.
  - Do not have sufficient computer stations to meet the educational requirements.
  - Experience severe budget constraints.
  - Should have become part of the HE system – this has not happened yet and creates uncertainty with regards to the future of Agricultural Colleges.

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<sup>46</sup> Comments made by Les Kirkland Chairperson of Higher Education Quality Committee  
Published in AgriNews Jan/Feb 2004

In the interest of a balanced provision of AET services (which is dependent on the Agricultural Colleges offering practical training services at the FET level) the above-indicated constraints must receive urgent attention. On the positive side it must be mentioned that the Netherlands Embassy has recently embarked upon an international aid initiative aimed at upgrading a number of selected colleges into so-called “centres of excellence” and that work in this regard has commenced. This is a development in the right direction and should be strongly recommended.

Further details related to specific enrolments at the Colleges of Agriculture attached as *Annexure 2*.

### 3.3.2.2 Public FET Colleges

As indicated above the FET landscape has changed considerably over the past 5 years. Of particular importance is the process initiated by the Department of Education in 1995 to consolidate the numerous technical colleges into FET Colleges through a process whereby on a geographical basis individual colleges were clustered and merged into larger consolidated FET Colleges. This has resulted in the establishment of 50 merged FET colleges in 2002 (many with 2-3 decentralised campuses or delivery sites). The FET Colleges are located throughout South Africa with a good geographical spread – whilst the majority are located in the urban or peri-urban areas and thus, from an agricultural perspective, not ideally located. Combined the Public FET Colleges had almost **400 000 students** enrolled in 2004 (primarily in the business management and engineering fields).

The FET Colleges were originally established as the “peoples’ universities” and concentrated on providing industry led education and training programmes (preferably in partnership with local businesses and via collaborative training models where learners received practical training and exposure in the companies). The focus was initially on technical training (so-called engineering studies). With the demise of the apprenticeship system and the changes in the education system a number of the colleges have however lost their strategic vision and allowed their linkages with industry and business to erode – with a gradual shift towards more students enrolling for so-called general and business studies.

The changes initiated by the Department of Education in 1995 also had as objective to provide new strategic direction to the colleges and to re-focus them towards bridging the skills gap in SA, by:

- Restructuring their offerings into general, occupational and vocational streams,
- Allowing greater flexibility in the structuring of training to meet the training demands of local communities and industry, and
- To address institutional constraints (e.g. addressing skill levels of lecturers, improving facilities, etc.)

Results of the above-indicated strategic changes are now being reaped and new curriculum guidelines have for instance been released in 2006. The Re-Capitalisation Programme introduced by the DoE in 2005/2006 to finance the upgrading and development needs at the colleges are also well underway.

Given their traditional strong focus on engineering sciences and general and business oriented programmes, the FET Colleges are ideally geared towards meeting a large proportion of the skills development needs required in the secondary agricultural sub-sector. Given their combined capacity to accommodate 400 000 learners at a given point in time they could be a critical provider of training services to the sector. Programme offerings relevant to the agricultural sector at large include the following:

- General management studies (including aspects such as human resources management)
- Business management and entrepreneurship studies (including functions such as marketing, financial management, etc.)
- Administration studies (including procurement, stock control, etc.)
- Engineering related studies (artisan type training over total spectrum)
- Variety of other vocational oriented programme fields

It should further be noted that where a sufficient demand exist, the Colleges are willing to develop tailor made programmes towards addressing the specific needs of such target groups.

Table 3.6 below reflects FET college enrolment in 2002 (note that whilst the headcount was 406 000 students the Full-Time Equivalent (FTE) count was 144 000.

PROVINCE	NEW MERGED COLLEGES	NUMBER CAMPUS SITES	TOTAL FTE'S	% OF TOTAL
Eastern Cape	8	30	13 500	9
Free State	4	15	9 800	7
Gauteng	8	32	47 200	33
KwaZulu-Natal	9	32	22 800	16
Limpopo	7	18	13 000	9
Mpumalanga	3	12	7 600	5
North West	3	11	9 400	7
Northern Cape	2	6	3 100	2
Western Cape	6	27	17 500	12
<b>NATIONAL TOTAL</b>	<b>50</b>	<b>183</b>	<b>144 000 *</b>	<b>100</b>

(Note \*: Whilst the FTE (Full Time Equivalent) count is 144 000, this equates to a headcount of 400 000)

**Table 3.6: Enrolment at FET Colleges**

#### **Agricultural Programme Focus:**

Whilst in the past a number of FET Colleges offered agriculture oriented programmes, supply was relatively small in numbers and students also received limited practical experience and exposure. However, of specific interest and relevance to this assignment (due to the relative small number of specialist agricultural education and training institutions at FET level), are the new curriculum changes proposed for those FET Colleges interested in offering Agricultural Qualifications. The new agricultural curriculum offers a choice of the following four subjects or learning fields:

- A language
- Animal sciences
- Plant and horticultural sciences
- Agri-business

In the above regard a total of **21 FET Colleges** have indicated that they will offer Agricultural Programmes as from 2007. The geographical spread of those FET Colleges that will offer agricultural programmes is as follows:

- Six colleges in the KZN province
- Two colleges in each of the Eastern Cape, Free State, North West and Mpumalanga provinces
- Three colleges in each of Limpopo and Western Cape provinces
- One college in each of the Northern Cape province

The Public FET Colleges can further make a critical contribution in the field of **ABET** and various **functional literacy and life skills** programmes. These institutions are ideally geared to provide ABET programmes to large numbers of people (a need that is considerable within especially the primary agricultural sub-sector and which has been identified as an important constraint in the development of the sector's workforce at large). Apart from the Colleges a further 2 300 ABET institutions (with a joint enrolment capacity of 270 000 ABET learners in 2004) are available countrywide to assist with such training.

There is also growing cooperation between the DoE and the SETAs in ensuring linkages and articulation between the new FET curricula and the unit standard based learnerships and skills programmes supported by the SETAs. In this regard the DoE has for instance facilitated a joint venture programme between the SETAs and Umsobomvu for the enrolment of 1 400 youth learners on various learnerships. Enrolments in Non-DoE programmes has increased by 22% over the period 2000 to 2003 – an indicator of increased responsiveness by colleges to industry demand. There is also a growing recognition within FET Colleges that they should develop mobile training capacity and the willingness to offer training on-site at the employer – which augers well for the agri sector with its rural nature.

Given the capacity at the FET Colleges it is possible for these institutions to enrol between 5 000 and 10 000 students on agri related programmes should a need for such exists. A specific challenge that the colleges will have to address is the need to offer training in the vernacular of learners.

### 3.3.2.3 The Private FET Sector<sup>47</sup>

Since the implementation of the Skills Development Strategy there has been a marked growth in private companies offering training to various industry sectors. According to the HRD Review statistics only 4% of these however offer training programmes aimed at the primary agricultural sub-sector.

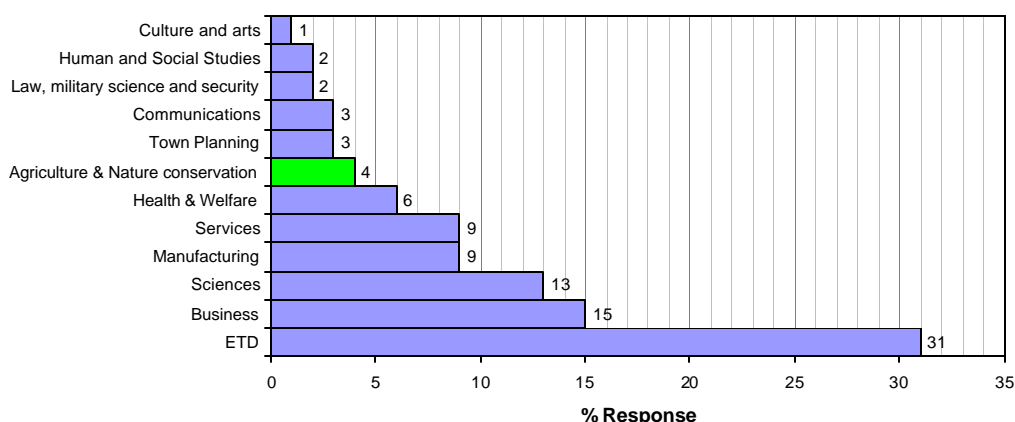


FIGURE 3.5: Offerings of Private FET institutions (<sup>1</sup>)

The majority of these organisations are:

- Commercial for profit organisations (75%).
- Were established between 1997 and 2001 (38%).

Their learning programmes on offer are mainly:

- Aimed at NQF Level 1 (45%) and at NQF Levels 2-4
- Contact Education – instructor led courses 76%.
- 1-7 days in duration (33%).
- Have admission requirements of ‘on the job’ experience, school certificates or use RPL tools (or spread between the three modes).

<sup>47</sup> Akoojee, S (2004) Private Further Education and Training: The Changing Landscape

Generally the private FET providers:

- Have tailored their programmes to fit the National Qualifications Framework.
- Offer programmes in areas that do not require a major investment in terms of capital and infrastructure.
- Are far more responsive than public providers to the skills demands of industry but the quality of such training (whilst unit standard based) has not been established as yet.
- Suffer from the fact that a few fly-by-night operators have further tarnished the reputation of this sector.

### Accredited Private Providers serving the Agri Sector

Within the above context focus is specifically placed on those Providers who are accredited at the AgriSETA and whose quality is therefore of a acceptable nature.

AgriSETA has, at the moment, a total of **120 accredited** private providers on its ETQA database. These comprise of providers accredited by both the former PAETA and SETASA and also include a few providers accredited with ETQA's at other SETAs but which from time to time deliver services in the agri sector. It is also worth noting that in excess of 800 applications for accreditation has been received by AgriSETA – many of which are individual one-man concerns that will most likely not have the capacity to be accredited.

At the time of developing this SSP the provincial distribution of accredited providers (whilst many function on a national basis) was as follows:

PROVINCE	NUMBER	PERCENTAGE
Gauteng	28	23%
Western Cape	20	16%
Limpopo	20	16%
Eastern Cape	13	11%
North West	11	9%
Free State	8	7,5%
KZN	9	8%
Mpumalanga	8	7,5%
Northern Cape	3	2%
<b>TOTAL</b>	<b>120</b>	<b>100%</b>

Many of these private providers are small BEE firms. As indicated above they are located across South Africa and what is most advantageous to the sector is the fact that a large proportion are located in rural areas – thus facilitating their access to many of the emerging farmers. This rural capacity enables AgriSETA to deliver in the most remote areas of South Africa. Their combined capacity for service delivery is in the region of 25 000 training opportunities per annum and they perform a pivotal and critical role in the sector – especially within the context of its rural nature.

An analysis of the general profile of the accredited providers on the database reflects the following;

- The majority are small enterprises (with employment ranging between 5 – 10 permanent employees). As such many make extensive use of contracted instructors/facilitators for larger and/or specialised training interventions.
- The majority are geared towards, and renders services to, farming enterprises (i.e. in the primary agricultural sector) and focus mainly on the lower NQF levels.
- They are highly flexible and mobile – with the capability and capacity to deliver services on farms (agri-sites) if and where needed
- Service rendering focus mainly on basic technical skills, life skills and business skills.

- Due to their flexibility and ability to adapt, it is difficult to determine their capacity but combined is estimated to be in the region of 25 000 learners per annum.
- They generally have a need for capacity building – especially in terms of managing their own businesses and operating within the NQF

If the FET Colleges (all but especially those who will offer agri programmes), are added to this equation, the sector is well endowed with suppliers of skills training – especially at NQF levels 1 to 4. At higher NQF levels Agricultural Colleges and the HE institutions also have considerable capacity – whilst they need to be geared up to provide focussed services.

It must however be said that the participation of employers in the new skills training dispensation is still somewhat disappointing. Whilst the employers who participate in the system (those who complete WSP's and ATR's) indicate that more than 50% of their employees have been exposed to some form of training (refer section 3.3.4.2. below) participation in formal structured education and training interventions (learnerships and skills programmes) are still relatively low and the capacity of providers far exceeds the demand for services.

Problems or constraints identified that restrains employers from participating (many historical constraints or barriers) include the following:

- Lack of commitment from employers.
- Perception amongst employers that accredited learning programmes such as learnerships would impact production negatively (due to learners being absent from work during training).
- Lack of awareness on the part of employers regarding the benefits of training.
- Employers had difficulty identifying the training needs of their enterprises.
- Poor management, supervision and planning practices on many farms restricts the evaluation of training and the impact thereof is thus not known
- Some employers are reluctant to train for fear of losing staff to competitors.
- Human resource development generally receives a relatively low priority within many organisations (even though labour is one of the most expensive inputs on most agri businesses – ranging from 17% to 40% of production costs).

It should be noted that there are also positive developments and there is a growing understanding amongst employers that due to rising labour costs it is important to train staff and to optimally utilise their services. In this regard a number of employer organisations or sub-sector interest groups have also commenced with their own actions to address specific skills needs in their respective fields. The following serve as examples of some of the sub-sectors or specific interest groups that offer training courses and have skills development initiatives (focussing on the skills needs of their respective sub-sectors);

- Red Meat Abattoir Association
- Kwa-Zulu Natal Poultry Institute
- South African Poultry Association
- South African Sugar Association
- Chamber of Milling
- Citrus Academy
- The Milk Producers Organisation

### 3.3.3 HIGHER EDUCATION INSTITUTIONS AND THEIR OFFERINGS

The higher education and training sector has recently undergone a similar consolidation as in the public FET sector, with a merger of a number of institutions on a geographical basis. To facilitate mobility between institutions (and the accreditation and recognition of qualifications) in some instances Universities, Universities of Technology and Teacher Training Colleges have been clustered and merged into a single tertiary education institution – whilst each will maintain its educational focus, scope and target groups to be served. The above consolidation has resulted in fewer but larger and stronger institutions – each with multiple campuses serving varied target groups and using different educational service delivery modes.

It is trusted that the above restructuring of the HET landscape will address some of the following challenges that HET institutions face:

- Race and gender inequalities – in student enrolments and distribution across disciplines.
- Low participation, graduation and success rates.
- Uneven quality of teaching and learning.
- Skewed academic/vocational mix with limited mobility between the two.
- Insufficient alignment to changing labour market needs.
- Persistent institutional inequalities.
- Low levels of research output.
- Insufficient managerial and administrative capabilities.

HET institutions that are particularly important for the agri sector are both Universities and Universities of Technology. Their respective roles and contributions are outlined below.

#### 3.3.3.1 Universities of Technology

The Universities of Technology offer learning programmes that addresses the education and training needs of the agri sector in its totality (i.e. up stream and down stream agricultural oriented industries in the so-call secondary agricultural sub-sector, as well as the on-farm training needs in the so-called primary agricultural sector).

The programmes on offer span 6 qualification tiers and cover the following range: National Certificates, National Higher Certificates, National Diplomas, B Tech degrees, M Tech degrees up to D Tech Degrees. They normally have a number of faculties spanning the management, engineering, humanities and business/economic/finance fields. In addition a number of the institutions also offer specialised programmes in the agriculture/ health/natural science fields. Generally the majority of learners enrolled at Universities of Technology enrol for the National Diploma Courses (which is usually a three-year programme – consisting of two years formal training at the institution followed by one year of structured experiential training at an approved employer). A matriculation certificate (or equivalent) is required for entry to these programmes.

Of the 15 Universities of Technology in South Africa the following six (6) institutions indicated that they offer qualifications in Agriculture, Agricultural Management and related disciplines and provided detail of their enrolments and programme offerings.

Total agri related enrolment at the various Universities of Technology amounted to **2 762 students** in 2004. A gender and racial breakdown of these enrolments reflect the following:

- 71% of students are black
- 65% of students are male (amongst the female students 72% are black)

An important statistic is the number of graduates that qualify at these learning institutions and enter the world of work (and/or the labour market). During 2004 a total of **783 students** qualified in agri related study fields from the six Universities of Technology.

A breakdown of AET graduates per CESM (Category of Education Subject Matter) and level of Qualification is provided in Table 3.7 below:

Within the agri specialisation field – which is the focus of this SSP – the Tshwane University of Technology (TUT) is taken as example to outline the range of functional programmes on offer and its potential as a key supplier of skills to the sector. The TUT Faculty of Agricultural Sciences is the largest of its kind in South Africa and one of the largest in the Southern hemisphere. The Faculty of Agricultural Sciences offers courses over the full spectrum of qualifications, from national diplomas to D Tech degrees and is one of the few higher education institutions in the country to offer the full range of agri courses. The Faculty currently has 1 800 undergraduate and 60 post graduate students.

Category of Education Subject Matter	Certificate	Diploma	B Tech	M Tech	Total	%
Agric Management/Admin	21	108	71	0	200	26
Animal Science	2	187	35	0	224	28
Horticulture	8	28	16	0	52	7
Plant Science	0	59	0	0	59	8
Land Reclamation	1	17	1	0	19	2
Renewable Natural Resources	0	87	0	0	87	11
Other Agric & Renewable Resources	4	0	15	0	19	2
Wildlife	8	0	0	4	12	2
Agric Science-General	0	43	0	0	43	5
Agric Extension	0	22	41	5	68	9
<b>Total</b>	<b>44</b>	<b>551</b>	<b>179</b>	<b>9</b>	<b>783</b>	<b>100</b>

**TABLE 3.7: Agricultural Graduates in Universities of Technology, 2004** <sup>48</sup>

The agri related fields of study available to students are:

Traditional Programmes:

- Agriculture
- Agriculture: Crop Production
- Agriculture: Mixed Farming
- Agriculture: Rural Development and Extension
- Agricultural Management
- Animal Production
- Poultry Production Management (National Higher Diploma)
- Pig Production Management (National Higher Diploma)
- Horticulture

New Programmes:

In addition to the above traditional programmes, new programmes on offer (for which an emerging and growing demand has been identified are the following: Turfgrass Management, Equine Science, Ecotourism Management, Game Ranch Management, Nature Conservation, Landscape Technology

Detailed information related to the AET related offerings of the various Universities of Technology is provided as Annexures.

<sup>48</sup> Research Report on Agricultural Enrolments and Graduate trends, Directorate of the Education and Training in the Department of Agriculture, 2006

General comments and observations regarding trends in the supply from the Universities of Technology are the following:

- Output in terms of numbers is sufficient to meet the demand. There is however still concern regarding the quality of output (especially from some of the institutions) and the ability of students to be assimilated into the workplace without the need for substantial in-service training.
- There has been a marked increase in black students at these institutions which is encouraging – although the majority are still choosing social science streams.
- Universities of Technology offer both contact and distance learning options – with the success rates for contact education programmes being much higher than for the distance education mode (67% versus 33%)
- It is believed that these institutions are responsive to the needs and requirements of industry – resulting in an ever increasing range of specialisation fields from which students can choose in order to meet their own needs and that experienced in the sector (the increasing range of study fields offered at TUT serve as an example in this regard)
- In relation to the above statement it should be noted that the range of qualifications offered at the various institutions vary and to a large extent reflect their history (with the historically disadvantaged institutions offering curricula that is more generalised and less specialised). In this regard those institutions that formerly catered for white students and/or newer institutions such as TUT offer a much wider and specialised range of programmes and have the capacity and facilities to focus on agri scarce skills such as Agricultural Economics, Agricultural Engineering Viticulture, Veterinary Science, etc.

It can generally be said that the Universities of Technology (together with the Universities) are suitably geared and has the capacity to meet the sector's demand for learners that hold higher education qualifications. For details of enrolments at Universities of Technology refer to *Annexure 2*.

### 3.3.3.2 Universities

The Universities offer learning programmes that addresses the education and training needs of the agri sector in its totality (i.e. up stream and down stream agricultural oriented industries in the so-call secondary agricultural sub-sector, as well as the on-farm training needs in the so-called primary agricultural sector). Such programmes span the total field and include business management, administration, technical and engineering, marketing, agriculture, etc. For the purposes of this SSP we have however focussed on those programmes specifically geared to the development of persons for the agri sector per se.

A total of 8 Universities offer qualifications in agri related disciplines and provided detail of their enrolments and programme offerings.

Total agri related enrolment at the various Universities amounted to more than **5 300 students** in 2004. A gender and racial breakdown of these enrolments reflect the following:

- 60% of students are black
- 60% of students are male (amongst the female students 63% are black)

An important statistic is the number of graduates that qualify at these learning institutions and enter the world of work (and/or the labour market). During 2004 a total of almost **900 students** qualified in agriculture related study fields from the eight Universities.

A breakdown of agricultural enrolments at the various universities in 2004 (per type and level of programme) is outlined in Table 3.8 below:

Category of Education Subject Matter	Under- Graduate	Honors	Masters	PhD	TOTAL	%
Agricultural Economics	26	39	43	0	108	2
Agricultural Eco (AgriBusiness)	12	0	6	27	45	1
Agricultural Scie-Gen(Art Stream)	482	10	25	310	827	16
Agricultural Scie- Gen (Science Stream)	952	6	524	0	1482	28
Agric Extension (InstAgrar Stream)	0	0	8	0	8	0
Agric Extension	139	23	54	10	226	4
Agric Food Technology	170	4	35	24	233	5
Animal Science	876	33	47	10	966	18
Horticulture	16	0	28	15	59	1
Plant Science	81	8	23	13	125	2
Soil Science	38	2	8	9	57	1
Forestry	47	1	24	14	86	2
Renewable Natural Resources	122	0	6	0	128	2
Agric Management/Admin	296	74	92	0	462	9
Other Agric and Renewable Resources	5	0	46	3	54	1
Agric Food Tech (InstAgrar Stream)	31	4	6	0	41	1
Agric Man (InstAgrar Stream)	0	39	0	0	39	1
Animal Sc (InstAgrar Stream)	12	0	12	0	24	0
Horticulture (InstAgrar Stream)	35	7	16	0	58	1
Land Rec(Land use InstAgrar Stream)	9	3	4	0	16	0
Rural Dev (InstAgrar Stream)	45	0	13	0	58	1
Agric Econ (InstAgrar Stream)	0	13	23	0	33	1
Environ Man (InstAgrar Stream)	0	0	7	0	7	0
Land Reclamation	0	54	0	0	54	1
Agronomy (InstAgrar Stream)	0	0	6	0	6	0
Wildlife (InstAgrar Stream)	0	0	6	0	6	0
Wildlife	76	5	3	0	84	2
<b>Total</b>	<b>3 470</b>	<b>325</b>	<b>1 062</b>	<b>435</b>	<b>5 292</b>	<b>100</b>

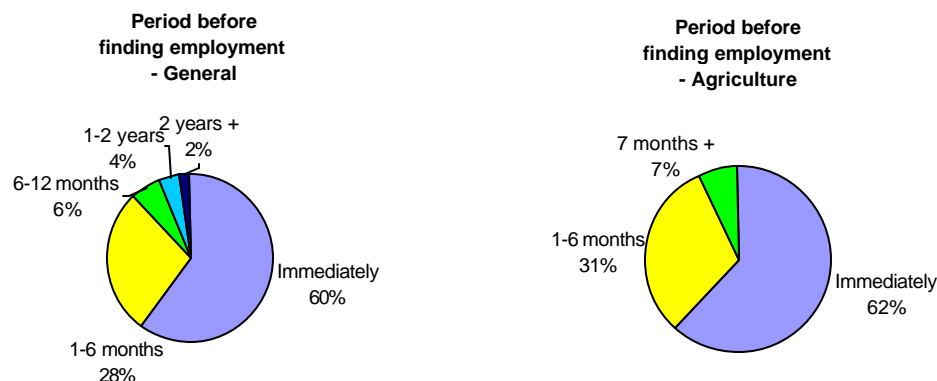
TABLE 3.8: Agricultural Enrolments in Universities by CESM in 2004<sup>49</sup>

Some observations with regard to university offerings and enrolment are:

- It is interesting to note that 35% of all enrolments are at post-graduate level – thus indicating that there is a steady supply of highly qualified and educated people to the industry. In 2004 a total of more than 200 people for instance qualified with Masters or PhD degrees.
- Students enrol primarily for the more general fields (e.g. General Agricultural Science and General Animal Science – making up 66% of all under-graduates), whilst some specialised fields where shortages are being experienced (e.g. Agricultural Engineering, Agricultural Economics) receive little popularity amongst students. This also impacts on the employability and take-up of such graduates in the industry – refer section below.
- The content of university courses has changed to include more multi-disciplinary studies (most noticeably within the Afrikaans universities).

One of the most disturbing factors of the formal education system in South Africa is the slow uptake of graduates in the workplace. A study interviewing students who graduated from 1990 to 2000 (study conducted in 2003) revealed that about 70% of white graduates found employment immediately, compared with black students (43%). A higher proportion of graduates from historically black universities (65%) experienced periods of unemployment compared to graduates from historically white universities (35%). Of those surveyed, 51% found their first job in the public sector, 47% in the private sector and 2,5% were self-employed. The above-indicated situation within the larger economy also applies within the agri sector – with the DOA having a register of a large number of qualified agri graduates who could not find suitable employment. The period before finding employment reported by graduates is reflected in the figure below:

<sup>49</sup> Research Report on Agricultural Enrolments and Graduate trends, Directorate of the Education and Training in the Department of Agriculture, 2006



**Figure 3.6:** Period before Finding Employment

Whilst it can thus generally be stated that the universities have the capacity to meet the demand for higher education within the agricultural sector, a need however exists to re-direct students into study fields that will address scarce and critical skills experienced within the industry – which will further facilitate and enhance their chances of finding suitable employment on completion of their studies.

For further details regarding enrolment at Universities please refer to *Annexure 2*.

### 3.3.4 NON-FORMAL EDUCATION AND TRAINING PROVIDERS

This section of the report reflects on the supply of so-called non-formal training. For the purposes of this SSP non-formal training (also referred to as informal training) is defined as training interventions (either structured or un-structured) that do not lead to a formal recognition and/or accreditation of the training and skills development that has been attained as a result of the intervention. Such non-formal training usually takes the form of:

- Structured short courses (either in-house or via external providers) that does not enjoy accreditation status and thus does not carry credits towards a qualification
- On-the-job training (enterprise based)

Whilst historically such non-formal and workplace training have not received a great deal of recognition and the intangible knowledge base stored within individuals and enterprises as a result thereof were not defined or acknowledged in any way, the value thereof within the context of a competent and productive workforce can not be underestimated.

Traditionally only qualifications obtained through FET and HE institutes i.e. Colleges, Universities of Technology and Universities were recognised. What is often left unsaid is the fact that work experience can also serve as a springboard into these training institutions and the continual development of lifelong learning need not only be confined to the realms of the academic world but also the extension of workplace experience and theoretical exposure to attain a qualification. Through the Recognition of Prior Learning process this is now fortunately being addressed and becoming a reality for many employees.

#### 3.4.4.1 Structured Short Courses

These training interventions are of a structured nature and specifically aimed at addressing an identified training need. This type of training is differentiated from formal training in that the training is not unit standard based and/or based on a curriculum that leads to a qualification or credits towards such. Duration ranges from a couple of hours through to a number of days and training could be offered in a consolidated block or be spread out over a period of time.

Providers of such training are external (lately mainly providers who do not enjoy accreditation status from AgriSETA) and/or the employers themselves and training is either offered on the farm or at an external venue. As indicated above the courses are usually structured to address a specific training need (aimed at improving a specific workplace competency) and do not have the larger development of the individual as aim or objective.

Such training interventions, whilst still widespread, are waning in popularity as more employers buy into the philosophy of the NSDS and there is a growing acknowledgement amongst both employers and employees that the attainment of new knowledge and skills should be recognised and acknowledged within a formal qualifications and ongoing skills development context (thus a growing shift to favouring unit standard based Skills Programmes as opposed to these non-accredited short courses).

### 3.3.4.2 On-the-Job Enterprise Based Training and Development

Whilst, within the context of the new skills development regime as articulated by the Skills Development Act and the Skills Development Strategy, little if any recognition is given to non-formal training, it nevertheless makes a very valuable contribution towards the competency level of the workforce. It is accepted that informal and on-job training is primarily task orientated and lacks a comprehensive human development perspective, within the context of the agricultural sector, this type of training is however very important as there are constant changes to agri requirements and inputs that requires regular re-training and upgrading (e.g. new products, farming implements becoming more sophisticated, new farming methods, etc.). It is also important to note such informal and on-the-job training is usually provided in the work context and coupled with practical application and practice – which enhances the transfer of learning and the internalisation thereof. One could therefore assume that this informal training (whilst not formally recognised unless accredited via a RPL process), results in skills development which is “carried” with the worker for the rest of his/her life and that it provides a good basis for expanding into more holistic human development.

When looking at the results of the 2003 Labour Force Survey, it is however evident that training still does not enjoy the priority attention that it deserves in the economy at large and that a very small percentage of people who participated in the survey (less than 20% of the active workforce) indicated that they have received training during the previous year.

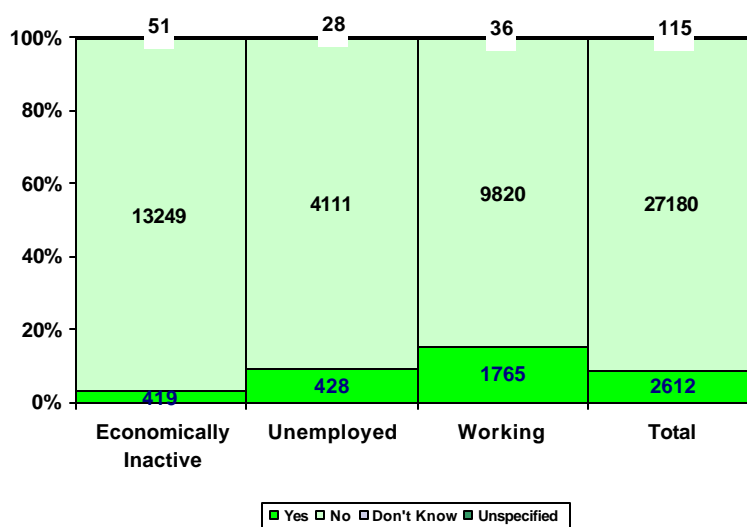


FIGURE 3.8: Training received, Labour Force Study September 2003

This position seems somewhat better in the agricultural sector than for the economy as a whole when the Annual Training Reports (ATR's) received by the AgriSETA for the period 2004-2005 is taken as a yardstick. According to these ATR's a total of 51 000 workers out of a total workforce of 107 000 (approximately 50%) was exposed to some form of training. This figure should however, be interpreted with extreme caution – it is most likely the more progressive and human development orientated enterprises that submit WSP's and ATR's and therefore this figure could not be projected to the total workforce in the agricultural sector. It is also believed that the figure of 51 000 reflects the number of training exposures or interventions provided rather than the number of different workers who have received training. This in itself does not create a problem as it most likely indicates a trend of continuous or repeated training. The figure further includes the informal and structured on-job training that took place on farms and other workplaces.

Some key statistics from analysing the ATR's submitted for the 2004/2005 period are:

Racial distribution of those benefiting from training	Gender		Total
African	M = 36%	F = 23%	59%
Coloured	M = 9%	F = 9%	18%
Indian	M = 2%	F = 0,5%	2,5%
White	M = 14%	F = 7%	20,5%
<b>TOTAL</b>	<b>M = 61%</b>	<b>F = 39%</b>	<b>100%</b>
Main SOC categories benefiting from training	Race		Total
Labourers (elementary occupations)	B = 99%	W = 1%	34%
Seasonal / contract workers	B = 99%	W = 1%	17%
Machine operators	B = 95%	W = 5%	15%
Administrative staff	B = 43%	W = 57%	9%
Managers, owners, senior officials	B = 12%	W = 88%	5%
Technicians and Associate Professionals	B = 37%	W = 63%	5%
Service and sales workers	B = 43%	W = 57%	5%
Craft and Related Trades	B = 63%	W = 37%	4%
Skilled agricultural workers	B = 83%	W = 17%	4%
Professionals	B = 22%	W = 78%	2%
<b>TOTAL</b>	<b>B = 79%</b>	<b>W = 21%</b>	<b>100%</b>
Number of workers trained per enterprise size			
0 – 49 employees			7%
50 – 149 employees			11%
150+ employees			82%
<b>TOTAL</b>			<b>100%</b>
Provincial distribution of learners			
Western Cape			21%
Mpumalanga			17%
Limpopo			14%
KwaZulu-Natal			11%
Gauteng			11%
Eastern Cape			10%
North West			7%
Free State			6%
Northern Cape			3%
<b>TOTAL</b>			<b>100%</b>

**TABLE 3.9:** Training undertaken by companies that submitted ATRs to AgriSETA, 2004/2005

From the above the following observations can be made;

- More males are benefiting from training – this is to be expected as more males are employed by the sector.
- Most training focuses on the lower end of employment categories with 51% aimed at labourer level (including seasonal and contract workers)
- Training was primarily aimed at black employees (59%)
- Most of the training is executed by large enterprises (82%) – care should be taken with this figure as most large enterprises submit ATRs
- As could be expected the Western Cape is most active in training (Western Cape is also AgriSETA's biggest province in terms of paying levies). There is however a good spread of participation between the provinces.
- A serious concern is the limited focus given to the training of black owners/managers (12%) given the need for the industry to become BEE compliant.

## 3.4 Summary of Skills Supply in the Agri Sector

Throughout this Chapter key findings and conclusions have been made – which is not all repeated and captured in the summary – and the reader is thus advised to consider the chapter in its totality. The following observations, conclusions and recommendations are however highlighted for specific attention:

### 3.4.1 Sector Profile Issues

3.4.1.1 The agri sector (especially the primary sub-sector) still has a significant number of people with little or no formal education and qualifications which places a damper on their ability to develop and progress to more skilled jobs and positions of responsibility. A comparison of current educational profiles (of especially workers in the labourer category) with the expected/preferred profile for such workers revealed that at least 50 per cent of the workforce requires further education of a GET or ABET nature.

Whilst the education and training sector has considerable ability and/or potential to address such learning needs (especially the latent potential within the FET Colleges), available capacity is not geared to address the literacy and numeracy training needs within agriculture and the demand is still substantial. A need exists to orientate, encourage and facilitate the 50 FET Colleges countrywide (and other suitable ABET providers) to service this sector more effectively. Decentralised and mobile training service delivery and the ability to offer training in the vernacular is essential shortfalls that require particular attention.

3.4.1.2 The rising cost of labour (which has firmly dawned on the primary agricultural sector with the introduction of minimum wages), has resulted in a growing understanding that optimal utilisation of this resource has become essential. Coupled with a streamlining of their workforces, farmers are realising the importance of well-motivated and multi-skilled workers. A need exists to reduce the large component of “un-skilled” workers and to advance them to the “skilled worker” category. Such an investment in the workforce also demands a changed attitude in labour practice to retain the services of multi-skilled and productive workers.

From a skills provision perspective a demand thus exist for the continuous re-training and upgrading of workers to develop a portfolio of skills. Those factors identified by employers as constraining the enrolment of learners on training programmes (e.g. lost productivity as a result of attending training) must be taken into consideration by providers in the delivery of training – e.g. attempt to provide phased and on-site delivery.

3.4.1.3 The skills and knowledge profile of emerging farmers (land reform beneficiaries) reveal a critical demand for farm management and business management skills. Whilst the FET Colleges offer a wide range of management related programmes and has significant capacity in this regard – these programmes are of a generalised nature and not geared to the specific needs of farmers. A need exists for the development of tailor made programmes for this target group and to ensure delivery modes (phased and decentralised training and at appropriate sophistication levels) that will facilitate access to such. Particular attention must also be given to mentoring as an extremely appropriate and effective means of providing emerging farmers with the full complement of skills, competencies and attitudes required for success.

Within the commercial agri sector there should also be a considerable increase in the training of black managers and/or owners to prepare such candidates for enterprises and the sector at large to become BEE compliant.

### **3.4.2 AET Supply Issues**

From the information provided it is evident that the sector has a well-established range of providers attempting to address needs at different levels and in different ways and means. The following were however identified as specific aspects for improvement or action:

3.4.2.1 The quality and relevance of training provided at the Agricultural Colleges need to be improved. In this regard the position of Agricultural Colleges (i.e. do they fall under the ambit of the Department of Agriculture or the Department of Education) must be addressed as a matter of urgency in view of the critical role that these institutions play in the training of Extension Officers. Given the growing ability and capacity at other FET Colleges (21 colleges indicated that they will offer agricultural programmes) and the excellent infrastructure at HET level (combined enrolment capacity in excess of 8 000 HET students), it is strongly proposed that the Agricultural Colleges be developed and upgraded as “Centres of Excellence” in offering specialised training in a selected functional field (e.g. as a “Dairy Center” or a “Deciduous Fruit Center” or a “Poultry Center”). Such centres of excellence should be equipped and staffed to highest industry standards and a full range of programme offerings (from short skills courses through to highly specialised and refresher courses) should then be offered at such centres of excellence – with the programmes covering the specialisation field in totality (i.e. production skills, management skills, entrepreneurial skills, agribusiness skills, etc.) related to that specific type of produce or agri enterprise. These centres could also be used for the practical training of students enrolled at FET and HET institutions that do not have suitable practical training facilities.

3.4.2.2 Whilst it can generally be stated that the HET institutions (Universities and Universities of Technology) have the capacity to meet the demand for higher education within the agri sector, a need however exists to re-direct students into study fields that will address scarce and critical skills experienced within the industry – which will further facilitate and enhance their chances of finding suitable employment on completion of their studies. In this regard too many students enrol for the ‘easier’ general programmes and too little for those fields identified as scarce skills (e.g. Agricultural Engineering and Agricultural Economics). Improved practical training facilities (especially at the former black universities) are also needed to develop the practical competence of students which will facilitate their attractiveness to industry. It is further strongly recommended that newly qualified graduates be enrolled for an internship for a period of at least one year to develop practical experience and competencies – the initiative of the DoA in this regard is thus strongly supported and should be expanded further.

3.4.2.3 There is a need for increased participation by employers in training and to optimally utilise the training opportunities created for their staff through the new training system. Whilst there are quite a wide range of courses and programmes available (learnerships and skills programmes of good quality and relevance and monitored by AgriSETA’s ETQA), the number of learners that have thus far been enrolled for such programmes is disappointing.

A need exists for continued awareness campaigns and promotion of training programmes amongst farmers and businesses and a need to ensure that delivery is such that participation by employers are facilitated and that the above indicated constraints which restricted participation in the past are eliminated. Specific focus should be placed on the development of black managers and farm owners (both to enhance farm profitability and viability and to meet BEE requirements).

3.4.2.4 The practical nature of AET implies that this type of training is expensive. A means of overcoming the costs of establishing expensive practical training and demonstration areas could be overcome through offering training on-site (i.e. on the farms). This however implies mobile training capacity and a mentoring approach to training (possibly to smaller groups of learners) which will have an impact on the unit cost of training. Training fees and subsidies must make provision for and accommodate such.

## CHAPTER 4: SKILLS DEVELOPMENT PRIORITIES

### 4.1 INTRODUCTION

This chapter aims to provide an analysis of the projected employment and skills needs of the agri sector as informed by, but not limited to, a gap analysis of the demand for skills (Chapter 2) and the supply of skills (Chapter 3).

A specific need exists to interpret data towards the identification of skills development priorities and the development of a critical and scarce skills list. As guiding tools an occupational classification system referred to as the Organising Framework for Occupations (OFO), which the Department of Labour has adopted as a tool for identifying, reporting and monitoring scarce and critical skills, were used. Within the Organising Framework for Occupations (OFO) "skill" is defined as the ability to perform competently the roles and tasks associated with an occupation.

In identifying and reporting on scarce and critical skills the following definitions as defined by the Department of Labour were be applied:

**SCARCE SKILLS** refer to those occupations in which there are a scarcity of qualified and experienced people, currently or anticipated in the future, either (a) because such skilled people are not available or (b) they are available but do not meet employment criteria. This scarcity can arise from one or a combination of the following, grouped as relative or absolute:

- **Absolute scarcity:** suitably skilled people are not available, for example:
  - A new or emerging occupation, i.e. there are few, if any, people in the country with the requisite skills (qualification and experience) and education and training providers have yet to develop learning programmes to meet the skills requirements.
  - Firms, sectors and even the country are unable to implement planned growth strategies and experiencing productivity, service delivery and quality problems directly attributable to a lack of skilled people.
  - Replacement demand would reflect an absolute scarcity where there are no people enrolled or engaged in the process of acquiring the skills that need to be replaced.
- **Relative scarcity:** suitably skilled people are available but do not meet other employment criteria, for example:
  - Geographical location, i.e. people are unwilling to work outside of urban areas.
  - Equity considerations, i.e. there are few if any candidates with the requisite skills (qualifications and experience) from specific groups available to meet the skills requirements of firms and enterprises.
  - Replacement demand would reflect a relative scarcity if there are people in education and training (formal and work-place) who are in the process of acquiring the necessary skills (qualification and experience) but where the lead time will mean that they are not available in the short term to meet replacement demand.

**CRITICAL SKILLS**, on the other hand, refers to specific key or generic and "top up" skills needed within an occupation. In the South African context there are two groups of critical skills:

- Key or generic skills, including (in SAQA-NQF terminology) critical cross-field outcomes. These would include cognitive skills (problem solving, learning to learn), language and literacy skills, mathematical skills, ICT skills and working in teams.

- Particular occupationally specific “top-up” skills required for performance within that occupation to fill a “skills gap” that might have arisen as a result of changing technology or new forms of work organisation.

Both scarce and critical skills have been identified at the occupational level, with scarce skills being considered against the occupation itself and critical skills being reflected as specific skills within the occupation.

The methodology employed in identifying the skills development priorities reported in this SSP included the following:

- Scarce and Critical Skills Workshops were held with eight Sub-Sector Committees (comprising representatives of 8 of the largest sub-sectors in the agri sector). During these workshops critical and scarce skills within their functional scope and ambit were identified and discussed.
- Interviews were held with a further 26 key stakeholders within the agricultural sector to obtain their views and inputs regarding skills development priorities to be addressed –refer to *Annexure 1* for list of sources consulted.
- The information contained in Chapters 2 & 3 of the SSP were analysed and interpreted to identify the gaps between the supply and demand for skills – thus identifying further critical and scarce skills and appropriate solutions towards addressing such
- A review of other documents and publications related to scarce and critical skills (including the SSP’s of related SETAs such as FoodBev and the W&R SETAs) – refer to *Annexure 4* for the list of references consulted.

## 4.2 CONTEXT TO SKILLS DEVELOPMENT PRIORITIES

Prior to outlining the sector’s skills priorities (section 4.3) and listing the scarce and critical skills (section 4.4) identified within the agri sector, it is important to outline how we have gone about identifying such needs – i.e. what were used as guidelines and principles in the identification, selection and prioritisation of skills development needs. In this regard the following were used:

- A recognised and generally acceptable model or approach towards undertaking training needs analysis and skills reviews. To this end the Topology of a Skills Review<sup>50</sup> was used (since it suitably accommodates and incorporates the need for identifying critical and scarce skills).
- The need to consider scarce and critical skills from the perspective and point of departure of various stakeholders and beneficiaries.
- Contextualising needs within the local and international economic perspectives.
- Policies and other national strategic guidelines that will direct and influence government support for interventions aimed at addressing needs.

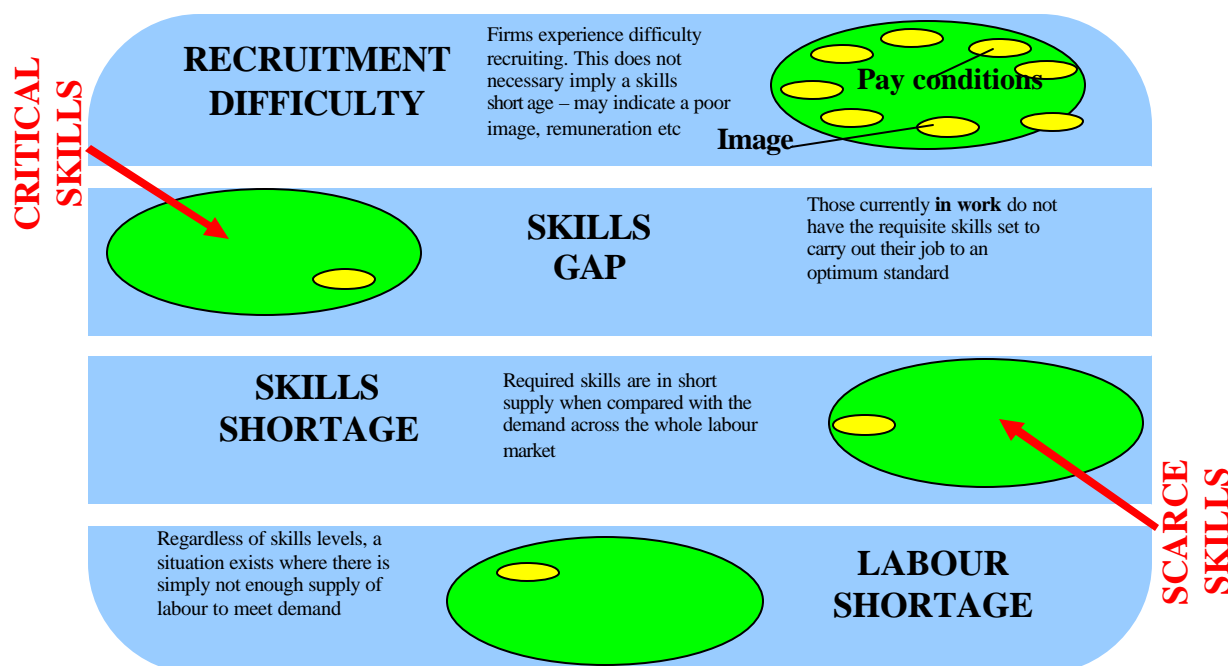
### 4.2.1 Topology of a Skills Review

The model is used to establish and evaluate skills development gaps and shortages on a macro level and is ideal for application in national or sectoral analysis. Needs can be established and evaluated in terms of:

- Recruitment difficulties,
- Skills gaps,
- Skills shortages, and
- Labour shortages.

Figure 4.1 below provides a schematic outline of how these dimensions interact.

<sup>50</sup> Skills Insight UK, Annual Skills Review 2002



**FIGURE 4.1: The Topology of a Skills Review**

#### 4.2.2 Needs identification from a Stakeholder / Beneficiary perspective

The identification and prioritisation of skills needs must also be undertaken from a key stakeholder and beneficiary perspective. Consideration was subsequently given to needs of the following groups:

- The *unemployed* – helping them gain and/or regain entry to the labour market.
- The *economically inactive* – helping them to become economically active.
- *School leavers* – helping them gain access to further education and training opportunities and thus facilitate their entry to the job market.
- *Entrants to the job market* – facilitating employment and integration into the work culture and work ethic (improving the employability of an individual).
- Those *currently employed* in the sector – increasing their competency and opportunities for advancement, creating a career path and offering continued job security, enhancement of value adding to the sector, improving their candidature for better employment opportunities.
- *Organisations and enterprises* within the sector – making sure that skills development and knowledge creation occurs in such a way as to improve the sector's viability and allow companies/enterprises to become more sustainable and profitable along the way, improves productivity, competitiveness and innovation within organisations.
- *Government and the economy* – increasing employment and promoting sustained economic growth, facilitate the attainment of political goals.

### 4.2.3 ASGISA and other Local and International Economic Perspectives and Drivers

The increased globalisation and openness of information streams has changed the way companies and countries compete for a part of the international market. It is important to understand the drivers of such a changing and evolving economic environment. In part, South Africa is still struggling to overcome some of the constraints caused by the historical political legacy and which has hampered growth whilst on the other hand its economic survival demands that it meets the challenges of the global market place.

Of particular importance in this regard is the Accelerated and Shared Growth Initiative of South Africa (*AsgiSA*) which aims to put South Africa on the high road to economic growth. The programme aims to halve poverty and unemployment by 2014 and, based on a realistic assessment of the capabilities of the economy and the international environment, the government established that for the period 2005-2009 an average growth rate of at least 4,5% or higher should be attained where after (i.e. between 2010 and 2014) the average growth rate should increase to 6%. Hand in hand with *AsgiSA* is the need to support and implement the *JIPSA* initiative through the accurate identification of scarce and critical skills and the development of suitable strategies to address and eradicate such shortages.

Against identified binding constraints on economic growth, and high potential opportunities that exists, *AsgiSa* has developed a strategic response that fall into the six categories outlined below. To further give impetus to the various strategies more than 100 individual projects have been earmarked for specific attention and implementation – some of these fall within the scope and ambit of the agri sector and as such should receive particular focus and attention when considering sectoral scarce and critical skills for inclusion in the *AgriSETA* SSP. The six intervention categories with projects relevant to the agri sector are:

- ***Infrastructure Investment and Programmes***

The programme aims to increase government investment in public infrastructure drastically (to 8% of GDP) and will go towards improving roads, water supply, electricity, housing, schools, etc. In addition to the general infrastructure specific projects that will have a major impact on accelerating and sharing growth were also identified on provincial level and the following 3 projects fall in the scope and ambit of the agri sector:

- A biofuels project that will cover the Northern Cape, Free State and KZN provinces
- The Makhathini Casava and Sugar Project in KZN
- A national livestock project focussing particularly on the Northern Cape and North West provinces

- ***Sector Investment (or Industrial) Strategies***

These strategies are aimed at promoting private-sector investment and pursue high potential opportunities. Two top priority strategies have been selected thus far – namely in the fields of Business Process Outsourcing (BPO) and tourism. The third priority falls within the scope of the agri sector and pertains to the development of the agro-processing industry with particular reference to biofuels (this programme and strategy is currently being finalised)

- ***Skills and Education Development Initiatives***

It is generally recognised that a shortage of skills serve as the greatest impediment to growth. The range of *AsgiSA* responses to address the constraint (and which particularly impact on the agricultural sector) includes:

- The upgrading of FET Colleges (a major provider to the sector)
- Support for ABET programmes (a priority need in the sector)
- Specific support to address skills needed for the implementation of *AsgiSA* projects
- The *JIPSA* initiative to support SETAs and other key stakeholders in the identification of priority skills and developing quick solutions in addressing such

- ***Eliminating the Second Economy Interventions***  
The strategy and interventions are aimed at overcoming historical inequalities and focus on BBBEE programmes and means of advancing informal sector enterprises into the economic mainstream. Focus is also placed on woman and youth participation. Measures and proposals related to the agri sector include:
  - Ensuring a significant participation of woman in agriculture and means of fast-tracking emerging farming enterprises out of the Second Economy.
  - Rapid formalisation of land tenure
  - Livestock improvement programme
  - Development of co-operatives
  
- ***Macro-economic issues***  
The measures proposed do not demand specific response or action from the agri sector – whilst it will indirectly have an impact as it aims to also reduce the volatility and overvaluation of the currency – which will create a more stable environment for importers and exporters of agri produce and products.
  
- ***Governance and Institutional Interventions (Public Administration)***  
The measures proposed do not demand specific response or action from the agricultural sector per se – whilst it could hold some benefits for the sector as it is aimed to also enhance service delivery of an institution such as the Land Bank.

The issue of **biofuels** is receiving particular interest at the moment. The DoA has commissioned an in-depth and detailed study into the scarce and critical skills required to implement the biofuels initiative and strategy and such will be reflected in the 2007 update of the SSP. It should however be noted that the AgriSETA responsibility for the biofuels programme is primarily limited to the production of crops needed as raw materials in the manufacturing of biofuels (whilst the actual production of the energy source will be the responsibility of the Chemicals SETA and others).

#### **4.2.4 Other Government Policies or Strategic Guidelines and Principles**

In addition to the economic drivers (such as AsgiSA outlined in 4.2.3 above), the following policies and strategies also provides guidelines and points of departure in the identification and prioritisation of scarce and critical skills:

##### **4.2.4.1 The National Skills Development Strategy**

In terms of the National Skills Development Strategy, skills development initiatives that qualify for government support are underpinned by the following guiding principles<sup>51</sup>

- Imbuing and supporting a culture of continual *quality lifelong learning*: Encouraging people to update their skills regularly.
- Promoting *equity*: Addressing historical imbalances, supporting equal opportunities for all.
- Being *demand-led*: Ensuring that training provision matches the skills requirement of sector.
- Encouraging *flexibility and decentralisation*: Allowing industry players to decide on what is relevant for the sector – and enabling providers to adapt to these offerings rather than prescribing curricula etc.
- Encouraging *partnership and cooperation*: Promoting partnerships between different levels of government and encouraging public-private sector interaction and collaboration. (Involving key stakeholders such as business, community and development agencies within the sector).
- Ensuring *efficiency and effectiveness*: Delivery of skills development programmes must be cost-efficient and should lead to positive outcomes for all those who invest and participate.

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<sup>51</sup> The National Skills Development Strategy: A Productive Citizenship for All, February 2001

Based on the above principles, the following are primary objectives of NSDS II:

- Prioritising and communicating scarce and critical skills.
- Promoting and accelerating quality training for all in the workplace.
- Promoting employability and sustainable livelihoods through skills development.
- Assisting new entrants into the labour market and self-employment.
- Improving the quality and relevance of provision.

#### 4.2.4.2 The National Education and Training Strategy for Agriculture (AET Strategy)

The AET Strategy developed by the Department of Agriculture (in consultation with various key stakeholders in the agri sector) highlights critical skills needs and constraints within the sector and categorises needs within the following 5 broad areas:

- **Agricultural production** – requesting that the past focus on a narrow band of commodities (relevant mainly to the commercial sector) and related research be expanded to address the needs of small-scale and subsistence farmers (e.g. more focus on mixed farming and rural livelihood sustainability skills)
- **Agricultural engineering** – with specific focus to be placed on technologies suitable for small-scale farmers (e.g. relevant and post-harvesting techniques related to processing and storage of produce) – to address this need the scarcity of agricultural engineers requires attention.
- **Agricultural economics** – a critical need was identified for general agricultural economic skills (ranging spectrum of farm planning, farm management, enterprise management, marketing, finance, etc.) – with the need to training both farmers and extension officers in such fields
- **Agricultural development** – a specific need was identified to develop agricultural extensionists in supporting especially emerging and small-scale farmers over the full spectrum (a need exists for both new curriculum in the training of new extensionists and the re-training and upgrading of existing officers)
- **Veterinarians** – the need to develop state veterinarians in order for the state to perform its role and function (particularly in its preventative, monitoring and regulatory role and function)

Taking all of the above into consideration, the following concepts define the premise for the analysis of skills requirements that follows in section 4.3 below:

- Skills are the key to unlocking competitive economic growth.
- Skills development builds employee confidence, productiveness and effectiveness and ultimately reduces employee dependency on external motivation for action.
- Skills development must be undertaken within a life-long learning context and should also consider capacity building needs in the context of meeting future skills requirements and demands – thus not focus narrowly on current workplace competency requirements only.

### 4.3 SKILLS DEVELOPMENT PRIORITIES IDENTIFIED

This section reflects on the skills development priorities identified and which warrants specific attention from the AgriSETA. A need was identified to include this section in the SSP (separate from the Scarce and Critical Skills list provided in section 4.4) for the following reasons:

- The Organising Framework for Occupations (OFO) template, prescribed by the Department of Labour for capturing scarce and critical skills needs do not make provision for capturing information related to small-scale and subsistence farmers – thus not allowing the capturing of needs of this critical constituency within the agricultural sector.

- The above indicated OFO template also does not incorporate all the “occupations” identified within the sector and more importantly does not make sufficient provision to capture specific skills needs within an occupation. It was subsequently felt that the “richness” of training and skills development needs identified as a result of the consultation process would be lost if not captured elsewhere.
- It is believed that the detailed information provided in this section will be more effective in guiding and directing the AgriSETA towards meeting the needs of specific target groups – whilst the critical and scarce skills captured in the OFO template is more useful at a macro or national level (i.e. for the Department of Labour in integrating the information from the various SETAs in establishing national requirements)

In organising and reporting the identified priority skills development needs, the following structuring approach was followed:

- The four categories of needs as per the proposed Topology of a Skills Review (outlined in section 4.2.1 above) were used as the first tier for the identification, evaluation and grouping of needs. These are:
  - Recruitment related needs
  - Skills gaps
  - Skills shortages
  - Labour shortages
- Within each of the above first tier groupings, needs were further broken down and organised per target group. At this second level needs were grouped as follows:
  - General skills development needs (cross-cutting over different target groups)
  - Needs experienced by small scale farmers (this group included subsistence farmers, new emerging land reform beneficiaries and small-scale AgriBEE farmers)
  - Needs within the commercial agri sector (per sub-sector groupings where specific needs for such were identified – both on-farm needs and within the secondary sub-sector or related agri-businesses)
  - Needs of the Department of Agriculture (DoA)

Schematically the above indicated hierarchy for organising the skills development needs can be depicted as follows:

Recruitment Related Needs	Skills Gap Related Needs	Skills Shortage Related Needs	Labour Shortage Related Needs
General Needs	General Needs	General Needs	General Needs
Small Scale Farmer Needs	Small Scale Farmer Needs	Small Scale Farmer Needs	Small Scale Farmer Needs
Commercial Sector Needs	Commercial Sector Needs	Commercial Sector Needs	Commercial Sector Needs
DOA Needs (Extension Services)	DOA Needs (Extension Services)	DOA Needs (Extension Services)	DOA Needs (Extension Services)

To further guide and direct the identification and selection of scarce and critical skills, the following factors or criteria that could reflect the importance (impact and effect) of a skills shortages were developed as an identification framework:

- *Basic Skills Development*  
Promoting basic literacy and numeracy and raising the base level of education for the sector, improving the work and livelihood of existing workers.
- *Employability:*  
Making the employee more employable by improving the fit between their skills and the sector needs.
- *Enterprise Viability:*  
Improving the capability and feasibility of the enterprise by increasing its effectiveness of or possibilities for profit generation, etc.
- *Enterprise Sustainability:*  
Allow enterprises to survive and grow over an extended period of time without compromising the value of renewable resources, thereby creating long-term meaningful employment for larger numbers of people.
- *Sector Growth:*  
Enabling the sector to develop or pursue new opportunities or improve the effectiveness of current operations.
- *Sector Competitiveness :*  
Enabling the sector to compete more effectively in the international arena, improving market intelligence and interpretation, productivity, cost efficiency, etc.
- *Human Resource Development Capacity:*  
Improving the access to quality provision of training to the agri sector.

With the above framework in mind, the following skills development needs were subsequently identified:

#### **4.3.1 RECRUITMENT RELATED SKILLS NEEDS**

Recruitment difficulties indicate jobs where enterprises find it difficult to recruit people, because the enterprise or sector is unable to attract the resources due to poor remuneration, bad image, poor career development opportunities etc. It is important to note that recruitment difficulties are not normally as a result of a shortage of people but rather an inability to attract these resources. Recruitment related needs include:

##### **4.3.1.1 General Needs**

Whilst the primary agricultural sector is the entry point into the world of work for a large percentage of persons in especially the rural areas, it should be noted that the sector also has negative connotations amongst sections of the youth and in certain parts of the country (and viewed as a last resort in their search of employment). The effect hereof is that despite an unemployment rate of approximately 26%, some farmers find it difficult to recruit workers to meet seasonal demands. This has resulted in the government approving the contracting of foreign labour to meet such temporary needs (workers are recruited mainly from Mozambique and Zimbabwe).

##### **4.3.1.2 Small-scale Farmer Needs**

Within the subsistence farming sector labour is provided primarily by family members and no real recruitment constraints due to a lack of such resources are being experienced.

#### 4.3.1.3 Commercial Sector Needs

Apart from the general comment made above, the agri sector still manages to attract technical and management skills through the allure of a better lifestyle and a strong tradition of agriculture. The increasing crime related security risk associated with farming may however have a negative impact.

#### 4.3.1.4 DOA Needs

The Department of Agriculture has identified a number of occupations in which they are experiencing shortages (vacancies). Whilst some of these long-term vacancies are as a result of a general shortage of such skills within South Africa (refer point 4.3.3.4 below – occupations marked with \*), it is also caused by the inability of the public sector to compete with the private sector for relative scarce skills (less favourable employment image and conditions) and the equity considerations when appointing staff for government posts.

Occupations in which the Department is experiencing recruitment problems include:

- Veterinarians
- Agricultural Engineers \*
- Plant Health Specialists (Nematology, Entomology, Plant Pathology) \*
- Statisticians (specialised agri knowledge)
- Plant Health Pest Risk Analysts \*
- ICT Specialists (AGIS, ICT Security)
- Agricultural Economists (production and resource economists) \*
- Agricultural Food and Quarantine Technicians \*
- Agro-meteorologists / Early warning Specialists \*
- Graphic artists
- Pasture Scientists \*
- Plant Production Specialists (e.g. ornamental crops, hydroponics) \*
- Specialised Food Analysts (pesticide residue analysts, processed food and dairy analysts, wine and spirit analysts)

### 4.3.2 SKILLS GAPS RELATED NEEDS

Skills gaps represent the mismatch between the job skills requirements and the skills of those in employment.

#### 4.3.2.1 General Needs

Within the agri sector there are generally the following critical skills gaps within the existing labour force (including owners/managers of small scale farming operations):

- Insufficient literacy and numeracy levels – both amongst workers within the sector at large and particularly at owner/manager level in many of the small-scale farming ventures (this is possibly the single largest factor stifling progress and growth of such enterprises). A willingness to learn, and analytical and problem solving skills coupled with initiative is a general requirements for viability and sustainability.
- Farm management skills (and general management skills in other agri businesses) coupled with a business orientation and entrepreneurship skills are critical.
- A general need to increase compliance with environmental, occupational health and safety, animal welfare and produce safety and hygiene standards, regulations and requirements (local and international standards)

#### 4.3.2.2 Small-scale Farmer Needs

This sub-sector is still characterised by high levels of illiteracy and a limited repertoire of skills (currently focussed primarily around a narrow range of technical/production skills). For the purposes of this exercise the responsibility of the AgriSETA has been limited to those farmers perceived to be on the road to becoming full-time farmers and who are interested to operate their farms as commercial enterprises (estimated 650 000 people) and the needs of the full spectrum of small-scale farming (including subsistence farmers and very small part-time agricultural activities – amounting to 2,4 million people) have thus not been considered here. The skills gap that has to be addressed towards advancing these small-scale operations into stronger commercial enterprises is the following:

MAIN REQUIREMENTS	SPECIFIC REQUIREMENTS	DEMAND *
Farm Management (Mainly owners/managers)	<ul style="list-style-type: none"> <li>• Farm management and entrepreneurship</li> <li>• Resource management and record keeping</li> <li>• Financial planning and management</li> <li>• Project management</li> <li>• Business plan development</li> </ul>	320 000
Analytical and Problem Solving skills	<ul style="list-style-type: none"> <li>• Problem-solving skills and techniques</li> <li>• Decision-making skills and techniques</li> <li>• Computer literacy</li> </ul>	320 000
Marketing and processing	<ul style="list-style-type: none"> <li>• Processing and packaging</li> <li>• Transport management</li> <li>• Marketing produce, including branding</li> <li>• Planning for marketing</li> <li>• Knowledge of markets</li> </ul>	320 000
Leadership	<ul style="list-style-type: none"> <li>• HR planning and management</li> <li>• Conflict resolution and management</li> <li>• Group cohesion</li> <li>• Labour relations</li> </ul>	320 000
Technical knowledge and skills	<ul style="list-style-type: none"> <li>• Production management (related to specific enterprise)</li> <li>• Demonstration of production techniques</li> <li>• Natural resources management</li> </ul>	280 000
Mechanical knowledge	<ul style="list-style-type: none"> <li>• Farm maintenance</li> <li>• Repairs of machinery and equipment</li> <li>• Electrical maintenance and installation</li> </ul>	20 000

\* Note: The demand is based on the results of the recent 2006 Farmer Syndicated Study and the 2003 Land Reform Beneficiary Needs Analysis study (approximately 50% of target group requested and require training)

#### 4.3.2.3 Commercial Sector Needs

A critical constraint is the poor educational levels of a large proportion of the labour force in the sector (both primary and secondary sub-sectors) demanding a considerable effort and investment in **ABET** and other life skills programmes for large numbers of workers. This should be undertaken as a first step within a life-long learning process and against future career and promotional prospects instil a **willingness to learn** attitude and culture amongst all.

Within the commercial agricultural sector there is a need for improved **management skills** and relevant **technological knowledge** (particular production techniques, cultivar decisions etc.) as productivity levels are increased and production methods become more precise. The rising importance of environmental issues will also create a need for skills and knowledge relating to environmentally responsible production and processing management systems. A more competitive international market will drive up the need for **business and marketing abilities** among owners and managers.

There are also increasing requirements for compliance with *environmental, health and safety*, phyto-sanitary, animal welfare, hygiene and produce traceability requirements of international trade standards, which are leading to a need for higher levels of awareness as well as specific knowledge to support implementation.

*Information technology* is increasingly being used for accounting, stock records and on some farms automation of equipment and computer-related skills are becoming more widely needed. Although these skills are not currently seen as particularly important in the industry, their growing importance is recognised and information technology is often cited as an area offering opportunity for improvement.

Among owner-managers, *business management* ability is becoming increasingly important as more farmers are making decisions about restructuring their businesses and diversification and developing supplementary sources of income. Diversification into non-farming enterprises is also creating a need for a wide range of specific skills; in some locations there are significant aggregate needs for specific skills and knowledge, for instance in relation to farm-based tourism and agri-business components for value adding to the primary produce within the food value chain.

Specific occupations or functional fields where skills gaps are particularly high (thus demanding specific focus and attention) were identified by various key stakeholders and the SSC's (Sub-Sector Committees). These needs are reflected the Scarce and Critical Skills Template in Section 4.4.

#### 4.3.2.4 DOA Needs

A particularly big need exists for skills upgrading amongst Extension Officers – particularly with regard to the change in policy and focus to redress the historical neglect of small-scale farmers and the rendering of services to such resource strapped farmers. Whilst a need exists to also upgrade their technical/production skills (refresher courses), the need is primarily for improved farm management and business skills within an agricultural context (since these are the critical knowledge constraints of the majority of BEE and emerging farmers and where the majority of Extensionists are particularly weak because they have never owned or managed their own farming enterprises). A large need exists to upgrade the knowledge and skills of a considerable proportion of the 2 800 existing Extension Officers in the following fields:

- Agricultural economics
- Agricultural management
- Business and financial management (preferably within the context of different types of farming)
- Technical and production related skills ranging:
  - Animal husbandry
  - Poultry
  - Crop production
  - Horticulture

### 4.3.3 SKILLS SHORTAGES RELATED NEEDS

Skills shortages are those skills in short supply when compared to overall demand within the labour market.

#### 4.3.3.1 General Needs

It can generally be stated that South Africa has a shortage of entrepreneurs and people who have the business acumen, drive, motivation and perseverance to succeed as businessmen. In essence these are the traits or characteristics required to become a successful farmer. Given the high risks involved in the agri sector (being exposed to natural elements outside one's control), and the various other lucrative and less risky opportunities that exists in South Africa for entrepreneurs, it can be said that the agri sector do not compete successfully for this "scarce resource". To a lesser extent it also applies in numerous other professional and skilled occupations where there is a natural tendency for especially younger qualified people to rather move to the urban areas – and who are thus lost to the agri sector.

#### 4.3.3.2 Small-scale Farmer Needs

The above trend is particularly evident amongst emerging farmers – where the profile reflects a large contingent of older and less educated people. Per definition these people are less flexible and tend to stick to known practices and less likely to take initiative or experiment with new technology. Within this sector or target group of the farming community, candidates with good entrepreneurial ability are thus scarce.

There is also a perceived *shortage* of Extensionists and advisors to assist this target group. This is however believed to be incorrect since there is a considerable pool of young unemployed agri graduates who could assist such emerging farmers in meeting their need for higher level expertise. This potential pool of resources however needs to be mobilised and be made accessible to farmers. Similarly the potential pool of retired commercial farmers who could serve as mentors to this target group need to be mobilised and supported by the DoA and/or AgriSETA to render such a service.

#### 4.3.3.3 Commercial Sector Needs

Within the context that the commercial agri sector will increasingly have to compete in the global market and that there is an ever increasing demand to increase productivity to remain profitable and viable, it can be stated that many of the existing farmers and managers/owners lack the *business management and entrepreneurial* orientation to survive.

Equity policy and the need to become BEE compliant demand that commercial enterprises appoint and/or develop *black owners/directors/managers*. There is a reported scarcity of workers who are ready for advancement to such positions and an urgent need exists within the commercial sector to develop BEE candidates for such positions.

Given the growing consumer demand and preferences for *food safety* and naturally grown produce, there is a need for farmers to change their traditional farming methods and practices to meet such new regulations and requirements. In this regard there is a general scarcity and shortage of knowledge and skills in the following fields:

- Global food standards, international quality standards and the attainment thereof
- Traceability requirements
- Organic produce and products

Specific skills (occupations related) identified as being in short supply to the sector are:

- People with CA qualifications
- Production Managers (in the food processing field)
- Product specialisation to international specifications (research skills)
- Forklift drivers, heavy vehicle/truck drivers and mobile plant operators (high L.T.O)
- Experienced and competent artisans (millwrights, electricians, fitters and turners,
- Agricultural Equipment Technicians
- Pest and weed controllers (scouters)
- Horticultural specialists

Please also refer to the Scarce and Critical Skills Template in Section 4.4. re details of further skills shortages identified by the SSC's and other key stakeholders.

#### 4.3.3.4 DOA Needs

Section 4.3.1.4 above indicated a list of occupations within which the Department of Agriculture are experiencing shortages (vacancies). Whilst some of these vacancies are due to the inability of the public sector to compete with the private sector for such scarce skills, in other categories it is purely as a result of a general shortage of such expertise to meet the national demand. Problems are especially experienced in specialised science related fields (those fields generally acknowledged as being complex or difficult courses resulting in few enrolments and/or pass rates at the HET institutions) with the result that too few qualified persons come onto the labour market. Examples of such skills shortages identified by the Department of Agriculture are:

- Agricultural Engineers
- Plant Health Specialists (Nematology, Entomology, Plant Pathology)
- Statisticians (specialised agricultural knowledge)
- Plant Health Pest Risk Analysts
- Agricultural Economists (production and resource economists)
- Agricultural Food and Quarantine Technicians
- Agro-meteorologists / Early warning Specialists
- Pasture Scientists
- Plant Production Specialists (e.g. ornamental crops, hydroponics)
- Specialised Food Analysts (pesticide residue analysts, processed food and dairy analysts, wine and spirit analysts)

### 4.3.4 LABOUR SHORTAGES RELATED NEEDS

#### 4.3.4.1 General Needs

Given that there is a 26% unemployment rate in South Africa, per definition a labour shortages do not exist. It is however, difficult for people who have never worked before to integrate into the agri workforce and the *aging workforce* (30-60% being over 40) means that most agri enterprises will within the next 5-10 years be looking at replacing a large proportion of their workforce and there could be an insufficient pool of people willing and able to participate. The impact of *HIV/AIDS* is also not always factored into understanding the diminishing pool of resources available.

Labour shortages have been reported within selected geographical areas and in particular occupations. Examples include cane cutters in the sugar industry, chicken catchers in the poultry industry, pickers in the fruit industry and animal handlers in feedlots, dairy parlour workers. It is however believed that these shortages rather reflect a recruitment problem as a result of the very harsh working conditions and the relatively poor remuneration (which makes these occupations unpopular). At present such "shortages" are addressed through contracting labour from neighbouring countries that due to the even worse conditions in those countries are willing to perform these jobs.

## 4.4 SCARCE AND CRITICAL SKILLS

A summary of scarce and critical skills appears on the next couple of pages (captured within the prescribed template provided by the Department of Labour).

As outlined in section 4.1 above, the methodology followed in developing the scarce and critical skills comprised mainly of interviews and workshops with stakeholders and representatives within the agri sector. Whilst the SSC's (Sub-Sector Committees) could make reasonably accurate projections for the total sub-sector that they represent, this was not possible for especially the subsistence and emerging farming target group within the primary sub-sector – we subsequently had to project and populate the size and scope of demand from various earlier studies undertaken (including the research undertaken by the DoA in developing the AET) and the Syndicated Study commissioned by AgriSETA for this purpose.

The scarce and critical skills needs reflected in the template below was further informed by:

- The important changes experienced in the agri sector (indicated in Chapter 1: Sector Profile and the PESTEL analysis in particular)
- The demand for skills and knowledge required by the sector as specified in Chapter 2: Demand for Skills
- The gaps identified in Chapter 3: Supply of Skills (gaps between the demand and supply of skills)
- The specific skills priority needs as outlined in Section 4.3 above.

The following section summarises the scarce and critical skills within the context of the OFO.

This is an Excel spreadsheet, inserted as part of page 98.

## 5. STRATEGIC PLANNING

### 5.1 STRATEGY PREMISE

In developing a strategy for skills development in the agri sector, full cognisance is taken of the following factors and/or requirements:

- **The profile of the commercial agri sector component** – which has seen the following developments in recent years:
  - A sector that has successfully weathered the adverse effects of deregulation and the pressures of global markets;
  - Increased production despite the fact that there has been a continued shedding of employment in the commercial sector component (mainly through embracing technological advances and increased productivity),
  - Increased ability to profit from burgeoning international markets and favourable export conditions (whilst the need to fully come to terms with international health, food safety and quality standards remains a challenge for many)
- The **Land Reform** process and the **AgriBBBEE** strategy – which holds the following key implications for the sector strategy:
  - The recognition that there is a large group of agricultural land reform beneficiaries that now have access to land but still do not have the skills or other production means and capacity to optimally use such land and to advance to the commercial sector. Given the fact that the land reform process will be increased substantially over the next decade, there is a critical need to especially support such under-resourced and emerging farmers to maintain and increase the food production capacity of the sector.
  - The need to identify and develop suitable black candidates for owner and/or senior management positions to attain BEE targets.
- **Skills needs** that are on the one hand calling for a workforce with the ability to influence and manage the marketplace, to implement and optimise technological advances and professionally manage production, finances, human resources and the risks attached to it; but equally important, on the other hand, the realisation that general educational levels are low, that businesses generally require better qualified staff and that rural small scale operations are specifically hampered by the low educational base.
- **The supply of skills to the sector** – which is more than sufficient in terms of the enrolment capacity of the education and training system, but is not optimal in terms of supplying the type and quality of skills needed by the sector. Many qualifying from the formal education and training system subsequently find it difficult to gain meaningful employment in the sector and a need exists to become more *demand* driven as opposed to the current supply oriented approach. Skills development in the workplace is also lagging in terms of both quality and quantity.
- **Alignment to and support of other key national development strategies and initiatives:**
  - Support for AsgiSA in an effort to halve poverty and unemployment by 2014 through an attainment of a growth rate of between 4,5% and 6% over this period. Specific focus to support agri sector related AsgiSA projects (e.g. the biofuels project and national livestock projects).

- Hand in hand with AsgiSA is the need to support and implement the JIPSA initiative – through the accurate identification of scarce and critical skills of the sector and the development of suitable strategies to address and eradicate such shortages.
- **The 2005 – 2010 National Skills Development Strategy (NSDS)**

The NSDS 2005 – 2010 provides the principles and objectives of skills development and subsequently spells out the national priority areas to which the income from the skills development levy will be allocated over the next five years. In developing a strategy for skills development in the agri sector, it is thus critical that the strategy embraces and interprets the principles and objectives of the NSDS – which are to:

  - Support economic growth for employment creation and poverty eradication – through promoting scarce and critical skills in the agri sector that will contribute to the sector’s growth and development – at the level of both commercial and emerging or under-resourced enterprises.
  - Promote productive citizenship by aligning skills development with national strategies for growth and development – especially those in employment will be exposed to quality training and focus will be placed on high growth opportunities such as AsgiSa projects and export-orientated enterprises.
  - Accelerate Broad Based Black Economic Empowerment and Employment Equity – through focussed service rendering to those who are classified as under-resourced (the land reform beneficiary, the emerging farmer, the very small enterprises), AgriSETA will, with the assistance of the NSF, impact on their sustainability and advancement towards the formal economy. Where necessary, this objective will further be advanced by making workplace support available to those with potential to engage in scarce skills development. Specific focus will also be placed on the development of BEE candidates for appointment and promotion to positions of ownership or senior management.
  - Support the unemployed and new market entrants to enter the labour market and self-employment – specific focus to be placed on assisting out-of-school, unemployed youths through the medium of learnerships to be exposed to the world of work in the agri sector.
  - Advance the culture of excellence in skills development and lifelong learning – the need to guide and direct the network of accredited education and training providers to provide quality and relevant programmes and services – thus ensuring that graduates meet the requirements of the sector and find gainful employment.

Whilst the above has offered a broad and generalised outline of how the skills strategy for the agri sector will embrace the NSDS principles, the following section will provide details of how the AgriSETA strategies and related actions are directly aligned to the various NSDS objectives and success indicators.

## **5.2 AGRISETA STRATEGY ALIGNMENT TO THE 2005 –2010 NSDS OBJECTIVES AND INDICATORS**

The NSDS specifies the aggregate performance indicators of the skills development system – that will be used to formulate specific performance indicators for the AgriSETA (via a Service Level Agreement). The following pages attempts to show how the AgriSETA strategies and related actions are aligned directly with the NSDS Objectives and performance indicators.

AGRISETA STRATEGY	ACTIONS AND COMMENTS
<b>NSDS OBJECTIVE 1: Prioritise and communicate critical skills for sustainable growth, development and equity</b>	
<b>1.1:</b> Ensure sufficient knowledge within AgriSETA to take informed decisions re. critical skills	<ul style="list-style-type: none"> <li>• Every second year execute scientific research re. status of skills in the agri sector.</li> <li>• Participate in and learn from the DoA study to identify scarce and critical skills needed for implementation of AgriSETA projects and programmes in the agri sector (e.g. biofuels project).</li> <li>• Work in close liaison with DoA and Provincial Departments of Agriculture re needs of various target groups to be served.</li> <li>• Engage in high level communication with the sector and the development of those who can impact at organisational level (such as SDFs).</li> </ul>
<b>1.2:</b> Ensure sufficient knowledge outside AgriSETA re. scarce skills and opportunities.	<ul style="list-style-type: none"> <li>• Participate in bi-annual national publication on skills development in SA.</li> <li>• Participate in JIPSA initiative and feed information re scarce skills in the agri sector</li> <li>• Use media to maximum effect.</li> <li>• Support DoL efforts.</li> <li>• Develop SDFs and other key skills development specialists in the sector.</li> </ul>
<b>NSDS OBJECTIVE 2: Promoting and accelerating quality training for all in the workplace</b>	
<b>2.1:</b> AgriSETA pays 50% grant on submission of WSPs and ATRs that meet requirements.	<ul style="list-style-type: none"> <li>• Target all firms with more than 150 employees (large) and those with 50 – 149 employees (medium).</li> <li>• Specifically target all export orientated enterprises.</li> <li>• Give specific preference to interventions aimed at AgriBBBEE</li> </ul>
<b>2.2:</b> For firms with more than 1 but less than 50 employees, grant training cost if WSP and ATR is submitted.	<ul style="list-style-type: none"> <li>• WSP and ATR to be submitted in simplified format.</li> <li>• Training must be unit standard based and proof of accredited provider.</li> <li>• Target emerging enterprises with high potential - equitable budget per enterprise to be determined.</li> </ul>
<b>2.4:</b> Obtain a high rate of participation in IIP (or similar).	<ul style="list-style-type: none"> <li>• Target all firms with more than 150 employees.</li> <li>• Target all export orientated enterprises.</li> <li>• Target large empowerment projects.</li> </ul>
<b>2.5:</b> Activate a support programme to small BEE enterprises	<ul style="list-style-type: none"> <li>• Finalise mentorship programme research and development programme and implement plan.</li> <li>• Develop funding formula and commence with direct skills development funding – expand interventions to target Land Reform Beneficiaries more effectively</li> <li>• Gain support from DoA and Provincial Departments of Agriculture and link AgriSETA strategy and actions to DoA AET and render support within joint ventures.</li> <li>• Always integrate with mentoring programme.</li> </ul>
<b>2.7:</b> Expand ABET programme.	<ul style="list-style-type: none"> <li>• Current initiative rolled out on a much larger scale using both multi-media and face-to-face.</li> <li>• Overall targets not realistic as full qualifications at ABET 4 (NQF 1) will deplete all resources within AgriSETA.</li> <li>• Attain a more realistic agreement with DoL by the end of year 1.</li> </ul>
<b>2.8:</b> Upgrade the skill levels of the employed workforce	<ul style="list-style-type: none"> <li>• Revise former SETASA qualifications and implement new qualifications for which learning material is currently being developed</li> <li>• Develop enterprises to take charge of learnership implementation and less delegation to providers.</li> <li>• Develop new funding model to ensure adequate reward to employer and provider and to be biased towards scarce skills and BBBEE directed learning interventions.</li> <li>• Design and implement skills programmes focussing on scarce skills.</li> </ul>

<b>NSDS OBJECTIVE 3: Promoting employability and sustainable livelihoods through skills development.</b>	
<b>3.2:</b> Impact on the sustainability of non-levy paying enterprises, NGOs, CBOs and community cooperatives.	<ul style="list-style-type: none"> <li>Finalise mentorship programme research and development programme and implement plan.</li> <li>Develop funding formula and commence with direct skills development funding</li> <li>Focus on agricultural land reform beneficiaries and high potential emerging enterprises (farm management and business management focus)</li> <li>Gain support from DoA and Provincial Departments of Agriculture in joint ventures to support (apply to NSF Informal Sector and Social Development Funding Windows for additional funding support)</li> <li>Focus on small community based initiatives involved in value-adding (eg. juice making).</li> <li>Assist to overcome limitations related to economies of scale – link with larger secondary enterprises.</li> </ul>
<b>NSDS OBJECTIVE 4: Assisting new entrants into the labour market and self-employment.</b>	
<b>4.1, 4.2 &amp; 4.3:</b> Enable high potential, poor youths to engage in study areas of scarce skills.	<ul style="list-style-type: none"> <li>Implement a bursary scheme for internships at commercial enterprises.</li> <li>Limit to those with qualification in scarce skills as per priority listing in previous chapter.</li> <li>Facilitate access to work experience opportunities – where necessary, combine with Work Experience Grants and/or learnerships from sector.</li> <li>Where necessary add elements of new venture learnerships to existing in sector.</li> </ul>
<b>NSDS OBJECTIVE 5: Improving the quality and relevance of provision.</b>	
<b>5.1:</b> Support five centres of excellence.	<ul style="list-style-type: none"> <li>Identify Agricultural Colleges, FET institutions or sector specific institutions to participate – link efforts to DoA initiative for developing selected Agricultural Colleges as Centres of Excellence.</li> <li>Focus on those with ability to deliver on scarce skills.</li> <li>Engage in organisational and staff development strategies with these colleges.</li> <li>Fund selected staff development and learning programme development activities at those institutions.</li> <li>Commence with all five by year two and support in long term (at least to 2010).</li> </ul>
<b>5.2</b> Enable providers to engage in new venture creation.	<ul style="list-style-type: none"> <li>Select 18 providers to participate (2+ per province).</li> <li>Design and implement specific new venture creation programmes at NQF levels 2 and 4.</li> <li>Adjust new venture learnerships to be sector specific.</li> </ul>
<b>5.3:</b> Guide providers to align services to priority needs. Enable AGRISETA accredited providers to deliver a quality service.	<ul style="list-style-type: none"> <li>Advise FET and HED institutions re scarce skills/occupations in the agri sector to direct students and institutional capacity to such study fields</li> <li>Cluster providers: one lead provider with two emerging providers.</li> <li>Implement development plan for all providers.</li> <li>Determine funding model to benefit all parties.</li> <li>Subcontract specialist to implement.</li> </ul>
<b>5.4</b> Build capacity of stakeholders	<ul style="list-style-type: none"> <li>Continue with current employer leadership programme and expand to total sector.</li> <li>Finalise and implement labour participation programme and expand to total sector.</li> <li>Continue with current labour laws information workshops and expand to total sector.</li> </ul>

## 5.3 AGRISETA STRATEGIC PLAN AND PRIORITY FOCUS AREAS

Based on the above the updated Strategic Plan of the AgriSETA for the period 2006 – 2010 is as outlined below (linking and integrating priority needs and subsequent focus areas to specific programmes and interventions – and reflecting how these in turn relate to the relevant NSDS Objectives).

AGRISETA PRIORITY FOCUS AREAS	SPECIFIC PROGRAMMES TO ADDRESS NEEDS	BROAD NSDS OBJECTIVE LINK
<p>Development of general human capacity as basis for sectoral growth:</p> <ul style="list-style-type: none"> <li>- Ability and willingness to learn (employees and staff of both commercial and emerging enterprises)</li> <li>- Increased educational levels as platform for further capacity building and lifelong learning and development initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• ABET</li> <li>• Problem solving</li> <li>• Numeracy</li> <li>• Literacy</li> <li>• Initiative, flexibility</li> <li>• Diversification</li> </ul>	<p>Objective 2, focus on indicator 2.7 Objective 3, focus on indicator 3.2</p>
<p>Management and agri business skills to increase profitability and viability and address AgriBBBEE targets:</p> <ul style="list-style-type: none"> <li>- Specifically target land reform beneficiaries and emerging farmers and enterprises</li> <li>- Upgrade Extension Officers to services above target groups</li> <li>- Increase efficiency of commercial enterprises</li> <li>- Target BEE candidates for development</li> </ul>	<ul style="list-style-type: none"> <li>• Farm management and leadership</li> <li>• Business and financial management</li> <li>• Marketing (local and international market)</li> <li>• Environmental management</li> <li>• Information technology</li> </ul>	<p>Objective 2, focus on indicator 2.1 Objective 2, focus on indicator 2.8 Objective 3, focus on indicator 3.2 Objective 4, focus on indicator 4.2 Objective 4, focus on indicator 4.3</p>
<p>Develop readiness, ability and capacity of sector to realise global market opportunities:</p> <ul style="list-style-type: none"> <li>- Meet international food safety standards</li> <li>- Develop export readiness and capacity</li> <li>- Markets and marketing knowledge and skills</li> <li>- Direct FET and HET providers to produce relevant researchers, technicians and technologists</li> </ul>	<ul style="list-style-type: none"> <li>• Food safety standards</li> <li>• Produce traceability</li> <li>• Information technology</li> <li>• Environmental standards</li> <li>• Phytosafety/Animal welfare</li> <li>• Marketing and processing skills</li> <li>• Develop, recruit and retain Lab Technicians, Biotechnologists, Food Inspectors, etc.</li> </ul>	<p>Objective 2, focus on indicator 2.8 Objective 4, focus on indicator 4.1</p>
<p>Guide and direct the Provider Sector to offer relevant programmes (focused on scarce and critical skills) and of the required quality:</p> <ul style="list-style-type: none"> <li>- Specific focus on skills needs of AsgiSA projects and programmes</li> <li>- Address identified scarce skills of DoA and the agri sector at large – JIPSA priorities</li> <li>- Through Centres of Excellence render specialised, high quality training</li> <li>- Address production skills needs of especially emerging farmers</li> <li>- Address technical and maintenance skills needs of especially secondary sub-sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Production knowledge and skills</li> <li>• Skills needed for implementing AsgiSA programmes and projects (e.g. biofuels, livestock programme, etc.)</li> <li>• Training and supply of graduates to address scarce skills in occupations such as Agricultural Engineers, Agricultural Economists, Horticulturists, Production and Process Engineers, Financial Experts, etc.)</li> <li>• Training and supply of range of technicians, artisans and maintenance staff</li> </ul>	<p>Objective 1, focus on indicator 1.1 Objective 1, focus on indicator 1.2 Objective 2, focus on indicator 2.8 Objective 4, focus on indicator 4.1 Objective 4, focus on indicator 4.2 Objective 4, focus on indicator 4.3 Objective 5, focus on indicator 5.1 Objective 5, focus on indicator 5.3</p>

## **ANNEXURE 1: ORGANISATIONS / PERSONS CONSULTED IN IDENTIFYING SKILLS PRIORITY NEEDS**

### **Workshops with following Sub-Sector Skills Committees:**

Sugar  
Fibre, Tea and Coffee  
Fruit packaging and processing  
Milling  
Pest and Weed Control  
Poultry  
Grain  
Tobacco

### **Meetings / Interviews:**

#### Commodity Organisations:

Potato SA  
Ornamental Horticulture  
Red Meat Abattoir Association  
NERPO (National Emerging Red Meat Producers Organisation)  
Fruit South Africa  
Fruit Packers Association  
Milk Producers Organisation  
Wildlife Ranching SA (game farming industry)

#### Organised Agriculture (Farmers and Employer Organisations):

AgriSA  
Transvaal Landbou Unie (TLU)  
Agricultural Employers Organisations (EAO)  
NAFU

#### Organised Labour:

FAWU  
NUF  
Solidarity  
SAFATU (Telephonic)  
FGWU (Telephonic)

#### Large Farming Enterprises (for farmer perspectives)

ZZ2  
Karan Beef  
Schoeman Boerdery

## ANNEXURE 2: FURTHER DETAILED INFORMATION RE SUPPLY OF AGRI RELATED EDUCATION AND TRAINING SERVICES (AET)

### AGRICULTURAL COLLEGES: PROGRAMMES, DURATION, ACCREDITING BODIES AND NQF LEVELS

College	Programme	NQF level	Duration	Accrediting body
1. Cedara	1. Higher Certificate in Agriculture.	5	2 years FT	HEQC
	2. Diploma in Agriculture.	6	3 years FT	HEQC
2. Elsenburg	1. National Certificate	1 & 4	Variable	AgriSETA
	2. Higher Cert in Agriculture.	5	2 years FT	CHE
	3. Dip in Agriculture: Cellar Technology.	5	1 year FT	CHE
	4. Diploma in Agriculture.	5	1 year FT	CHE
	5. B Agric	6	3 years FT	CHE
3. Fort Cox	1. Diploma in Social Forestry.	5	3 years FT	CHE
	2. Diploma in Agriculture: Animal Production.	5	3 years FT	CHE
	3. Diploma in Agriculture: Crop Production.	5	3 years FT	CHE
	4. Diploma in Agriculture: Agribusiness	5	3 years FT	CHE
4. Glen	1. National Certificate	5	2 years Ft	HEQC
	2. N Dip in Agriculture.	6	1 year (post Cert)	HEQC
5. Grootfontein	1. Higher Certificate in Agriculture.	5	2 years Ft	HEQC
	2. Diploma in Agriculture.	6	3 years Ft	HEQC
6. Lowveld	1. Higher Certificate.	5	2 years Ft	CHE/HEQC
	2. Diploma Plant Production	6	1 year Ft (post certificate)	CHE/HEQC
7. Madzivandila	1. N. Certificate	1	1 years FT	AgriSeta
	2. Diploma in Agriculture: Animal Production.	5	3 years FT	CHE
	3. Diploma in Agriculture: Plant Production.	5	3 years FT	CHE
8. Owen Sithole	1. Higher Certificate in Agriculture.	5	2 years Ft	HEQC
	2. Diploma in Agriculture	6	3 years	HEQC
	3. Higher Certificate in Home Economics	5	2 years	HEQC
	4. Dip in Agriculture: Home Economics.	6	3 years	HEQC
9 Potchefstroom	1. H Certificate in Agriculture.	4	2 years	HEQC
	2. Dip in Agriculture.	5	3 years	HEQC
10. Taung	1. N4 Certificate Farming Management.	4	1 year	Umalusi
	2. N5 Certificate Farming Management.	4	2 years	Umalusi
	3. N6 Certificate Farming Management.	18 months experiential	3 years	Umalusi
11 Tompi Seleka	1. Diploma in Animal Production.	6	3 years	CHE
	2. Diploma in Community Extension.	6	3 years	CHE
	3. Diploma in Plant Production.	6	3 years	CHE
	4. Diploma in Resource Utilization.	6	3 years	CHE

Source: Department of Agriculture Publication: Agricultural Enrolments at Colleges and Universities,

**DEMOGRAPHIC BREAKDOWN OF AET ENROLMENTS - UNIVERSITY OF TECHNOLOGY**

Name University of Technology	African			Coloured			White			Indian			Total
	M	F	T	M	F	T	M	F	T	M	F	T	
<b>CPUT</b>	5	3	8	5	2	7	87	10	97	0	0	0	112
<b>CUT</b>	52	16	68	3	0	3	22	2	24	0	0	0	95
<b>MANTEC</b>	265	184	449	0	0	0	0	0	0	0	0	0	449
<b>NMMU</b>	81	41	122	3	1	4	13	0	13	0	0	0	139
<b>TUT</b>	695	398	1093	4	3	7	388	233	621	4	2	6	1727
<b>UNISA</b>	140	55	195	5	5	10	12	20	32	3	0	3	240
<b>TOTAL</b>	1238	697	1935	20	11	31	522	265	787	7	2	9	2762

Source: Department of Agriculture Publication: Agricultural Enrolments at Colleges and Universities,

**AGRICULTURAL PROGRAMMES OFFERED IN UNIVERSITIES OF TECHNOLOGY**

	Cape Peninsula University of Technology	Central University of Technology Free State	Nelson Mandela Metropolitan	Mangosuthu Technikon	Tshwane University of Technology	UNISA (Former Technikon SA)
<b>National Certificate Programmes</b>						
NCertificate Agriculture Animal Production					X	
NCertificate Agriculture Crop Science					X	
NCertificate Agricultural Management Crop Science					X	
NCertificate Game Ranch Management					X	
NCertificate Horticulture					X	
NCertificate Nature Conservation					X	
NCertificate Landscape Technology					X	
NCertificate Turfgrass Management					X	
<b>National Higher Certificate Programmes</b>						
NHCertificate Agriculture Animal Production					X	
NHCertificate Agriculture Crop Science					X	
NHCertificate Agric Management Crop Science					X	
NHCertificate Game Ranch Management					X	
NHCertificate Nature Conservation					X	
<b>National Diploma Programmes</b>						
NDip Agriculture	X				X	
NDip Animal Health						X
NDip Agriculture Crop Production					X	
NDip Agriculture Crop Science					X	
NDip Agriculture Mixed Farming					X	
NDip Agriculture Rural Development					X	
NDip Agricultural Management	X	X	X		X	X
NDip Agriculture Animal Production				X	X	
NDip Agriculture Plant Production				X		
NDip Agriculture Equine Science					X	
NDip Agriculture Horticulture					X	
NDip Landscape Technology					X	
NDip Nature Conservation					X	
NDip Turfgrass Management					X	

<b>National Higher Diploma Programmes</b>						
NHDip Pig Production					X	
<b>BTech Programmes</b>						
BTech Agriculture	X	X			X	
BTech Agricultural Management			X		X	X
BTech Agricultural Science						X
BTech Agriculture Animal Production					X	
BTech Agriculture Crop Production					X	
BTech Agriculture Mixed Farming					X	
BTech Agriculture Rural Development					X	
BTech Agriculture Animal Health						X
BTech Game Ranch Management					X	
BTech Agriculture Horticulture					X	
BTech Landscape Technology					X	
BTech Nature Conservation					X	
BTech Turfgrass Management					X	
<b>MTech Programmes</b>						
MTech Agriculture					X	
MTech Nature Conservation					X	
<b>DTech Programmes</b>						
DTech Agriculture					X	
DTech Agriculture Animal Production					X	
DTech Nature Conservation					X	

Source: Department of Agriculture Publication: Agricultural Enrolments at Colleges and Universities,



<b>B Sc Degree Programmes</b>								
B Sc in Agriculture		X	X	X	X		X	X
B Sc in Food Science & Technology			X				X	X
B Sc Forestry							X	X
B Sc Conservation Ecology							X	
B Sc Agric Economics		X	X		X	X		
B Sc Agric Agronomy			X		X			
B Sc Animal Production					X			
B Sc Horticulture					X	X		
B Sc Agric Pasture Science					X			
B Sc Agric Soil Sciences			X		X			
B Sc Environmental & Resource Studies					X			
B Sc Crop Science		X						
B Sc Animal Health		X						
B Sc Land Management		X						
B Sc Agronomy & Agrometeorology			X					
B Sc Plant Pathology			X			X		
B Sc Irrigation Sciences			X					
B Sc Plant Pathology & Entomology			X					
B Sc Plant Breeding and Genetics			X			X		
B Sc Natural Agricultural Resources			X					
B Sc Animal Sciences / Grassland Sciences		X	X					
B Sc Food Sciences & Biochemistry			X					
B Sc Food Science & Microbiology			X					
B Sc Food Science & Chemistry			X					
B Sc Agric. Econ. Agri-Business Management						X		
B Sc Animal Sciences & Animal Genetics						X		
B Sc Food Sciences & Technology						X		
B Sc Genetics: Plant Breeding						X		
B Sc Plant Production						X		
B Sc Plant Protection						X		
B Sc Food Management						X		
B Sc Nutrition & Food Science						X		
<b>B InstAgrar Programmes</b>								
BInstAgrar: Agric.Econ: Animal Production						X		
BInstAgrar: Agronomy/Horticulture						X		
BInstAgrar: Animal Production						X		
BInstAgrar: Animal Production Management						X		
BInstAgrar: Crop Protection						X		
BInstAgrar: Food Production & Process.						X		
BInstAgrar: Land-Use Planning						X		
BInstAgrar: Plant Protection						X		
BInstAgrar: Rural Development Management						X		

Honors Degree Programmes							
B Agric	X		X	X			
B Sc Food Sciences						X	
B Agric Extension	X						
B Agric Crop/Horticulture	X						
B Agric Pasture/Livestock	X						
B Agric Management			X	X			
B Agric Admin					X		X
Rural Development							X
B Sc in Agric: Animal Health		X					
B Sc in Agric: Crop Sciences	X	X					
B Sc in Agric: Animal Sciences	X	X					
B Sc in Agric: Economics	X	X					
B Sc in Agric: Extension		X					
B Sc in Agric: Land Management		X					
B Sc Forestry							X
B Sc Agric			X				X
B Sc Biotechnology			X				
B Sc Soil Science	X		X				
B Sc Agric Economics			X				
B Sc Plant Breeding			X				
B Sc Plant Pathology			X				
B Sc Animal Science	X		X				
B Sc Wildlife Management			X				
B Sc Agric Economics							
BCom(Hons): Actuarial Science						X	
BCom(Hons): Agricultural Economics						X	
BInstAgrar(Hons): Agribusiness Management						X	
BInstAgrar(Hons): Agricultural Economics						X	
BInstAgrar(Hons): Crop Protection						X	
BInstAgrar(Hons): Extension						X	
BInstAgrar(Hons): Food Processing						X	
BInstAgrar(Hons): Food Produc. & Proces.						X	
BInstAgrar(Hons): Land-Use Planning						X	
BInstAgrar(Hons): Plant Production						X	
BInstAgrar(Hons): Rural Devel. Planning						X	
Masters Degree Programmes							
M Agric Admin/ Management				X	X		X
M A Agriculture			X	X			
M Phil							X
M Sc Forestry							X
M Sc Agriculture		X	X	X	X		X
M Sc Conservation Ecology							X
M Sc Food Science & Technology						X	X
Masters in Rural Development							X
M A Agric Economics	X				X	X	
M A Agric Extension	X				X		
M Phil Environmental Studies	X						
M Sc Agric: Crop Science	X				X		

M Sc Agric: Animal Science	X					X		
M Sc Agric: Soil Science	X				X	X		
M Sc Agric: Horticulture	X				X	X		
M Sc Plant Production						X		
M Sc Agric: Pasture Sciences	X				X			
M Sc Agric: Geography & Environmental Science	X							
M Sc Agric: Plant Protection & Plant Pathology					X			
M Sc Agronomy						X		
M Sc Agric: Remote Sensing					X			
M A : Disaster Management			X					
M A: Sustainable Agriculture			X					
MCom: Agric Economics						X		
MInstAgrar: Agric Economics						X		
MInstAgrar: Agronomy						X		
MInstAgrar: Animal Production Management						X		
MInstAgrar: Animal Production						X		
MInstAgrar: Crop Protection						X		
MInstAgrar: Environmental Management						X		
MInstAgrar: Extension						X		
MInstAgrar: Food Processing						X		
MInstAgrar: Food Production & Processing						X		
MInstAgrar: Horticulture						X		
MInstAgrar: Land Development						X		
MInstAgrar: Land-Use Planning						X		
MInstAgrar: Plant Production: Agronomy						X		
MInstAgrar: Plant Production: Horticulture						X		
MInstAgrar: Plant Protection						X		
MInstAgrar: Rural Developm.& Ecotourism						X		
MInstAgrar: Rural Development Planning						X		
MInstAgrar: Rural Household Devel.(Diss)						X		
MInstAgrar: Sust.Ecol.Management						X		
MInstAgrar: Sustain.Insect Mngemnt.						X		
M Sc Agric Agronomy						X		
Wildlife (MInstAgrar)						X		
M Sc Animal Breeding & Genetics						X		
M Sc Genetics						X		
M Sc Microbiology						X		
M Sc Plant Biotechnology						X		
<b>PhD Degree Programmes</b>								
PhD: Agrarian Extension						X		
PhD: Agricultural Economics	X					X		
PhD: Agronomy						X		
PhD: Animal Production						X		
PhD: Animal Science						X		
PhD: Crop Protection						X		

PhD: Food Science										X	X	
PhD: Horticultural Science										X		
PhD: Pasture Science										X		
PhD: Plant Production: Agronomy										X		
PhD: Plant Production: Horticulture										X		
PhD: Plant Production: Pasture Science										X		
PhD: Rural Development Planning										X		
PhD: Soil Science	X									X		
PhD: Soil Science & Plant Nutrition										X		
PhD Agriculture							X	X		X	X	X
PhD Science & Agriculture							X					
PhD Crop Sciences	X											
PhD Geography & Environmental Sciences	X											
PhD Forestry											X	

Source: Department of Agriculture Publication: Agricultural Enrolments at Colleges and Universities,

**BREAKDOWN OF ENROLMENTS BY GENDER AND RACE PER UNIVERSITY**

Name of the University	African			Coloured			White			Indian			Total
	M	F	T	M	F	T	M	F	T	M	F	T	
<b>Fort Hare University</b>	221	139	360	0	0	0	2	0	2	0	0	0	<b>362</b>
<b>North West University</b>	388	468	856	0	0	0	0	0	0	0	0	0	<b>856</b>
<b>University of Free State</b>	230	82	312	6	3	9	392	105	497	3	2	5	<b>823</b>
<b>University of KwaZulu Natal</b>	192	74	266	6	2	8	98	71	169	16	15	31	<b>474</b>
<b>University of Limpopo</b>	325	216	541	1	0	1	2	0	2	0	0	0	<b>544</b>
<b>University of Pretoria</b>	262	158	420	5	5	10	198	161	359	7	7	14	<b>803</b>
<b>University of Stellenbosch</b>	61	41	102	30	29	59	551	400	951	4	0	4	<b>1116</b>
<b>University of Venda</b>	217	172	389	0	0	0	0	0	0	0	0	0	<b>389</b>
<b>TOTAL</b>	<b>1896</b>	<b>1350</b>	<b>3246</b>	<b>48</b>	<b>39</b>	<b>87</b>	<b>1243</b>	<b>737</b>	<b>1980</b>	<b>30</b>	<b>24</b>	<b>54</b>	<b>5367</b>

Source: Department of Agriculture Publication: Agricultural Enrolments at Colleges and Universities,

### ANNEXURE 3: SUB-SECTOR SCARCE & CRITICAL SKILLS IDENTIFIED DURING SECTOR SKILLS COMMITTEE WORKSHOPS

<b>FIBRE, TEA, COFFEE AND MACADAMIAS CRITICAL AND SCARCE SKILLS</b>					
<b>OCCUPATION</b>	<b>INDUSTRY</b>	<b>SCARCE/ CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNINGTYPES</b>
<b>TECHNICIANS (PRODUCT/MARKETING ETC)</b>					
TECHNICAL FIELD OFFICERS ( EXTENTION OFFICERS - PRODUCT SPECIFIC))	ALL	SCARCE	5 TO 6	75	
TECHNICAL OFFICERS (STORES) (CLASSING AND IDENTIFICATION OF FIBRE)	FIBRE	CRITICAL	5 TO 6	20	
* SOIL AND PLANT TECHNICIAN	ROOIBOS/MAC	SCARCE	5 TO 6	5	
* LAB TECHNICIANS (MICROBIOLOGIST)	ROOIBOS	SCARCE	5 TO 6	5	
* LAB ASSISTANT	ROOIBOS	SCARCE	3 TO 4	10	
* ANIMAL HEALTH TECHNICIAN	FIBRE	SCARCE	5 TO 6	20	
AUCTIONEERS/ VALUATER	FIBRE	S + C	4 TO 5	10	COMPUTERS SKILLS BASIC BUSINESS SKILLS
FARM MANAGERS (EMERGING PRIMARY)	ALL	CRITICAL	3 TO 4	750	FARM MANAGEMENT SKILLS
FARM MANAGERS (COMMERCIAL PRIMARY)	ALL	CRITICAL	4 TO 5	50	
<b>ARTISANS</b>	ALL	S + C			
* ELECTRICIANS	ALL	SCARCE	4 TO 5	25	INFLUENCE OF SUBSIDISATION OF OVERSEES
* MAINTENANCE TECHNICIANS	ALL	SCARCE	4 TO 5	25	vs NONE IN SA
* MILLWRIGHTS	ALL	SCARCE	4 TO 5	50	
* MECHANICS(P ETROL /DIESELS)	ALL	SCARCE	4 TO 5	25	
* ARTISAN ASSISTANT	ALL	SCARCE	2 TO 3	50	
* REFRIDGERATION	ALL	SCARCE	4 TO 5	25	
* BOILER ATTENDANTS	ALL	CRITICAL	2 TO 3	25	GOV CERTIFICATED
<b>SHEARERS</b>					
* HAND	FIBRE	SCARCE	2 TO 3	500	AGRICULTURE NOT A P PREFERRED JOB
* MACHINE	FIBRE	SCARCE	2 TO 3	300	INFLUENCE OF AIDS - DEATH RATE

WOOL CLASSERS (WOOL & MOHAIR)	FIBRE	CRITICAL	1 TO 4	100	LOW SALARY LEVEL
GRADERS (TEA)	TEA	SCARCE	3 TO 4	25	
SCOUTERS (PEST & WEED CONTROL)	MAC/ ROOIBOS	SCARCE	3 TO 4	200	
PEST CONTROL OPERATOR			2 TO 3	100	ABET
AGRI SALES (EE)	FIBRE	SCARCE	4 TO 5	30	NUMERACY
					LIFE SKILLS
QUALITY CONTROL OFFICER (HACCP)	ROOIBOS	S + C	3 TO 5	10	FUMEGATION AND PEST CONTROL
QUALITY INSPECTORS	ALL	CRITICAL	1 TO 4	100	HEALTH AND SAFETY
<b>MANAGEMENT (EE)</b>					
* JR SUPERVISORS	ALL	CRITICAL	2 TO 4	100	AGRICULTURAL PRACTICES
* SNR SUPERVISORS	ALL	CRITICAL	3 TO 4	50	FINANCIAL/ ECONOMIC MANAGEMENT
* PRODUCTION (PROCESS/ PACKHOUSE) MANAGERS	ALL	SCARCE	4 TO 5	25	MARKETING
* INTERNAL AUDITORS	ALL	SCARCE	4 TO 5	50	ENTREPRENEURIAL
* IT NETWORKS/ PROGRAMMERS/ WEB DESIGN	ALL	SCARCE	6 TO 7	5	GEOGRAPHICAL DEMAND
					HUMAN RESOURCES, PROCUREMENT
					HEALTH AND SAFETY, QUALITY CONTROL
<b>LOGISTICS/WAREHOUSING</b>	ALL	CRITICAL			
* EXPORT AND TRACKING OFFICER	ALL	SCARCE	3 TO 4	25	EXPORT ADMIN
* EXPORT ADMINISTRATIVE CLERK	ALL	S + C	3 TO 4	25	
* FORKLIFT DRIVERS	ALL	CRITICAL	2 TO 3	100	LICENSED
* RECEIVING CLERKS	ALL	CRITICAL	2 TO 3	100	LITERACY AND NUMERACY AGAINST WAGE
* DESPATCH CLERKS	ALL	CRITICAL	2 TO 3	100	LACK OF COMPUTER SKILLS
* STORES CLERKS	ALL	CRITICAL	2 TO 3	50	REPLACEMENT DEMAND PROBLEMATIC
* TRUCK DRIVERS (CODE EC)	ALL	CRITICAL	2 TO 3	50	LIFE SKILLS, STORAGE ADMIN CONTROL
	ALL	SCARCE	1 TO 2		
GENERAL /WORKERS - HARVESTERS	ALL	CRITICAL	1 TO 2	3500	WORK ETHICS & VALUE
					PRICING STRUCTURES
					UNWILLINGNESS TO WORK

<b>FRUIT PACKAGING AND PROCESSING - CRITICAL AND SCARCE SKILLS</b>				
<b>OCCUPATION</b>	<b>SCARCE/ CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNING TYPES</b>
<b>PRIMARY SECTOR</b>				
<b>GENERAL WORKER</b>	SCARCE	BELOW 1	100 000	
* PICKERS, PACKERS, SORTERS, PALLETIZES				"UNWILLINGNESS TO WORK"
<b>OPERATORS</b>				
* FORKLIFT	CRITICAL	2	20 000	WORK ETHICS AND VALUES
* MECHANICAL AND COMPUTERIZED				FORM A CULTURE OF LONGTERM PLANNING
*SWITCHBOARD OPERATORS				NOT AN INDUSTRY THAY PEOPLE
*TRUCK				WOULD LIKE TO BE WORKING IN
*TRACTOR				
<b>SPECIALISTS</b>				
* MECHANICAL MAINTENANCE	CRITICAL	2 TO 3	5 000	AGRICULTURE NOT A CAREER
* QUALITY PRINCIPLES				CHANGE OF MINDSET NEEDED
* FOOD SAFETY				ABET
<b>PEST CONTROL</b>				
IRRIGATION	CRITICAL	2	3 000	BASIC FARM MANAGEMENT
FERTILIZATION	CRITICAL	2	1 000	SUPERVISORY
				PEOPLE SKILLS
				FOOD SAFETY

<b>SECONDARY SECTOR</b>				
PRODUCTION MANAGER (INDUSTRIAL ENGINEERS)	SCARCE	6	100	BASIC FINANCE SKILLS
<b>ADVISORS/ EXTENSION OFFICERS</b>	SCARCE	2 TO 6	500	GRADE 10- 12 EDUCATION GAP
*HORTICULTURE				TECHNICAL SKILLS - PACKING, SORTING,
CHEMICAL ANALYST	SCARCE	3 TO 6	100	ARTISANS
LAB TECHNICIANS	SCARCE	2 TO 3	400	PEST AND DECEASE CONTROL
FOOD SAFETY SPECIALIST/FOOD TECHNOLOGIST	SCARCE	4 TO 6	100	LOGISTICS
REFRIGERATION TECHNICIANS	SCARCE	3	150	DOMESTIC VS EXPORT QUALITY STANDARDS
ARTISAN ASSISTANTS	SCARCE	2 TO 3	1000	IRRIGATION SKILLS
MILLWRIGHT (FITTER, TURNER AND ELECTRICIAN)	SCARCE	3 TO 4	500	QUALITY CONTROL IN FOODSAFETY
ELECTRICIANS	SCARCE	3 TO 4	200	
WELDERS	SCARCE	3 TO 4	200	
BOILERMAKERS	SCARCE	3 TO 4	200	
GENERAL MACHINE OPERATORS	CRITICAL	2	1000	
MICRO BIOLOGISTS	SCARCE	5	100	
EVAPORATOR/EXTRACTION OPERATOR	SCARCE	2	100	
<b>LOGISTICS</b>				
*COLD STORAGE	SCARCE	3	250	
*PLANNERS/PRODUCT COORDINATORS	SCARCE	3 TO 4	100	
*COLD CHAIN MANAGERS	SCARCE	5 TO 6	100	
*EXPORTS MANAGERS	SCARCE	5 TO 6	50	
*EXPORTS CLERKS	CRITICAL	4	50	
SUPERVISORS	CRITICAL	4	500	
FIRST LINE MANAGERS	CRITICAL	4	1500	
QUALITY CONTROL MANAGERS	SCARCE	5 TO 6	100	
PRODUCTION/ PACK HOUSE MANAGER	SCARCE	5 TO 6	300	
<b>RISK MANAGERS</b>	SCARCE	5	100	
*HEALTH AND SAFETY				
*SECURITY				

*INSURANCE				
*LEGISLATIVE				
<b>QUALITY ASSURER/CONTROLLER</b>	CRITICAL	4	500	
*INTERNAL AUDITOR	CRITICAL	5	200	
*HACCP				
*QUALITY CONTROL				
* FINANCE				
CHARTERED ACCOUNTANT	SCARCE	7	200	
PRO/MARKETING MANAGERS	CRITICAL	5	100	
HR/IR MANAGERS	CRITICAL	5	100	
TRAINERS	CRITICAL	5	100	
RESEARCH AND DEVELOPMENT	SCARCE	5	100	
QUALITY ASSURERS - EXPORT AND LOCAL MARKET STANDARDS	S & C	4 to 6	300	LEGISLATIVE LEARNING, QUALITY ASSURANCE FACTORS
				ON INDIVIDUAL PRODUCTS
ADVISORS TO EMERGIN FARMERS WITH BROAD KNOWLEDGE	S & C	4 to 6	600	BUSINESS DEVELOPMENT , HUMAN RESOURCES
				PRACTICES, MARKET ACCESS AND QUALITY
AUDITORS OF QMS SYSTEMS	S & VERY C	4 to 6	300	QUALITY MANAGEMENT SYSTEMS, AUDITING TECHNIQUES
				(SAATCA APPROVED

<b>MILLING SCARCE AND CRITICAL SKILLS</b>				
<b>OCCUPATIONS</b>	<b>SCARCE/ CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNING TYPES</b>
<b>RESEARCHERS</b>	SCARCE	8		
*PLANT BREEDERS STRATEGISTS	SCARCE	8	30	PHD IN WHEAT AND MAIZE
*PLANT PHYSICIANS/ AGRONOMIST	SCARCE	8	30	ESPECIALLY DIFFICULT FOR EE CANDIDATES
*FOOD TECHNOLOGIST	SCARCE	8	18	
*PLANT BREEDING AND BIO-TECHNICIANS	SCARCE	8	18	
*PLANT PATHOLOGY	SCARCE	8	30	
*ENTOMOLOGIST	SCARCE	8	18	
*WEED SCIENTISTS	SCARCE	8	25	
*SOIL SCIENCE	CRITICAL	8	30	
*FOOD SCIENCE RELEVANT TO CROPS	CRITICAL	8	30	
*MOLECULAR BIOLOGY	CRITICAL	8	25	
*PLANT NEMATOLOGY	CRITICAL	8	30	
*SOIL MICROBIOLOGY	CRITICAL	8	30	
*NUTRITIONIST	SCARCE	6 TO 8	30	NUTRITION IN ANIMAL FEEDS
*FOOD SCIENTIST	SCARCE	5 TO 6	30	
*BIOMETRY	CRITICAL	8	30	
*PLANT BIOCHEMISTRY	CRITICAL	8	25	
CHEMICAL ENGINEERS	SCARCE	8	30	
MICRO BIOLOGIST	SCARCE	5 TO 6	30	
MILL MACHINE OPERATORS (PLC'S)	SCARCE	3 TO 4	100	PLC PROGRAMMING
JR MACHINE MILL OPERATORS	CRITICAL	2	300	
SILO OPERATORS	SCARCE	3 TO 4	100	
TRAINEE MILLER	CRITICAL	2 O 3	200	
FUMIGATOR	CRITICAL	2 TO 3	100	
WAREHOUSING MANAGER	CRITICAL	5 TO 7	150	

RECEIVING CLERKS	CRITICAL	3 TO 4	200	
DISPATCH CLERKS	CRITICAL	3 TO 4	200	
PACKAGING/PROCESS MANAGER	SCARCE	5 TO 7	100	
STOCK CONTROLLER	CRITICAL	3 TO 4	150	
FORKLIFT OPERATORS	CRITICAL	2	200	
LOGISTIC MANAGER	SCARCE	4 TO 6	150	
DISTRIBUTION MANAGER	SCARCE	4 TO 6	150	
PROCUREMENT MANAGER	SCARCE	6 TO 7	50	
BUYER	CRITICAL	4	50	
DIESEL MECHANIC	SCARCE	4 TO 5	200	EE CANDIDATES
DIESEL MECHANIC ASSISTANTS	SCARCE	2 TO 3	400	TRADE TESTS COMPLETED
MILLWRIGHTS	SCARCE	4 TO 5	200	EE CANDIDATES
MILLWRIGHT ASSISTANTS	SCARCE	2 TO 3	300	
QUALIFIED MILLERS	SCARCE	4 TO 5	200	
GRAIN GRADERS (SILO)	SCARCE	4	150	
FITTERS	SCARCE	4 TO 5	200	
FITTER ASSISTANTS	CRITICAL	2 TO 3	200	
ELECTRICIANS	SCARCE	4 TO 5	200	
ELECTRICIAN ASSISTANTS	CRITICAL	2 TO 3	200	
ARTISAN - TRAINERS	SCARCE	4 TO 5	50	
TUTORS - MILLERS	SCARCE	6 TO 7	20	
QUALITY ASSURER MANAGER	CRITICAL	4 TO 6	50	
INSPECTOR/CONTROLLER	CRITICAL	2 TO 3	150	
GENERAL WORKER	CRITICAL	2	5000	NO MORE GEN WORKERS NEEDED BUT NEED TO BE MULTI SKILLS FOR RE-EMPLOYMENT
ACCOUNTANTS/FIN MANAGERS	SCARCE	4 TO 8	100	
FEED MAKER/PRODUCTION MANAGER	SCARCE	7 TO 8	50	ANIMAL FEEDS - NUTRITIONIST NEED TECHNICAL LICENSE
TECHNICAL SPECIALISTS	SCARCE	7 TO 8	50	
BOILER OPERATORS	S & C	2	100	

BOILER ATTENDANTS COAL)	S & C	5	100	GOV CERTIFIED
MECHANICAL/INDUSTRIAL/AGRICULTURAL ENGINEERS	S & C	7 TO 8	100	
JNR MANAGER	S & C	4	200	
MIDDLE MANAGER	S & C	5	200	EE CANDIDATES
LIVESTOCK SCIENCES	CRITICAL	6 TO 7	50	
PASTURE SCIENCES	CRITICAL	6 TO 7	50	
AGRICULTURAL METEOROLOGY	CRITICAL	6 TO 7	50	
AGRICULTURAL ECONOMICS	CRITICAL	6 TO 7	200	

<b>PEST SCARCE AND CRITICAL SKILLS</b>				
<b>OCCUPATIONS</b>	<b>SCARCE / CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNNG AREAS</b>
SECRETARIES/ PA	CRITICAL	4	100	BUSINESS DOC
SERVICE PROGRAMMER/ SCHEDULER	CRITICAL	3	50	SPACIAL DISTANCE
STOREMAN	CRITICAL	3	50	STOCK MANAGEMENT
<b>PEST CONTROL OPERATORS</b>	S + C	4	2000	BASIC READING /WRITING SKILLS
*GENERAL (DOMESTIC PEST CONTROL)	S + C	4		COMPUTER LITERACY
*FOOD SAFETY SKILLS	CRITICAL	4		WORK ETHICS AND
*WEED CONTROL	S + C	4		VALUE SYSTEMS
*FUMEGATION	SCARCE	4		DRIVERS LICENCES
*TERMITES	SCARCE	4		COSTING/ TENDERS
WDO INSPECTORS (WOOD DESTROYING ORGANISMS)	SCARCE	5	100	FIN FOR NON -FIN MANAGERS
PEST CONTROL OFFICER ASSISTANT	CRITICAL	2 TO 3	5000	
BOOKKEEPERS	CRITICAL	4	50	
CREDIT MANAGER	CRITICAL	4	50	
SERVICE MANAGER	CRITICAL	4	50	
MARKETING MANAGERS	CRITICAL	4	50	
SALES REPS	SCARCE	3 TO 4	50	
CHARTERED ACCOUNTANTS	SCARCE	7	100	

<b>POULTRY SSC</b>				
<b>OCCUPATION</b>	<b>SCARCE/ CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNING TYPES/PROGRAMMES</b>
<b>ARTISANS:</b>				
* MILLWRIGHTS	SCARCE	3 TO 4	50	
* ELECTRICIANS	SCARCE	3 TO 4	50	
* FITTERS	SCARCE	3 TO 4	50	
* REFRIGERATION TECHNICIANS	SCARCE	3 TO 4	25	
* SCALE TECHNICIANS	SCARCE	3 TO 4	25	ELECTRONIC ENGINEERING
HATCHERY MANAGERS	S +C	5 TO 6	20	BSC AGRICULTURE
<b>BREEDING MANAGERS</b>	SCARCE	5 TO 6	20	
* LAYING	SCARCE	5 TO 6	20	
* REARING	SCARCE	5 TO 6	20	
BROILER MANAGER	SCARCE	5 TO 6	20	
SUPERVISORS FOREMAN (FARMS)	CRITICAL	3 TO 5	100	
POULTRYMEN	CRITICAL	2 TO 3	100	
CATCHERS	CRITICAL	1	100	
FACTORY MANAGER	CRITICAL	6 TO 8	6	EE CANDIDATE - GLOBAL THINKING - STRATEGIC THINKING
PRODUCTION MANAGERS	SCARCE	5 TO 7	30	LEARNING MATERIAL DEVELOPMENT NEEDED
PRODUCTION SUPERVISIONS	CRITICAL	4 TO 6	60	INTO POULTRY INDUSTRY
QUALITY CONTROLLERS	CRITICAL	6 TO 7	10	LAB BACKGROUND - DEGREE - DO NOT WANT TO WORK SHIFTS
				WOMEN NOT SAFE FOR NIGHT SHIFT AND TRANSPORT
MACHINE MINDERS (MACHINE RUNNING PROCESS)	CRITICAL	3 TO 4	80	COMBINED SKILL OF OPERATOR AND PROCESSOR
SALES REPRESENTATIVES	CRITICAL	5 TO 6	15	HIGH TURNOVER- FMCG AND EMPLOYMENT EQUITY CANDIDATES
LONG DISTANCE DRIVER	CRITICAL	3	50	LONG HOURS -BCE
GENERAL MANAGERS	CRITICAL	5 TO 7	10	EQUITY CANDIDATES ON THE LEVEL
ACCOUNTANTS	CRITICAL	6 TO 8	10	RURAL(GEOGRAPHICAL AREA LIMIT) AND EE
WAREHOUSE/LOGISTICS MANAGERS	CRITICAL	5 TO 7	10	
NUTRITIONISTS	SCARCE	6 TO 8	5	NUMBERS NEEDED ARE LIMITED
HR MANAGERS	CRITICAL	6 TO 7	20	EE

<b>GRAIN CRITICAL AND SCARCE SKILLS</b>				
<b>OCCUPATION</b>	<b>CRITICAL / SCARCE</b>	<b>NQF LEVEL</b>	<b>NO. OF PEOPLE</b>	<b>LEARNINGTYPES</b>
SILO WORKERS (SEASONAL)	CRITICAL	1	1200	
GRAIN SAMPLERS	CRITICAL	1	200	
CONTROL BOARD OPERATORS	CRITICAL	3	200	
ASST SILO MANAGERS	CRITICAL	4	200	
ADMIN ASST	CRITICAL	4	100	
SWEEPERS/CLEANERS	CRITICAL	1	200	
LOCO DRIVERS	CRITICAL	2	50	
HEALTH AND SAFETY OFFICER	CRITICAL	5	20	
TRACTOR DRIVERS	CRITICAL	2	200	
FORKLIFT DRIVERS	CRITICAL	2	200	
SECURITY OFFICERS	CRITICAL	3	20	
<b>AGRI TRADE (COMMERCIAL)</b>	CRITICAL			
SPECIALISTS SALES CLERK	CRITICAL	4	200	
PROCUREMENT	CRITICAL	4	100	
<b>OCCUPATION</b>		<b>NQF LEVEL</b>	<b>No. OF PEOPLE</b>	<b>LEARNINGTYPES</b>
<b>GRAIN GRADERS</b>	SCARCE	4	200	
MIELIES				
SORGHUM				
SOYA				
BARLEY				
CANOLA				
GROUNDNUTS				
WHEAT				
SUNFLOWER				
LUPINE				
KORING				

<b>GRAIN MARKETING</b>	SCARCE			
SAFEX TRADERS	SCARCE	5	50	
COMPLIANCE OFFICERS	SCARCE	4	50	
GRAIN PROCUREMENT	SCARCE	4	50	
<b>MAINTENANCE (SILO)</b>	SCARCE			
<b>MECHANICAL</b>	SCARCE			
BOILERMAKERS	SCARCE	3	100	
FITTERS	SCARCE	3	100	
TURNERS	SCARCE	3	100	
WELDERS	SCARCE	3	100	
ASSISTANTS/HANDYMAN	CRITICAL		200	
<b>ELECTRICAL</b>	SCARCE			
ELECTRICIANS (LOW VOLTAGE)	SCARCE	3	100	
ELECTRICIANS (HIGH VOLTAGE)	SCARCE	3	100	
<b>MECHANISATION</b>	SCARCE			
DIESEL MECHANIC (SPECIALISATION)	SCARCE	3	100	
SWEISERS	SCARCE	3	100	
WORKSHOP MANAGERS	SCARCE	4 to 5	100	
AGRI MAINTENANCE TECHNICIAN	SCARCE	4	100	
LAB TECHNICIANS	SCARCE	5	20	
SILO MANAGERS	SCARCE	4 TO 5	200	
PRECISION FARMING SPECIALIST	SCARCE	5	50	
CHEMICAL MACHINE OPERATORS	CRITICAL	2	50	
STOCK CONTROL	CRITICAL	4	100	

<b>TOBACCO CRITICAL AND SCARCE SKILLS</b>				
<b>OCCUPATION</b>	<b>SCARCE/ CRITICAL</b>	<b>NQF LEVEL</b>	<b>NO OF PEOPLE</b>	<b>LEARNING TYPES</b>
<b>ARTISANS</b>				TRAINING ARTISANS
* FITTER AND TURNERS	SCARCE	4	150	MENTORS
* ELECTRONIC TECHNICIANS	SCARCE/ CRITICAL	5	80	ASSESSORS
* ELECTRICIANS	SCARCE	4	60	PROGRAMME / TRAINING
* MILLWRIGHTS	SCARCE	4	10	MATERIAL DESIGN AND DEVELOPMENT
TOBACCO BUYERS	CRITICAL	5 TO 6	10	
ENGINEERS (EE)	SCARCE/ CRITICAL	7	15	GOVERNMENT CERTIFIED
*PLANT	SCARCE/ CRITICAL		15	ENGINEERS
*PROJECT	SCARCE/ CRITICAL		15	
*MECHANICAL	SCARCE/ CRITICAL		15	
*INDUSTRIAL	SCARCE/ CRITICAL		15	
*ELECTRONIC	SCARCE/ CRITICAL		15	
PRODUCTION MANAGERS	SCARCE	6	18	
PROCESS ANALYSTS	CRITICAL	5 TO 6	5	
QUALITY CONTROLERS (FACTORY)	CRITICAL	5	40	
QUALITY TECHNICIANS	CRITICAL	6 TO 7	20	
QUALITY INSPECTORS	CRITICAL	3 TO 4	100	
MACHINE OPERATOR	CRITICAL	3 TO 4	100	
* MAKING OPERATOR	CRITICAL	3 TO 4	200	
* PACKING OPERATOR	CRITICAL	3 TO 4	200	
* FILTER OPERATOR	CRITICAL	3 TO 4	30	
*THRESHING OPERATOR	CRITICAL	3 TO 4	50	
*FORKLIFT OPERATOR	CRITICAL	3 TO 4	450	
*CUTTING OPERATOR	CRITICAL	3 TO 4	50	
*METALISING PAPER	CRITICAL	3 TO 4	50	
* BOILER ATTENDANT	SCARCE	3	20	

CONTAINER HANDLERS	CRITICAL	2 TO 3	30	FOR COMPUT. MACHINES
REPRESENTATIVES	CRITICAL	4	300	BASIC PC LITERACY, IN-HOUSE SYSTEM TRAINING
AREA MANAGERS MARKETING	CRITICAL	5	50	IN-HOUSE SYSTEM TRAINING
ENVIRONMENTAL HEALTH AND SAFETY REPS	CRITICAL	4	200	
HEALTH AND SAFETY COORDINATOR	CRITICAL	5	50	
SECURITY OFFICIAL	CRITICAL	3	55	
ARTISAN ASSISTANT	CRITICAL	3	300	
PROGRAMME DEVELOPER (TRAINERS)	CRITICAL	5 TO 6	20	
WAREHOUSE MANAGER	CRITICAL	5	30	
* RECEIVING CLERKS	CRITICAL	4	10	
* DESPATCHING	CRITICAL	4	10	
* STOCK CONTROLLER	CRITICAL	4	10	
PRODUCTION PLANNERS	CRITICAL	5 TO 6	10	PLANNING PROCESSING
CHEMISTS	SCARCE	7	20	
ACCOUNTANTS (EE)	SCARCE	6 TO 7	200	EE POSITIONS IN THE FOLLOWING
HR PRACTITIONERS	SCARCE	5 TO 6	10	LEADERSHIPS SKILLS
IR PRACTITIONER	SCARCE	5 TO 6	10	MANAGERIAL SKILLS
FACTORY MANAGERS (INDUSTRIAL ENGINEER)	SCARCE	7	4	
PROCUREMENT / LOGISTICS MANAGER	CRITICAL	5 TO 6	20	
*BUYERS	CRITICAL	4	20	
COMPLIANCE OFFICER/ INTERNAL AUDITOR	SCARCE/ CRITICAL	5 TO 6	10	
TRAINING MANAGERS	SCARCE	5 TO 6	50	TO COMPLY WITH SKILLS ACT REQUIREMENTS
RESEARCH EXECUTIVES (MARKETING)	SCARE	5	5	
IT BUSINESS ANALYST (EE)	SCARE	6	5	EE
IT BUSINESS INTELLIGENCE APPLICATION DEV ANALYST (EE)	SCARE	6	5	EE

<b>SUGAR SCARCE AND CRITICAL SKILLS</b>		
<b>OCCUPATIONAL</b>	<b>NQF LEVEL</b>	<b>NO. OF PEOPLE</b>
<b>SCARCE OCCUPATIONS</b>		
BOILERMAKERS	2 TO 4	15
FITTER, TURNER AND COMBINED	2 TO 4	25
INSTRUMENT MECHANIC	4	15
INSTRUMENT TECHNICIAN	5	15
ELECTRICIANS (GEOGRAFIC, EE)	4	25
MILLWRIGHTS	4	15
BOILER OPERATORS	2 TO 4	20
DIESEL MECHANICS	2 TO 4	5
<b>PROCESSING /MANUFACTURING OPERATORS</b>		
PAN BOILER	2 TO 3	50
CHEMICAL AND MECHANICAL ENGINEERS (TECHNICAL DRAWING)	6	30
ELECTRICAL EGINEERS (WOMEN)	6	10
CODED WELDERS	4	6
DRAFTSMEN(SIVIEL, MECHANICAL ENGINEERS)	4 TO 5	5
MAIZE MILLS	4 TO 5	4
FARM MAINTENANCE/HANDYMAN	2 TO 3	250
MAINTENANCE WORKERS	1 TO 2	200
SUGAR PROCESSING OPERATORS	1 TO 2	200
CONTROLROOM POWERSTATION(STEAM) OPERATORS	2 TO 4	50
PRODUCTION SUPER'S& FOREMAN (FIRST -LINE MANAGEMENT)	5	50
SUPERVISORY ARTISANS	4	30
ELECTRICAL , INSTRUMENT (AND COMBINED) ENGINEERS	6	6
ANALYTICAL CHEMISTS	6	33

<b>FARM MANAGERS (BLACK FEMALE )</b>	4 TO 5	60
* TAX, BUSINESS, COMPUTER, FINANCE - EMERGING		
CANE & MECHANICAL CUTTERS , BARK/WATTLE STRIPPERS	1	3000
SUGAR TEGNOLOGIST	5 TO 6	15
AUDITORS (BLACK)	6	6
QUALITY ASSURANCE OFFICER WITH OPERATIONAL PRACTICAL EXPERIENCE (EE)	4 TO 5	12
COMPUTER OPERATORS	1 TO 2	5
<b>TOP-UP CRITICAL SKILLS</b>		
SUPERVISORY /MANAGEMENT AND LEADERSHIPS SKIILS (TOP-UP)	5 TO 6	50
PACKAGING FOREMAN (AND TOP-UP)	5	20
ABET FACILITATORS	2 TO 5	15
FIRST AIDERS (TOP-UP)	2	20
HIV COUNCILLORS(TOP -UP)	1	10
OCCUPATIONAL HEALTH AND SAFETY NURSES AND CLINICAL SUSTERS	4 TO 5	10
VIBREATION ANALYST (TOP-UP)	5	5
<b>LEARNING FIELD</b>		
COMPUTER OPERATORS		
SCIENTIFIC ANALYSIS SKILLS		
COMMUNICATION IN ENGLISH		
LIFE ORIENTATION		
FINANCIAL LITERACY		
GENERAL ELLNESS/HYGIENE		
MENTORING SKILLS		

## ANNEXURE 4: LIST OF DOCUMENTS CONSULTED

1. The IMF Country Report on South Africa, 2005.
2. The State of Skills in South Africa Report; Department of Labour, 2005.
3. Statistics South Africa - Quarterly Reviews (P0441 series) for period 2000 to 2005.
4. Statistics South Africa - Labour Force Surveys (P0210 series) for period 2000 to 2005.
5. Statistics South Africa – Gross Domestic Product Annual Estimates 1993 – 2004, October 2005
6. Statistics South Africa – General Household Survey, July 2005.
7. Breaking the grip of Poverty in South Africa 2004-2014; study and report commissioned by the Ecumenical Foundation of South Africa, 2004.
8. Socio-political Environment: Trends, challenges and prospects; article by W Oosthuizen of Metlife, October 2003.
9. Economic Review of South African Agriculture; publication of the Department of Agriculture, 2005
10. Strategic Plan for the Department of Agriculture 2005; publication of the DoA
11. Study on the Deregulation of the Meat Industry; study undertaken and report prepared by the NAMC, April 2004.
12. The National department of Agriculture Annual Report, 2003.
13. Broad based black Economic Empowerment, Draft Transformation Charter; prepared by AgriBEE Steering Committee, November 2005.
14. Report on the Training Needs of Land Reform Beneficiaries and Recommendations for a Training Strategy, study commissioned by PAETA and undertaken by Upstart and Manstrat, 2003.
15. The AgriSETA Sector Skills Plan 2005-2010.
16. The AgriSETA WSP and ATR Database (2005/2006); data and statistics compiled and provided by Deloitte
17. The National Education and Training Strategy for Agriculture and Rural development in South Africa; Department of Agriculture, 2005. (Including the Provincial Reports used in the development of the AET Strategy).
18. Changes in the South African Education System: In search of Economic Growth; J Erasmus and SC Steyn, 2002.
19. Research report on Agricultural Enrolments and Graduate Trends; Directorate of Education and Training in the Department of Agriculture, 2006.08.28.
20. Private Further Education and Training: The Changing Landscape; S Akooje, 2004.
21. Skills Insight UK, Annual Skills review, 2002.
22. The National Skills Development Strategy 2005 – 2010; the Department of Labour, 2005.
23. The 2005 – 2010 Sector Skills Plans of FoodBev and MERSETA; 2005.

## ANNEXURE 5: LIST OF ACRONYMS

ABET	Adult Basic Education and Training
AEO	Agricultural Employers Organisation
AET	Agriculture Education and Training
AGIS	Agricultural Georeferenced Information System
AgriBBBEE	Broad Based Black Economic Empowerment in the Agricultural Sector
ASGISA	Accelerated and Shared Growth Initiative of South Africa
ATR	Annual Training Report
BRC	British Retail Consortium
CA	Chartered Accountant
CESM	Category of Education Subject Matter
CHE	Council for Higher Education
CPI	Consumer Price Index
CPIX	Consumer Price Index excluding the impact of Interest
CPUT	Cape Peninsula University of Technology
CUT	Central University of Technology
BBBEE	Broad Based Black Economic Empowerment
BEE	Black Economic Empowerment
DoA	Department of Agriculture
DoE	Department of Education
DoL	Department of Labour
DTI	Department of Trade and Industry
ETQA	Education and Training Quality Assurer
EU	European Union
EUREPGAP	European Union Retailers standards for Good Agricultural Practice
FAWU	Food and Allied Workers Union
FET	Further Education and Training
FGWU	Food and General Workers Union
FoodBevSETA	Food and Beverages Sector Education and Training Authority
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GET	General Education and Training
GINI	A measurement of inequality in wealth distribution
Ha	Hectare
HACCP	Hazard Analysis Critical Control Points
HE	Higher Education
HEQC	Higher Education Quality Committee
HET	Higher Education and Training
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSRC	Human Science Research Council
HRD	Human Resource Development
ILO	International Labour Organisation
IMF	International Monetary Fund
ICT	Information and Communication Technology
IT	Information Technology
JIPSA	Joint Implementation for Priority Skills Acquisition
LTO	labour Turnover
MANTEC	Manchester Training & Enterprise Council
MERSETA	Manufacturing and Related Sector Education and Training Authority
MRL	Minimal Risk Level
NAFU	National African Farmers Union
NAMC	National Agricultural Marketing Council
NEPAD	New Partnership for Africa's Development
NERPO	National Red Meat Producers Organisation
NMMU	Nelson Mandela Metropolitan University
NQF	National Qualifications Framework
NSDS	National Skills Development Strategy
NSF	National Skills Fund
NUF	National Union of Farmworkers
OBE	Outcomes Based Education

OFO	Organising framework for Occupations
PAETA	Primary Agriculture Education and Training Authority
PESTEL	Political, Economic, Social, technological, Environmental and Legal analysis
PPECB	Perishable Products Export Control Board
RPL	Recognition of Prior Learning
SADC	Southern Africa Development Community
SAFATU	South African Food and Allied Trade Union
SAPA	South African Poultry Association
SAQA	South African Qualifications Authority
SARB	South African Reserve Bank
SARS	South African revenue Services
SETA	Sector Education and Training Authority
SETASA	Sector Education and Training Authority for Secondary Agriculture
SIC	Standard Industrial Classification
SLA	Service Level Agreement
SSC	sub Sectoral Committees
SSP	Sector Skills Plan
TBT	Technology Based Training
TAUSA	Transvaal Agricultural Union of South Africa
TUT	Tshwane University of Technology
UNISA	University of South Africa
US or USA	United States of America
W&RSETA	Wholesale and Retail Sector Education and Training Authority
WSP	Workplace Skills Plan