AGRICULTURAL SECTOR STRATEGIC SKILLS PLAN: 2011-2016

(Annexure A)

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Prepared, on behalf of the Sector by AgriSETA
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SECTION 1: SECTOR ANALYSIS

1. THE AGRICULTURAL LANDSCAPE

"South Africa's agricultural sector is characterised by dualism: a modern commercial farming sector using hired farm workers alongside small-scale farmers, mostly in the former homeland areas. In addition, land reform is creating thousands of new farming opportunities for emerging black farmers throughout the country and across the scale from large commercial to smallholder production."[1]

"The agro-processing sector comprises a highly diverse group of sub-sectors and industries. The major sub-sectors include:

- Food processing
- Beverages
- Aquaculture
- Horticulture
- Medicinal, aromatics and flavourants

The agro-processing sector has particularly strong linkages both up- and down-stream. Up-stream, the sector links to agriculture across a wide variety of farming models and products. Down-stream, the sector's products are marketed across both wholesale and retail chains, as well as through a diverse array of restaurants, pubs, shebeens and fastfood franchises.
Moreover, the food processing sector is now the largest manufacturing sector in employment terms with some 160,000 employees, this increases to more than a million jobs once the upstream (primary agriculture) is included."[2]

1.1 Size and shape of the Agricultural sector

Overview

The South African agricultural sector is a diverse sector comprising several branches, namely: field crop husbandry; horticulture; animal production); dairy farming, fish farming, game farming and agro-processing. Within these broad branches are 39 sub-sectors that are classified according to agricultural and economic focus as follows. The sector encompasses both primary (resource production) and secondary (primary processing) activities.

Table 1: Activities within the agricultural sector by international SIC code

Sub-sector	Code	Description
Coffee/Tea	30493	Processing and marketing of coffee and tea including coconuts, cocoa, nuts, olives, dates, etc.
Fibre	30118	Grading, ginning and packing of wool and cotton raw material
Fruit	30132	Fruit packed in cartons, fruit juice concentrate drummed and fruit juice in container ready for consumption
Fruit	30133	Fruit exporters and importers
Grain	30300	Manufacture of grain mill products and starches
	30313	Handling and storage of grain
	61502	Wholesale & retail trade in Agricultural machinery

[1] *SETA re-establishment and demarcation – A synthesis of the AgriSETA landscape*, AgriSETA June 2010
[2] *2011/12-2012/13 Industrial Policy Action Plan*, DTI, February 2010. Emphasis added.

Sub-sector	Code	Description
	62111	Sale and distribution of Agricultural raw materials and other farming inputs
Milling	30311	Manufacture of flour and grain mill products, including rice and vegetable milling, grain mill residues
	30330	Manufacture of prepared animal feeds
	30331	Manufacture of pet foods
	30332	Manufacture of starches and starch products
Pest control	99003	Pest Control
Poultry	30114	Poultry and egg production including the slaughtering, dressing and packing of poultry
Primary	11110	Growing of Cereals and other crops (not elsewhere classified)
	11120	Growing of Vegetables, Horticultural specialties and nursery products
	11121	Growing of Vegetables, Horticultural specialties (Including Ornamental Horticulture) and nursery products.
	11122	Sugar plantation including sugar cane and sugar beet etc.
	11130	Growing of fruit, nuts, beverage, and spice crops.
	11210	Farming of cattle, sheep, goats, horses, asses, mules, and hinnies; Dairy farming.
	11220	Other animal farming, production of animal products (not elsewhere classified)
	11221	Ostrich farming
	11222	Game farming
	11300	Growing of crops combined with farming of animals (Mixed farming)
	11301	Growing of coffee and tea including coconuts, cocoa, nuts, olives, dates, etc.
	11400	Agricultural and animal husbandry services, except veterinary activities
	11402	Other animal farming (not elsewhere classified)
	12109	Growing of trees as second crop by farmers
	13000	Fishing, operation of fish hatcheries and fish farm
Red Meat	11141	Production and animal products (not elsewhere classified)
	30111	Slaughtering, dressing and packing of livestock, including poultry and small game for meat.
	30115	Production, sale & marketing of Agricultural by products (e.g. bones, hides)
	30117	Slaughtering, dressing and packing of livestock, including small game for meat and processing of ostrich products
	61210	Wholesale trade in Agricultural raw materials and livestock
	74136	Transport of livestock as supporting activity
	87120	Agricultural and livestock research
Seed	11140	Seed production and marketing
Sugar	30420	Manufacture of sugar including golden syrup and castor sugar
Tobacco	62208	Processing and dispatching of tobacco

Source: AgriSETA

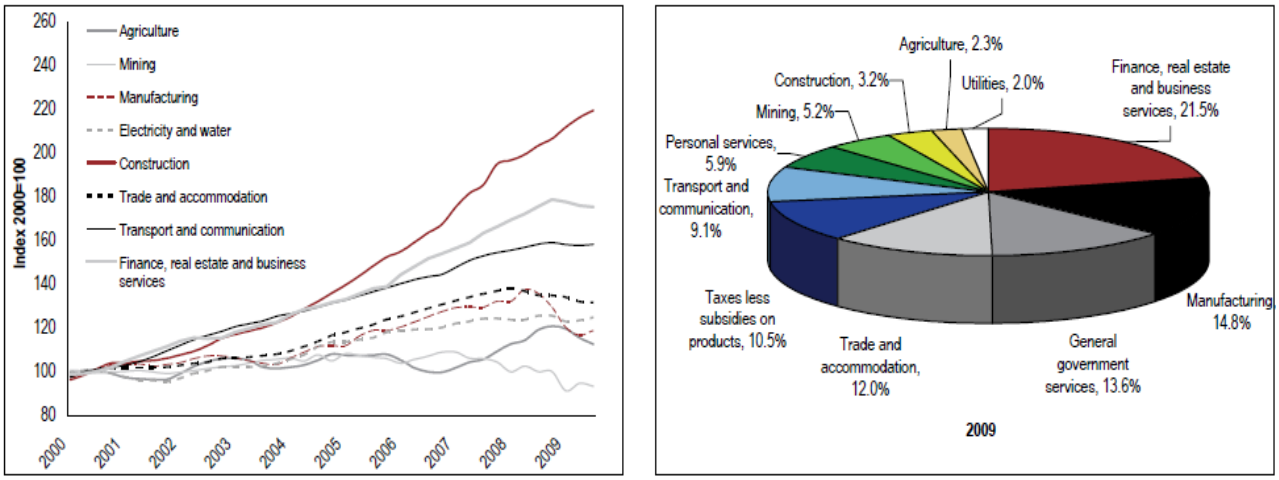
The contribution of primary agriculture to the gross domestic product (GDP) is about 2.5% and its contribution to formal employment is about 5%[3]. However, agriculture has strong backward and forward linkages into the economy.

- The agro-industrial sector has a higher contribution of about 12% to GDP[4].
- Primary agriculture contributed 2.3% to the GDP in 2009[5].

The figure below shows the relatively small proportion of GDP contribution from primary agriculture. It needs to be noted however that processing is not included in the 2.3% as it is included in manufacturing, and other farming activities. For example, farms linked to leisure facilities, are located under Trade and Accommodation.

[3] National Treasury, 2010
[4] GCIS, 2010
[5] National Treasury, 2010

Figure 1: Contribution of agriculture to national GDP



Source: National Treasury, Budget Review 2010

South Africa is one of the top global exporters of some agricultural produce, where it is ranked first in three products.

Table 2: South Africa's world ranking in selected products

Export Item	South Africa's world ranking
Avocados	1st
Clementines	1st
Ostrich products	1st
Grapefruit	2nd
Table grapes	3rd
Plums	3rd
Pears	5th

Source: DTI, February 2010

Distribution of agricultural production

South Africa has 12.76 million hectares of cultivated land, of which nearly 10.45 million hectares (82%) is used for commercial purposes. A total of 0.79 million hectares (only 6.19%) is permanently under cultivation and more than 10.83 million hectares (85%) is rain-fed. More than 0.7 million hectares of land are degraded and left bare by sheet and gully erosion. About 4.61 million hectares of natural vegetation are degraded, mainly in indigenous forests, woodlands, and grasslands; a further 0.19 million hectares are degraded by mine tailings, waste rock dumps and surface-based mining. Land use in urban areas comprises mainly formal residential suburbs and townships (1 million ha) and informal settlements (0.23 million ha). Savannas (woodlands and bush lands) and grasslands cover 25.70% and 19.92% of South Africa, respectively (Department of Environmental Affairs).

Although 80% of South African land is used for agriculture and subsistence farming, only 12% is arable. The rest is used for grazing. The main agricultural activities are crop production, mixed farming, cattle ranching and sheep farming, dairy farming, game ranching, aquaculture, beekeeping, and winemaking (GCIS, 2010). South Africa is the largest producer of maize, the staple food in the Southern African Development

Community (SADC) as well as the main ingredient for animal feed. The table below gives an indication of the geographic location of production of specific agricultural produce as well as the annual volume produced.

Table 3: Volume of agricultural production by product and location

Agricultural product	Dominant production locations	Average annual volume produced
Maize	North West; Free State; Mpumalanga	13, 2 metric ton
Wheat	Western Cape; Free State	2.1 metric ton
Barley	Western Cape	192 000 ton
Groundnuts	Free State; North West; Northern Cape	88 800 ton
Sunflower seeds	Free State; North West; Mpumalanga; Limpopo	872 000 ton
Soya beans	Free State; Mpumalanga; KwaZulu Natal	295 200 ton*
Sorghum	Free State; Mpumalanga; Limpopo; North West	255 000 ton
Canola	Western Cape; North West; Limpopo	30 800 ton
Dry beans	Mpumalanga; Free State; Gauteng; North West; KZN; Limpopo; Western Cape; Northern Cape	60 000 ton
Sugar	Eastern Cape; Mpumalanga; KwaZulu Natal	20 metric ton
Deciduous fruit	Western Cape; Eastern Cape; Free State; Mpumalanga; Gauteng	Peaches – 180 000 ton* Table grapes – 1 800 000 ton*
Wine	Western Cape	403.3 million litres exported in 2009
Citrus and subtropical fruit	Limpopo; Mpumalanga; Eastern Cape; KwaZulu Natal; Western Cape; Northern Cape	46 896 ton subtropical fruit
Potatoes	North West; Northern Cape; KwaZulu Natal; Limpopo; Free State; Mpumalanga; Eastern Cape; Western Cape	1 853 000 ton
Tomatoes	Limpopo; Mpumalanga; KwaZulu Natal; Eastern Cape; Western Cape	459 217 ton
Onions	Mpumalanga; Western Cape; Free State	417 579 ton
Cabbages	Mpumalanga; KwaZulu Natal	138 161 ton
Cotton	Mpumalanga; Limpopo; Northern Cape; KwaZulu Natal; North West	14 896 ton*
Tobacco	Mpumalanga; Limpopo; North West	10 200 ton
Tea	Western Cape; Eastern Cape	3 600 ton*
Flowers	Western Cape	-
Livestock	All provinces	Largest agricultural sector
Dairy	Free State; North West; KwaZulu Natal; Eastern Cape; Western Cape; Mpumalanga	3 129 metric litres
Beef Cattle	Eastern Cape; Free State; KwaZulu Natal; Limpopo; North West; Mpumalanga; Northern Cape	Over 700 000 ton*
Sheep and goats	Eastern Cape; Northern Cape; Free State; Western Cape; Mpumalanga	Goat – 9 000 ton Sheep – 5 300 000 sheep
Poultry and pigs	All provinces	930 000 ton broilers 2.6 million pigs slaughtered from August 2007 to August 2008
Fish	Western Cape; Eastern Cape, Limpopo, Mpumalanga, Northern KwaZulu Natal	5 800 000 kg*
Game	Limpopo; Northern Cape; Eastern Cape; Western Cape	18 000 ton*
Beekeeping	Western Cape; KwaZulu Natal	2 000 ton

Source: GCIS, SA Yearbook 2009/10; *NDA agric market value chain profiles

Agriculture plays an important part in provincial development and for most provinces provides a source of employment as well as being a potential focus for increased employment and sustainable livelihoods. Agriculture therefore features as a key focus for economic development and growth in the all provinces.

Agricultural contribution to provincial GDP varies, with the Free State's agricultural sector contributing the most, as reflected below.

Table 4: Agriculture - Contribution to Provincial GDP

Province	Percentage contribution to GDP
Free State	9.2
Limpopo	3
KwaZulu Natal	5.5 (2004)
Western Cape	4.5 (2003)
Mpumalanga	6.1

Source: Provincial Growth Development Strategies

The provinces all have different focuses in their development strategies for agriculture although the underlying principle is the improvement of the lives of the people through employment creation in agriculture and provision of food security through investment in agricultural processes and technologies that enhance efficiency.

Free State's focus on agriculture development is agriculture diversification and agribusiness. Diversification involves identifying crops with a defined market in line with new and innovative agricultural practices. Agribusiness extracts value from primary agriculture through processing of raw materials and provision of services to add value to produce[6].

The objectives of the Limpopo province with regards to agricultural development are tripling the size of agriculture by 2015, increasing the value of agriculture through enterprise diversification, investing in water saving technologies and adding value within the agro-value chain[7].

In the Eastern Cape, two thirds of the population live in rural areas and the development of agriculture is a key factor in the development of the people's socio-economic livelihood. Development of agriculture will provide employment and an income to many families. The focus of the growth and development strategy is to promote household food security through expanded smallholder production, development of commercial agriculture through optimal use of agricultural land in the homelands, focus on land redistribution and tenure, and integration of homelands agriculture into mainstream provincial agricultural activity[8].

KwaZulu Natal's focus on agriculture in the Growth Development Strategy is poverty alleviation, as most areas of poverty in the province are rural. The plan is to link up rural subsistence agricultural activity with commercial agriculture so as to develop subsistence agricultural projects into commercial ones. The other focus is to link land reform projects to key provincial agrarian revolution programmes so as to make land transfer an economic growth opportunity. The agrarian revolution strategy involves enabling access to markets, farmer development through the set up of agri-businesses, improve road infrastructure to improve access to markets, and expediting the land reform process[9].

The focus for the Northern Cape is the development of agro-processing[10]. The North West is focusing on enabling access to markets and assisting financially in infrastructure development and machinery

[6] Free State Growth Development Strategy, 2004 – 2014
[7] Limpopo Growth Development Strategy, 2004 – 2014
[8] Eastern Cape Growth Development Plan, 2004 - 2014
[9] KZN Growth Development Strategy, 2006
[10] Northern Cape Growth and Development Strategy

acquisition as well as investing in agro-processing technology and skills, as well as promoting efficient land use[11].

Agriculture holds employment growth potential in Mpumalanga province. It accounts for 18.1% of provincial employment, with forestry being the main agricultural activity in the province. About 38.3% of the province's land is used for forestry. Agriculture is identified as a key focus area to achieve the strategic growth development strategy of providing a better life for all in the province through economic development. Growth potential is through agricultural investment, production and beneficiation so as to increase agriculture GDP contribution from 6.1% to 10% by the end of the 2008/2009 financial year. Other strategic objectives are to increase sustainable employment in the agricultural sector from 18% to 20% by the end of 2015, improve food security by 50% by 2014, improve sustainability in agri-business enterprises by 20%, and increase participation of historically disadvantaged in agriculture to meet national Agri BEE targets (Mpumalanga Growth and Development Strategy, 2004 - 2014).

It can be anticipated that provinces will review their strategies so as to align them to the newly developed Integrated Growth and Development Plan (IGDP) launched by DAFF in September 2010. It will be important for the SETA to examine the revised plans when updating this SSP.

The structure of the agriculture sector in South Africa

The South African Agriculture Sector, primarily based in rural and peri-urban areas, is characterised by a dual agricultural economy comprising well developed commercial farming, with an established supply chain, and small (subsistence) based production. The General Household Survey of 2009 (Statistics South Africa) and the Census for commercial farms, 2007 (Statistics South Africa) provide an insight into the size of the subsistence and commercial sectors. Precise details in relation to non-commercial and semi-commercial farming are not available.

In 2009, 20.7% of South African households were engaged in some form of agricultural production. Table 1 reflects household agricultural production patterns in the provinces and shows that the largest proportions of households engaged in agriculture are in Limpopo, Eastern Cape, Free State and KwaZulu Natal.

Table 5: South African households involved in agricultural activities by province (1,000s)

Activity	Province									Total
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	
Involved in agricultural production	**39**	**643**	**35**	**274**	**697**	**108**	**248**	**205**	**580**	**2 832**
	2.7%	37.3%	11.4%	31.9%	26.8%	11.4%	7.1%	21.1%	43.4%	20.7%
Livestock production	*	**312**	**22**	**26**	**230**	**34**	**27**	**21**	**99**	**778**
	17.5%	48.5%	62.1%	9.6%	33.0%	31.0%	10.7%	10.4%	17.1%	27.5%
Poultry production	*	**349**	**11**	**35**	**256**	**23**	**22**	**11**	**146**	**853**
	1.8%	54.3%	31.0%	12.9%	36.7%	21.1%	9.0%	5.1%	25.1%	30.1%
Grains and food crops	*	**389**	*	**21**	**316**	**34**	**31**	**128**	**465**	**1 390**
	2.7%	60.5%	12.2%	7.8%	45.4%	31.5%	12.5%	62.5%	80.1%	49.1%
Industrial crops	**0**	*	**0**	*	*	**0**	*	**0**	*	*
	0.0%	0.2%	0.0%	0.1%	0.6%	0.0%	0.5%	0.0%	0.1%	0.3%
Fruit & vegetable crops	**30**	**220**	*	**232**	**330**	**40**	**175**	**141**	**173**	**1 350**
	75.9%	34.2%	25.2%	84.7%	47.3%	36.8%	70.5%	68.8%	29.8%	47.7%
Fodder grazing /	*	*	*	*	**14**	*	**11**	*	*	**53**

[11] North West Growth and Development Strategy

Activity	Province									Total
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	
pasture grass – animals	11.2%	0.5%	3.8%	3.5%	2.0%	2.0%	4.3%	2.0%	0.7%	1.9%
Forestry	*	*	*	*	*	0	*	*	*	10
	1.2%	0.1%	0.5%	2.1%	0.1%	0.0%	0.4%	0.4%	0.2%	0.4%
Fish farming / Aquaculture	*	*	0	0	0	0	0	0	0	*
	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Game farming	*	*	*	0	*	0	0	0	*	*
	2.2%	0.2%	1.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%	0.1%
Other	0	*	0	*	*	*	*	0	0	*
	0.0%	0.2%	0.0%	0.3%	0.4%	0.3%	0.3%	0.0%	0.0%	0.2%

*** Numbers smaller than 10 000 are too small for reliable estimates**

A particular household can be involved in more than one activity and percentages therefore do not add up to 100%

Source: Statistics South Africa - General Household Survey, 2009 (p.318)

In 2007, there were 39 982 commercial farms[12] in South Africa as opposed to the 45 818 registered in 2002. However, this downward trend masks the picture of expansion of commercial farms that have bought into other farms to exploit economies of scale. As the stakeholders put it, while some farms are closing down because of high input costs, other commercial farms have bought into other farms and grown bigger. This view is supported by Vink and Van Rooyen, who propose that the decline in farming units suggest a "consolidation of landholding into larger units of ownership and production."[13]

Table 6: Commercial farming enterprises by province - 2002 and 2007

Province	2002	2007	Growth / Decline
Eastern Cape	4 376	3 896	- 10.97
Free State	8 531	7 515	- 11.91
Gauteng	2 206	2 378	7.80
KwaZulu-Natal	4 038	3 560	- 11.84
Limpopo	2 915	2 657	- 8.85
Mpumalanga	5 104	3 376	- 33.86
North West	5 349	4 692	- 12.28
Northern Cape	6 114	5 226	- 14.52
Western Cape	7 187	6 682	- 7.03
Total	**45 818**	**39 982**	**- 12.74**

Source: Statistics South Africa, 2008

Whilst the largest proportions of households involved in agriculture are in Limpopo, Free State, Eastern Cape and KZN (Table 1), it is in the Free State, Western Cape, Northern Cape and North-West provinces where the largest numbers of commercial farms are located (Table 2). No direct relationship can thus be drawn between the numbers of households engaged in agriculture in a province and the numbers of

[12] Commercial farms are farming enterprises that are registered with SARS for Value Added Tax (VAT) and income tax.
[13] Vink & Van Rooyen, 2009

commercial agricultural enterprises. AgriSETA WSP data analysis reveals no direct relationship between the number of employers in a province and the number of formally employed persons.

Categories of farming enterprises

"Dualism" (Mhone, 2000), is a useful way of describing the agricultural sector, both in terms of understanding the economics of the sector and planning skills development interventions. This term describes a formal sector that is well established and an informal or emergent sector, with the two sectors reliant on each other, and on interventions by the state for integration. However these two broad categories have their limitations. Within the commercial sector there are large established farming businesses and smaller ones that struggle to survive, and within the less formal sector there are emergent farmers striving to achieve commercial success. It is necessary, therefore, to understand the agricultural sector as comprising a number of different economic entities all operating within the same dualistic economic framework. The following typology for the agricultural sector reflects the complexity of the agricultural sector:

Table 7: Typology of the agricultural sector

Production Unit	Turnover	Ownership & Management	Number	Binding constraint	Support required
Large commercial on private property	>R2 million	Family owned but incorporated multiple farms. Rent in land – professional management	±5 400	Market size Equity capital	Export market access Financial market innovation
Medium commercial on private property	R300 000 to R2 million	Family owned, could be incorporated. Some renting in of land – family management	17,000	Land capital management	Mortgage capital for land access Management training
Small commercial on private property	<R300 000	Family owned, generally part time. Some lifestyle farming (game ranches, weekend farms)	24 000	Management time	
Commercial in communal areas	>R300 000	Communal ownership Development projects Private ownership	-	Capital management infrastructure	Grants for land access Property rights Comprehensive farmer support Credit Physical infrastructure
"Emerging" commercial in communal areas	<R300 000	>20 hectares Communal ownership Small farmers in development projects Private ownership	35 000	Land (property rights) Capital labour management Employment opportunities	Grants for land access Property rights Comprehensive farmer support Physical infrastructure Institutional infrastructure
Subsistence farmer in communal areas Allotments Market gardens		<20 hectares Communal ownership Private ownership Little formal market participation	1.256m	Employment opportunities	Social welfare transfers

Source: Vink and van Rooyen, 2009

This confirms the dualism evident from Stats SA data. It includes an estimate for emergent farms and provides insight into the different types of farming enterprises. Being small and part time can mean subsistence farming, but it can also mean running a game farm on a part-time basis. There is considerable scope for farming enterprises to move from being commercial to subsistence and vice versa. There is some evidence that there is currently an increase in volatility, with quite significant changes occurring, mainly due to the global economic down turn and the small margins that many agricultural enterprises operate within.

The changes that are occurring are sub-sectoral as well as being related to the size of enterprises. For example, while the red meat sub sector is experiencing a decline in farming units and activities, and some abattoirs are facing closure because of high input costs, the game sub sector is doing well because of a higher demand for game meat due to its associated health effects. Regarding size of enterprises, in the sugar cane growing and processing sub sector, as well as the deciduous fruit and vegetable growing sub sector, commercial farmers have expanded their operations by buying other farms, while small farmers are experiencing economic hardships and some face the choice of closing or being taken over.

Further, the sugar cane growing and processing big players are utilising emerging farmers for supply of cane for processing, so, while they are providing ready markets for the emerging farmers, the status quo (where these emerging farmers remain dependent on a ready market and do not become commercial competitors) has its advantages. However, in the wool growing sub-sector, there are cases of communal farming that have turned commercial. The National Wool Growers Association (NWGA) reported that the number of communal sheds marketing their wool through formal auctions has increased from 291 in 2006 to 497 in 2009. This means that communal farmers are producing wool of comparable quality and also earning income from the export market. The success of the commercialisation of communal farmers as well as improvement of socio-economic status of communal farmers is attributed to a Master Mentorship programme between commercial farmers and communal farmers and the Training and Mentorship programme both managed by the NWGA

It is particularly important to have an understanding of the category of "emerging" farmers: those who may be striving to move from subsistence farming to a more commercial model; those who have benefited from land reform processes and want to establish an agricultural enterprise on the land that has been allocated to them; and those who have made use of BEE funding to acquire a stake in a farm and are trying to achieve profitability. The emerging farmer sector is largely neither established commercial farming nor subsistence in nature and is the focus of many of the government's efforts to achieve transformation within the sector as a whole However, according to stakeholders, there is also a new breed of emerging farmers involving black business people who acquire commercial farms as businesses and make use of skilled people to manage and operate these farms for them as businesses. Given the national equity target of 30% black ownership, there will be a need for the SETA to examine this more closely and to explore possible skills interventions that will help sustain such businesses in the difficult market conditions that prevail.

Employment trends

Employee numbers is a more important measure of "size" for the purpose of the SETA and skills planning, even though turnover may be more important in terms of economic impact or contribution to GDP. The cause of this discrepancy between turnover or GDP contribution on the one hand and formal employment numbers on the other is discussed extensively by Mhone (2000) and others such as Webster (2004). Labour absorption levels in an enclave (second/informal) economy are not optimal. One conclusion that can be drawn from this is that skills development will need to be linked to other changes within the sector if it is to contribute meaningfully to job creation. Mechanisms need to be found that link growth to jobs and this is not strictly something that the SETA can address. However it is important to link skills planning to other processes, and opportunities for these will be examined as part of the environmental scan later in this section.

The past few years have seen huge reductions in employment levels and a very high unemployment rate – currently estimated at 31.1%. The agricultural sector has also witnessed a general decline in sector employment, although this has been characterised by growth of employment in some sub-sectors and contraction in others. Further, the size of employment is determined not only by contraction of the sector but by other factors like mechanisation of processes, size of the sub sector, family run entities among emerging farmers that do not employ other people, and the labour needs of some sub-sectors, for

example animal production and fruit growing is not labour intensive and mostly relies on seasonal labour for activities like wool shearing and fruit picking. According to stakeholders, employment levels have also been affected by labour law (minimum wages and LRA protections) as well as security of tenure provisions in relation to farm houses. Such issues may not in themselves result in job shedding, but are factors that are taken into account by farm owners when deciding (for example) whether to employ additional people or to invest in labour saving equipment.

The sector is characterised by the need for highly skilled and qualified farm managers and technical staff on the one hand and large numbers of unskilled and semi-skilled workers on the other. The need for seasonal workers is also justified given the nature of most of the business processes that require different labour input at different stages of the growth process. Many managers and employees of emerging farms are mainly untrained and unqualified. This is one of the contributors of lack of success of new enterprises and a critical one as stakeholders indicate that land reform recipients are drawn from a diverse range of people from different occupational backgrounds who do not necessarily know anything about farming. Farming is a high skills occupation with a complex set of agricultural and business skills. Unless the skills challenge is addressed it is anticipated that most emergent enterprises will fail to become viable and sustainable and create jobs. Moving beyond subsistence farming requires a major shift in operational culture and practice which can only come from skilled managers and staff. Some evidence of this is provided through the National Wool Growers Association training and mentoring scheme which has transformed some communal sheds to commercial lots.

Agriculture relies more on semi skilled labour than other services as reflected in the table below. The sector also relies on migrant, casual and seasonal labour.

Table 8: Unskilled and Semi-skilled labour rates by DTI sector classification

Sector	1995	2008
Agriculture	99.0	94.1
Mining	92.0	87.9
Manufacturing	87.0	82.1
Utilities	80.0	68.8
Construction	90.0	88.3
Trade	84.0	84.2
Transport and Communication	73.0	76.8
Finance	62.0	59.5
Community and personal services	54.0	49.8
Total	**78.2**	**73.8**

Source: National Treasury, 2010

Employment in the sector is based on those who work in administration in DAFF and those who work in production and processing at farms and in factories. The challenge for the sector, according to stakeholders, is the concentration of production in rural areas and at locations outside the cities whilst processing is generally located in larger towns. This presents farmers with high costs of transportation as without an efficient rural railway infrastructure transportation has to be by road. Storage facilities are also far away from rural areas and movement of goods to production facilities also entails huge transportation costs and increased environmental pollution. The concentration of processing infrastructure in the larger towns, e.g. mills and abattoirs is affecting the rural economy and restricting its potential to provide a viable market for farm produce, sustain viable small farms and create employment.

In March 2009, DAFF had 3 285 posts, with 2 735 of these filled. The table below shows the employment profile at DAFF by occupation, race, gender and disability as at 31 March 2009. The department employed

57% male employees and 43% female employees. There were more African employees, constituting 69% of the entire department workforce. Very little progress has been made regarding the employment of people with disabilities, who constitute only 0.4% of the workforce. This is in line with other department across government where similarly little progress has been made.

Table 9: Employee profile - Department of Agriculture, Forestry and Fisheries

Occupational Category (SASCO)	African		Coloured		Indian		White		Totals			
	M	F	M	F	M	F	M	F	M	F	Total	%
Legislators, senior officials, managers	15	14	2	2			8	3	25	19	**44**	1.6
Professionals	239	241	11	12	4	14	70	64	324	331	**655**	24.0
Technicians, associate professionals	190	153	38	19	9	4	86	57	323	233	**556**	20.4
Clerks	93	204	22	42	0	7	13	171	128	424	**552**	3.0
Service and sales workers	38	19	4	2	1		17	1	60	22	**82**	3.0
Craft and related trades workers	42		3				13		58	0	**58**	2.1
Plant, machine operators and assemblers	53	1	8				1		62	1	**63**	2.3
Elementary occupations	484	96	94	28	1		6	5	585	129	**714**	26.2
Totals	**1 154**	**728**	**182**	**105**	**15**	**25**	**214**	**301**	**1 565**	**1 159**	**2 724**	
Percentage	42.4	26.7	6.7	3.9	0.6	0.9	7.9	11.0	57.5	42.5	100	
People with disabilities	1	1			1		2	6	4	7	**11**	**0.4**
Race	**1 882**		**287**		**40**		**515**					
Percentage	69.1%		10.5%		1.5%		18.9%					

Source: Dept of Agriculture, Forestry and Fisheries (2010)

In respect of occupations and skills profiles, the majority of the Department's employees are Professionals and Technicians / Associate Professionals (44.4%), followed by people employed in elementary occupations (26.2%). DAFF employees work in 12 main directorates responsible for various functions including agricultural product quality assurance; plant production; plant health, animal production; bio-safety; genetic resources; international trade; food and veterinary services; food security and education, training and extension services.

The education, training ad extension service is a particularly important service especially in the land reform context. The responsibility of the education, training and extension services include ensuring that farmers and other stakeholders access appropriate agricultural skills for the development of agriculture as an industry. To achieve this, the directorate focuses on the following:

- Develop and facilitate the implementation of the national Agricultural Education and Training Strategy.
- Develop a Performance Improvement Plan for Extension and Advisory Service.
- Developed an implementation Plan for future Governance of Colleges of Agriculture.
- Develop and Publish reports on agricultural education and training.
- Develop and implement targeted training programmes.

- Ensure the generation of appropriate agricultural qualifications for the advancement of agriculture.
- Liaise with agricultural line function Sector Education and Training Authorities to ensure alignment of their work with the strategic priorities of the Department.
- Facilitate the development of Implementation Protocol between the Departments of Agriculture and Education for the advancement of agricultural education and training.
- Coordinate and manage agricultural international training. [14]

In 2007, there were about 2 210 extension officers. Limpopo, Eastern Cape and KwaZulu Natal had the highest number of extension officers, 666 in Limpopo; 623 in the Eastern Cape and 360 in KwaZulu Natal. The Free State had 70 extension officers; Gauteng had 29; Mpumalanga had 183; Northern Cape had 23; North West had 137; and the Western Cape had 119. A majority 1 772 had a diploma qualification or lower, although the norms require extension officers to have a degree or higher. Extension services are in a poor shape in relation to the demands and expectations on them within the sector. Traditionally they served the needs of established farming enterprises. In recent years the larger commercial farms have not needed the general support that was offered and have turned to consultants and specialist to meet their needs. Small commercial farms and that very large number of under-resourced and emerging farmers have needed the general extension services but have been unable to access them. This is partly related to the falling numbers of extension officers, and partly due to the capacity of extension officers to respond. Lack of transport and limited access to lap tops and other equipment, has reduced the capacity of extension officers. In addition it was reported that many extension officers lack a full BA in agriculture, and many of those who have the desired qualification lack farming experience as well as the skills needed to facilitate community processes, develop business plans and access funding – key issues facing emerging farms.

Employment across the agricultural sector is subject to growth and decline variations related to a wide range of conditions and circumstances. Since 2002 the trend has been downwards with variations in sub-sectors. There are a number of reasons for this including mechanisation and casualisation of labour on larger farms, the economic downturn impacting on some sub-sectors, and the global trade situation, including changes in the foreign exchange rates and the failure of successive DOHA development talks to address inequalities in access to global agricultural markets[15]. More locally sustainable employment growth has been impacted on by mechanisation, application of new technologies, land reform and increasing input and transaction costs.

There will be pressure on the agricultural sector to: meet local and international demand for food; reduce imports by increasing production in some sub-sectors (poultry for example); respond to government initiatives to expand agricultural niche export markets and the development of an aquaculture sub-sector to counter depletion of natural resources; and these pressures should lead to some growth in the sector. Further, a focus on the environmental drivers in agriculture, expansion of game farming, and mechanisation of the sector will require new skills and contribute to some expansion of employment. It is also anticipated that as more land claims are settled and potential farming enterprises are identified there will be growth in the non-commercial or informal sector that will lead to expansion of employment.

However this is an optimistic view expressed by some sub-sector stakeholders and is heavily dependent on a range of factors that cannot be accurately forecasted. The dominant trend in employment is one of downward movement, with reductions taking place even in sub-sectors where some growth has occurred.

[14] DAFF website

[15] The **Doha Development Round** is the trade-negotiation of the World Trade Organization (WTO). Its objective is to lower trade barriers globally. Talks have stalled over a divide on major issues, such as agriculture, industrial tariffs and non-tariff barriers, services, and trade remedies. The most significant differences are between developed nations led by EU, USA, and Japan and the major developing countries led and represented by India, Brazil, China, and South Africa. Considerable contestation exists over the maintenance of agricultural subsidies, operating as trade barriers.

As commercial farms are growing in size they are employing fewer people, and this seems to be a situation that is unlikely to change. Farming is becoming more capital intensive not less, and the drive for economies of scale is leading to the shedding of labour, and in particular unskilled labour.

Table 10: Workforce changes in the Agricultural sector - 2001 to 2010

Year	Workers	Year on year difference	Variation
2001	969 000		
2002	1 153 000	+ 184 000	16.0%
2003	808 000	- 345 000	- 42.7%
2004	828 000	+ 20 000	2.4%
2005	778 000	- 50 000	- 6.4%
2006	886 000	+ 108 000	12.2%
2007	703 000	- 183 000	- 26.0%
2008	764 000	+ 61 000	8.0%
2009	615 000	- 149 000	- 24.2%
2010*	650 000	+ 35 000	5.4%

*** Quarter 1**

Source: Statistics South Africa Survey (pp. 210-211)

Employment categories and remuneration

It is difficult to get detailed and accurate yearly statistics on employment by type (full-time, casual and seasonal employees) or on remuneration in the agricultural sector. The latest available statistics on commercial agriculture are found in the 2007 Stats SA Census of Commercial Agriculture. The following tables reflect survey data on the number of permanent, casual and seasonal agricultural sector employees by province as well as total remuneration per province.

Table 11: Number of paid full-time agricultural workers and total remuneration by province

Province	2002		2007		Growth / Decline	
	Number	Remuneration R'000s	Number	Remuneration R'000s	Number	Remuneration
Eastern Cape	33 718	329 351	34 253	510 404	1.6%	55.0%
Free State	57 607	580 888	53 944	737 796	-6.4%	27.0%
Gauteng	20 815	344 629	22 979	534 083	10.4%	55.0%
KwaZulu-Natal	75 799	763 439	66 685	968 455	-12.0%	26.9%
Limpopo	62 635	525 390	35 728	625 436	-43.0%	19.0%
Mpumalanga	61 603	599 617	46 520	853 396	-24.5%	42.3%
North West	39 914	409 526	53 741	574 596	34.6%	40.3%
Northern Cape	31 077	320 598	26 871	339 948	-13.5%	6.0%
Western Cape	98 207	1 378 816	90 943	2 029 275	-7.4%	47.2%
Totals	**481 375**	**5252251**	**431 664**	**7 173 389**	**-10.3%**	**36.6%**

Source: Statistics South Africa, Report 12.02.01 (p.1101)

Table 12: Number of paid casual & seasonal agricultural workers & total remuneration by province

Province	2002		2007		Variance	
	Number	Remuneration R'000s	Number	Remuneration R'000s	Number	Remuneration
Eastern Cape	30 936	59 680	30 565	106 497	-1.2%	78.4%
Free State	57 871	69 595	45 150	98 996	-22.0%	42.2%
Gauteng	8 722	20 975	11 957	93 461	37.1%	345.6%
KwaZulu-Natal	37 602	103 946	34 383	154 286	-8.6%	48.4%
Limpopo	38 614	107 223	31 833	124 159	-17.6%	15.8%
Mpumalanga	46 480	86 242	32 826	176 363	-29.4%	104.5%
North West	46 078	62 653	32 008	75 250	-30.5%	20.1%
Northern Cape	68 174	121 613	47 874	123 723	-29.8%	1.7%
Western Cape	124 968	331 406	98 546	485 108	-21.1%	46.4%
Totals	**459 445**	**963 331**	**365 142**	**1 437 843**	**-20.5%**	**49.3%**

Source: Statistics South Africa, Report 12.02.01 (p.1101)

The tables above reflect that the Western Cape was the biggest employer of labour on commercial farms in 2007, with a majority of the employees being casual and seasonal. The Eastern Cape employed the least number of commercial farm employees. The comparator figures for 2002 and 2007 would appear to show a continuous country wide reduction in employment both in permanent employees and casual and seasonal workers. The exception is the North West that has experienced an increase in full time employees.

The current minimum wage for farm workers (February 2010) is R1 316.69 per month[16]. Monthly salaries differ across sub-sectors with highest paid workers in primary production in the fisheries and dairy sub-sectors.

Table 13: Approximate monthly wage rates in Agriculture for selected sub-sectors

Subsector	Primary Production	Processing/Pack house
Meat	R 2000	
Dairy	-	R 2650
Wines	R 1100	R 1400
Flowers	R 800	R 1200
Fisheries	R 5000 (crewman)	R 1892

Source: DTI, 2010[17]

Vink & van Rooyen (2009) indicate that before the introduction of minimum wage in 2003, the real cash remuneration for employees had been increasing. However over time the unit cost of labour (the ratio of the total cost of labour to the total value of output) has been in decline, including a steep drop during and after the introduction of minimum wages.

In 1970, for every R1 of output, 16 cents was spent on labour. By 1980 this has dropped to 13 cents for R1 of output. By 1994 the figure had increased to 19 cents, declining to 17 cents in 1998 and to 11.7 cents in

[16] Department of Labour, 2010

[17] Source: DTI: (Data sourced from SAMIC, Dairy Industry JAG, WOSA, SAFEC, SA Pelagic Fish Industry Association)

2001. By 2007 it had reduced to 10.8 cents. Further research will be needed to establish the current situation, but there is reason to believe that the decline has continued, with wages being very low both in terms of unit costs and in relation to other groups of workers in the economy.

Strictly speaking it is not the role of the SETA to engage in the complex regulatory framework for the agricultural labour market. It is for the Department of Labour and NEDLAC, with their employer and organised labour stakeholders to find ways of balancing the need for protection of vulnerable workers with the need to create a framework that encourages the creation of jobs and improved job security. The reason that more research is needed in this area, and in particular detailed discussions with industry and labour representatives, is to establish

- The extent to which skills development interventions can improve the prospects for job creation and improved job security, and
- The mechanisms that can be established to enable uninterrupted skills training, in the context of casualisation and the use of contract and seasonal labour.

Stakeholders in the Agricultural sector

National government departments

There are a number of national government departments, nationally and in provinces as well as local municipalities involved in various ways in the agricultural sector. The following table sets out the broad contribution that each department as viewed from the perspective of an agricultural enterprise.

Table 14: Government department roles in relation to Agriculture

Department	Role	Functions in relation to agricultural enterprises
Department of Agriculture, Forestry and Fisheries	Agricultural policy and support	• Sector regulatory framework • Sector strategy and leadership • Organisation of support to farmers (extension services) • Sector BEE charter • Funding of development interventions in support of agriculture
Department of Rural Development and Land Reform	Land Reform and land claims settlements	• Settling claims • Ensuring that farms remain functional pending the settlement of claims • Identifying claimants who wish to develop agricultural enterprises • Partnering AgriSETA in mobilising funds for capacity building of claimants • Making land available for renting or purchase for farming
Department of Economic Development	Economic planning	• Sector economic strategies • Identification of economic policy levers and interventions and motivation of these in cabinet
National Treasury and SARS	Macro economic policy	• Financial planning • Financial incentives • Accountability of Land Bank • Regulations relating to credit • VAT, PAYE and company tax
National Planning Commission	Planning	• Macro strategy in relation to land reform and rural development • Identification of inter-departmental overlaps and gaps

Department	Role	Functions in relation to agricultural enterprises
Department of Cooperative Governance and Traditional Affairs (and municipalities)	Municipal capacity development and coordination	• Linking agricultural and rural development to IDPs and LED • Infrastructure and services to agricultural enterprises • Land and industrial zone management (making suitable space available for enterprises)
Department of Environmental Affairs	Environmental planning and natural resource management	• Policy and guidelines on environment protection and natural resource management • Partner in environmental education
Department of Trade and Industry (and provincial departments of economic development)	Industrial strategy	• IPAP 2 • BEE codes • Identification of growth areas • Identification and promotion of export opportunities • Trade policies and international agreements on access to markets (WTO, GATT. DOHA) • SMME and cooperative registration (CIPRO) • SIDA services to SMMEs and Cooperatives • Provincial development agencies and banks (Wesgro, Ithala etc), who provide funds and advice on marketing and trade etc
Department of Water Affairs	The management of water supply	• Water supply • Boreholes • Regulation and management of water and prevention of waste/excess use
Department of Energy	Energy supply	• Strategy in relation to electricity supply to rural areas • Cost of power (Eskom)
Department of Transport	Transport policy and planning	• Planning for transport needs in rural areas • Transport subsidies • Providing policy framework for parastatals (whether freight rail provision in rural areas is prioritised) • Controlling cost of transport (a major transaction cost in agriculture)
Department of Labour	Labour market policy	• Labour legislation • BCEA and wage determinations • Promotion and monitoring of employment equity • Health and safety on farms • Regulation of labour agencies and brokers
Department of Basic Education	General Education	• Quality of education of entrants to labour market (schools)
Department of Higher Education and Training	FET, HET and Skills	• Quality of education of entrants to labour market (FET colleges) • Planning of Higher Education provision to agriculture • Management of skills development including AgriSETA
South African Police Services	Safety and Security	• Collaboration with agricultural community to address issues of farm security including attacks on people and stock and property theft
Statistics South Africa	Research	• Provision of updated statistics on commercial and emerging units and agricultural labour force

Department	Role	Functions in relation to agricultural enterprises
Home Affairs	Control of migrant labourers	• Regulating the flow of foreign migrant workers, including the provision of permits and visas • Facilitating the importation of scarce skills for the sector
Health	Education	• HIV/AIDS education

It could be argued that there are more departments with an impact on agriculture. The 19 listed are those with an obvious and significant impact. As can be seen from this very simplified description of the role of government the needs of agriculture cut across many departments. AgriSA has identified over 30 different pieces of legislation and regulation that an agricultural enterprise is required to comply with, and it is a list that is growing. This framework can be experienced (by an agricultural enterprise) as bureaucratic and costly or enabling and supportive – or even both restrictive and enabling at the same time.

The level of importance of each of the national and provincial departments will depend on the size and scale of operation of the enterprise, whether a producer's market is local, national or international, whether an enterprise is well funded and has a strong asset base or whether it is poorly funded and running on low levels of credit. Sometimes the impact of the work of a department is not obvious or easy to understand or interpret.

Sometimes there are bureaucratic requirements that are understood but benefits that are not. For example everyone understands the bureaucratic work involved in submission of tax returns but not everyone understands the concessions and tax breaks available to small businesses. The same applies to even to SETA processes, whereby the completion of a WSP is an administrative requirement but one that can lead to significant support in building skills required for running a successful enterprise.

It becomes clear that the role that AgriSETA plays is one that is part of a broader framework of dependencies and support provision. Whilst AgriSETA can play its part in building the capacity of an agricultural enterprise, the impact of training will be limited if other services and opportunities cannot be accessed. There is a need for both assistance in accessing services and some coordination of provision so that one service can complement and add to the impact of another. For example if a loan has been obtained by an enterprise or a significant order obtained training could be of more value than training where no other support or opportunities for growth are in place.

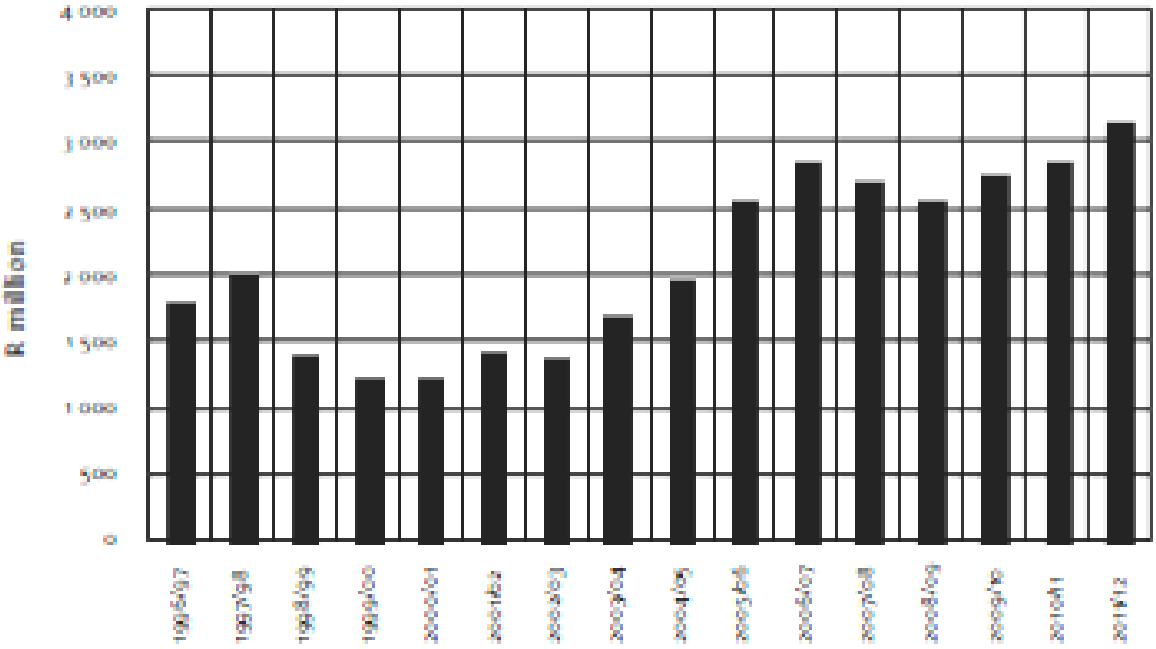
This understanding is important both in relation to the way that the SETA plans and organises its work and in the way that the role of DAFF is understood, and in particular the role of extension services. The SETA will need to work with DAFF to build the capacity of extension officers to assist agricultural enterprises to make use of the many opportunities that government has put in place to support them and to promote rural development, develop agriculture and ensure food security.

In relation to public spending on agriculture the agricultural national budget constitutes about 0.5% of the national budget. The figure below reflects trends in national budgeting for the agricultural sector between 1996/7 and 2011/12.

Some analysts[18] have argued that state expenditure on agriculture shows lack of prioritisation of the sector, especially considering that the budget remains lower than it was in the late 1980s, when it now caters for a greater number of farmers than it did during apartheid segregation.

[18] Greenberg , 2010, p. 2

Figure 2: National budgets for Agriculture, 1996-2011 (adjusted for inflation)



Source: Greenberg, 2010

The Department of Agriculture, Forestry and Fisheries (DAFF) is responsible for the agricultural sector. The department works with various organisations to promote the interests of the sector:

- It registers all South African Pest Control Association (SAPCA) qualified inspectors.
- It works with the Agricultural Research Council for research to optimise the control of migratory pests.
- The Directorate on Marketing works with the National Agricultural Marketing Council (NAMC) on issues related to equitable access to markets including policy formulation, issuing of permits, and coordinating inter-departmental relations to enhance marketing.
- Historically the Department has employed a large number of extension officers located in farming communities who have supported and advised farmers. This service has been in decline in recent years, but remains an important aspect of state support to the sector.

The above roles will be subject to some review in the context of IPAP 2 and also the debates around the role of the state in the economy. The issue is not only levels of spending, but also clarifying the role of government in relation to the business of the sector.

Sector representatives

There are three major umbrella organisations representing the interests of farmers, AgriSA, TLUSA and the National African Farmers Union of South Africa (NAFU).

AgriSA represents both commercial farmers and cooperatives' interests through its engagement at national and international level. AgriSA is a member of the Southern African Confederation of Agricultural Unions (SACAU), a regional farmers' union for farmers in Southern Africa. AgriSA has structures in all the provinces, *except Limpopo*.

NAFU is a union for predominantly previously historically disadvantaged smallholder farmers with a membership base including farmers, agribusinesses, farmers' organisations, corporations and individuals who support their goals. NAFU is represented by different unions in all the provinces.

There are other employer organisations who are not affiliated to AgriSA and NAFU including:

- Agricultural Industrial and Medium Employers Organisation
- Agricultural, Mining and Industrial Chemical Manufacturers' Association
- Agrilabor Employers' Organisation
- Algoa Meat Traders Association
- East Coast Poultry Producers Employers' Association
- East London and District Meat Traders Association
- Fertiliser Industry Employers' Organisation
- Landbou Werkgewersorganisasie
- Red Meat Producers' Association

The Agricultural Research Council is an autonomous statutory body that provides research to DAFF and the provincial departments of agriculture. Figures available for South Africa's investment in agriculture research and development show that South Africa was above international norms of investment in R&D, which are 0.53% of agricultural GDP for developing countries and 2.36% for developed countries. In South Africa, in 2000, agricultural R&D investment in relation to agricultural GDP was 3.04%[19].

There are six major sources of credit for farmers: banks (50%), agricultural cooperatives and agribusiness (12%), the Land Bank (21%), private creditors (8%), other creditors and financial institutions (9%) and government (1%) (GCIS, 2010)

1.2 Factors impacting development in the Agriculture sector

Several international and local factors impact on the productivity of the agricultural sector and its growth. Key amongst these are:

- Growth of the South African economy and rising consumer demand
- International trade and trade agreements
- The global recession and rise in food prices
- The land reform programme
- Reliance on imports
- Environmental drivers
- Water availability
- Changing consumer patterns and demands (e.g. organic food stuffs)
- Technological changes and mechanisms
- Quality standards
- Farm safety and security
- Broad-based black economic empowerment
- Legislation
- Skills demand and supply
- HIV/AIDS

These key factors are clustered and discussed below:

[19] Vink & van Rooyen, 2009

Future sector economic growth and development

South African sector growth plans (IPAP2)

The 2010/2011 – 2012/2013 Industrial Policy Action Plan (IPAP) identifies five structural challenges that existed in the South African economy before the global economic downturn and which have been exacerbated by the recent economic crisis. These challenges were evident even during the time South Africa was experiencing relatively high growth rates between 2005 and 2007 and have continued during the recession. These challenges are:

1. Structural imbalances in the growth path including growth that is lagging behind other medium and low income countries.
2. Uneven performance of the manufacturing sector with some divisions like the automotive sector experiencing exponential growth while other sectors have stagnated.
3. Employment growth being sustained by credit extension and consumption rather than by productive sectors, leading to a large current account deficit.
4. Low profitability of manufacturing.
5. Low savings and investment from financial sector growth. Only 5.2% of private credit was extended to fixed investment in 2008.

Key sectors have been identified for IPAP's focus, including agro-processing, which has a diverse group of industries and sub-sectors including food processing, beverages, aquaculture, horticulture, medicinal, aromatic and flavourants. Key action plans for the agro-processing sector are identified in IPAP2 as:

- Development of a National Food Control Agency to consolidate the sector;
- Development of aquaculture to supplement dwindling wild fish stocks;
- Designating specific areas for utilisation of aquaculture;
- Development of the organic food sector;
- Development of the small milling industry;
- Enhancing competitiveness in fruit and vegetable canning;
- Improving beneficiation of Rooibos and Honeybush products (IPAP2, 2010).

International Trade

South Africa is a major exporter of Agricultural produce. In particular South African fruit and fruit-derived products such as wine and fruit juice are competitive in the global market. However in many sub-sectors where export potential exists – grain and meat – serious problems face the industry. A key challenge is the uneven playing field experienced by South African exporters. Major global competitors include the United States and the countries of the European Union, where government subsidies in various forms are in place. No such subsidies are in place in South Africa making it difficult, if not impossible for South African agricultural produces to enter developed country markets due to the prices that they have to ask for products. I

In addition, the value of the Rand has fluctuated from levels of around R10 to the US dollar to as little as R7 to the dollar. When the Rand is strong export becomes difficult because it costs more, in the case of the move from R10 to R7 a 30% cost increase for the importer. It is impossible to predict whether the World Trade Organisation negotiations, known as the DOHA Round, will achieve progress in the coming years. Historical evidence is that during periods of global recession developed economies become more protective not less, and so the current outlook is not good. Nor is it possible to predict the value of the Rand, though current thinking in government is to move toward a weaker Rand to encourage exports. These are two key variables that will need to be factored into the different sector growth scenarios for the future.

Global recession and rise in food prices

Economic growth slowed down significantly in sub Saharan Africa and in South Africa in 2009 but there appear to be signs of recovery. GDP growth in the region declined from about 6% in 2004 – 2008 to about 1.8% in 2009/10. GDP growth in South Africa was 1.6% in 2009 [20]and rose to 4.6% in the first quarter of 2010[21], though much of this is related to the income derived from the 2010 FIFA World Cup and may not be sustained. Projections are generally for a slow revival with a set back after the slight rise resulting from the World Cup. A return to the 6% levels of the 2007/8 could take some years.

The global recession reduced the demand for African exports and reduced capital flows to the region but it is anticipated that the demand for mineral resources by Asian and Western powers will result in both the expansion of exports and expanded foreign direct investment. The competition between India and China for African markets is also expected to boost trade to the benefit of African suppliers. South Africa is expected to particularly benefit from direct foreign investment from China and India. China has already become South Africa's largest market for exports and supplier of imports[22].

Rising food prices have forced governments around the world to control prices of maize, bread, rice and dairy products. In South Africa, "food price inflation between December 2005 and December 2006 averaged 7.88 %"[23]. Although efforts are being made to reduce barriers to poorer families in relation to basic food, there has been no move to subsidise food generally. This may change, though the space for significant levels of support is restricted because of reduced revenue from income taxes resulting from the recession. The global credit crunch and recession have meant a reduction in public expenditure and funding, which has affected the agricultural sector[24].

Land reform

In South Africa specifically, land reform has a significant bearing on food security and agriculture's contribution to GDP. The objective of the land reform programme is to transfer 30% of agricultural land to black ownership by 2014 (deferred to 2025) to ensure more equitable access to land by historically disadvantaged people and to increase their participation in agricultural activities[25]. Land reform has been informed by four processes[26]

- Land restitution, involving returning land or providing financial compensation to those whose land was dispossessed during apartheid;
- Land redistribution, transferring more land to the historically disadvantaged;
- Tenure reform, modernising land tenure rules and access to land ownership; and
- Providing financial support for the development of emerging farmers.

In relation to progress with land reform, by September 2009, only 6.9% of agricultural land (about 5.67 million hectares) had been transferred, and a majority of the beneficiaries have not yet occupied the land due to lack of infrastructure, input or technical support. The following table gives an indication of the progress of land reform since the inception of the first democratic government.

[20] Department of Agriculture, Forestry and Fisheries, 2010
[21] Stats SA, 2010
[22] Department of Agriculture, Forestry and Fisheries, 2010
[23] Department of Agriculture, Forestry and Fisheries, 2010 -2011 Strategic Plan
[24] Economic Commission for Africa, 2009
[25] Xingwana, 2008
[26] CDE, 2008

Table 15: Land transfers and beneficiaries - 1994 to 2009

Province	Redistribution and tenure			Restitution			Total	
	#	Hectares	Beneficiaries	Claims	Hectares	Beneficiaries	Hectares	Beneficiaries
Eastern Cape	675	353 357	25 633	16 201	94 834	215 201	448 191	240 834
Free State	799	350 291	7 721	2 662	47 615	40 893	397 906	48 614
Gauteng	286	34 513	7 328	13 159	9 476	70 179	43 989	77 507
KwaZulu Natal	690	547 414	67 761	14 752	642 447	433 168	1 189 861	500 929
Limpopo	291	91 235	7 403	3 382	513 024	220 227	604 259	227 630
Mpumalanga	444	322 839	13 950	2 694	399 876	225 877	722 715	239 827
Northern Cape	271	952 744	2 773	3 682	539 620	100 554	1 492 364	103 327
North West	300	268 566	40 539	3 709	373 642	172 963	642 208	213 502
Western Cape	223	122 304	12 750	15 546	3 769	118 165	126 073	130 915
Total	**3 979**	**3 043 264**	**185 858**	**75 787**	**2 624 303**	**1 597 227**	**5 667 567**	**1 783 085**

Source: Greenberg, 2010

Achievement of the 30% land reform target is being made difficult by land prices. Under the willing buyer willing seller scheme, the government will need R74 billion to be able to purchase enough land. While resources may be available, there are suggestions of lack of capacity. The Department of Rural Development and Land Reform (DRDLR) was able to spend only 31% of its land reform 2009/10 budget in the first six months of the financial year. Going forward, this Department needs to identify what the real challenges are with the pace of land reform delivery so that they can be mitigated to meet the 2025 target. A priority is the retention of skills, skills transfer and skills development during the transfer of land, as well as retention of national food production to avoid loss of production.

Support for new beneficiaries of land to ensure sustained productivity is derived from two main sources of funding – the Broadening Access to Agriculture Thrust (BADAT) and the Comprehensive Agricultural Support Programme (CASP). CASP is a conditional grant from the Department of Agriculture, Forestry and Fisheries to provincial departments to support emerging farmer development. Provincial farming budgets dedicated for farmer support in Mpumalanga, the Free State, Northern Cape and the Western Cape have risen significantly and those in KwaZulu Natal and Gauteng have witnessed a slight increase. Eastern Cape and Limpopo agricultural budgets have been steady. The North West is the only province where there has been a sharp decline in the share of the budget dedicated to farmer support[27].

Reliance on imports

Overall the Agriculture sector contributes positively to the balance of payments.

> "South Africa remains food secure. The value of our exports increased by 46.4 % from R33 656 million in 2007/08 to R49 278 million in 2008/09. During the same period the estimated value of imports rose by 12 %, from R34 009 million to R38 401 million, resulting in a positive trade balance"[28]

South Africa depends largely on world markets for seed production and agrochemicals. Regarding seed production, there are only three community seed production schemes in Limpopo and Mpumalanga being piloted with state funding. Ten top large companies, including two South African companies and multinationals, have rights to over two thirds of registered seed varieties in South Africa. Despite the dominance of genetically modified and hybrid seed in some sub-sectors like maize, sunflower and sorghum, open-pollinated varieties have been resilient in South Africa, enabling the possibility of alternative seed sources not dependent on technological processes[29].

[27] Greenberg, 2010

[28] Department of Agriculture, Forestry and Fisheries, Strategic Plan 2010/11

[29] Greenberg, 2010

In relation to agrochemicals, deregulation and liberalisation in the fertiliser sector led to the shutdown of local production capacity, and South Africa became an importer of fertiliser for the first time in 2000. There are three large players in the fertiliser sector, Sasol Nitro, Yara and Omnia. South Africa imports an estimated 70% of fertilisers and pesticides. Fertiliser prices rose by over 200% between 2006 and 2008, but dropped somewhat after that. However, this hike signified the volatility of the agrochemicals industry and South Africa's dependency on imports, and the potential risk for emerging farmers and food production of this dependence on imports, as the country cannot control the prices, making inputs both difficult to budget for and in many cases unaffordable. The price of agrochemicals is also particularly influenced by the prices of oil and the exchange rate.

The general understanding in relation to job creation is that a weaker Rand will improve exports and therefore enable job creation. Of course the down side of this strategy is that imports become more expensive. So what may be an advantage for those sub-sectors who are expanding their export volumes for those relying on imported agro chemicals may be increased pressure.

Environmental drivers

The Medium Term Strategic Framework (MTSF) identifies as one of its strategic goals sustainable resource management and use.[30] The environment is a critical driver for sustainable economic and social development, particularly given the fact that millions of people in South Africa both in the formal and informal economy earn their livelihoods from natural resources like water, ecosystems, land, and indigenous vegetation. As such, the sustainability of these resources also ensures the sustainability of the livelihoods of people who rely on agriculture, which is highly reliant on land, climate and water.

Land

South Africa's rising population has put a demand on farmers to produce more food. Some farmers have responded to this challenge by increasing the area of cultivation and using more pesticides, herbicides, fertilisers and water. However, if use of chemicals on the soil is not controlled, this will lead to, among other things, soil erosion and declining soil health. In South Africa, the contribution to soil loss of erosion is 400 million tonnes a year. The level of land degradation is also high, with land in 25% of the country's magisterial districts classified as severely degraded. Further, about 91% of South Africa is classified as arid or semi-arid, and about 2% of land has compacted and crusted because of overgrazing and overstocking, resulting in poor water filtration and available soil water. The severest degradation is in the Eastern Cape, Limpopo and KwaZulu Natal and the most degraded commercial farms are in the Western and Northern Cape. These areas need support to combat further land degradation.[31]

Climate change

In South Africa climate change will directly impact agriculture through changing temperature and rainfall patterns in the country. This will in turn affect pest and disease distributions, flowering and fruiting seasons, and ground water resources. Climate change also impacts agriculture indirectly through consumers' demand for carbon-efficient business processes. In this regard, South Africa is at a disadvantage compared to its export competitors as the agricultural sector in the country is a large source of greenhouse gas emissions through land-use change, agrochemical application, fossil fuel use, and a largely coal-based energy supply. The sector has a responsibility to develop mitigating practices through conservation and restoration. This requires an increase in awareness and specific knowledge of carbon emissions and how they can be reduced in different contexts.

[30] Medium Term Strategic Framework, 2009 - 2014
[31] Scotcher, 2009.

The Western Cape is predicted as facing shorter rainfall seasons because of climate change and this will affect fruit production. Limpopo, KwaZulu Natal and the Eastern Cape have the least ability to cope with climate change and may be the worst affected in the country.

There are also predictions that climate change will negatively impact South Africa's biodiversity and ecosystems. By 2050, there is an anticipated 40% shrinkage of the area whose climate is suitable for the seven biomes, and this will be replaced by unknown vegetation. A large percentage of the area occupied by grasslands could shrink and become susceptible to invasion by the savannah species. Many other specie changes and loss will affect biodiversity and ecosystems and impact negatively on the environment and agricultural productivity. Climate change therefore calls for an adaptation of practice to focus more on activities that align with sustainable land practice and management like using drought resistant cultivars, precision fertiliser management, and more efficient use of water.

Biodiversity and Ecosystems

Agricultural activity has moved away from a dependence on biodiversity and ecosystems to fertilisers and pesticides for its productivity. Agricultural productivity, however, also depends on soil micro-organisms, pollinators, predators of agricultural pests, as well as the genetic diversity of crops and animals. Some of these services can be provided by natural ecosystems, which also provide assistance with increased water availability and better quality of water, flood and erosion control, nutrient cycling and natural hazard protection and soil fertility. Despite their contribution to agricultural productivity, a large proportion of ecosystems are being degraded or used in unsustainable ways, and this will affect future agricultural productivity. The biggest threat to ecosystems and biodiversity is land transformation. The conversion of terrestrial land to urban settlements and crop land leads to fragmentation and habitat loss which results in extinctions of some species. In South Africa, land transformation has led to the loss of 34% of terrestrial ecosystems, 5% critically, that is, 14 ecosystems in the fynbos, 5 forest ecosystems, 1 grassland and 1 vegetation ecosystem). It is difficult to conserve some of the ecosystems especially those located in areas of low economic potential.[32]

A recent survey in South Africa showed that about 10% of the birds and frogs, 20% of all mammals, and 13% of plants are threatened with extinction. Cultivation is the greatest source of plant extinction. The Western Cape is now the world's highest site of species extinction. Only 20% of the Western Cape land is pristine but exists in fragmentation for any meaningful maintenance of ecological process required for the survival of species. The fact that 80% of South Africa's land is under agricultural use means that farmers bear a key responsibility for maintaining ecosystem equilibriums. Crop fields are disconnecting the habitat connectivity and ecosystem functioning but this can be restored if farmers have the knowledge on how this restoration can be driven.[33] There is an urgent need to restore and conserve biodiversity and ecosystems as this have implications for future agricultural productivity in the country.

Genetically modified crops

Some of the genetically modified crops in South Africa are insect resistant yellow and white maize, herbicide tolerant soybean, and insect resistant cotton. Genetically modified crops have several merits, including the fact that the environment can be protected as herbicide resistant crops require zero or minimal tillage which saves fuel and reduces carbon emissions. However, there are concerns about the threat to biodiversity by genetically modified crops, including the fear that non-target insects, particularly beneficial insects will be affected. Another concern is the genes in genetically modified crops can pass on to other crops that will become invasive. Currently, long term studies are being conducted in South Africa to assess the impact of genetically modified crops.[34]

[32] Scotcher, 2009.
[33] Scotcher, 2009
[34] DEA website

Biofuels

The Biofuels Strategy, accepted by the South African government in 2007, allows for 2% of the country's annual fuel needs to be supplied by biofuels within the next four years. Biofuel production will entail the production of bio-ethanol using sugar cane and sugar beet, and biodiesel using sunflower, canola and soya beans. To meet the biofuel target envisaged, 1.4% of arable land will have to be utilised for its production. The concern is whether the use of arable land for non-food production will be beneficial for the country.[35] Further, if arable land is already threatened by climate change, there is a great concern in diverting land that could be used for food production for bio-fuels production. This is likely to remain a contested area nationally and internationally making planning problematic.

Water

Water is both an essential and scarce resource for the agriculture sector and is being threatened by climate changes. Crop production relies heavily on water and yet access to water is not being addressed in a systematic way in the land reform processes. Greenberg suggests that the relationship between land reform, agricultural support and water resource provision is inadequate, and a way to address this could be established by linking water provision to land transfer or investing in irrigation for both commercial and resource-poor farmers. However, investing in irrigation in the context of water scarcity and climate change may not be the best option. What could be needed is finding ways to maximise efficiency of the 60% of South African water used for irrigation, by, for example, using methods such as drip or micro-irrigation, which are expensive to set up but which reduce water wastage by 5-10%[36].

Most of the agricultural land in South Africa relies on rainfall, and only 7% of cultivated farmland is irrigated. However, because of climate change, rainfall patterns have changed and there is less consistent and predictable rainfall patterns. In the agricultural sector, the poor use of pesticides, herbicides and fertilisers makes agriculture one of the largest non-point sources of water pollutants in the country. This has caused the water in many areas to be of limited use for irrigation. The agricultural sector is thus facing a scenario where there is potentially the same amount or even less water available, of poorer quality, and at the same time a growing water demand from expanding farming activities to meet growing food needs.[37] Further, the available water supplies are threatened by ongoing problems of alien vegetation.[38]

With these water challenges facing the sector, several interventions are needed, including the maximisation of efficiency of water use in irrigation. There is a currently a lack of capacity to implement some of the legislation and guidelines on water management. Devolution of water resource management to local authorities has been hampered by capacity challenge.[39]

The Department of Water Affairs is responsible for managing water supply and has to give authorisation for agricultural projects and other developments. The department needs to be seen as an important stakeholder in the agricultural sector, including in relation to training programmes to support improved access to and use of water.

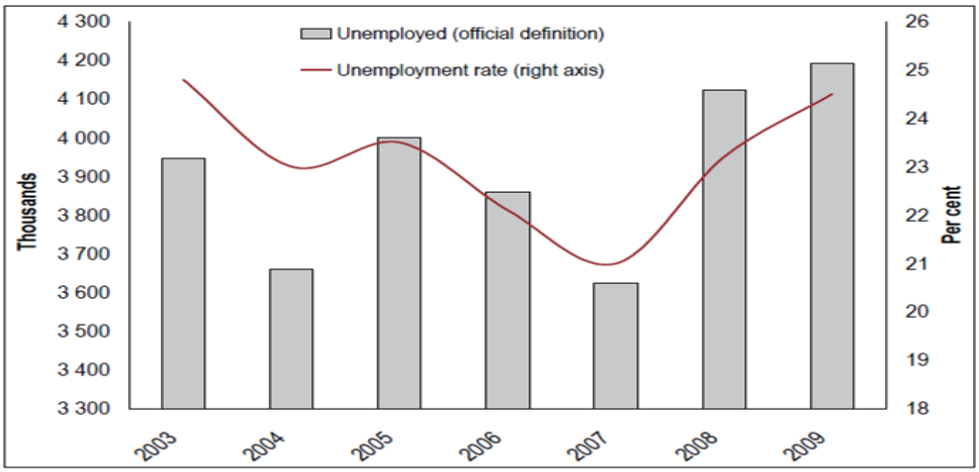
The labour market

South Africa recorded an unemployment rate of 24.3% in 2009 (narrow definition). If people who are no longer actively seeking work are considered, the broad unemployment rate rose from 26.7% to 31.3%,

[35] Scotcher, 2009
[36] Greenberg, 2010
[37] Scotcher, 2009
[38] News24, 27 July 2010
[39] Water Rhapsody, 2010

illustrated in the figure below. As a direct consequence of the global economic downturn in 2008, 870 000 formal jobs were lost in 2009[40]. Others have quoted a figure of over 1 million.

Figure 3: Official unemployment in South Africa, 2003 -2009



Source: National Treasury, 2010

Annual employment loss followed sector growth patterns, with agriculture, mining, manufacturing and trade facing the highest job losses as their sector growth contracted. Unemployment is especially a major problem among lower skilled workers and younger people. Youth employment in the 15 -24 year age group has fallen by 219 000 (13.6%), and 48.3% of people in this age group are unemployed. Employment of semi-skilled and unskilled workers has contracted by 527 000, and male employment has gone down by 550 000 (7.1%) while that of women has decreased by 320 000 (5.2%). The number of discouraged workers, i.e. those no longer actively seeking work, has increased from 518 000 to 1.7 million[41].

The existence of a very large pool of largely unskilled unemployed workers has an impact on the farming sector. It drives wages down and creates opportunities for casualisation and the expansion of labour contract agencies and brokers. In addition there are significant numbers of foreign nationals, mainly from Zimbabwe and Mozambique, who are seeking work and often finding it on farms and in primary processing and packaging plants. There are benefits to the sector with skilled and semi-skilled workers coming into the labour market, being absorbed into the workforce and helping raise productivity levels. However at the lower skilled end of the market the existence of this pool brings further casualisation and downward pressure on wages. Tensions are likely to increase, and further protests either in the form of xenophobic outbreaks or actions against farmers may well increase.

A view often expressed by farm employers is that current labour legislation makes dismissing workers difficult and so the availability of labour without entering into contracts of employment is an attractive way of avoiding the legislation and its obligations. Organised Labour is seeking to restrict these opportunities through either regulating or eliminating labour brokers, and efforts are being made to regulate the use of foreign labour. However for the foreseeable future the trend is for formally employed people to reduce in number and contracted in and casual or agency work to increase.

In relation to the emergent sector there will also be a reluctance to enter employment contracts with workers. The fact that many households are engaged in some form of largely unpaid agricultural work means that there is significant casual work dating back many years. Helping change this situation into one where casual or unpaid jobs are transformed into formal jobs with regular wages will take time. It is also

[40] National Treasury, 2010
[41] National Treasury, 2010

likely that as some emergent farms become established they will act similarly to established farms and institute a form of casual labour rather than expanding a workforce for which they would have to take a level of responsibility. The work of being an employer is quite onerous and involves significant financial and legal knowledge and expertise. Even minimal requirements such as registering as a company with CIPFA, opening a bank account and registering for VAT and PAYE are challenges for micro or emerging enterprises.

From an AgriSETA perspective these labour market trends mean that whilst levy income can be directed at a relatively small labour pool, one that is manageable in terms of planning and implementation, the size of the informal, casual and unemployed labour force in the sector - for whom no levy is paid and who have no employer to plan for their skills needs – is very large and its needs almost unlimited. Clearly the relationship with the National Skills Fund (NSF) becomes critical in respect of the entire non-levy income sector. Again the level of support available from non-levy income sources will be an important variable in looking at future sector skills development scenarios.

Consumer trends

South Africa currently produces enough food to meet the needs of its population. However, consumption of three main staples, maize, wheat and vegetables has been volatile since 1985 and remains below 1990 levels. Consumption of maize and vegetables by South Africans is 17% and 32% less respectively than in 1985[42].

The main reasons for this lie in the growing levels of poverty and the difficulties that families have in purchasing nutritious food. Whilst government has increased the levels of social grants and increased the number of people receiving grants to around 13 million, the incomes of poor families have been badly hit by a range of factors, including job losses and rises in food prices. The approximately 1 million people who lost their jobs in 2008/9 meant a loss of income for many millions of dependents. Rises in food prices have also had a disproportionate impact on the poor. Whilst food is available it is often not accessible to families on the income levels that they have to manage within. The result is that less, and less nutritious, food is purchased, which in turn impacts on the ability of farmers to sell their products locally.

Whilst there is no evidence that government will reduce its efforts in relation to poverty relief and social benefits, including such programmes as school feeding schemes and food parcels during periods of drought, the state of public finances may not be enough to alleviate the poverty that grips many rural areas. If real income levels for the poor were to rise it could have a significant impact on the economy of the agricultural sector. Equally an improvement in the rural economy with increased agricultural production and jobs, would dramatically impact on the capacity of people to buy nutritious food. Achieving a positive growth path in rural areas is a huge challenge for government and one that is key to government's Medium Term Strategic Framework and Industrial Policy Action Plan.

[42] Greenberg, 2010

HIV/AIDS

South Africa has a high prevalence of HIV and AIDS. The HIV prevalence among people aged two and above was estimated at 10.9% in 2008.

Table 16: Estimated HIV percentage prevalence by age group (2002 – 2008)

Age	2002	2005	2008	Change
Children (2-14 years)	5.6	3.3	2.5	-3.1
Youth (15-24 years)	9.3	10.3	8.7	-0.6
Adults (25 and older)	15.5	15.6	16.8	1.3
15-49 year olds	15.6	16.92	16.9	1.3
Total (ages 2 to 49)	**11.4**	**10.8**	**10.9**	**-0.5**

Source: Avert, 2009

The table above shows that HIV prevalence is highest amongst those aged 25 years and older. Given youth labour market analyses which point to people from previously disadvantaged backgrounds, mainly African males, accessing formal employment for the first time at age 25 -27, this population can be held to represent people in employment. Research[43] has estimated that by 2020, the pandemic will have claimed at least 20% of employees in the agricultural sector in Southern Africa.

HIV and AIDS have significant ramifications in the agricultural sector for both commercial farming and subsistence farming. The implications include:

- Decrease in cultivated land
- Focus on less labour intensive crop and animal production
- Decrease in women's agricultural productivity as they take on a more care giving role
- Loss of skills
- Increase in absenteeism from work
- Decrease in daily work output/productivity because workers are weaker from infections

There are suggestions that the impact of the pandemic in South Africa demands sectoral intervention, although this may be difficult in the agricultural commercial sector as:

- Seasonal workers, who seem to be more vulnerable to infection because of their low socio-economic status, are not in one place long enough for care programs. Further, farmers and employers may not feel responsible for seasonal workers in the same way they would invest in their permanent employees.
- There may be uncertainty around land reform which may put HIV intervention on farms on the back burner.
- There are no policies that enforce HIV education and care on farms in the same way that legislation like BEE does for ownership. As a result, HIV intervention may be left to goodwill and employers may feel it is more important to comply with issues that are monitored.

Farm safety and security

South Africa has been plagued by unacceptably high levels of violent crime and murder for many years now. Farms have experienced this and those living on farms feel and are extremely vulnerable. The South

[43] Ingelozi Management Solutions, 2008

African Chamber of Commerce and Industry (SACCI) has argued that:

> "Using the nominal GDP figure for 2009 of R2.4 trillion, a 3.22 percent contribution of agriculture to GDP and an estimate of 39,982 farms (as at 2007) in South Africa, the cost of a murder/attack on a farm, to the economy, was R1,932,869 per annum."

SACCI acknowledges that this estimate is flawed as it does not take into consideration the fact that farming units contribute differently to GDP and that not every attack or murder contributes to farm shut down or loss of productivity. However, if not addressed, these attacks could lead to loss of farming sectors as farmers migrate to 'safer' regions. This will affect employment and GDP contribution of the sector. The need for safety and security on farms may also shift farmers' focus in skills development to include personnel who have skills in safety and security.

Broad-based Black Economic Empowerment

The aim of the AgriBEE Charter (gazetted in 2008) is to increase the involvement of black business in agriculture through ownership and control as executives and senior managers of new and existing agricultural businesses. The extent to which AgriBEE is transforming the sector is not known, as it is too early to tell, but a recent survey conducted by ABC and the IDC showed that among the ABC respondents, in 2007 46% of enterprises were busy constructing a BEE strategy, and 46% claimed to be implementing a BEE strategy.

A survey of the dairy industry in the Western and Eastern Cape in 2008 showed that only 6% of firms had a BEE strategy in place. It also seems from survey data that companies are focusing on the skills development and socio-economic aspects of BEE rather than on ownership[44]. It would appear that although there have been some significant BEE purchases of viable farms, and some employee empowerment projects, including some quite high profile ones in the Cape winelands, the extent of ownership change had been limited. One of the factors is the very high level of single person or family ownership in the agricultural sector. BEE is more straightforward in the corporate world where shares can be exchanged. For a family business it is a matter of selling off part or all of the land and the tendency is to sell off those areas of the farm that are expendable from a business sustainability perspective. On the other hand the growth in size of farms and farming corporations will open up opportunities for BEE deals.

Whilst there is discussion in government about the ending of the "willing buyer, willing seller" concept the Constitution itself provides for property rights, and so although some pressure may be exerted through legislation and regulation the extent and speed of change may not be fast. The mechanisms for encouraging the transfer of significant levels of ownership have not yet been created. The focus of the SETA is therefore likely to be more the beneficiaries of land reform, and emergent farmers, though projects of a BEE nature can be targeted as they arise.

[44] Greenberg, 2010

1.3 Summary PESTEL analysis

POLITICAL	TECHNOLOGICAL
• Agrarian reform is one of the national priorities • Economic development, job creation, rural development, land reform, food sustainability and the environment key strategic goals • Increased focus on inter-departmental cooperation and planning • Increased focus on accountability and M&E systems	• Larger farms becoming more capital and less labour intensive • Cost of plant and equipment high, so machinery kept longer or hired • Bio technology on the rise • Growing number of professions and professional support services needed in the sector
ECONOMIC	**ENVIRONMENTAL**
• Expanding markets due to increasing global demand for food • Uncertainty over value of Rand and exchange rate impact on sector • Enclave or duel economy with low labour absorption particularly in rural areas • Rural economy stagnant in spite of many government programmes – poverty and exclusion deeply entrenched • IPAP 2 signalling significant state support to identified growth areas, including key agriculture sub-sectors • Rising input and transaction costs leading to increased prices, reduced margins as well as pressure for take-overs and mergers	• Farming "moving north" in Africa, where there is better water supply • Pressure on traditional crops because of limited water supply • Increased frequency and duration of "crises" linked to over use of natural resources and changing weather patterns • Increased concerns over eco-system preservation and bio-diversity • Opportunities in sector from green technologies and their applications commercially • Increased consumer awareness leading to changes (e.g. demand for organic produce)
SOCIAL	**LEGISLATIVE**
• Ongoing migration from rural to urban areas, particularly young people • Social problems arising from high levels of unemployment and economic exclusion • Crime and farm attacks • Agriculture not seen as a viable or high status activity • HIV and AIDS remains at crisis proportions • Game farm and leisure market in agriculture is expanding	• Generally adequate legislative framework • Tenant and labour rights legislation an ongoing factor in labour absorption levels • There is a very large amount of regulation of agricultural enterprises - particularly small and emerging. Can have both positive and negative impacts • International safety and food standards impact on exports • Uncertainty over bio-fuel legislation

1.4 Growth Scenarios

It is useful when looking at possible scenarios to examine the key variables or uncertainties and to project how variations one way or the other will have an impact on the development and growth of the sector. From the sector analysis and factors that are contributing to change in the sector there are some key factors that seem to emerge.

First appears to be the economy and related issues of the labour market and the challenges of labour absorption. These factors determine whether there will be growth and development and whether this will result in improved employment opportunities and the creation of a virtuous cycle of development.

Second is the role of the state and the various government departments whose plans and work impact on the agricultural sector. Related to this is land reform that is inevitably driven by the state and not the owners of land or the landless. The view expressed by many engaged in agrarian reform is that the state must play a significant role. It becomes clear that a successful agricultural enterprise requires a number of factors to be in place to be successful. These include access to land (Department of Rural Development and Land Reform), agricultural support within a supportive agricultural framework (Department of Agriculture, Forestry and Fisheries), access to consistent water supply (Department of Water Affairs), access to finance (Department of Trade and Industry, various state agencies), conducive labour market regulation (Department of Labour), sound industrial policy (Department of Trade and Industry), economic planning and macro policy (Department of Economic Development, National Treasury), and appropriate education, training and skills development (Department of Higher Education and Training, the Human Resources Development Council, NSA and the SETA). There are other government departments as well as provincial and municipal structures that also play a role.

The following analyses show how the following four variables impact positively or negatively on the growth of the sector and the demand for skills:

- economic growth and development;
- role of the government;
- labour market changes; and
- land reform)

▪

HIGH GROWTH SCENARIO	
The economics of the sector	**Role of government**
The economy in SA and globally continues to revive, albeit slowly for the next few years	Roles and integration of national government departments are clarified. Specific functions are agreed, processes put in place and personnel appointed with the required skills
International trade agreements are still weighted in favour of US and EU but progress is being made and specific blockages are addressed in bilateral talks	The roles of Departments (DWA, DAFF, DRDLR, DoL, DTI, DED, DHET) are clarified with appropriate joint plans and coordinating structures
The rural economy gradually improves with the buying power of the poor increasing and more stable markets created for local produce	For each of the functions agreed in each of the related departments appropriate structures and systems are put in place and staff trained
Exports increase in key areas identified in IPAP 2, and the Rand exchange rate stabilises at a level not too much different than it is today	Specific capacity is put in place at local level to support implementation of land reform and rural development
There is a growing understanding of the concept of dualism and the need to intervene with labour absorption and development mechanisms	Land claims are all finally settled and ownership and tenure is resolved. There is a serious drive to establish effective agricultural enterprises
An understanding is reached on the role of agencies and labour brokers and abuse is curbed	The "willing buyer willing seller" approach is resolved and enables viable land to become black owned
Some relaxation of labour market regulations are agreed that maintain some minimum standard of employment but assist absorption	Land transfer to black and emergent farmers is done in a manner that integrates then into the supply chains of the sector
Mechanisms are found to address skills needs in the context of casual and seasonal work patterns	Financing of land reform and transfer is done on the basis of agreed development plans, including skills.
Labour market reform	**Trajectory of land reform**
LOW GROWTH SCENARIO	
The economics of the sector	**Role of government departments**
The economy in SA and globally stagnates at current levels and the economy struggles to pick up after the temporary 2010 World Cup boost	A lack of purpose at government level means limited progress for another five years. Land reform remains a commitment without a plan
International trade agreements are still weighted in favour of US and EU and protectionism increases as a result of the global recession	The roles of Departments (DWA, DAFF, DRDLR, DoL, DTI, DED, DHET) are unclear and there is no proper co-ordination
SA's Gini coefficient continues to worsen, with rural poverty increasing and local economies declining	There is a lack of effective structures, systems and processes to implement policy across departments
Rand volatility causes problems for importers and exporters. Well established markets are maintained but exports decrease	At local level the decline in the agricultural extension officer functions continues and limited practical support is available
Understanding of the rural economy is so diverse that stakeholders cannot agree the problem, let alone the solution to low absorption levels	Land claims take too long and land reform processes leave potentially productive land poorly developed and managed
Casual labour and labour brokers remains an issue of dispute. Confrontation results in bitterness and resentment	The impasse caused by a rigid interpretations of property clauses in the Constitution continues to stall achievement of the 30% black ownership target
Labour market regulation continues to be a contributing factor to reducing levels of employment	Black owned farms find it difficult to become part of supply chains and are unable to perform adequately
Unstable employment patterns in the sector make skills interventions difficult to manage and largely ineffective	Financing of land reform and land transfer continues to be wasted as it is not tied to the building of appropriate capacity
Labour market reform	**Trajectory of land reform**

These analyses can be translated into four potential growth and development scenarios for the agricultural sector which are based on the requirements for a strong, development state:

Scenario 3: Weak government support and sound economy		Scenario 1: Integrated government support and sound economy
The economic upturn triggered by the World Cup continues and globally things improve enabling an expansion of exports. The government, because of a lack of integrated policy planning and implementation, provides limited support for sector development. The gains go to the well established enterprise owners, with few gains for emerging farmers and local communities.		Government departments coordinate their efforts to achieve maximum impact. There are favourable economic conditions that create opportunities for advance. Within this positive environment the role of the AgriSETA becomes a central component of a comprehensive strategy for growth and skills interventions are targeted to achieve maximum effect. Results in growth in sustainable enterprises and expanded employment opportunities.
Government policy and support	**Economic factors globally, nationally and locally**	**Government policy and support**
Combination of disjointed government policy, planning and a weak and increasingly marginalised rural economy. Economic conditions result in unsustainable farming conditions and employment declines along with productivity. Food shortages and the lack of development in rural areas leading to increasing social tensions. A vicious cycle develops with the sector going into long term decline.		Government departments coordinate their efforts to achieve maximum impact. However economic conditions hamper progress. Efforts by the AgriSETA are undermined by poor labour absorption and job insecurity. Some significant successes are recorded including some NSF funded projects that result in sustainable enterprises. A platform is laid for future improvements when the economic conditions improve.
Scenario 4: Weak state and economy		**Scenario 2: Strong state but weak economy**

2. DEMAND FOR SKILLS

AgriSETA registered employers and employee coverage

In 2009, 17 351 employers were registered with the AgriSETA, comprising

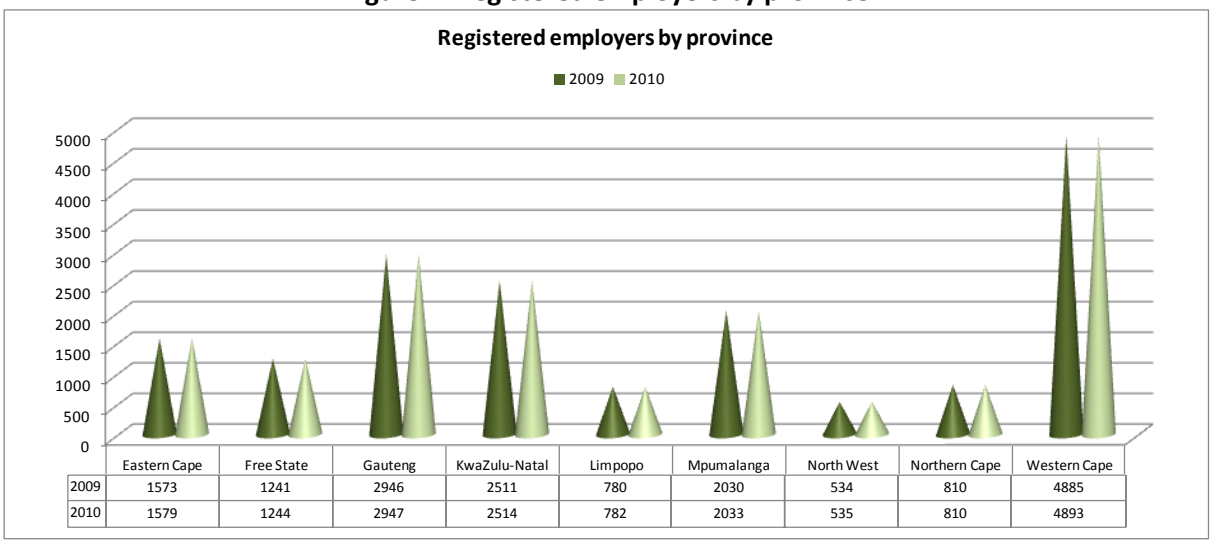
- 15 434 small employers (less than 50 employees)
- 1 255 medium sized employers (50 - 149 employees) and
- 662 large employers (more than 150 employees).

Considering that there are around 40,000 commercial farms[45], the 17 351 employers represent around 43% of commercial farms. Notwithstanding changes in the sector as a result of land reform and sector

[45] SARS statistics, 2007

shrinkage, this is a sizable proportion and is held to be sufficiently representative for the purpose of skills development planning.

Figure 4: Registered employers by province



Source: WSP Data 2009 - 2010

However this paints an incomplete picture. It *understates* the representative nature of large enterprise registered with the SETA and *overstates* the representative nature of small registered enterprises. 4 175 (24.2%) of the enterprises are levy paying members. Further, only 1 673 (11%) workplace skills plans (WSPs) were submitted. Around 95% of the WSPs were from large employers and thus only a small proportion of smaller commercial enterprises are represented.

An analysis of the Workplace Skills Plans for 2010 and the Annual Training Reports for 2009 further demonstrated that employer registration with the AgriSETA increased slightly by 0.17% from 2009 to 2010.

Table 17: Registered employers by sub-sector and levy and training spend

Sub Sector	No of Employers	Levy Paying	Levy Amount	Training Spend (2008/9)	Training Budget (2009/10)
Coffee/Tea	40	14	R 845 843	R 4 450 959	R 185 213
Fibre	1712	153	R 4 489 677	R 1 913 283	R 2 243 911
Fruit	373	204	R 14 792 086	R 10 530 280	R 14 494 099
Grain	648	175	R 28 755 352	R 29 036 587	R 38 443 229
Milling	335	109	R 6 881 788	R 4 912 402	R 4 256 367
Pest control	213	33	R 594 390	R 32 879	R 13 000
Poultry	391	151	R 18 703 764	R 15 792 865	R 19 724 713
Primary	12229	3273	R 85 155 530	R 37 290 812	R 41 906 640
Red meat	1110	231	R 10 771 584	R 4 971 197	R 7 352 941
Seed	167	46	R 5 372 278	R 3 021 969	R 4 162 920
Sugar	73	22	R 15 106 196	R 22 508 610	R 22 379 382
Tobacco	60	13	R 7 558 150	R 44 562 228	R 40 754 000
Grand Total	17351	4424	R 199 026 639	R 179 024 071	R 195 916 415

Source: WSP Data 2009-20010

The primary sector constitutes 70% of employers registered with the SETA and 74% of those are levy paying. Whilst 25.5% of the employers registered are paying levies, this figure is about 10% of the entire farming industry and is constituted mainly by large employers. Comparing the 2008/9 and 2009/10 data one notices that R 179m was spent on training and skills programmes in 2008/9 whilst R 195m is budgeted for 2009/10, a 9.4% increase.

The largest number of registered small and medium enterprises are found in the mixed farming sub-sector, while most large enterprises are in the growing of fruit, nuts, beverage and spice crops sub-sector. A table providing a breakdown of registered employers by subsector, levy status and organisation size is available in Annexure 3.

Table 18: Registered employers by size and sub-sector

Sub Sector	Description	Small (0-49)	Medium (50-149)	Large (150+)
Coffee / Tea	Processing and marketing of coffee and tea including coconuts; cocoa; nuts; olives; dates; etc.	33	4	3
Fibre	Grading; Ginning and Packing of Wool and Cotton raw material	1677	17	18
Fruit	Fruit exporters and importers.	4	1	
	Fruit packed in cartons; fruit juice concentrate drummed and fruit juice in container ready for con	270	40	58
Grain	Handling and storage of grain.	67	7	24
	Manufacture of grain mill prod; starches and starc.	118	5	8
	Sale and distribution of Agricultural raw materials & other farming inputs.	181	10	3
	Wholesale & retail trade in Agricultural machinery.	212	9	4
Milling	Manufacture of flour and grain mill products; including rice and vegetable milling; grain mill resi	118	17	11
	Manufacture of pet foods.	41	10	
	Manufacture of prepared animal feeds.	108	20	1
	Manufacture of starches and starch products.	7	1	1
Pest Control	Pest Control.	209	4	
Poultry	Poultry and egg production including the slaughtering; dressing and packing of poultry.	304	48	39
Primary	Agricultural and animal husbandry services; except veterinary activities.	444	23	9
	Farming of cattle; sheep; goats; horses; asses; mules; and hinnies; Dairy farming.	2270	59	19
	Fishing; operation of fish hatcheries and fish farm.	915	10	6
	Game farming.	17		
	Growing of Cereals and other crops n.e.c	905	164	32
	Growing of coffee and tea including coconuts; cocoa; nuts; olives; dates; etc.	2		
	Growing of crops combined with farming of animals (Mixed farming).	2929	263	115
	Growing of fruit; nuts; beverage; and spice crops.	1793	270	156
	Growing of trees as second crop by farmers.	128	18	4
	Growing of Vegetables; Horticultural specialities (Including Ornamental Horticulture) and nursery p	13	5	
	Growing of Vegetables; Horticultural specialities and nursery	943	129	70

Sub Sector	Description	Small (0-49)	Medium (50-149)	Large (150+)
	products			
	Ostrich farming.	4	1	
	Other animal farming n.e.c.	11	2	1
	Other animal farming; production of animal products n.e.c.	437	25	11
	Service for nut farmers and companies.	6		1
	Sugar plantation including sugar cane and sugar beet etc.	8	7	4
Red meat	Agricultural and livestock research.	215	9	3
	Production and animal products n.e.c.	6		
	Production; sale & marketing of Agricultural by products (E.G. bones; hides).	61	2	
	Slaughtering; dressing and packing of livestock; including poultry and small game for meat.	318	40	17
	Slaughtering; dressing and packing of livestock; including small game for meat and processing of os	2	1	
	Transport of livestock as supporting activity.	225		
	Wholesale trade in Agricultural raw materials and livestock.	194	7	10
Seed	Seed production and marketing.	148	13	6
Sugar	Manufacture of sugar including golden syrup and castor sugar.	45	6	22
Tobacco	Processing and dispatching of tobacco.	46	8	6
Grand Total		15 434	1 255	662

Source: AgriSETA, WSP data

Employee coverage in the AgriSETA

Collectively, the 17 234 employers registered with AgriSETA employed a total of 239 076 employees. This represents 39% of the agricultural labour force in 2009.

The 1 673 employers who submitted WSPs in 2009 employed 97 898 employees, representing 41% of the total number of people employed by registered employers. While the number of registered employers submitting WSPs is small (11%), they employ a sizeable number of employees and the percentage of employees provides a statistically significant sample. The data for larger enterprises is statistically much more representative than that for small enterprises.

Table 19: Number of employees of registered employers by sub-sector

Sub-sector	Sub-sector description	Employees
Coffee/Tea	Processing and marketing of coffee and tea including coconuts, cocoa, nuts, olives, dates, etc.	483
Fibre	Grading, ginning and packing of wool and cotton raw material	6 539
Fruit	Fruit packed in cartons, fruit juice concentrate drummed and fruit juice in container ready for consumption	27 661
	Fruit exporters and importers	212
Grain	Manufacture of grain mill products and starches	133
	Handling and storage of grain	18 303
	Wholesale & retail trade in Agricultural machinery	795
	Sale and distribution of Agricultural raw materials and other farming inputs	2 898

Milling	Manufacture of flour and grain mill products, including rice and vegetable milling, grain mill residues	3 634
	Manufacture of prepared animal feeds	731
	Manufacture of pet foods	160
	Manufacture of starches and starch products	105
Pest control	Pest Control	119
Poultry	Poultry and egg production including the slaughtering, dressing and packing of poultry	19 187
Primary	Growing of Cereals and other crops (*not elsewhere classified*)	10 104
	Growing of Vegetables, Horticultural specialties and nursery products	37 799
	Growing of Vegetables, Horticultural specialties (Including Ornamental Horticulture) and nursery products.	195
	Sugar plantation including sugar cane and sugar beet etc.	220
	Growing of fruit, nuts, beverage, and spice crops.	47 043
	Farming of cattle, sheep, goats, horses, asses, mules, hinnies; Dairy farming.	3 382
	Other animal farming, production of animal products (*NEC)*	4 203
	Ostrich farming	0
	Game farming	0
	Growing of crops combined with farming of animals (Mixed farming)	28 722
	Growing of coffee & tea including coconuts, cocoa, nuts, olives, dates, etc.	0
	Agricultural and animal husbandry services, except veterinary activities	970
	Other animal farming (*not elsewhere classified*)	513
	Growing of trees as second crop by farmers	1 294
	Fishing, operation of fish hatcheries and fish farm	1 589
Red meat	Production and animal products (*not elsewhere classified*)	0
	Slaughtering, dressing and packing of livestock, including poultry and small game for meat.	5 128
	Production, sale & marketing of Agricultural by products (*e.g. bones, hides*)	116
	Slaughtering, dressing and packing of livestock, including small game for meat and processing of ostrich products	0
	Wholesale trade in Agricultural raw materials and livestock	1 697
	Transport of livestock as supporting activity	0
	Agricultural and livestock research	534
Seed	Seed production and marketing	2 127
Sugar	Manufacture of sugar including golden syrup and castor sugar	10 478
Tobacco	Processing and dispatching of tobacco	2 002
	Total	**239 076**

Source: AgriSETA, WSP data

According to the WSP analysis, the sub-sector for the growing of fruit, nuts, beverage and spice crops employed the largest number of people. In six sub-sectors, there are employers who do not employ workers. These are probably family based organisations where family members help in the business without drawing a salary. These are in transport and livestock research; slaughtering, dressing and packing of livestock, including poultry and small game for meat; growing of coffee and tea including coconuts, cocoa, nuts, olives, dates etc; ostrich farming and game farming.

Table 18: Employee distribution by province

Province	Workforce 2008/9	Workforce 2009/10	% Change
Eastern Cape	15 236	13 455	-11.7%
Free State	9 088	9 590	5.5%
Gauteng	45 914	34 483	-24.9%
KwaZulu-Natal	31 070	29 664	-4.5%
Limpopo	36 829	30 983	-15.9%
Mpumalanga	22 382	22 191	-0.9%
North West	12 735	11 636	-8.6%
Northern Cape	7 973	7 147	-10.4%
Western Cape	79 413	79 660	0.3%
Grand Total	260 640	238 809	-8.4%

Source: AgriSETA, WSP data

Of those submitting WSPs, registered employers in the Western Cape employed the largest number of people while employers in Limpopo employed the least number of employees. Free State, with the largest number of commercial farms, has a small number of employees covered by WSPs submitted to the SETA, whereas Eastern Cape, with a relatively small number of registered farms has a very large number of employees on farms submitting WSPs. Given this variance between provinces, the use of WSP data for extrapolation purposes must be viewed cautiously.

2009 WSP equity information was only provided for about a quarter of employees (25 637 or26%)[46]. No information was available from the WSPs on non-South Africans working on commercial farms.

Table 21: Equity profile from 2009 WSP data

African			Coloured			Indian			White			Totals
M	F	D	M	F	D	M	F	D	M	F	D	
8 040	5 785	38	5 097	5 228	24	22	25	0	811	556	11	
58.0%	41.7%	0.3%	49.3%	50.5%	0.2%	46.8%	53.2%	0.0%	58.9%	40.3%	0.8%	
13 863			10 349			47			1 378			**25 637**
54.1%			**40.4%**			**0.2%**			**5.4%**			100%

Total Equity		
Total Male	**Total Female**	**Total Disability**
13 970	11 594	73
54.5%	**45.2%**	**0.3%**

Source: AgriSETA, WSP data

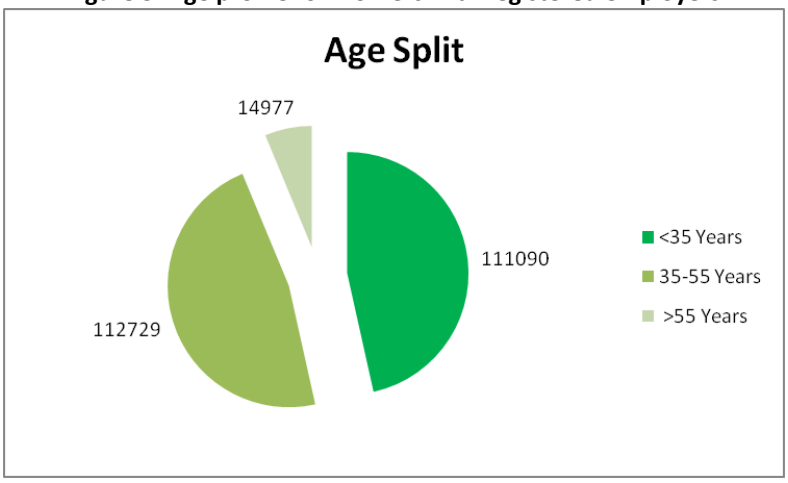
Using currently available data it is not possible to provide disaggregated employment data by sub-sector. This will require a small change in the way that gender, race and disability data is codified during WSP data-capturing, including allocation by sub-sector. What can be stated is that employment of males is more dominant than that of women, and more Africans are employed in the sector than other groups. Employment of people with disabilities is below 1%.

The age profile for the sector reflects an almost equal distribution of workers below the age of 35 years and those aged between 35 and 55 years of age. This only reflects the age profile of workers with registered levy paying employers and additional research is required to establish the age profile for small

[46] Some employers did not complete race and gender information when giving their employment profiles.

and emerging farming enterprises, land beneficiaries and co-operatives. This additional information may alter the age profile significantly enough to provide the quantitative evidence to support stakeholder and key informant qualitative information that the sector has an aging workforce and young people are moving to towns and cities and away from farming activities.

Figure 5: Age profile for workers with registered employers



2.1 Skills demand

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

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

1. ***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)
2. ***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.
3. ***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
4. ***Agricultural development*** – a specific need was identified to develop agricultural extension officers and services to support especially emerging and small-scale farmers over the full spectrum (a need exists for both new curriculum in the training of new extension officers and the re-training and upgrading of existing officers)
5. ***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)

A critical cross cutting skills need in all areas highlighted in this AET strategy is the need for agricultural environmentalists with knowledge and skills on researching and implementing sustainable resource management in production, engineering, economics, development and veterinary practice. However, there is a general shortage of skills in environmentalists. Studies that have explored the skills need in the environmental sector have indicated that there is a shortage of about 800 environment-related scientists and 1500 environment-related technical skills in the public sector, and this shortage is impacting negatively

on service delivery like water provision. For example, about 55% of local authorities have sub-standard water because of a lack of skills in waste water treatment.[47]

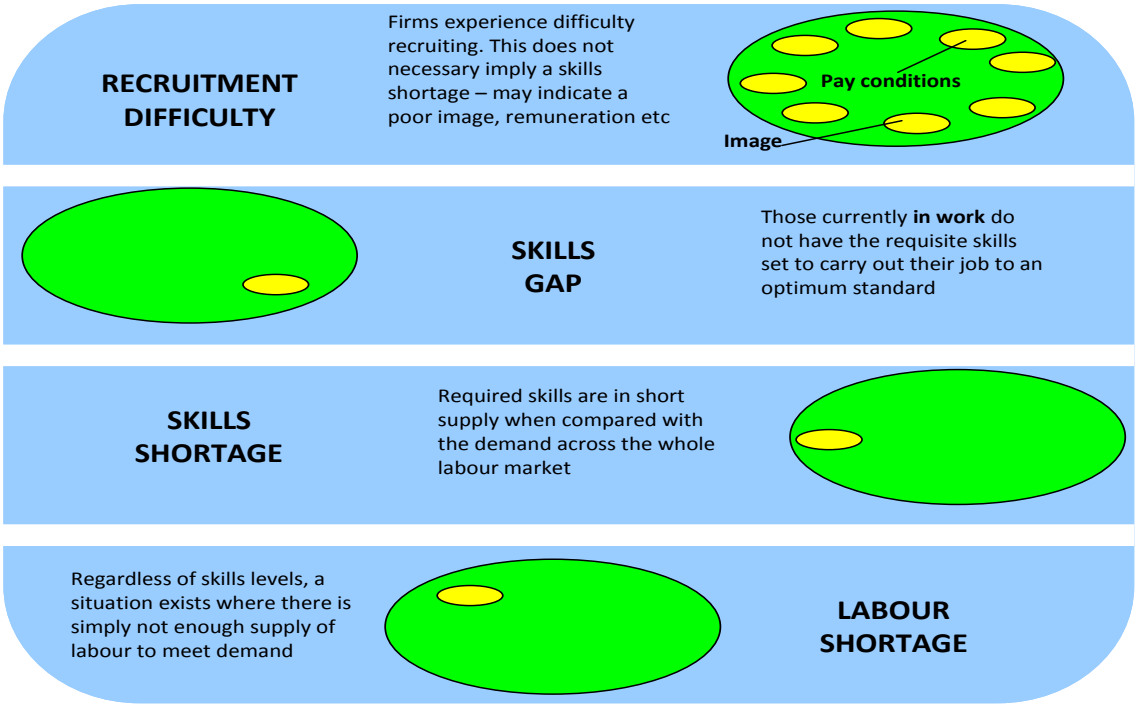
AGRISETA sector skills planning demand data (2008-2009)

The following section reflects research on skills demand in the Agricultural sector arising from the sector analysis (section 1), AGRISETA skills demand research for Sector Skills Planning during 2010 -2015, analysis of WSP data and interviews and surveys of sub-sector key informants and stakeholders.

With the introduction of the Organising Framework of Occupations and agreement on definitions for scarce and critical skills in 2005/06, the AGRISETA undertook an extensive research and consultation processes to determine skills development priorities for the sector.

The research methodology employed was based on the four dimensional topology for establishing and evaluating skills needs, illustrated in the figure below:

Figure 4: Topology for identifying skills development priorities



Source: AGRISETA SSP Annual Update, August 2009

The identification and prioritisation of skills needs was also undertaken from a key stakeholder and beneficiary perspective. Consideration was 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 facilitating 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).

[47] DEA, May 2010.

- 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 prospects 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 allowing companies/enterprises to become more sustainable and profitable along the way, improving productivity, competitiveness and innovation within organisations.

In organising and reporting the identified priority skills development needs (2008/09), the following structuring approach was followed:

- Tier 1: The four categories of needs as per the Topology presented above were used for the identification, evaluation and grouping of needs.
- Tier 2: Within each of the first tier groupings, needs were further broken down and organised per target group. At this second level needs were grouped by:
    - 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 agricultural 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, Fisheries and Forestry (DAFF)

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:

1. 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.
2. Employability:
   Making the employee more employable by improving the fit between their skills and the sector needs.
3. Enterprise Viability:
   Improving the capability and feasibility of the enterprise by increasing its effectiveness of or possibilities for profit generation, etc.
4. 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.
5. Sector Growth:
   Enabling the sector to develop or pursue new opportunities or improve the effectiveness of current operations.
6. Sector Competitiveness:
   Enabling the sector to compete more effectively in the international arena, improving market intelligence and interpretation, productivity, cost efficiency, etc.
7. Human Resource Development Capacity:
   Improving the access to quality provision of training to the agricultural sector.

Based on this research and consultation framework the following skills development needs and priorities were identified. The table below builds on the 2005 research and includes key inputs from the research undertaken for the current 5 year SSP.

Table 22: Skills Demand by employer category

Category	Skills Needs Identified
	RECRUITMENT ISSUES DRIVING SKILLS DEMAND
General	Primary agriculture is the entry point into the world of work for large numbers of people in rural areas. However, the sector has negative connotations amongst sections of the youth and in parts of the country and is viewed as a last resort for some in the search for employment). The effect is that despite an unemployment rate of approximately 26% (now over 30%), 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 Zimbabwe and Mozambique).
Small-scale	Labour in this farming sector is provided primarily by family members and no real recruitment constraints can be identified
Commercial	The agricultural sector still manages to attract technical and management skills as it is perceived to include a better lifestyle and there is a strong tradition of agriculture in SA. Increasing crime related security risks associated with farming may have a negative impact.
DAFF	The Department has identified a number of occupations in which they are experiencing long-term vacancies. Some of these result from a general shortage of such skills in SA, while others arise from the inability of the public sector to compete with the private sector (less favourable employment image, working conditions and equity considerations). Priority vacancies include ▪ Veterinarians ▪ Agricultural Engineers* ▪ Plant Health Specialists* ▪ Agricultural Statisticians ▪ Plant Health Pest Risk Analysts * ▪ ICT Specialists ▪ Agricultural Economists ▪ Agricultural Food and Quarantine Technicians * ▪ Agro-meteorologists* ▪ Pasture Scientists * ▪ Plant Production Specialists * ▪ Specialised Food Analysts
	SKILLS GAPS
General	• Low literacy and numeracy levels – both amongst workers within the sector at large and at owner/manager level in many of the small-scale farming. • Farm management skills (and general management skills in other agricultural businesses) coupled with a business orientation and entrepreneurship skills. • A general need to increase compliance with environmental, occupational health and safety, animal welfare, produce safety and hygiene standards, regulations and requirements (local and

Category	Skills Needs Identified
	international standards)
Small –scale	Farm Management
	(Mainly owners / managers)
	• Farm management & entrepreneurship
	• Resource management and record keeping
	• Financial planning and management
	• Project management
	• Business plan development
	Marketing and processing
	• Processing and packaging
	• Transport management
	• Marketing produce, including branding
	• Planning for marketing
	• Knowledge of markets
	Technical knowledge and skills
	• Production management (related to specific enterprise)
	• Demonstration of production techniques
	• Natural resources management
	Mechanical knowledge
	•Farm maintenance
	•Repairs of machinery and equipment
	•Electrical maintenance and installation
Commercial	A critical constraint is the poor educational levels of a large proportion of the labour force in the sector demanding a considerable effort and investment in ***ABET*** and other life skills programmes.
	Need for improved ***management skills*** and relevant ***technological knowledge*** for increasing productivity levels and improved production methods.
	Rising importance for environmentally responsible production and processing management systems. Rising competitive and international markets increases need for ***business and marketing abilities*** among owners and managers.
	Increasing requirements for compliance with ***environmental, health and safety***, and international trade standards…
	Information technology although not a priority, is increasing in importance.
	Business management ability is becoming increasingly important as more farmers are making decisions about restructuring their businesses, diversification and developing supplementary

Category	Skills Needs Identified
	sources of income.

DAFF	A particularly big need exists for skills upgrading amongst Extension Officers – particularly with regard to redress the historical neglect of small-scale farmers and resource strapped farmers.
	
	Critically, improved farm management and business skills within an agricultural context to support the majority of BEE and emerging farmers.
	
	Skills upgrading requirements for existing Extension Officers include:
	• Agricultural economics
	• Agricultural management
	• Business and financial management
	• Technical and production related skills including:
	  ○ Animal husbandry
	  ○ Poultry
	  ○ Crop production
	  ○ Horticulture

	SKILLS SHORTAGES
General	Generally, SA has a shortage of entrepreneurs and people who have the business acumen, drive, motivation and perseverance to become a successful farmer. Given the high risks involved in the agricultural sector (natural elements outside one's control), the agricultural sector does not compete successfully for this "scarce resource". Moreover, as with other professional and skilled occupations there is a tendency for younger qualified people to move to urban areas.
Small-scale	The profile of these farmers reflects a large contingent of older and less educated people who are generally less flexible, tend to stick to known practices and are less likely to experiment with new technology. Within this target group, candidates with good entrepreneurial ability are scarce. There is a perceived *shortage* of Agricultural Extension officers and advisors to assist this target group. However, a large pool of young unemployed graduates exists who could assist such emerging farmers if they were mobilised and made accessible to farmers. Similarly the potential pool of retired commercial farmers who could serve as mentors to this target group.
Commercial	The commercial agricultural sector will increasingly have to compete in the global market and the ever increasing need to increase productivity to remain profitable and viable, it can be stated that many of the existing farmers and managers / owners lack business management and entrepreneurial orientation. Equity policy and the need to become BEE compliant requires that commercial enterprises appoint and develop black owners / directors / managers. Changing local and global consumer preferences require farmers to change traditional farming methods and practices. The sector needs to be responsive to environmental drivers. Skills and knowledge requirements include: • Global food and international quality standards

Category	Skills Needs Identified
	• Product traceability requirements • Organic produce and products Specific occupations identified as being in short supply are: • Production Managers (food processing) • Product specialisation to international specifications (research skills) • Forklift drivers, heavy vehicle/truck drivers and mobile plant operators • Experienced and competent artisans (millwrights, electricians, fitters and turners, • Agricultural Equipment Technicians • Pest and weed controllers • Horticultural specialists
DAFF	DAFF is experiencing problems are especially sourcing people in specialised science related fields (learning fields experiencing few enrolments and/or pass rates at HET institutions with the result that too few qualified persons come onto the labour market). Examples of such skills shortages identified by the Department include: 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)
	LABOUR SHORTAGES
General	▪ Given an employment rate of some 26% (2009, currently estimated at over 30%, expanded definition), per definition there cannot be a labour shortage.. It is however, difficult for people who have never worked before to integrate into the agricultural sector workforce. Coupled with an aging workforce (30-60% being over 40) means that most agricultural enterprises will, within the next 5-10 years, be looking at replacing a large proportion of their workforce. There could be an insufficient pool of people willing and able to participate. The impact of HIV/AIDS is also not always factored in to 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

Category	Skills Needs Identified
	poultry industry, pickers in the fruit industry and animal handlers in feedlots, as well as dairy parlour workers. It is however believed that these shortages may 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.

AgriSETA WSP analyses

Skills demand in the commercial agricultural sector

Information for demand for skills from WSP data is available for 1 710 employers who submitted their WSPs for the 2009-10 period. Only 11% of all registered employers submitted WSPs for the 2009/10 period. Of these 49% were medium and large sized employers and 51% small. However, only 16% small employers submitted their WSPs relative to the number of registered small employers and 44% medium and large employers submitted WSPs relative to the number of registered medium and large employers. As such, skills demand statistics provides more representative data on the requirements of medium and large employers.

The number of WSPs submitted to the SETA decreased slightly by 1.2% from 2009 to 2010.

Table 23: WSP Submission Data

	2009						
Sub Sector	WSP Received	WSP Accepted	WSP On Hold	WSP Deactivated	WSP Rejected	WSP Query	WSP None
Coffee/Tea	9	6	3	0	0	0	32
Fibre	36	25	6	1	1	0	1971
Fruit	158	129	24	0	4	0	242
Grain	75	62	11	1	1	0	663
Milling	63	52	9	0	2	0	293
Pest control	7	5	2	0	0	0	207
Poultry	76	64	8	0	3	0	318
Primary	1169	889	207	7	40	1	12119
Red meat	71	55	11	0	4	0	1062
Seed	24	23	1	0	0	0	143
Sugar	14	13	1	0	0	0	61
Tobacco	8	5	0	0	3	0	53
	1710	**1328**	**283**	**9**	**58**	**1**	**17164**

	2010						
Sub Sector	WSP Received	WSP Accepted	WSP On Hold	WSP Deactivated	WSP Rejected	WSP Query	WSP None
Coffee/Tea	9	5	4	0	0	0	32
Fibre	41	27	5	1	3	1	1966
Fruit	164	131	20	1	2	2	236
Grain	79	64	8	0	5	0	659
Milling	61	54	2	2	2	0	295
Pest control	7	6	1	0	0	0	207
Poultry	63	54	8	0	1	0	331
Primary	1149	884	177	27	35	0	12139
Red meat	73	56	11	1	3	0	1060
Seed	25	19	5	1	0	0	142
Sugar	14	13	0	0	0	0	61
Tobacco	5	4	0	0	1	0	56
	1690	**1317**	**241**	**33**	**52**	**3**	**17184**

Source: WSP Data 2009 - 2010

The table below shows data on sub-sector WSP submission relative to size of the sub-sector, as well as subsector data from all registered organisations and those who submitted WSPs. Data for registered employers shows that there were 260 640 employees employed by the 17 351 registered organisations.

Table 24: Employment and sub-sector data drawn from WSP analyses

Sub Sector	Registered Employers	Small Employer	Medium Sized Employer	Large Employer (150+)	Employee per profile	Employees Trained	ABET Trained
Coffee/Tea	**40**	3	4	33	**581**	89	0
Fibre	**1712**	18	17	1677	**6539**	1574	67
Fruit	**373**	58	41	274	**31994**	13669	198
Grain	**648**	39	31	578	**22822**	8693	49
Milling	**335**	13	48	274	**4607**	1685	67
Pest control	**213**		4	209	**119**		0
Poultry	**391**	39	48	304	**20664**	8272	66
Primary	**12229**	428	976	10825	**149669**	54183	1893
Red meat	**1110**	30	59	1021	**8727**	4144	147
Seed	**167**	6	13	148	**2212**	925	12
Sugar	**73**	22	6	45	**10478**	4761	52
Tobacco	**60**	6	8	46	**2228**	1902	33
Grand Total	**17351**	662	1255	15434	**260640**	**99897**	2584

Source 1: AgriSETA, WSP 2009 data

Of the 17531 employers registered with AgriSETA, 88% fall under the large category whilst medium and small employers combined constitute 12%. In terms of training and skills development, 38% of the 260640 employees of registered employers in the sector attended some kind of training programme in 2008/9. Over 2.5% of these employees attended an ABET programme. The data provided further reflects that in 2009/10 the sector plans to train 3959 employees on ABET representing a 53% increase.

Data for skills demand in the commercial agricultural sector is based on data for permanent employees as well as casual and seasonal employees.

Skills demand forecasting by AgriSETA

Forecasting for skills demand, the AgriSETA has estimated that the demand for skilled employees at different levels in the next few years is 510 686. This is based on WSP data analyses over the last 5 years and projected demand for the formal, commercial agricultural sector and factoring in the demand that, at maximum, would result from completion of the land restitution programme in South Africa. The table below reflects the skills that are on demand as well as the estimates for demand over the next five years by major occupational category[48].

Table 25: Demand for skills by occupational category

Major Occupation (OFO)		Estimated Demand
Group	**Title**	
1	Managers (commercial and small, emerging farmers)	264 370
2	Professionals	4 141
3	Technicians and Trade workers	8 925
5	Clerical and administrative workers	800
6	Sales workers	400
7	Machinery operators and drivers	5 800
8	Elementary workers	226 250
Total		**510 686**

Source: AgriSETA, WSP data and SSP demand forecasts

[48] AgriSETA, 2010

3: Supply of Skills

Supply of skills

South Africa's agriculture skills are produced in high schools, agricultural colleges, FET colleges, and Higher Education institutions. In high school, a large cohort of learners take Agricultural Science as a subject. In 2003, there were 42 Agricultural High Schools offering Agricultural Science as a subject. These students and those in high schools taking the subject could progress to taking agriculture as a focus area for further education. In 2004, there were 10 FET colleges offering vocationally directed agricultural programmes. These FET colleges offered complete qualifications and short courses. Eleven Colleges of Agriculture can offer qualifications up to degree level and 19 universities offer qualifications in Agriculture ranging from agricultural economics, animal and plant sciences, and horticulture among others, at under and post graduate levels (Department of Agriculture, 2006).

While long term planning of skilling of new entrants in the sector can be done through close consultation between the sector, agricultural schools and colleges, FET colleges and HET institutions so that they teach relevant skills, there are other avenues for training for those who are already employed in the sector, for example skills programmes and learnerships. There are 15 registered qualifications for the primary agriculture sub sectors. Currently, AgriSETA has 94 registered learnerships that can address the skills needs of the identified scarce skills. These are captured in Appendix 2.

AgriSETA has approved / accredited a number of training providers across the country to deliver the theoretical and practical components of these learnerships. These include agricultural colleges, FET colleges, and private providers. Currently, the AgriSETA has 246 registered and approved providers distributed nationally as follows:

Table 26: AgriSETA approved training providers (2010)

Province	Number of providers	Percentage of total
Gauteng	72	29%
KwaZulu Natal	20	8%
Limpopo	35	14%
North West	30	12%
Northern Cape	3	1%
Free State	15	6%
Mpumalanga	14	6%
Western Cape	26	11%
Eastern Cape	31	13%
Total	**246**	

The providers are small to large organisations. In primary agriculture small providers appear to offer the most training in rural areas and community projects (AgriSETA, 2010). Most of the operating providers will be in FET colleges and agricultural colleges.

The AgriSETA is unable to meet the total demands for skills across the duality of their sector. There seems to be fairness in the approval of training for both permanent and casual and seasonal workers. In 2008/09, the AgriSETA approved 559 learnerships as follows:

Table 26: AgriSETA learnerships approved for grant purposes (2008-2009)

Sponsored Companies	Qualification	Employed Learners (18.1)	Unemployed Learners (18.2)	Total Learners	Amount
1	Agri Machinery [Level 3]	2	0	2	R 28 500.00
1	Agri Sales	0	20	20	R 498 000.00
2	Animal Production [Level 1 & 4]	0	120	120	R 1 469 700.00
3	Business Management [Level 4]	5	1	6	R 96 150.00
2	Grain Processes [Level1-5]	30	46	76	R 1 572 900.00
14	Horticulture [Level 1]	117	12	129	R 1 598 490.00
1	Meat Processing [Level 3]	3	0	3	R 37 500.00
2	Mixed Farming [Level 1-2]	50	0	50	R 525 000.00
16	Plant Production [Level 1-4]	121	30	151	R 1 993 770.00
1	Wine Processing	2	0	2	R 28 500.00
43	Totals	330	229	559	R 7 848 510.00

Source: AgriSETA, learnership data analysis

Provision of skills programmes in the same year attracted grants for 2 706 employees.

Table 28: Participation by learners in skills programmes in the AgriSETA (2008/09)

Learner Status	Number of Learners	Amount
Employed	1485	R 1 892 197.50
Unemployed	1221	R 2 467 597.50
Totals	2706	R 4 359 795.00
Total Companies / Projects	66	
Total Unit Standards	106	

Source: AgriSETA, Skills programmes data analysis

In terms of development of skills within employer organisations, almost 100 000 people were trained in 2009 across a number of subsectors. The table below provides detail of the provincial distribution of 2009 training in the agricultural sector, per sub-sector, further differentiating between small, medium and large farmers. As will be seen in the table, most training (86.3%) took place in large employers.

Table 29: Participation in skills programmes by subsector and organisation size

Sub-sector	Provincial coverage	Trained Employee Numbers (by registered employers)			)
		Small	Medium	Large	Total
Coffee/Tea	Eastern Cape	16			16
	Western Cape			73	73
Coffee/Tea Total	**Total Subsector**	16		73	89
Fibre	Eastern Cape		116	569	685
	Limpopo		74	234	308
	Northern Cape			13	13
	Western Cape			568	568
	Total Subsector		190	1384	1574

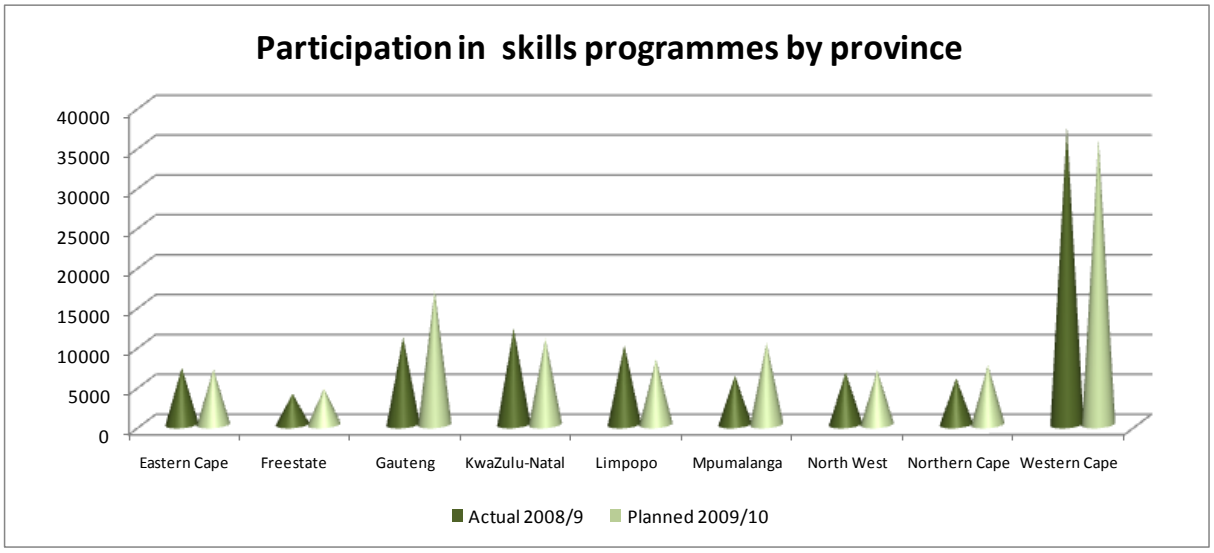
Fruit	Eastern Cape			3048	3048
	Gauteng			922	922
	Limpopo		14	2935	2949
	Mpumalanga	87	32	894	1013
	North West			1589	1589
	Northern Cape			58	58
	Western Cape		414	3676	4090
	Total Subsector	87	460	13122	13669
Grain	Eastern Cape		107	80	187
	Free State			2089	2089
	Gauteng		237	448	685
	Limpopo		35	198	233
	North West	2		2711	2713
	Northern Cape		8	533	541
	Western Cape	36	35	2174	2245
	Total Subsector	38	422	8233	8693
Milling	Eastern Cape		96		96
	Free State		154	32	186
	Gauteng		101	605	706
	KwaZulu-Natal		143	78	221
	Limpopo		20	41	61
	Mpumalanga		13	140	153
	North West		45	86	131
	Western Cape		131		131
	Total Subsector		703	982	1685
Poultry	Eastern Cape		30	612	642
	Free State		3	377	380
	Gauteng		364	1031	1395
	KwaZulu-Natal		4	2255	2259
	Limpopo		35		35
	Mpumalanga			74	74
	North West			1860	1860
	Northern Cape		27		27
	Western Cape		75	1525	1600
	Total Subsector		538	7734	8272
Primary	Eastern Cape		643	1804	2447
	Free State	2	265	656	923
	Gauteng		791	4437	5228
	KwaZulu-Natal		647	3844	4491
	Limpopo		587	5756	6343
	Mpumalanga	4	497	3160	3661
	North West		111	44	155
	Northern Cape	3	1131	3328	4462
	Western Cape	953	4727	20793	26473
	Total Subsector	962	9399	43822	54183
Redmeat	Free State		36	255	291
	Gauteng		314	1240	1554
	KwaZulu-Natal		46	908	954
	Limpopo			35	35
	Mpumalanga		45	212	257
	North West			106	106

	Northern Cape		164	514	678
	Western Cape		39	230	269
	Total Subsector		644	3500	4144
Seed	Gauteng		153	326	479
	KwaZulu-Natal			333	333
	Western Cape		113		113
	Total Subsector		266	659	925
Sugar	KwaZulu-Natal			3809	3809
	Mpumalanga			952	952
	Total Subsector			4761	4761
Tobacco	Western Cape			1902	1902
	Total Subsector			1902	1902
Grand Total		1103	12622	86172	99897

Source: WSP Data 2009

It is expected that for 2010 participation in skills programmes by employees of organisations who submitted workplace skills plans is expected to increase by 8% to 107860 in 2010. The biggest percentage increase in planned participation for 2010 is at Mpumalanga (68.3%) followed by Gauteng (53.6%). Limpopo is reflecting a 17.5% decrease from actual training of 2009 which implies the province will continue to experience skills shortages. Whilst Western Cape appears to be miles apart as compared to the rest of the country in terms of actual numbers, the province recorded the highest number of employees and is therefore not significantly different with the rest of the country considering participation in skills programmes as a percentage of workforce. . Whereas planned training for 2009/10 is down 4% from the 2008/9 actual training, at this level Western Cape still constitute approximately 33% of all the training planned to take place in 2009/10.

Figure 6: Participation in skills programmes by province



Source: WSP data 2009 to 2010

SECTION 2: STRATEGIC SECTOR SKILLS PLAN

4. Scarce and critical skills across the Agricultural Sector

Approach to identifying scarce and critical skills for the sector

A number of approaches were combined to identify the scarce and critical skills in the agricultural sector, to project these over the period 2011-2016 and to extrapolate the list of priority skills which form the focal point of skills development interventions for the AgriSETA over this period.

1. The starting point was the list of Scarce and Critical Skills submitted by the AgriSETA for the period 2009-2010 period (attached as Appendix 3) which reflects the last analysis submitted by the SETA for the NSDS II period, 2005-2010, as the platform for building the Scarce and Critical Skills list for the 2011-2016 SSP and identifying priority skills

2. All Workplace Skills Plans (2010-11, 2011-12) and Annual Training Reports (2008-09, 2009-10) were then analysed against the 2009-10 Scarce and Critical Skills lists to

    a. Identify trends in demand (planned versus conducted training)

    b. Confirm occupations identified as scarce in the 2009-10 Scarce Skills List as reflecting ongoing demand based on the analysis of WSP information

    c. Confirm training interventions in the Scarce and Critical Skills list by type of training conducted

3. Inputs from all the interviews on scarce/critical skills and skill priorities (see Appendix 4, questions 10 through 14) were then analysed against the lists which emerged from activity 2. Inputs on training interventions were consolidated across the interviews (question 15) and cross-checked with the interventions reflected in the consolidated lists.

4. A baseline for skill scarcity was then established by comparing the 2009-2010 scarce skills target indicator with the planned (2011-2012) and actual(2009-2010) training to ensure that the baseline scarce skills target would take into account both

    a. Those instances where the AgriSETA research has identified a target that is not reflected by current employers (i.e. planned and conducted training is below the identified need); and

    b. Those instances where employer planned and conducted training is above the target identified in the 2009-10 Scarce and Critical Skills List.

5. Projections of scarcity across the period 2011-2016 were then made using the baseline targets and multiplying this by a factor based on government's growth indicator of 6%, taking into account the 30% decline in agricultural enterprises and 30% decline in employment over the past decade[49] and then disaggregating the employment growth scenario by commercial vs. co-operative and small, emerging farms based on an understanding that commercial farms will employ fewer people given the use of technology and mechanisation at these enterprises. While the employment growth factorisation does not apply equally across all sub-sectors and all occupations it is hoped that it is

[49] Input at DAFF IGDP Workshop, September 2010, Dept of Economic Development economist.

robust enough to provide the AgriSETA with sufficient information on scarce and priority skills to plan, implement and monitor skills development interventions and their impact on the sector. The full worksheet for these projections is attached as Appendix 6.

a. Employment growth and skills needs factor of 2.5%:

Low-to-medium growth scenario for 2011-2013 taking into account the time required to consolidate and build the platform for the DAFF Integrated Growth and Development Plan, the need for the Land Reform programme to be finalised and implemented, funding and financial resources to be secured for the revitalisation of the Agricultural sector and for the capacity development of FET and Agricultural Colleges as well as Higher Education Institutions to be able to respond to increased learner demand

b. Employment growth and skills needs factor of 3%:

Medium growth scenario for 2013-14 being the transition phase from low growth into high growth as various programmes start to bear fruit, and

c. Employment growth and skills needs factor of 4.5%:

Medium-to-high growth scenario for 2014-2016 based on government and sector strategies being implemented as planned and successes achieved across the agricultural sector.

All scenarios assume that demand will continue to increase given the national imperative to revitalise the sector, conjoin with Forestry and Fisheries and the time required to develop the skills pool.

Scarce Skills Overview

Using the highest level of grouping in the Organising Framework of Occupations, Group 1, the following overall picture of scarce skills can be identified.

Major Occupational Group		Adjusted Baseline	Low-Medium Growth		Medium Growth	Medium-High Growth	
			2011-12	2012-13	2014-15	2014-15	2015-16
1	**Managers** 24 occupations	9 362	9 609	9 860	10 170	10 642	11 133
2	**Professionals** 32 occupations	2 873	2 964	3 115	3 072	3 226	3 386
3	**Technicians & Trades Workers** 25 occupations	6 387	6 559	6 736	6 937	7 243	7 581
4	**Community & Personal Service Workers**	-	-	-		-	-
5	**Clerical & Admin Workers** 6 occupations	1 373	1 410	1 448	1 494	1 564	1 637
6	**Sales Workers** 3 occupations	99	103	107	112	118	125
7	**Machine Operators & Drivers** 5 occupations	2 128	2 183	2 239	2 309	2 415	2 526
8	**Elementary Workers** 3 occupations	1 746	1 791	1 838	1 895	1 982	2 072

Please note:

1. The factor analysis used to create the baseline and the year-on-year projection "targets" have not been rounded off and hence the target figures provided appear to suggest a level of specificity of skills demand that would be more associated with labour force planning than is actually the case.

2. The figure (target) in the 2015-16 column reflects the total projected demand over the period 2011-2016 as the projection formula used is calculated from the baseline on low-medium, medium and medium-high growth scenarios.

3. When one considers the drivers for skills demand discussed in the Sector Analysis, it is clear that the higher numbers of occupations in demand in the Manager, Professional and Technician/Trades Worker major occupational groups results from a combination of national and sector imperatives, including

    a. The combination of agrarian and land reform government objectives which are driving both the revitalisation of the sector and the need to establish high performing co-operatives and sustainable small farms. The combination of these objectives is driving the focus on developing new farming managers and building the skills of current managers

b. The combination of the export orientation objective for the sector to grow revenue streams, reduce reliance on imports (foodstuffs, seed and horticulture) together with the imperatives to address climate change, scarce water resources and the "green" economy are driving the focus on the development of scientific and research professionals across a range of occupations

c. The combination of technological innovation, mechanisation and the high cost of farming equipment is driving a focus on the development of trades workers, while the imperatives to address climate change, scarce water resources, the "green" economy and improve cattle and crop stocks as well as reduce disease and pest incidence is driving the focus on development of agricultural and associated technicians.

Scarce Skills Priorities

Using the minor group code of the Organising Framework of Occupations to provide additional detail and reflect sub-sector occupational skills demand, an analysis of strategic skills development priorities can be identified and used to inform the quantitative targets reflected against strategic objectives.

Group 1: Managers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
111	**Chief Executives, General Managers, Legislators, Senior Government Officials** Chief Executive Officer / Managing Director (Enterprise / Organisation) Corporate General Manager	159	164	169	175	184	193	1.7	Mainly equity and geographical reasons
121	**Aquaculture, Crop, Livestock and Ornamental Horticultural Farmers and Farm Managers** Agronomy Farmer / Farm Manager Horticultural Farmer / Farm Manager Mixed Crop Farmer / Farm Manager, Livestock Farmer / Farm Manager Mixed Crop and Livestock Farmer / Farm Manager	5 344	5 480	5 619	5 791	6 055	6 331	56.9	Lack of farm managers on land reform projects, Equity and replacement
122	**Aquaculture, Crop, Livestock and Ornamental Horticultural Farm Production Managers / Foremen** Agronomy Farm Production Manager/Foreman, Ornamental Horticultural Farm Production Manager / Foreman, Horticultural Farm Production Manager / Foreman Mixed Crop Farm Production Manager / Foreman	2 228	2 286	2 345	2 418	2 530	2 646	23.8	New occupation for large and growing agronomy farms, Equity and replacement
131	**Advertising, Marketing and Sales Managers** Sales and Marketing Manager, **Clip Marketing**	170	175	180	186	195	204	1.8	Equity, **Export market growth**
132	**Business Administration Managers** Corporate Services Manager Resources Manager Personnel / Human Resource Manager, Research and Development Manager	291	300	309	321	337	354	3.2	Equity and replacement, Geographical, EE and replacement
133	**Construction, Distribution and Production / Operations Managers** Engineering Maintenance Manager, Importer or Exporter, Production / Operations Manager	655	674	693	716	751	787	7.1	Geographical, equity, replacement
139	**Miscellaneous Specialist Managers** Laboratory Manager Quality Assurance Manager Retail Manager (General)	515	530	545	563	590	618	5.6	Geographical, equity, replacement, EE,

From the percentage demand which is the total projected demand over the period 2011-2016 (column 15-16) for each occupation as a percentage of total occupations in the same minor group code, it is clear that the priorities for the AgriSETA are

1. Aquaculture, Crop, Livestock and Ornamental Horticultural Farmers and Farm Managers
   Targeting Agronomy, Horticultural and Mixed Crop Farmers and Farm Managers, Livestock and Mixed Crop and Livestock Farmers and Farm Managers.
2. Aquaculture, Crop, Livestock and Ornamental Horticultural Farm Production Managers / Foremen
   Targeting Agronomy, Ornamental and Horticultural, and Mixed Crop Farm Production Managers and Foreman (including supervisors)
3. Operations Managers
   Targeting Engineering Maintenance Managers, Exporters of agricultural products, and Agricultural Production and Operations Managers
4. Miscellaneous Specialist Managers
   Targeting Laboratory and Quality Assurance Managers

Group 2: Professionals

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
221	**Accountants, Auditors and Company Secretaries** Accountant (General), Management Accountant, Company Secretary, **External auditor,** Internal Auditor, **Compliance Officer**	198	207	216	226	239	253	7.5	Geographical, EE, Replacement, Red-meat: Standards, Quality, Health, Hygene, Safety
222	**Financial Brokers and Dealers, and Investment Advisors** Commodities Trader, **Agricultural procurer, buyer**	49	51	53	55	58	61	1.8	Geographical, equity, replacement, **Environment**
223	**Human Resource and Training Professionals** Training and Development Professional, Technical Instructor / Trainer	100	103	106	111	117	123	3.6	Geographical, equity, replacement
224	**Information and Organisation Professionals** Economist, **Agricultural economist, Environmental / natural resource economist, Policy Analyst, Risk Advisor,** Skills Development Facilitator	19	22	25	28	31	34	1.0	**Equity, DAFF - trends analysts, Environment,** Replacement
225	**Sales, Marketing and Communication Management Professionals** Marketing Practitioner - Agricultural produce, Sales Representative / Salesman (Agricultural Produce)	140	144	148	154	162	170	5.0	Geographical, equity, replacement
232	**Architects, Designers, Planners and Surveyors** Landscape Architect, **Urban and Regional Planner (Natural resource management consultant/ officer/planner, environmental policy planner, land use planner)**	49	51	53	55	58	61	1.8	Geographical, **Environment**
233	**Engineers and Engineering Technologists** Chemical Engineer, Industrial Engineer, Mechanical Engineer, **Agricultural Engineer**	120	126	132	138	146	154	4.5	Geographical, Equity, **Sub-sectors, DAFF**
234	**Natural and Physical Science Professionals** Agricultural Consultant **(Agricultural advisor, extension officer, field officer, farm consultant / advisor)**, Agricultural Scientist (Pomologists, Viticulturalists, Animal Genetics, Acqua scientists, **Immunologist**), Food Technologist, **Conservation officer (Environmental officer, forestry conservationist, land care facilitator, species protection officer), Environmental research scientist (Conservancy advisory scientist, , ecological researcher, land degradation analyst), Earth and Soil Scientist (Soil conservationist, advisor), Zoologist (Entomologist)**, Veterinarian **(especially for State)**	1 610	1 656	1 703	1 759	1 843	1 930	57.0	None, Geographical, Equity, **Environmental sector input; DAFF - need to train and fill 700 vacancies to hit target of 1 officer to 400 farmers**
251	**Health Diagnostic and Promotion Professionals** Occupational Health and Safety Advisor, Health Promotion Officer	347	357	367	379	397	416	12.3	Geographical, EE, Replacement, **Occupational health and safety and Hygene**

254	**Midwifery and Nursing Professionals** Registered Nurse (Community Health)	50	52	54	56	59	62	1.8	Geographical, EE
262	**Database and Systems Administrators, and ICT Security Specialists** Systems Administrator	101	104	107	111	116	122	3.6	Replacement

From the percentage demand analysis, the skills development priorities are:

1. Natural and Physical Science Professionals
   Focusing on
   Agricultural Consultants (Agricultural advisors, extension officers, field officers, farm consultants and advisors),
   Agricultural Scientists (Pomologists, Viticulturalists, Animal Genetics, Aqua scientists, Immunologists),
   Food Technologists,
   Conservation officers (Environmental officer, forestry conservationist, land care facilitator, species protection officer), Environmental research scientist (Conservancy advisory scientist, , ecological researcher, land degradation analyst), Earth and Soil Scientist (Soil conservationist, advisor), Zoologist (Entomologist), Veterinarians (especially for State)
2. Health Diagnostic and Promotion Professionals
   Focussing on Occupational Health and Safety Advisors and Health Promotion Officers

Group 3: Technicians and Trades Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
311	**Agricultural, Medical and Science Technicians** Agricultural Technician, Livestock Inspector, Agricultural / Horticultural Produce Inspector, Food Technician, Crop Produce Analyst, Livestock Product Analyst	1 694	1 739	1 787	1 844	1 930	2 021	26.7	Geographical, EE, replacement
321	**Mechanics and Automotive Electricians** Automotive Motor Mechanic, Diesel Motor Mechanic, Motor Mechanic (General)	777	799	821	848	888	929	12.3	Geographical, EE, replacement
322	**Fabrication Engineering Trades Workers** Metal Fabricator (Boilermaker), Welder	929	953	978	1 008	1 054	1 102	14.5	Geographical, EE, replacement
323	**Mechanical Engineering Trades Workers** Fitter (General), Fitter and Turner, **Fitter-Welder**, Millwright	1 398	1 434	1 471	1 517	1 587	1 660	21.9	Geographical, EE, replacement
341	**Electricians** Electrician (General), General, light current	612	628	644	661	673	704	9.3	Geographical, EE, replacement
342	**Electronics and Telecommunications Trades Workers** Air-conditioning and Refrigeration Mechanic, Electronic Instrument Trades Worker (General)	351	361	371	383	401	420	5.5	Geographical, EE, Replacement
361	**Animal Attendants Trainers and Shearers** Animal Attendant / Groomer, Shearer	328	337	348	364	362	379	5.0	Replacement, retention
399	**Miscellaneous Technicians and Trades Workers** Sugar Juice Extraction Process Controller, Miller, Bulk Storage Controller, Cotton Ginning Process Controller , Tea Maker, Perishable Produce Packing Controller	298	308	318	330	348	366	4.8	Emerging occupations, EE, replacement, geographical

From the percentage demand analysis, the skills development priorities are:

1. Agricultural, Medical and Science Technicians
   Focussing on Agricultural Technicians, Livestock Inspectors, Agricultural and Horticultural Produce Inspectors, Food Technicians, Crop Produce Analysts and Livestock Product Analysts

2. Mechanical Engineering Trades Workers
   Focussing on Fitters, Fitter and Turners, Fitter-Welders and Millwrights
3. Fabrication Engineering Trades Workers
   Focussing on Boilermakers and Welders
4. Mechanics and Automotive Electricians
   Focussing on Automotive Motor Mechanics, Diesel Motor Mechanics and Motor Mechanics

Group 5: Clerical and Administrative Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
551	**Accounting Clerks and Bookkeepers** Accounts Clerk, Payroll Clerk	90	93	96	99	104	109	6.7	EE, replacement
591	**Purchasing, Supply, Transport and Dispatch Administrative Workers** Production Administrator, Sales Clerk / Officer, Warehouse Administrator / Clerk	781	802	824	851	891	933	57.0	Geographical, EE, replacement
599	**Miscellaneous Administrative Workers** Noxious Weeds and Pest Inspector	502	515	528	544	569	595	36.3	New legislated occupation

From the percentage demand analysis, the skills development priorities are:

1. Purchasing, Supply, Transport and Dispatch Administrative Workers
   Focussing on Production Administrators, Sales Clerks and Officers, Warehouse Administrators and Clerks
2. Miscellaneous Administrative Workers
   Focussing on Noxious Weeds and Pest Inspectors

Group 6: Sales Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	Comments
611	**Insurance Agents and Sales Representatives** Auctioneer, Agricultural Chemical Sales Representative	35	37	39	41	43	46	EE, replacement
621	**Sales Assistants and Salespersons** Automotive Parts Salesperson	64	66	68	71	75	79	Replacement

Given the low demand figures in respect of the overall picture of scarce skill occupations in the agricultural sector, no priority has been accorded to the development of Sales Workers by the AgriSETA.

Group 7: Machine Operators and Drivers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
711	**Machine Operators** Agricultural Produce Processing and Handling Plant Operator	34	35	36	**38**	**40**	**42**	1.7	EE, replacement
712	**Stationary Plant Operators** Boiler/Engine Operator, Bulk Materials Handling Plant Operator	158	163	168	174	183	192	7.6	New occupation in sugar industry, EE
721	**Mobile Plant Operators Farm Equipment / Machinery Operator**	1 120	1 148	1 177	1 213	1 268	1 326	52.5	**All sub-sectors**
723	**Truck Drivers** Truck Driver (General)	816	837	858	884	924	966	38.2	None, Geographical, EE, Replacement, **Especially for highly technical machines**

From the percentage demand analysis, the skills development priorities are:
1. Mobile Plant Operators
   Focussing on Farm Equipment and Machinery Operators; and
2. Truck Drivers

Group 8: Elementary Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
831	**Food Process Workers** Coffee and Tea Process Worker (Bush Tea)	5	6	7	**8**	**9**	**10**	0.5	Replacement
839	**Miscellaneous Factory Process Workers** Product Examiner (Red Meat)	627	643	660	680	711	743	35.9	None, Geographical, EE
841	**Farm, Forestry and Garden Workers** Pest or Weed Controller	1 114	1 142	1 171	1 207	1 262	1 319	63.7	New legislation requirements

From the percentage demand analysis, the skills development priorities are:
1. Product examiners, especially for the red meat industry, and
2. Farm workers, especially pest and weed controllers.

Critical Skills Overview

The following table provides an overall picture of critical skills which was identified using the highest level of grouping in the Organising Framework of Occupations, Group 1.

Major Occupational Group		Adjusted Baseline	Low-Medium Growth		Medium Growth	Medium-High Growth	
			2011-12	2012-13	2014-15	2014-15	2015-16
1	**Managers** 23 occupations	86 908	89 092	91 329	94 080	98 323	102 760
2	**Professionals** 14 occupations	5 756	5 908	6 064	6 251	6 539	6 841
3	**Technicians & Trades Workers** 13 occupations	36 124	37 032	37 964	39 108	40 876	42 722
4	**Community & Personal Service Workers**	-	-	-		-	-
5	**Clerical & Admin Workers** 2 occupations	591	607	623	642	672	703
6	**Sales Workers**	-	-	-		-	-
7	**Machine Operators & Drivers** 7 occupations	12 725	13 046	13 376	13 781	14 405	15 057
8	**Elementary Workers** 13 occupations	274 326	281 189	288 225	296 878	310 245	324 211

It must be noted that the factor analysis used to create the baseline and the year-on-year projection "targets" have not been rounded off and hence the target figures provided appear to suggest a level of specificity of skills demand that would be more associated with labour force planning than is actually the case.
The figure (target) in the 2015-16 column reflects the total projected demand over the period 2011-2016 as the projection formula used is calculated from the baseline on low-medium, medium and medium-high growth scenarios.

The main drivers of critical skills demand appear to be upgrading of existing skills, creation of new skills as a result of technological innovations, government programmes as well as growing export participation of sector. Other drivers seem to be changes in legislation and employment equity requirements.

Group 1: Managers

From the percentage demand which is the total projected demand over the period 2011-2016 (column 15-16) for each occupation as a percentage of total occupations in the same minor group code, it is clear that the priorities for the AgriSETA are:

Aquaculture, Crop, Livestock and Ornamental Horticultural Farmers and Farm Managers Focussing on Agronomy Farm Production Managers, Ornamental Horticultural Farm Production Managers, Horticultural Farm Production Managers, Mixed Crop Farm Production Managers, Livestock Farm Production Managers, Livestock Farm Production Managers / Foremen and Poultry Farm Production Managers / Foremen

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
111	**Chief Executives, General Managers, Legislators, Senior Government Officials** Chief Executive Officer / Managing Director (Enterprise / Organisation)	10	11	12	13	14	15	<0.1	For promotion of EE employees
121	**Aquaculture, Crop, Livestock and Ornamental Horticultural Farmers and Farm Managers** Agronomy Farmer / Farm Manager, Ornamental Horticultural Farmer / Farm Manager, Arboricultural Farmer / Farm Manager, Horticultural Farmer / Farm Manager, Mixed Crop Farmer / Farm Manager, Livestock Farmer / Farm Manager, Poultry Farmer/Farm Manager, Mixed Crop and Livestock Farmer / Farm Manager	81 795	83 843	85 942	88 524	92 511	96 678	94.1	Fast growing industry, Upskilling of existing staff, Huge demand for upskilling land reform beneficiaries
122	**Aquaculture, Crop, Livestock and Ornamental Horticultural Farm Production Managers / Foremen** Agronomy Farm Production Manager / Foreman, Ornamental Horticultural Farm Production Manager / Foreman Horticultural Farm Production Manager / Foreman, Mixed Crop Farm Production Manager / Foreman, Livestock Farm Production Manager / Foreman, Livestock Farm Production Manager / Foreman, Poultry Farm Production Manager / Foreman	3 736	3 832	3 930	4 052	4 236	4 431	4.3	Skills upgrading, Land reform, Equity and replacement
132	**Business Administration Managers** Research and Development Manager	26	27	28	29	31	33	<0.1	
133	**Construction, Distribution and Production / Operations Managers** Engineering Maintenance Manager, Importer or Exporter, Production/Operations Manager (Manufacturing), Operations Manager (Non Manufacturing), Supply & Distribution Manager	1 331	1 368	1 405	1 449	1 517	1 588	1.5	Advancing existing skills, Development, Upgrading and/or new technology
139	**Miscellaneous Specialist Managers** Laboratory Manager	10	11	12	13	14	15	<0.1	

Group 2: Professionals

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
221	**Accountants, Auditors and Company Secretaries** Internal Auditor	175	180	185	191	200	209	3.1	Upgrading existing skills
222	**Financial Brokers and Dealers, and Investment Advisors** Commodities Trader	49	51	53	55	58	61	0.9	
223	**Human Resource and Training Professionals** Workplace / Industrial Relations Advisor, Training and Development Professional, Technical Instructor / Trainer	80	84	88	92	98	104	1.5	Continuously updating on new legislation, Updating existing skills, New technology
224	**Information and Organisation Professionals Agricultural economist**	23	24	25	26	28	30	0.4	Economic changes
225	**Sales, Marketing and Communication Management Professionals** Marketing Practitioner, Sales Representative / Salesman (Industrial Products)	194	200	206	213	223	234	3.4	
233	**Engineers and Engineering Technologists** Mechanical Engineer, Electrical Engineer Agricultural Engineer	644	662	681	703	737	772	11.3	Process specific top up, Sugar industry, Heavy current, Top up related to mechanisation
234	**Natural and Physical Science Professionals** Agricultural Consultant, Agricultural Scientist	4 531	4 645	4 762	4 905	5 126	5 358	78.3	DoA requirement linked to Agric, Land reform
251	**Health Diagnostic and Promotion Professionals** Environmental Health Officer	60	62	64	66	69	73	1.1	New legislation, consumer demands

From the percentage demand analysis, the critical skills development priorities are:

1. Natural and Physical Science Professionals
   Focussing on Agricultural Consultants and Agricultural Scientist; and
2. Engineers and Engineering Technologists with emphasis on Mechanical, Electrical and Agricultural Engineers

Group 3: Technicians and Trades Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
311	**Agricultural, Medical and Science Technicians** Agricultural Technician, Livestock Inspector, Agricultural/ Horticultural Produce Inspector	932	957	983	1 013	1 061	1 110	2.6	Updating on technological changes
313	**ICT and Telecommunications Technicians** Web Administrator	34	35	36	38	40	42	0.1	Upgrading existing skills
321	**Mechanics and Automotive Electricians** Small Engine Mechanic	800	820	841	867	907	948	2.2	Artisan, Top up related to mechanisation
331	**Bricklayers, Carpenters and Joiners** Bricklayer (General handyman)	39	40	41	43	45	48	0.1	Farm maintenance - top-up
361	**Animal Attendants Trainers and Shearers** Animal Attendant / Groomer	3 028	3 104	3 182	3 278	3 426	3 581	8.4	Farm worker, Upgrading basic skills, life skills
362	**Ornamental Horticultural Trades Workers** Gardener, Arborist, Landscape Gardener	31 182	31 963	32 764	33 748	35 268	36 856	86.3	Ornamental horticulture, Mainly nurseries, Growth in golf estates and high density housing.
399	**Miscellaneous Technicians and Trades Workers** Integrated Manufacturing Line Machine Setter and Minder, Packaging Manufacturing Machine Setter and Minder, Miller	109	113	117	121	129	137	0.3	Top up related to mechanisation, Top up - technology

From the percentage demand analysis, the critical skills development priorities are:
1. Ornamental Horticultural Trades Workers to cater mainly for Gardeners, Arborists and Landscape Gardeners; and
2. Animal Attendants Trainers and Shearers focussing on Animal Attendants and/or Groomers

The main driver for demand in this group appears to be increased mechanisation as well as technological changes being implemented in the sector.

Group 5: Clerical and Administrative Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	Comments
591	**Purchasing, Supply, Transport and Dispatch Administrative Workers** Purchasing Office, Import-Export Administrator	591	607	623	642	672	703	Top-up, Growing export participation of sector

The demand analysis for this group has shown that the critical skills development priorities are chiefly Purchasing, Supply, Transport and Dispatch Administrative Workers. Due to the growing export participation of the sector, Purchasing Office and Import-Export Administrators were identified as requiring skills development interventions.

Group 7: Machine Operators and Drivers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
711	**Machine Operators** Paper Products Machine Operator, Agricultural Produce Processing and Handling Plant Operator	1 036	1 063	1 091	1 125	1 177	1 231	8.2	Forklift, motorised agricultural machinery
712	**Stationary Plant Operators** Weighbridge Operator	496	509	522	538	563	589	3.9	Upgrading existing skills - technology
721	**Mobile Plant Operators** Agricultural Mobile Equipment Operator, Loader Operator, Forklift Driver	8 857	9 079	9 308	9 589	10 022	10 475	69.6	Technological changes require constant up-skilling, Technological changes require constant up-skilling, Annual renewal of certification - legal
733	**Truck Drivers** Truck Driver (General)	2 336	2 395	2 455	2 529	2 643	2 762	18.3	

From the percentage demand analysis, the critical skills development priorities are:
1. Mobile Plant Operators focussing on Agricultural Mobile Equipment Operators, Loader Operators and Forklift Drivers
2. Truck Drivers with emphasis on General Truck Drivers
3. Machine Operators focussing on Paper Products Machine Operators, Agricultural Produce Processing and Handling Plant Operators

Changes in technology are the main driver for demand in critical skills for this group.

Group 8: Elementary Workers

OFO Code	Occupation	Base line	11-12	12-13	13-14	14-15	15-16	%	Comments
831	**Food Process Workers** Silo Worker, Perishable Produce Packhouse Worker, Red Meat De-Boner, Slaughterer	8 022	8 225	8 433	8 688	9 081	9 491	2.9	Upskilling of existing staff, Poor educational level
832	**Packers and Fillers** Container Filler	1 000	1 025	1 051	1 083	1 132	1 183	0.4	Poor educational level
841	**Farm, Forestry and Garden Workers** Crop Production Farm Worker / Assistant, Garden Workers, Ornamental Horticultural or Nursery Assistant, Livestock Farm Worker / Assistant, Mixed Crop and Livestock Farm Worker / Assistant, Irrigationist, Chemical Mixer snd Harvester / Picker	265 304	271 939	278 741	287 107	300 032	313 537	96.7	Poor educational level, Technological changes require constant up-skilling

From the percentage demand analysis, the critical skills development priorities are:

Farm, Forestry and Garden Workers focussing on Crop Production Farm Workers and/or Assistants, Garden Workers, Ornamental Horticultural or Nursery Assistants, Livestock Farm Worker s and/or Assistants, Mixed Crop and Livestock Farm Workers / Assistants, Irrigationists, Chemical Mixers and Harvesters / Pickers.

The main driver for increase in demand for this group appears to be upskilling of staff as a result of their current poor educations levels.

5. THE STRATEGIC PLAN – 2011-2016

Alignment with national and sector strategies and objectives

Draft National Skills Development Strategy III (2011-2016)

In accordance with the Skills Development Act (SDA) section 10(1)(a) each Sectoral Education and Training Authority (SETA) is required to develop a Sector Skills Plan (SSP) within the framework of the National Skills Development Strategy (NSDS).

The key national strategies that the DHET requires all Sector Skills Plans to align with includes a consideration of national and sector growth and development strategies, particularly those related to the national economic and development strategy, the National Human Resources Development Strategy and those related to the Industrial Policy Framework, innovation and technology and Rural Development. In accordance with the requirements of the Skills Development Act (1997) as amended (December 2008), the SSPs will reflect provincial growth and development strategies particularly the skills demand and supply issues identified through provincial skills development forums as specified in the Skills Development Act (December 2008 amendment).

NSDS III requires sector skills strategies to contribute to the achievement of the country's new economic growth and social development goals. These are embodied in the new Medium Term Strategic Framework's strategic priorities, which include

1. *Speeding up growth and transforming the economy to create decent work and sustainable livelihoods*
2. Massive programme to build economic and social infrastructure
3. **Comprehensive rural development strategy linked to land and agrarian reform and food security**

4. **Strengthen the skills and human resource base**
5. Improve the health profile of all South Africans
6. Intensify the fight against crime and corruption
7. *Build cohesive, caring and sustainable communities*
8. Pursuing African advancement and enhanced international cooperation
9. **Sustainable resource management and use**
10. *Building a developmental state, including improvement of public services and strengthening democratic institutions*

From these government priorities, it is clear that the work of the AgriSETA contributes directly to three priorities (bolded) and impacts on at least three more priorities (italicised).
The SETA has examined the relevant skills requirements and, informed by the strategies that have been developed to take these forward, is confident that the draft SSP (2011-2016) will support the development of the skills base on which the achievement of the MTSF objectives depend.

Alignment with the draft Integrated Growth & Development Plan

One of the themes running through the sector analysis, informed by the views of sector stakeholders, is the need for the alignment of efforts across government if there is to be a significant improvement in productivity, employment and enterprise development. It is therefore appropriate for AgriSETA to align its work with the plans and strategies of government, and in particular the line government department DAFF.

In September 2010 a two-day national workshop was convened by DAFF to launch and engage with stakeholders on a new **Integrated Growth and Development Plan (IGDP) for Agriculture**, **Forestry and Fisheries for the period 2011 – 2031**. Whilst Forestry and Fisheries are not currently the responsibility of AgriSETA, Agriculture is and the goals set out in the IGDP are key to the work of the AgriSETA. In the event of the Forestry and Fisheries sub-sectors becoming part of AgriSETA[50] it will be relatively straight forward to accommodate them particularly if the SETAs where they are currently located also align their sub-sector strategic plans to the draft IGDP. Alignment will also assist in helping SETAs to work together to meet needs in areas of sub-sector overlap and in coordinating efforts along the backward and forward supply chain, particularly important for aligning with the rural development strategy.

The IGDP sets out to create an enabling environment wherein all stakeholders can work towards a set of goals which, when achieved, will result in increased equity, growth and sustainability. The IGDP sets out four overarching strategic objectives. For the purpose of AgriSETA planning these can be understood as "sector objectives" that can then be used to frame the SETA's strategic objectives that will focus specifically on skills development in support of the IDGP.

The sector objectives are:

1. **Equity and Transformation**: including equity ownership and employment equity; management; skills development; preferential procurement; enterprise development and socio-economic development. This objective includes accessing markets, information and support, including finance, extension services and equipment. There is a specific focus on the beneficiaries of land reform and assisting them to establish sustainable farming enterprises. Equity is understood to include : attention to Class (addressing the unequal nature of society and the economy and deliberately setting out to empower poor and unemployed people through skills development); attention to race (broad-based black economic empowerment as a critical strategy to support with skills development); attention to gender (women are vulnerable and not able to access some of the most prestigious and rewarding occupations, and must be empowered to change this); attention to youth aged 16-24 years (far too many young people leave school with few prospects of finding decent work. Skills development,

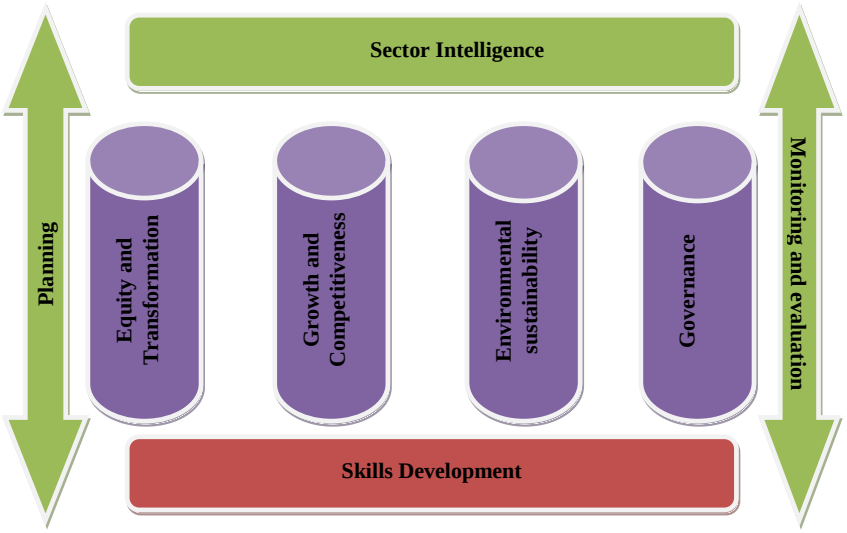
[50] DAFF Interview: Chief Director Sector Skills Agriculture, Forestry and Fisheries. View of the Department is that whole primary sector should be covered. Minister supports a unified SETA with one mandate whose main focus is primary production.

including induction to work, is a vital bridge from youth into productive and satisfying adulthood); and attention to older people who need to remain economically active if rural economies are to be built; attention to disability (removing barriers to persons with disabilities and enabling them to access meaningful work and income; attention to HIV and AIDS (HIV/AIDS is eroding our efforts and it must be confronted including in all skills development interventions).

2. **Growth and Competitiveness**: focusing on food security, increase production, support smallholders and emerging farmers, open up internal market as well as export possibilities globally, reducing import dependencies, reducing input and transaction costs and generally creating an enabling environment for the creation and strengthening of viable and sustainable agricultural enterprises. Partnerships are envisaged between the public and private sectors, between large successful commercial farms and emerging farms, in areas of common interest such as extension services and mentoring.
3. **Environmental sustainability**: a concerted approach to natural resource management including protection of scarce resources such as water, soil and marine life and the management of ecosystems, and generally improved risk management. Climate change will be monitored and managed and early warning systems developed. Research and the promotion of alternative production methods is envisaged as well as improved regulations and enforcement.
4. **Governance**: There will be specific focus on clarifying responsibilities and achieving improved accountability. Inter-departmental and cross departmental processes will be put in place, including state owned enterprises and a comprehensive monitoring and evaluation system developed. Knowledge and information management will be a new focus to support effective governance.

AgriSETA sector skills planning objectives

The sector stakeholders at the DAFF workshop on 16 and 17 September 2010 were supportive of the broad strategic objectives and in particular for the commitments made to improve coordination and accountability. The stakeholder interviews and engagements leading to the preparation of the AgriSETA Sector Skills Plan (2011-2016) also endorsed the need for improved coordination within the sector, greater levels of trust and cooperation, alignment of skills development with strategic sector and sub-sector growth interventions and the achievement of more focussed and effective human development. The linkages between the SETA skills development strategy and the IDGP sector objectives are illustrated in the diagram below



AgriSETA has developed seven strategic objectives that align with the four DAFF objectives as follows.

IDGP Objectives	AgriSETA strategic objectives
1. Equity and Transformation	1. Facilitating a common understanding of the dynamics of the sector and its human development needs to support inclusive growth and development of the sector 2. Skills development in the agriculture supply chain contributing to growth in the rural economy 3. Skills development across all sub-sectors to maximize equity impact
2. Growth and Competitiveness	4. Building enterprise viability and sustainability through training and development 5. Building and supporting partnerships to facilitate access to learning programmes, enhance the quality of learning programmes and raise the skills base of the sector
3. Environmental sustainability	6. Assisting the sector to manage natural resources and take advantage of green technologies through skills development support and funding
4. Governance	7. Supporting skills development within DAFF and DRDLR to provide appropriate support to agricultural enterprises, establishing sound social partner governance structures and systems, monitoring human development and evaluating impact

Strategic Objective 1: Facilitating a common understanding of the dynamics of the sector and its human development needs to support inclusive growth and development of the sector

Sector knowledge and information

The AgriSETA sector analysis and subsequent Sector Skills Plan stakeholder engagements identified a range of issues that are impacting and will continue to have a disruptive effect on enterprise viability and on the SETA's ability to sustain human development initiatives. Scenario analysis has been applied and two major variables have been identified, namely the extent of coordinated government support to agriculture, and the economy (global, national and local rural). These variables will impact on the sector as a whole, and at the same time will impact on the sector's ability to deal with the many changes and challenges that can be anticipated.

Whilst skills planning is based on the best current knowledge of the sector and skills demand scenario projections, change in inevitable. It will be important for AgriSETA, in partnership with DAFF and other stakeholders, to constantly monitor the sector and its dynamics, and to share and exchange understandings with other role players. In this way the SETA can play an important role in mobilising the efforts of providers, employers and other stakeholders to address the skills needs to meet sector and sub-sector dynamics.

Learning and employment opportunities information

In order for learners to succeed they need to be guided prior to enrolment on both the best match of their interests and abilities to occupational requirements as well as on their best prospects for employment and decent remuneration. Alignment requires input from the labour market as well as vehicles for matching potential learners to opportunities. The information gathered and support services generated need to be synchronised centrally and made available nationally.

Outcome 1: Reliable Sector intelligence and information to support planning, monitoring and evaluation

Output 1.1: Skills planning, monitoring and evaluation system established and integrated with a sector wide information management system

1.1.1 Reliability of the skills demand and demand projection model is monitored and researched to enhance value-add of information and 'target' setting

1.1.2 Partnerships across the sector are concretised to ensure that an integrated information and knowledge management capacity is established to provide the sector with reliable and current information on growth and sustainability of the sector, including skills demand and development

1.1.3 Sector information, analyses and reports are regularly published to serve the needs of the social partners across the sector and add-vale to sector analyses, planning, monitoring and evaluation activities

1.1.4 Research capacity development is supported through partnerships with universities, agricultural research institutions and councils

Output 1.2: Learning and skills development needs communicated

1.2.1 Education and training needs communicated and a shared understanding between employers, employees and providers is developed on the length of time required to acquire the requisite knowledge and skills associated with particular occupations

1.2.2 Scarce skills and occupational demand information is provided in accessible and user-friendly format to a range of institutions and structures (listed below) to encourage learners, out-of-school youth and adults to work in the sector and provide them with career planning information and support. Genera information on opportunities, career pathways, programmes and providers forms part of this communication through a range of mechanisms– on the web site, in publications, and communiqués.

- Schools (through the national school career information and guidance capability being established by DHET),
- FET Colleges and accredited private providers,
- Agricultural Colleges,
- Universities and Universities of Technology,
- National and sector social partners,
- Provincial skills development forums
- Land claim beneficiaries and
- Communities, especially in rural areas, possibly through district centres associated with the Provincial skills development forums.

Strategic Objective 2: Skills development located within the agriculture supply chain contributing to growth in the rural economy

It is important that the SETA and its stakeholders contribute to rural development, one of the national objectives for the current MTSF and a priority in the draft Integrated Growth and Development Plan. The sector analysis has described the dual nature of the South African economy, which is felt most acutely in the rural areas of the country. Very often the suppliers of plant, machinery, seeds, fertiliser and other inputs (looking backwards in the supply chain) as well as the packaging, transport, storage, marketing and retail outputs (looking forward in the supply chain) are all located in the lager towns and cities. Efforts have

been made to locate such activities in rural and peri-urban areas but economies of scale, infrastructure and other factors, including skills shortages, mitigated against the success of such attempts.

The weakness of the rural agricultural supply chain is a critical factor in the failure of the rural economy to respond to successive government interventions and initiatives. From the perspective of the SETA it has become clear that supporting emerging farming enterprises but ignoring the supply chain is an error. Skills development may assist in improving production methods, but if input costs are high and transaction costs involved in getting products to commercial centres are also prohibitive, those enterprises will fail. The SETA will therefore focus skills development not only the needs of rural-based co-operatives and emerging farmers, but also on the supply chains on which these farming activities depend.

It is recognised that when attempting to provide skills development services in the supply chain other SETAs will also have key roles to play: for example, in transport TETA, in equipment supplies and services MERSETA, in storage, packaging and retail W&RSETA. The AgriSETA will therefore forge partnerships and develop common programmes with relevant SETAs to achieve this objective. AgriSETA will not provide programmes located with other SETAs, but funding for agricultural sector workers and new entrants, the communication of programmes and how they can be accessed will be coordinated and efforts will be made to make access to skills development as simple as possible.

Outcome 2: Skills development is contributing to strengthening rural supply chains and the rural economy reflects growth and sustainability

Output 2.1 Cross SETA and cross-sectoral skills development needs are identified and addressed

Supply and value chains in each sub-sector mapped and skills required to support establishment of sustainable forward- and backward enterprises are identified

Skills needs and appropriate interventions are agreed with all stakeholders and relevant SETAs

Learning programmes are planned, developed and implemented with formal agreements for agricultural sector learners to access programmes available through relevant SETAs secured

Strategic objective 3: Supporting skills development across all sub-sectors to maximise equity impact

As indicated in the section on alignment with the draft Integrated Growth and Development Plan, equity considerations include two key and related dimensions of equity in the South African context: Enterprise ownership and management (BEE) and Employment Equity (expanded to include class, age and HIV/AIDS with race, gender and disability as reflected in the draft NSDS III).

Strategically, the AgriSETA will facilitate and support skills development to address both of these dimensions and will focus on beneficiary target groupings of skills development and capacity building interventions to achieve the requisite Agricultural Sector Scorecard and employment equity targets, where appropriate.

Outcome 3: Skills development contributes to the achievement of equity in enterprise ownership and management and in the skills profile of the sector

Output 3.1 The 30% ownership and management target for agricultural enterprises is supported through skills development

Partnerships are established with the relevant social partners and structures to identify enterprises which require skills development support to achieve the 30% ownership and management target

Project designed for pool of Manager-Owner and Management learning beneficiaries including identification of appropriate programmes and short-courses adapted to meet the needs of the identified beneficiaries, suitable coaches and mentors recruited and trained to support the identified beneficiaries

Project implemented, evaluated and enhancements made for future beneficiaries.

Output 3.2 The 30% target is reflected amongst social partner representation and in AgriSETA governance structures

3.2.1 Capacity development needs analysis conducted with all social partner structures

3.2.2 Appropriate development interventions designed and implemented, specific to social partner structure needs

3.2.3 Mechanisms to ensure continuity of representation, enhance application of learning secured

3.2.4 Representation and participation in AgriSETA governance, planning, monitoring and evaluation enhanced.

Output 3.3 Employment equity impact realised

3.3.1 Skills development interventions through learning programmes: ABET and foundational programmes, PIVOTAL programmes, skills programmes and short courses, academic and innovation programmes and capacity development mechanisms will target

- 80% blacks, particularly Africans
- 50% women
- 4% people with disabilities

3.3.2 By January 2016, **50%** of all AgriSETA learner and skills development beneficiaries will be youth (aged 16-24 years) in order to address the replacement demand of current workers related to retirement and an aging workforce, support strategies to revitalise the agricultural sector and address the youth unemployment crisis in South Africa.

3.3.3 **% sector coverage:** HIV / AIDS awareness programmes for communities and farming enterprises supported

Strategic Objective 4: Building enterprise viability and sustainability through training and development

It is recognised that there are many different types of enterprise, including a very important difference between established commercial enterprises and under resourced farmers and their emerging enterprises. In the changing economic conditions that prevail, and in the context of different scenarios unfolding in the sector, there will be commercial farms that will find it difficult to survive, and at the same time there will be emerging farms that establish themselves as viable businesses. The aim of the SETA will be to work with all enterprises to ensure that through the development of skills the enterprises become stronger and more able to meet the ever growing challenges and changes that they have to confront.

The main concerns of stakeholders in the sector are in relation to the quantity (and duration of training when set against the size of some of the skills challenges), the focus of training (is it being properly targeted, with existing competence being assessed and taken into account) and the quality of some of the learning programmes available to the sector.

A number of stakeholders raised a concern over the number of short courses and the need to develop skills over time. This concern will be addressed by locating programmes within broader career-pathing strategies in the sub-sectors.

Standardised mechanisms for RPL assessment and credentialing are essential to recognise skills gained through experience and indigenous knowledge. Workers in the sector need to be afforded the opportunity to have their skills acquired through experience measured against that which they require to attain. However it is important not to see RPL as a simple assessment process. Those who have acquired skills through practical experience often do not have an adequate knowledge base to support practice, and in the context of the complex challenges facing the sector such knowledge is important. Also any assessment conducted as part of RPL must be contextualised and structured so as to enable the person assessed to

make use of the assessment for ongoing learning and development as well as progression and development in the work place.

It is proposed that RPL should be understood as a process that takes place during bridging and other access programmes and that the SETA should plan and structure access to such programmes.

In relation to quality, the AgriSETA is not the provider of training and skills development but a facilitator and support service structure for access to and quality of training and skills development. There is also an acknowledgement that with the establishment of the QCTO the role of the SETA will change. It is proposed that during the transition phase where the SETA retains its quality assurance role and negotiates changes with the QCTO, there will be a greater focus on quality management. In other words the focus will shift from formal quality assurance of providers to the monitoring of provision against the needs of sub-sectors and the education and training outputs that have been agreed for each sub-sector. The role of the SETA in setting standards for and monitoring quality of work based learning remains a key priority function and focus of the AgriSETA.

Outcome 4: Training needs of the sector and its sub-sectors are being addressed in accessible programmes that meet agreed quality standards

Output 4.1: Promotion and funding of programmes aligned to opportunities and needs

4.1.1 SETA PIVOTAL and discretionary grants aligned to priority programmes agreed for each sub-sector.

4.1.2 Programmes monitored and access and quality concerns identified and addressed

4.1.3 Bridging and access programmes, including RPL agreed and made available

4.1.4 Targeted programmes on managing HIV and AIDS in each sub-sector

Output 4.2 Career pathways mapped within the sector

4.2.1 Career paths in each sub-sector linked to the occupation framework for that sub-sector and the associated qualifications monitored for changing requirements and tasks

4.2.2 SETA interventions at various points in each occupational learning pathway linked to the career pathway agreed

4.2.3 Sector career pathway agreed – building on sub-sector pathways and ensuring cross- sub-sector pathways that outline occupational learning and qualification requirements and allow for progression and mobility across the sector

Output 4.3 Programmes linked to pathways identified, standards set and implemented

4.3.1 Programmes addressing entry into the career paths – viz. bridging programmes and RPL are identified and requirements agreed

4.3.2 Experiential work based learning and work placement programmes are identified and requirements agreed against priorities

4.3.3 PIVOTAL programmes within the career path, including work placements, internships, learnerships and apprenticeships identified and requirements agreed against priorities

4.3.4 Skills programmes and short courses for ongoing development, occupational specialisation development and top-up skills requirements are identified and requirements agreed against priorities

4.3.5 Target enrolments agreed by priority, including funding support

4.3.6 Learners identified, assessed and placed in the relevant programmes

4.3.7 Coaches and mentors secured and trained to support learners in work placements

4.3.8 Throughput, success and impact monitored and evaluated.

Strategic Objective 5: Building and supporting partnerships to facilitate access to learning programmes, enhance the quality of learning programmes and raise the skills base of the sector

Sector stakeholders have raised a concern that competent providers are not always accessible in many rural areas and that the SETA needs to examine this challenge and put in place plans to build capacity where it does not exist. A number of public colleges and universities have stated that they generally obtain funding from government for courses linked to full qualifications, but can only provide shorter courses addressing specific skills needs when funding is made available by employers, donors and SETAs.

Agricultural colleges and FET colleges are often ideally located to provide education and training, but cannot respond to need because of a lack of funding, and in some cases limited capacity. The SETA will examine this on a province by province (and region by region) basis and will facilitate discussions and agreements on how sub-sector skill needs can be addressed in a viable and sustainable manner.

Given the strategic location of many colleges there is a case to be made for the uplifting of their capacity – given the gap that exists between their current capacity and that which is required to dramatically increase the number of learners served – particularly where many of these learners come from poor homes unable to pay market-set course fees. This places renewed focus on the capacity of public partner learning institutions to deliver programmes that are of the required relevance and quality.

The improvements required may be in any one of a number of areas, including: Curriculum and qualification design; Lecturer, teacher or trainer development (a matter of national priority); Learning material; Student information and support; Facilitation of partnerships between public and private providers.

One of the difficulties the SETA faces when trying to put in place, or facilitate, quality targeted provision, including providing support to providers, is the lack of a provincial presence. It is not realistic within the AgriSETA budget to establish functioning offices in each province. Some provinces are so large that one office would in any case not be adequate. Nevertheless the absence of a SETA presence has been raised by stakeholders, and will be addressed. Ways can and will be found of establishing SETA contact people locally, including possible agency and partnership arrangements. A number of suggestions have been made in relation to partnerships to establish extension services in the different sub-sectors, and such models can also be considered in relation to SETA services, and in particular the SETA function of facilitating access to appropriate quality training.

Outcome 5 Education and training capacity issues are addressed contributing to better access and improved quality

Output 5.1: Capacity evaluated and programmes in place to address priorities

5.1.1 Capacity assessment tool developed and providers surveyed to determine capacity needs and possibilities for AgriSETA support

5.1.2 Programme to support providers by identified capacity needs agreed across the sector through partnership arrangements with DHET, DAFF and provincial structures

5.1.3 Capacity development programme implemented in accordance with partnership arrangements, monitored and evaluated

Output 5.2 AgriSETA presence established in all provinces

5.2.1 AgriSETA engages with DAFF, all provincial skills development forums, social partners and commodity organisations to identify possibilities for raising profile and skills development support services in provinces to service all agricultural enterprises

5.2.2 Mechanisms agreed and implemented, monitored and evaluated

Strategic objective 6: Assisting the sector to manage natural resources and take advantage of green technologies through skills development support and funding

One of the most difficult challenges for the agricultural sector is the damage being done to the environment and natural resources by primary production processes. An obvious and current challenge is the pollution of crops and water supplies from mining and other industrial activities. Another identified by environmental scientists is the extensive damage being done to natural ecosystems. Soil erosion due to over grazing has also reached crisis proportions in many areas. It is anticipated that there will be a series of crises over the coming years, whether due to over use of limited water supplies and other resources, diseases and damaged immune systems because of experimental changes in production methods, or a failure to heed danger signals in time.

At the same time environmental measures are creating new industries and opportunities as well as new technologies which the sector needs to be aware of and access. As the sector moves from one of seeing the environmental challenges as a risk to one of seeing the opportunities opening up (note the growth in the solar heating panel industry resulting from recent electricity price increased) there will be industries and services that will grow and which will require skills development interventions.

AgriSETA will monitor the environmental discourses in the sector, enter research and other partnerships, will conduct awareness workshops and will plan and support the delivery of training where it is needed.

Outcome 6: The skills development needs of the sector to address environmental challenges are agreed and programmes put in place to address them

Output 6.1 Needs identified

6.1.1 Research conducted to identify the critical focal areas over the next five years

6.1.2 Relationships and partnerships established with specialists in the relevant fields

6.1.3 Priority programmes are identified and plans put in place for delivery and access

6.1.4 A programme of workshops facilitated on the environment, natural resource management and green technologies, that raise awareness and build support for the training programmes

Output 6.2 Needs addressed

6.2.1 Programmes of training (to be agreed) supported, through bursaries, including:

- Training of bio-scientists and environmental specialists
- Making expertise available across the sector
- Support for product development specialists for indigenous plants – such as medical herbs, amarula, honey bush tea and the like

6.2.2 Programmes that build the academic profession and engender research and innovation identified and implemented

Strategic objective 7: Supporting skills development within DAFF and DRDLR to provide appropriate support to agricultural enterprises, establishing sound social partner governance structures and systems, monitoring human development and evaluating impact

As has been set out in the sector analysis, land reform, rural development and agricultural enterprise development require a variety of interventions from government. An under resourced farmer requires water, municipal services, funding, market access, skills training, transport etc. The farmer will also need specialist assistance and emergency help when confronted with a drought, flood, or disease. Historically the Department of Agriculture (now DAFF) has provided extension services. Farmers were provided with

regular advice and support, and specialist support and assistance was facilitated by extension officers who played a generic or generalist role supporting farmers. These services have continued in some areas and function well, but in many parts of the country there has been a loss of expertise and an inability to adjust to new priorities and challenges.

In stakeholder engagements it has become clear that many well established farms no longer rely on extension services provided by DAFF, but have created their own supply of services or found them in the market. On the other hand less well resourced commercial farms have not been able to fund such services and remain badly in need of such support. What has become very clear is that emerging and under resourced farmers cannot survive without such assistance, and so the provision of extension services is seen as a critical priority in the sector. Because of the changes in extension services over time, and in line with international trends various partnerships are becoming common, where sub-sector role players fund and organise appropriate targeted support. At the same time there is an expectation that the DAFF will also provide support or become partners with the various private role players.

What ever the model developed, and this could include variations in provinces and by sub-sector, AgriSETA will play a role in supporting these services with skills development and training.

Given the dependencies that exist in the sector – on government services at national, provincial and local level, on effective sub-sector stakeholder structures and systems, on an increasing number of public/private partnerships, and on research and academic studies and on effective provision of relevant training by training providers to rural communities – the need for accountability is evident. Unless the different role players implement the plans that they commit themselves to then the challenges of farming enterprises will continue with more and more commercial enterprises closing or being taken over, and few emerging farms becoming commercially viable. Only if all contributing organisations and structures are held to account will progress be achieved.

DAFF and DRDLR therefore need to increase their capacity put in place accountability mechanisms and to monitor human development, and the contribution of the various role players, in the sector and evaluate the impact of funded education and training and other inputs on the growth and sustainability of the sector. Improved planning, coordination, monitoring and evaluation are essential to achieving the wider sector goals set in the IGDP. Whilst the establishment of effective governance structures and systems is a DAFF responsibility the SETA will play an important role in supporting DAFF through various skills development initiatives and interventions. These will include working with stakeholders to develop a clearer understanding of their roles and their importance in raising the skills levels in the sector.

Outcome 7: DAFF has improved its capacity to coordinate and facilitate support to the sector and to agricultural enterprises. Human development in support of good governance is monitored and reported on and its impact evaluated

Output 7.1 Extension services

7.1.1 Research conducted into the structure and composition of extensions services in each province and locality

7.1.2 Gaps in extension service provision identified and skills needs of extension services assessed

7.1.3 Programmes of training planned and delivered to enable extension services to contribute meaningfully to agricultural enterprise development

Output 7.2: Monitoring and Evaluation

7.2.1 A plan is agreed between DAFF and the SETA to build capacity in support of effective monitoring and evaluation

7.2.2 A plan is agreed between DAFF and the SETA to build stakeholder capacity and understanding

7.2.3 A plan is agreed between DRDLR and the SETA to put in place the structures and skills to support rural development

7.2.4 Monitoring and evaluation arrangements are agreed to enable human development to be monitored and its impact measured

Framework of activities, measures and success indicators for the SSP

The following table provides a list of activities, measures and indicators against the objectives, outcomes and outputs of the Strategic Skills Plan for the sector as detailed above.

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
Equity and Transformation					
SO 1:Facilitating a common understanding of the dynamics of the sector and its human development needs to support inclusive growth and development					
Reliable sector intelligence and information to support planning, monitoring and evaluation	Skills planning, monitoring and evaluation system established and integrated with a sector wide information management system	▪ Conduct research into sector needs ▪ Update SSP ▪ Build partnerships to support government alignment ▪ Update MIS and align to DAFF, RDLR and DHET systems ▪ Establish sharing of information	▪ Quality research conducted ▪ SSP updated annually ▪ Partnerships agreed and supporting alignment ▪ MIS system reviewed and aligned ▪ Information shared	Research report SSP signed off Formal agreements between partners MIS reports Shared analysis reflected in strategies and plans of DAFF, DRDLD,DHET and AgriSETA	Recommendations agreed and acted on. SSP reflects current and future changes Positive feedback on working relationships and joint projects Shared understanding is reflected in joint projects and programmes
	Learning and skills development needs communicated	▪ Facilitate sub-sector workshops ▪ Develop career guides and information ▪ Seek feedback on guides from users	▪ Career guides produced and distributed ▪ Career guides assisting agricultural career and study choices	Career guides Distribution lists and receipt confirmations.	Colleges, universities and schools report on interest in and usefulness of guides
SO2:Skills development located within the agriculture supply chain contributing to growth in the rural economy					
Skills development is contributing to strengthening rural supply chains and the rural economy reflects growth	Cross SETA and cross-sectoral skills development needs are identified and addressed	▪ Plan and facilitate workshops (action research) to identify supply chain entities ▪ Discuss concept, possible joint initiatives, funding and processes with relevant SETAs ▪ Explore and pilot possible models (e.g. SABCOHA HIV/AIDS supply	▪ Increasing knowledge and understanding of supply chains ▪ Growing cooperation between SETAs to address supply chain skills needs	Regional data collected and organised: entities in local supply chains, skills needs, relevant programmes, relevant SETAs etc Formal agreements between SETAs on concept, programmes, funding and	Narrative descriptions of regions, regional dynamics, supply chains, challenges, skills needs. Monitoring reports examining both the success of the training

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
and sustainability		chain programme) ▪ Identify relevant programmes ▪ Identify delivery partners and processes ▪ Plan and manage delivery	▪ Models pilotted ▪ Programmes identified and communicated ▪ Delivery partners identified ▪ Programmes managed effectively and efficiently	process Agreements (contracts) with delivery partners Training programme reports Programmes reported on	and the views of participants on impact in the local supply chain and economy
SO 3: Supporting skills development across all sub-sectors to maximise equity impact					
Skills development contributes to the achievement of equity in enterprise ownership and management and in the skills profile of the sector	The 30% ownership and management target for agricultural enterprises is supported through skills development	▪ Plan and deliver programmes for land claims beneficiaries ▪ Plan and deliver programmes for emergent farmers ▪ Plan and deliver programmes for managers and staff in BEE entities	▪ Owner-manager development projects with mentorship partnerships implemented ▪ Funded projects established ▪ Funding partnerships developed that enable projects to be sustained	Statistical reports on SETA programmes	M&E reports examining quality and impact of the training
	The 30% target is reflected amongst social partner representation and in AgriSETA governance structures	▪ Facilitate workshops on the role of the SETA ▪ Publicise the work of the SETA in funded programmes	▪ Increased interest and participation of emerging farmers in SETA processes and structures	Statistical reports on equity profile of participants in SETA workshops and structures	Annual assessment of equity achievements in SETA processes and structures
	Employment equity impact realised	▪ Develop reporting formats and processes for race, gender, class and HIV/AIDS ▪ Produce quarterly equity reports	▪ Equity impact of SETA programmes reported on	Monitoring reports on numbers remaining in agricultural enterprises	Evaluations of programmes and their impact on enterprises

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
		▪ Develop tracer system to monitor individuals and enterprises supported by the SETA with skills development ▪ Plan and manage annual impact evaluations			
Growth and Competitiveness					
SO4:Building enterprise viability and sustainability through training and development					
Training needs of the sector and its sub-sectors are being addressed in accessible programmes that meet agreed quality standards	Promotion and funding of programmes aligned to opportunities and needs	**Plan and support:** **At entry point:** ▪ ABET & foundational learning programmes ▪ Bridging programmes **(**NQF levels 1, 2 and 3) ▪ Work placements for exposure to sector ▪ Standardised **RPL** mechanisms **PIVOTAL Programmes** ▪ Work placements during institutional learning programme ▪ Learnerships, apprenticeships, internships ▪ Skills programmes & other non-accredited short courses ▪ Programmes that build academic profession and engender innovation ▪ Programmes for researchers, professionals and technologists **Align SETA funding to SETA priority programmes:**	Targets will be set for each of these programmes	▪ Data from ATRs ▪ Data from quarterly reports from NSF funded projects	▪ ETQA reports ▪ Feedback from learners and employers ▪ M&E reports

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
		PIVOTAL Grants ▪ 10% of mandatory to support PIVOTAL **Discretionary Grants** ▪ Additional grants for PIVOTAL, skills programmes, short courses **Catalytic Grants** **NSF NRF bursaries**			
	Career pathways mapped within the sector	▪ Update OFO list ▪ Facilitate sub-sector workshops to agree career-paths ▪ Develop posters and pamphlets setting out career-paths and SETA role at different stages	▪ OFO for Agricultural sector finalised across all sub-sectors ▪ Occupational career pathways finalised for all sub-sectors	▪ OFO ▪ Career-path posters and pamphlets	▪ Feedback from schools, colleges and universities
	Programmes linked to pathways identified, standards set and implemented	▪ Map qualifications and programmes to career-paths ▪ Design and plan short courses to support career development ▪ Identify providers ▪ Adjust grants policy to address career-path needs	▪ Qualifications and curricula agreed for priority development ▪ Skills programmes and short-courses developed ▪ Learning programmes designed ▪ Providers identified – quality issues addressed	▪ Reports on programme delivery	▪ M&E Reports on programme delivery ▪ ETQA reports ▪ Feedback from participants and employers

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
			▪ Grants policy reflects needs in career-paths		
SO 5: Building and supporting partnerships to facilitate access to learning programmes, enhance the quality of learning programmes and raise the skills base of the sector					
Education and training capacity issues are addressed contributing to better access and improved quality	Capacity evaluated and programmes in place to address priorities	▪ Conduct research into provider and programme availability ▪ Evaluate the quality of available provision ▪ Identify gaps ▪ Develop strategy to ensure availability of quality training ▪ Identify potential delivery partners ▪ Plan and manage programme of capacity building ▪ Monitor and report on programme implementation ▪ Plan and conduct an evaluation of provision in rural areas	▪ Current capacity assessed. ▪ Weaknesses and gaps identified ▪ Strategy agreed within the SETA ▪ Partners identified ▪ Capacity of providers developed to meet sector needs ▪ Provider capacity monitored and reported on	▪ Research reports and data reports from database of providers ▪ ETQA accreditation and programme approval reports ▪ Partnership agreements ▪ Capacity building plans ▪ M&E reports	▪ Research reports ▪ Feedback from learners in identified areas ▪ Evaluation report
	AgriSETA presence established in all provinces	▪ Develop concept paper – what the SETA needs to do locally. ▪ Analyse and report on need per province ▪ Develop options paper - models of service delivery ▪ Pilot models ▪ Identify potential partners in SETA service delivery ▪ Plan and manage a process to secure partners with SLAs	▪ SETA objectives for service delivery agreed ▪ Options for establishing a SETA presence considered by the SETA board ▪ 3 models piloted and reported on ▪ Partnerships put in place to provide	▪ Concept paper ▪ Options paper ▪ Pilot reports ▪ SLAs	▪ Board minutes (quality of process and decision-making) ▪ Feedback from SETA member organisations and stakeholders

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
		▪ Obtain feedback from SETA members and stakeholders	services		
Environmental sustainability					
SO 6: Assisting the sector to manage natural resources and take advantage of green technologies through skills development support and funding					
The skills development needs of the sector to address environmental challenges are agreed and programmes put in place to address them	Needs assessed	▪ Conduct research into concerns and needs within the sector ▪ Put in place information sharing system across sector, commodity bodies and provinces ▪ Facilitate a series of workshops on the environment ▪ Develop monitoring mechanisms ▪ Identify potential partners to conduct research, raise awareness, build capacity and monitor progress ▪ Review skills needs annually ▪ Identify priority programmes to support members to address environmental challenges	▪ Needs identified ▪ Information available across the sector ▪ Awareness levels raised ▪ Monitoring system in place ▪ Partners identified ▪ Skills needs identifies ▪ Priority programmes agreed ▪ Funding secured and allocated	▪ Needs report ▪ Data base reports ▪ Workshop reports ▪ Monitoring reports ▪ Partner list and SLAs ▪ Skills needs lists ▪ Grants policy	▪ Qualitative research findings ▪ Examples of local actions identified from workshops ▪ Report on partnership projects and outcomes

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
	Needs addressed	▪ Review OFO and incorporate environment related occupations ▪ Develop career pathways for environmental specialists ▪ Identify relevant qualifications and learning programmes ▪ Review grants policy to enable funding of priority programmes ▪ Facilitate/support priority programmes	▪ OFO updated to include environmental occupations ▪ Career-path posters and pamphlets ▪ Qualifications and programmes identified and communicated ▪ Grants policy reviewed ▪ Programme in place	▪ OFO ▪ Posters and pamphlets ▪ Qualifications and programmes ▪ Grants policy ▪ Programmes	▪ Feedback from partner organisations ▪ Feedback from SETA members, stakeholders and structures
Governance					
SO 7: Supporting skills development within DAFF and DRDLR to provide appropriate support to agricultural enterprises, establishing sound social partner governance structures and systems, monitoring human development and evaluating impact					
DAFF and DRDLR have improved their capacity to coordinate and facilitate support to the sector and to agricultural enterprises. Human development in support of good governance is	Extension services	▪ Facilitate a series of workshops with DAFF and DRDLR on extension services ▪ Develop an agreed career path for extension officers and extension services ▪ Take part in DAFF-led processes to put in place partnerships for the delivery of extension services ▪ Develop SETA programmes to support the establishment of effective extension services	▪ Extension officer and services requirements agreed ▪ Career-paths agreed ▪ Partnerships in place ▪ SETA programmes to support extension services agreed and implemented	▪ Workshop reports ▪ Career-path posters and pamphlets ▪ SLAs ▪ Programme reports	▪ Feedback from emerging farmers on extension services ▪ Feed back from DAFF and DRDLR on SETA support

Outcomes	Outputs	Activities	Indicators	Measure (Quant)	Measure (Qual)
monitored and reported on and its impact evaluated	Monitoring and Evaluation	▪ Facilitate joint processes with DAFF and DRDLR to determine need in relation to governance and M&E ▪ Identify training needs within the departments ▪ Identify training needs of stakeholders ▪ Develop and facilitate programmes to support M&E and improved governance	▪ Conduct research into concerns and needs within the sector ▪ Put in place information sharing system across sector, commodity bodies and provinces	▪ Conduct research into concerns and needs within the sector ▪ Put in place information sharing system across sector, commodity bodies and provinces	▪ Conduct research into concerns and needs within the sector ▪ Put in place information sharing system across sector, commodity bodies and provinces

APPENDIX 1: Skills demand in the Department of Agriculture, Forestry & Fisheries (2008/09)

Occupational categories	Gender	No. of employees as at 1 April 2008	Training needs identified at start of reporting period			
			Learnerships	Skills programmes and other short courses	Other forms of training	Total
Legislators, senior officials and managers	Female	16	–	125	–	125
	Male	26	–	70	–	70
Professionals	Female	290	–	344	–	344
	Male	307	–	424	–	424
Technicians and associate professionals	Female	203	–	100	–	100
	Male	299	–	119	–	119
Clerks	Female	419	6	457	–	463
	Male	138	–	180	–	180
Service and sales workers	Female	17	–	5	–	5
	Male	51	–	158	–	158
Craft and related trades workers	Female	–	–	100	–	100
	Male	62	–	119	–	119
Plant and machine operators and assemblers	Female	1	–	11	–	11
	Male	68	–	59	–	59
Elementary occupations	Female	125	16	63	–	79
	Male	616	7	213	290	510
Gender subtotals	Female	1 071	22	1 235	–	1 257
	Male	1 567	7	1 360	290	1 657
Total		**2 638***	**29**	**2 547**	**290**	**2 866**

* No. of employees, excluding Minister and Deputy Minister

Source: DAFF Annual Report, 2008-20009

Appendix 2: AgriSETA registered learnerships

Registered Learnership	NQF Level	SAQA Registration No'
Learnership in Agri Sales and Service	4	22 Q 220001 20 178 4
Learnership: Agricultural Machinery Technician	2	22 Q 220007 20 160 2
Learnership in Specialist Agricultural Machinery Technician	5	22 Q 220009 21 258 5
Agri Trade Processes	2	22 Q 220013 30 125 2
FETC: Meat Examination: Applying Basic Business Principles	4	30 Q 3000 2823 164 4
Further Education and Training Certificate: Seed Marketing: Execute Seed Trials	4	22 Q 220025 21 126 4
Further Education and Training Certificate: Seed Research and Development: Certify as Seed Unit	4	22 Q 220027 21 121 4
FETC: Seed Research and Development: Conduct a Field Inspection of a Seed Unit	4	22 Q 220028 20 120 4
Seed Research and Development Operations: Operate in a Team	3	22 Q 220020 22 121 3
Seed Research and Development Operations: Apply Basic Business Principles	3	22 Q 220021 22 121 3
National Certificate: Seed Processing and Packaging: Operate in a Team	3	22 Q 220026 21 123 3
Sugar Industry Technical Maintenance worker	2	22 Q 220011 39 128 2
National Certificate: Sugar Manufacturing and Refining Technical Maintenance	3	30 Q300003 23 146 3
Further Education and Training Certificate: Manufacturing Technical Maintenance: Produce Components by Performing Engineering Turning Operations	4	30 Q 3000 1321 173 4
FETC: Manufacturing Technical Maintenance: Produce Components by Performing Milling Operations	4	30 Q 3000 1521 173 4
FETC: Manufacturing Technical Maintenance: Develop and Fabricate from Complex Drawing	4	30 Q 3000 1420 173 4
National Certificate in Sugar Technology	5	22 Q 220036 22 140 5
Further Education and Training Certificate: Sugar Processing	4	22 Q 220035 31 144 4
National Certificate in Sugar Technology Processing: Sugar Refining	2	22 Q 220037 28 124 2
National Certificate in Sugar Technology Processing: Juice Preparation	2	22 Q 220038 28 124 2
National Certificate in Sugar Technology Processing: Crystallisation	2	22 Q 220039 27 122 2
National Certificate in Sugar Technology Processing: Laboratory Practice	2	22 Q 220040 25 124 2
National Certificate in Sugar Technology Processing: Extraction	2	22 Q 220041 28 122 2
NC: Rooibos Production: Applying Basic Business Principles	2	30 Q 3000 2427 130 2
NC: Rooibos Processing: Applying Basic Business Principles	2	30 Q 3000 2224 123 2
National Certificate: Cigarette Production	3	22 Q 220046 23 121 3

Appendix 3: Scarce Skills: 2011-2016 (Baseline and Projections)

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 1: MANAGERS															
111101	Chief Executive Officer / Managing Director (Enterprise / Organisation)		HET	7		73	134	114	53	55	57	59	62	65	Mainly equity and geographical reasons
111201	Corporate General Manager		HET, mentorships	7		45	239	300	106	109	112	116	122	128	Mainly equity and replacement
121201	Agronomy Farmer / Farm Manager		FET, mentorships	5	Y	1 285	49	102	1 338	1 372	1 407	1 450	1 516	1 585	Lack of farm managers on land reform projects
121204	Horticultural Farmer / Farm Manager		FET, Learnerships, mentorships	5	Y	250	269	276	257	264	271	280	293	307	For equity and replacement reasons
121205	Mixed Crop Farmer / Farm Manager		FET, Learnerships, mentorships	5	Y	250	58	56	248	255	262	270	283	296	Equity and replacement
121301	Livestock Farmer / Farm Manager		FET, Learnerships, mentorships	5	Y	1 762	65	54	1 751	1 795	1 840	1 896	1 982	2 072	Land reform beneficiaries, but also equity and replacement
121401	Mixed Crop and Livestock Farmer / Farm Manager		FET, Learnerships, mentorships	5	Y	1 750	31	31	1 750	1 794	1 839	1 895	1 981	2 071	1000 towards land reform and balance for equity and replacement reasons
122201	Agronomy Farm Production Manager/Foreman		Learnerships	4	Y	555	83	102	574	589	604	623	652	682	New occupation for large and growing agronomy farms
122202	Ornamental Horticultural Farm Production Manager / Foreman		Learnerships, skills Programmes	4	Y	40	39	129	130	134	138	143	150	157	Equity and replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
122204	Horticultural Farm Production Manager / Foreman		Learnerships, skills Programmes	4	Y	750	574	726	902	925	949	978	1 023	1 070	Equity and replacement
122205	Mixed Crop Farm Production Manager / Foreman		Learnerships, skills Programmes	4	y	600	59	81	622	638	654	674	705	737	Equity and replacement
131102	Sales and Marketing Manager	Clip marketing	Skills Programme	5	y	9	226	170	170	175	180	186	195	204	Equity, **Export market growth**
132101	Corporate Services Manager		Skills Programme	5	y	14	44	33	3	4	5	6	7	8	Equity and replacement
132102	Resources Manager		Skills Programme	5	y	30	32	37	35	36	37	39	41	43	Equity and replacement
132301	Personnel / Human Resource Manager		Learnerships, skills Programmes	5	y	35	212	141	141	145	149	154	161	169	Equity and replacement
132501	Research and Development Manager		HET, Learnerships	5	y	115	20	17	112	115	118	122	128	134	New. None geographical, EE and replacement
133202	Engineering Maintenance Manager		HET, FET	6		70	55	32	47	49	51	53	56	59	Geographical, equity, replacement
133301	Importer or Exporter		Learnerships	6	y	110	10	15	115	118	121	125	131	137	New, none, geographical, equity replacement
133502	Production / Operations Manager (Manufacturing)		Learnerships	6	y	129	427	310	12	13	14	15	16	17	New, none, geographical, equity replacement
133504	Operations Manager (Non Manufacturing)		Learnerships	6	y	185	299	262	148	152	156	161	169	177	None, Geographical, EE, Replacement
133601	Supply & Distribution Manager		Learnerships, skills Programmes	6	y	374	246	205	333	342	351	362	379	397	None, Geographical, EE, Replacement
139903	Laboratory Manager		Learnerships	6	y	28	28	10	10	11	12	13	14	15	Geographical, equity, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
139906	Quality Assurance Manager		Learnerships	6	y	195	105	75	165	170	175	181	190	199	None, Geographical, EE, Replacement
142101	Retail Manager (General)		Learnerships	6	y	15	553	340	340	349	358	369	386	404	Equity
TOTALS	**24**					**8 669**	**3 857**	**3 618**	**9 362**	**9 609**	**9 860**	**10 170**	**10 642**	**11 133**	
GROUP 2: PROFESSIONALS															
221101	Accountant (General)		Learnerships	6	y	222	329	163	56	58	60	62	65	68	None, Geographical, EE,
221102	Management Accountant		Learnerships	6	y	10	102	58	58	60	62	64	67	71	EE
221201	Company Secretary		Learnerships	6	y	5	16	19	8	9	10	11	12	13	EE
221203	**External auditor**	**Auditor**					1	0	1	2	3	4	5	6	**Water**
221204	Internal Auditor		HET	6		106	90	58	74	76	78	81	85	89	None, Geographical, EE, Replacement
221205	**Compliance Officers**						0	1	1	2	3	4	5	6	**Red meat sub-sector: Standards and quality; Health, hygene and safety**
222101	Commodities Trader	**Agricultural procurer, buyer**	HET Programmes, **HET Module**	6		37	106	49	49	51	53	55	58	61	Geographical, equity, replacement, **Environmental sector input**
223301	Training and Development Professional	Skills strategy related	Skills Programme	5	y	81	69	52	64	66	68	71	75	79	None, geographical, EE
223302	Technical Instructor / Trainer		Learnerships, skills Programmes	5		50	24	10	36	37	38	40	42	44	None, EE, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
224301	Economist	**Agricultural economist, Environmental / natural resource economist**	**HET Pivotal Programmes, Bursaries**	**6**		**10**	19	22	13	14	15	16	17	18	**Equity, DAFF - trends analysts, Environmental sector input**
224402	**Policy Analyst**	**All, including Risk advisor**	**HET Pivotal Programmes, Bursaries**	**6**			3	1	1	2	3	4	5	6	**Environmental sector input**
224703	Skills Development Facilitator	SDF	Skills Programme	5	y	8	15	12	5	6	7	8	9	10	Equity and replacement
225103	Marketing Practitioner	Agricultual produce	Learnership	5	y	27	101	73	73	75	77	80	84	88	Equity and replacement
225401	Sales Representative / Salesman (Industrial Products)	Agricultural produce	Skills Programme	5	y	110	164	121	67	69	71	74	78	82	Geographical, equity, replacement
232102	Landscape Architect	Golf courses and related	HET, Learnership	7		50	1	0	49	51	53	55	58	61	Geographical
232601	**Urban and regional planner**	**Natural resource management consultant/ officer/planner, environmental policy planner, land use planner**	**HET Pivotal Programmes, Bursaries**	**6**			0	0	0	0	0	0	0	0	**Environmental sector input**
233101	Chemical Engineer	Various but mainly sugar industry	HET	7		45	83	15	15	16	17	18	19	20	None, geographical, equity
233501	Industrial Engineer	Secondary industry	HET	7		45	30	30	45	47	49	51	54	57	None, geographic, equity
233502	Mechanical Engineer	Secondary industry	HET	7		47	126	43	43	45	47	49	52	55	New, Geographical, Equity, **Sub-sectors, DAFF**

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
233902	**Agricultural Engineer**	**Natural resources engineer**	**HET Pivotal Programmes, Bursaries**	**6**			19	17	17	18	19	20	21	22	**Environmental sector input; DAFF, all sub-sectors - depleted pool**
234101	Agricultural Consultant	**Agricultural advisor, extension officer, field officer, farm consultant / advisor etc**	**BURSARIES, FET, HET, PIVOTAL programmes; On-line services**	**6**	**y**	594	113	85	566	581	596	614	642	671	None, Geographical, Equity, **Environmental sector input; DAFF - need to train and fill 700 vacancies to hit target of 1 officer to 400 farmers**
234102	Agricultural Scientist	Pomologists, Viticulturalists, Animal Genetics, Acqua scientists, **Pomologist, Immunologist**	HET, \fet	7		35	162	191	64	66	68	71	75	79	New, EE, **DAFF; Western Cape**
234202	Food Technologist	Primary and secondary industry	HET, FET	5		215	28	18	205	211	217	224	235	246	None, Geographical, EE
234301	**Conservation officer**	**Environmental officer, forestry conservationist, landcare facilitator, species protection officer**	**HET Pivotal Programmes, Bursaries**	**6**			1	2	1	2	3	4	5	6	**Environmental sector input**

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
234303	**Environmental research scientist**	**Conservancy advisory scientist, , ecological researcher, land degradation analyst**	**HET Pivotal Programmes, Bursaries**	**6**			19	13	13	14	15	16	17	18	**Environmental sector input**
234403	**Earth and Soil Scientist**	**Soil conservationist, advisor**	**HET Pivotal Programmes, Bursaries**	**6**			11	1	1	2	3	4	5	6	**Environmental sector input; Green industries**
234508	**Zoologist**	**Entomologist**					2	0	2	3	4	5	6	7	**Green Industires**
234701	Veterinarian	**State veterinarians**	HET	7		750	6	14	758	777	797	821	858	897	Geographical, equity, replacement, **All relevant sub-sector, DAFF**
251302	Occupational Health and Safety Advisor	Primary and secondary industry	HET, FET	6		305	56	47	296	304	312	322	337	353	Geographical, EE, **Occupational health and safety and Hygene - scarce skills sets and training throughout workforce**
251901	Health Promotion Officer	Primary sector	FET	5		50	4	5	51	53	55	57	60	63	Replacement
254404	Registered Nurse (Community Health)	On-farm	FET	5		50	22	22	50	52	54	56	59	62	Geographical, EE
262103	Systems Administrator	IT systems	HET, FET	6		100	112	113	101	104	107	111	116	122	Replacement
TOTALS	**32**					**2 952**	**1 834**	**1 255**	**2 783**	**2 873**	**2 964**	**3 072**	**3 226**	**3 386**	
GROUP 3: TECHNICIANS AND TRADES WORKERS															
311101	Agricultural Technician	Farming implements	FET	5		74	473	539	140	144	148	153	160	168	None, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
311302	Livestock Inspector	Mainly in abattoirs	FET, Learnership, Skills Programme, workplace experience	5	y	250	0	47	297	305	313	323	338	354	Geographical, EE, replacement
311304	Agricultural / Horticultural Produce Inspector	Export readiness	Learnership, skills programme	5	y	170	524	669	315	323	332	342	358	375	Geographical, EE, replacement
311402	Food Technician	Export readiness	Learnership	5	y	428	86	49	391	401	412	425	445	466	None, Geographical, EE, Replacement
311502	Crop Produce Analyst (Level 3)	Seed produciton	Learnership, skills programme	4	y	110	177	110	43	45	47	49	52	55	Geographical, EE, replacement
311503	Livestock Product Analyst (Level 3)	Meat science	Learnership, skills programme	4	y	490	37	55	508	521	535	552	577	603	Geographical, EE, replacement
321201	Automotive Motor Mechanic	Artisan	Apprenticeship	4	y	23	34	21	10	11	12	13	14	15	Geographical, EE
321202	Diesel Motor Mechanic	Artisan	Apprenticeship	4	y	700	153	214	761	781	801	826	864	903	Geographical, EE, replacement
321205	Motor Mechanic (General)	Artisan	Apprenticeship	4	y	30	53	29	6	7	8	9	10	11	Not available in sector
322301	Metal Fabricator	Boilermaker	Apprenticeship	4	y	508	106	58	460	472	484	499	522	546	None, Geographical, EE, Replacement
322303	Welder / Welder (First Class)	Welder	Apprenticeship	4	y	450	71	90	469	481	494	509	532	556	None, Geographical, EE, Replacement
323201	Fitter (General)	General	Apprenticeship	4	y	315	609	334	40	41	43	45	48	51	None, new, geographical, EE, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
323202	Fitter and Turner		Apprenticeship	4	y	540	55	59	544	558	572	590	617	645	None, new, geographical, EE, replacement
323203	**Fitter-Welder**		Apprenticeship	**4**	**y**		0	0	0	0	0	0	0	0	
323501	Millwright		Apprenticeship	4	y	837	67	44	814	835	856	882	922	964	None, new, geographical, EE, replacement
341101	Electrician (General)	General, light current	Apprenticeship	4	y	664	215	163	612	628	644	664	694	726	None, new, geographical, EE, replacement
342101	Air-conditioning and Refrigeration Mechanic	Cooling specialists, mainly fresh produce pack-houses	Apprenticeship	4	y	340	14	12	338	347	356	367	384	402	None, Geographical, EE, Replacement
342304	Electronic Instrument Trades Worker (General)	Sugar mills	Apprenticeship	4	y	14	27	26	13	14	15	16	17	18	New, EE, replacement
361101	Animal Attendant / Groomer	Shearer	Learnership, skills programme	3	y	300	5	33	328	337	346	357	374	391	Old age – replacement
399802	Sugar Juice Extraction Process Controller		On-job, workplace experience	3		10	141	63	63	65	67	70	74	78	New occupation in sugar industry
399803	Miller	Miller	Learnership	4	y	50	87	63	26	27	28	29	31	33	Geographical, EE, replacement
399804	Bulk Storage Controller	Silos	Skills programme	3	y	14	188	114	114	117	120	124	130	136	EE, replacement
399805	Cotton Ginning Process Controller		Skills programme	4	y	27	0	0	27	28	29	30	32	34	Geographical reasons
399806	Tea Maker	Bush tea	Skills programme	3	y	10	0	1	11	12	13	14	15	16	EE, replacement
399808	Perishable Produce Packing Controller	Packing line controller	Skills programme	3	y	150	248	155	57	59	61	63	66	69	None, geographical, EE
TOTALS	**25**					**6 504**	**3 370**	**2 948**	**6 387**	**6 559**	**6 736**	**6 951**	**7 276**	**7 615**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 5 CLERICAL AND ADMINISTRATIVE WORKERS															
551101	Accounts Clerk		Learnership, skills programme	4	y	15	575	0	0	0	0	0	0	0	EE, replacement
551301	Payroll Clerk		Learnership, skills programme	4	y	15	139	90	90	93	96	99	104	109	EE, replacement
591102	Production Administrator		Learnership, skills programme	4	y	350	379	359	330	339	348	359	376	393	None, geographical, EE
591104	Sales Clerk / Officer		Skills programme	4	y	45	415	255	255	262	269	278	291	305	EE, replacement
591106	Warehouse Administrator / Clerk		Skills programme	4	y	250	159	105	196	201	207	214	224	235	None, geographical, EE
599504	Noxious Weeds and Pest Inspector		Skills programme	3	y	500	11	13	502	515	528	544	569	595	New legislated occupation
TOTALS	**6**					**1 175**	**1 678**	**822**	**1 373**	**1 410**	**1 448**	**1 494**	**1 564**	**1 637**	
GROUP 6: SALES WORKERS															
611101	Auctioneer		Skills programme	3	y	20	1	0	19	20	21	22	23	25	EE, replacement
611308	Agricultural Chemical Sales Representative		Skills programme	3	y	15	28	29	16	17	18	19	20	21	Replacement
621302	Automotive Parts Salesperson		Skills programme	3	y	15	178	64	64	66	68	71	75	79	Replacement
TOTALS	**3**					**50**	**207**	**93**	**99**	**103**	**107**	**112**	**118**	**125**	
GROUP 7: MACHINERY OPERATORS AND DRIVERS															
711911	Agricultural Produce Processing and Handling Plant Operator		Skills programme	3	y	65	1268	1 237	34	35	36	38	40	42	EE, replacement
712901	Boiler/Engine Operator		Skills programme	3	y	15	110	211	116	119	122	126	132	138	New occupation in sugar industry

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
712902	Bulk Materials Handling Plant Operator		Skills programme	3	y	10	260	42	42	44	46	48	51	54	EE
721101	**Farm Equipment / Machinery Operator**						3055	4 175	1 120	1 148	1 177	1 213	1 268	1 326	**All sub-sectors**
733101	Truck Driver (General)		Skills programme	3	y	480	811	1 147	816	837	858	884	924	966	None, Geographical, EE, Replacement, **Especially for highly technical machines**
TOTALS	**5**					**570**	**5 504**	**6 812**	**2 128**	**2 183**	**2 239**	**2 309**	**2 415**	**2 526**	
GROUP 8: ELEMENTARY WORKERS															
831109	Coffee and Tea Process Worker	Bush tea	Skills programme	2	y	10	39	34	5	6	7	8	9	10	Replacement
839301	Product Examiner	Red meat	Skills programme	3	y	630	366	363	627	643	660	680	711	743	None, Geographical, EE
841902	Pest or Weed Controller		Skills programme	2	y	1 020	321	415	1 114	1 142	1 171	1 207	1 262	1 319	New legislation requirements
TOTALS	**3**					**1 660**	**726**	**812**	**1 746**	**1 791**	**1 838**	**1 895**	**1 982**	**2 072**	

APPENDIX 3: CRITICAL SKILLS LIST: 2011-2016 (BASELINE AND PROJECTIONS)

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 1: MANAGERS															
111101	Chief Executive Officer / Managing Director (Enterprise / Organisation)		Skills Programme	7	y	30	134	114	10	11	12	13	14	15	For promotion of EE employees
121201	Agronomy Farmer / Farm Manager		Learnerships, mentorships	4	y	25 000	49	102	25 053	25 680	26 322	27 112	28 333	29 608	Huge demand for upskilling land reform beneficiaries
121202	Ornamental Horticultural Farmer / Farm Manager		Learnerships, mentorships	4	y	1 500	42	16	1 474	1 511	1 549	1 596	1 668	1 744	Fast growing industry
121203	Arboricultural Farmer / Farm Manager		Learnerships, mentorships	4	Y	200	7	0	193	198	203	210	220	230	
121204	Horticultural Farmer / Farm Manager		Learnerships, mentorships, skills programmes	4	y	2 000	269	276	2 007	2 058	2 110	2 174	2 272	2 375	Demand to upskill land reform beneficiaries
121205	Mixed Crop Farmer / Farm Manager		Learnerships, mentorships, skills programmes	4	y	2 000	58	56	1 998	2 048	2 100	2 163	2 261	2 363	Land reform beneficiaries
121301	Livestock Farmer / Farm Manager		Learnerships, mentorships, skills programmes	4	y	25 000	65	54	24 989	25 614	26 255	27 043	28 260	29 532	Huge demand for upskilling land reform beneficiaries
121305	Poultry Farmer/Farm Manager		Learnerships	4	y	1 120	165	126	1 081	1 109	1 137	1 172	1 225	1 281	Upskilling of existing staff
121401	Mixed Crop and Livestock Farmer / Farm Manager		Learnerships, mentorships, skills programmes	4	y	25 000	31	31	25 000	25 625	26 266	27 054	28 272	29 545	Huge demand for upskilling land reform beneficiaries
122201	Agronomy Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	20	83	102	39	40	41	43	45	48	
122202	Ornamental Horticultural Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	50	39	129	140	144	148	153	160	168	Skills upgrading

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Alig-ned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
122204	Horticultural Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	700	574	726	852	874	896	923	965	1 009	Land reform
122205	Mixed Crop Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	200	59	81	222	228	234	242	253	265	Land reform
122301	Livestock Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	1 820	36	29	1 813	1 859	1 906	1 964	2 053	2 146	Equity and replacement
122301	Livestock Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	600	36	29	593	608	624	643	672	703	Land reform
122305	Poultry Farm Production Manager / Foreman (Skill Level 4)		Learnerships, skills Programmes	4	y	10	314	381	77	79	81	84	88	92	
132501	Research and Development Manager		Learnerships, skills Programmes	5	y	29	20	17	26	27	28	29	31	33	
133202	Engineering Maintenance Manager		Learnerships, skills Programmes	6	y	71	55	32	48	50	52	54	57	60	Advancing existing skills
133301	Importer or Exporter		Learnerships, skills Programmes	6	y	14	10	15	19	20	21	22	23	25	Development
133502	Production/Operations Manager (Manufacturing)		Learnerships, skills Programmes	6	y	683	427	310	566	581	596	614	642	671	Upgrading, new technology
133504	Operations Manager (Non Manufacturing)		Learnerships, skills Programmes	6	y	530	299	262	493	506	519	535	560	586	Upgrading, new technology
133601	Supply & Distribution Manager		Learnerships, skills Programmes	6	y	10	246	205	205	211	217	224	235	246	
139903	Laboratory Manager		Learnerships, skills Programmes	6	y	10	28	10	10	11	12	13	14	15	
TOTALS	**Scarce Occupations: MANAGERS**					**86 597**	**3 046**	**3 103**	**86 908**	**89 092**	**91 329**	**94 080**	**98 323**	**102 760**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Alig-ned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 2: PROFESSIONALS															
221204	Internal Auditor		Learnerships	6	y	207	90	58	175	180	185	191	200	209	Upgrading existing skills
222101	Commodities Trader		HET Programmes	6		12	106	49	49	51	53	55	58	61	
223103	Workplace / Industrial Relations Advisor		Skills Programme	4	y	35	36	16	15	16	17	18	19	20	Continuously updating on new legislation
223301	Training and Development Professional		Skills Programme	5	y	21	69	52	4	5	6	7	8	9	Updating existing
223302	Technical Instructor / Trainer		Learnerships, skills Programmes	5	y	75	24	10	61	63	65	67	71	75	New technology
224301	Economist	Agricultural economist	HET	6		20	19	22	23	24	25	26	28	30	Economic changes
225103	Marketing Practitioner		Learnership, skills programme	5	y	15	101	73	73	75	77	80	84	88	
225401	Sales Representative / Salesman (Industrial Products)	Agricultural produce	Skills Programme	5	y	15	164	121	121	125	129	133	139	146	
233502	Mechanical Engineer	Secondary industry	HET	7		20	126	43	43	45	47	49	52	55	Process specific top up
233301	Electrical Engineer	Heavy Current					8	11	3	4	5	6	7	8	Sugar industry. Heavy current
233902	Agricultural Engineer		HET	7		600	19	17	598	613	629	648	678	709	Top up related to mechanisation
234101	Agricultural Consultant	Extension officers	FET, Learnerships,	5	y	4 500	113	85	4 472	4 584	4 699	4 840	5 058	5 286	DoA requirement linked to agric. Land reform
234102	Agricultural Scientist	Pomologists, Viticulturalists, Animal Genetics, Acqua scientists,	HET	7	y	30	162	191	59	61	63	65	68	72	
251301	Environmental Health Officer	Primary and secondary industry	HET, FET	6	y	100	57	17	60	62	64	66	69	73	New legislation, consumer demands

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
TOTALS						**5 650**	**1 094**	**765**	**5 756**	**5 908**	**6 064**	**6 251**	**6 539**	**6 841**	
GROUP 3: TECHNICIANS AND TRADES WORKERS															
311101	Agricultural Technician (Skill Level 4)	Farming implements	FET	5		374	473	539	440	451	463	477	499	522	Updating on technological changes
311302	Livestock Inspector (Skill Level 4)	Mainly in abattoirs	Skills Programme, workplace experience	5	y	200	0	47	247	254	261	269	282	295	
311304	Agricultural/ Horticultural Produce Inspector (Skill Level 4)	Export readiness	Skills programme	5	y	100	524	669	245	252	259	267	280	293	
313103	Web Administrator (Skill Level 4)	Website maintenance	Learnership	5		25	4	13	34	35	36	38	40	42	Upgrading existing skills
321204	Small Engine Mechanic (Skill Level 3)	Artisan	Learnership, skills programme	3	y	800	12	12	800	820	841	867	907	948	Top up related to mechanisation
331101	Bricklayer (Skill Level 3)	General handyman	Learnership, skills programme	3	y	30	14	23	39	40	41	43	45	48	Farm maintenance - top-up
361101	Animal Attendant / Groomer (Skill Level 3)	Farm worker	Learnership, skills programme	2	y	3 000	5	33	3 028	3 104	3 182	3 278	3 426	3 581	Upgrading basic skills, life skills
362201	Gardener (Skill Level 3)	Ornamental horticulture	Skills programme	2	y	900	0	0	900	923	947	976	1 020	1 066	Also related to golf estaqtes
362202	Arborist (Skill Level 3)	Ornamental horticulture	Skills programme	2	y	250	19	20	251	258	265	273	286	299	Mainly nurseries
362203	Landscape Gardener (Skill Level 3)	Ornamental horticulture	Learnership, skills programme	3	y	30 000	7	38	30 031	30 782	31 552	32 499	33 962	35 491	Growth in golf estates and high density housing.
399703	Integrated Manufacturing Line Machine Setter and Minder (Skill Level 3)		Skills programme	3	y	20	6	47	61	63	65	67	71	75	Top up related to mechanisation
399709	Packaging Manufacturing Machine Setter and Minder (Skill Level 3)		Skills programme	3	y	40	34	18	24	25	26	27	29	31	Top up related to mechanisation
399803	Miller (Skill Level 3)	Miller	Skills programme	4	y	48	87	63	24	25	26	27	29	31	Top up - technology
TOTALS						**35 787**	**1 185**	**1 522**	**36 124**	**37 032**	**37 964**	**39 108**	**40 876**	**42 722**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Alig-ned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 5 CLERICAL AND ADMINISTRATIVE WORKERS															
591103	Purchasing Officer (Skill Level 3)		Learnership, skills programme	4	y	10	114	94	94	97	100	103	108	113	Top-up
591202	Import-Export Administrator (Skill Level 3)		Learnership, skills programme	4	y	500	19	16	497	510	523	539	564	590	Growing export participation of sector
TOTALS						**510**	**133**	**110**	**591**	**607**	**623**	**642**	**672**	**703**	
GROUP 7: MACHINERY OPERATORS AND DRIVERS															
711301	Paper Products Machine Operator (Skill Level 2)		Skills programme	3		2	1	1	2	3	4	5	6	7	
711911	Agricultural Produce Processing and Handling Plant Operator (Skill Level 2)	Plant operator	Skills programme	3	y	1 065	1268	1 237	1 034	1 060	1 087	1 120	1 171	1 224	Forklift, motorised agricultural machinery
712910	Weighbridge Operator (Skill Level 2)		Skills programme	3	y	500	53	49	496	509	522	538	563	589	Upgrading existing skills - technology
721101	Agricultural Mobile Equipment Operator (Skill Level 2)		Skills programme	3	y	5 000	3055	4 175	6 120	6 273	6 430	6 623	6 922	7 234	Technological changes require constant up-skilling
721206	Loader Operator (Skill Level 2)		Skills programme	2	y	20	141	321	200	205	211	218	228	239	Technological changes require constant up-skilling
721301	Forklift Driver (Skill Level 2)		Skills programme	2	y	3 000	1582	1 119	2 537	2 601	2 667	2 748	2 872	3 002	Annual renewal of certification - legal
733101	Truck Driver (General) (Skill Level 2)		Skills programme	3	y	2 000	811	1 147	2 336	2 395	2 455	2 529	2 643	2 762	
TOTALS						**11 587**	**6 911**	**8 049**	**12 725**	**13 046**	**13 376**	**13 781**	**14 405**	**15 057**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 8: ELEMENTARY WORKERS															
831111	Silo Worker (Skill Level 1)		Skills programme	2	y	30	826	949	153	157	161	166	174	182	Upskilling of existing staff
831114	Perishable Produce Packhouse Worker (Skill Level 1)		Skills programme, ABET	1	y	9 000	7947	3 396	4 449	4 561	4 676	4 817	5 034	5 261	Poor educational level
831201	Red Meat De-Boner (Skill Level 2)		Skills programme	2	y	100	806	915	209	215	221	228	239	250	
831202	Slaughterer (Skill Level 2)		Skills programme	2	y	3 000	438	649	3 211	3 292	3 375	3 477	3 634	3 798	Upskilling of existing staff
832105	Container Filler (Skill Level 1)		Skills programme, ABET	1	y	1 000	0	0	1 000	1 025	1 051	1 083	1 132	1 183	Poor educational level
841201	Crop Production Farm Worker / Assistant (Skill Level 2)		Skills programme, ABET	1	y	10 000	9026	4 723	5 697	5 840	5 986	6 166	6 444	6 734	Poor educational level
841401	Garden Workers (Skill Level 2)		Skills programme, ABET	1	y	12 000	1005	2 144	13 139	13 468	13 805	14 220	14 860	15 529	Poor educational level
841402	Ornamental Horticultural or Nursery Assistant (Skill Level 2)		Skills programme, ABET	1	y	28 000	553	500	27 947	28 646	29 363	30 244	31 605	33 028	Poor educational level
841501	Livestock Farm Worker / Assistant (Skill Level 2)		Skills programme, ABET	1	y	15 000	827	1 146	15 319	15 702	16 095	16 578	17 325	18 105	Poor educational level
841601	Mixed Crop and Livestock Farm Worker / Assistant (Skill Level 2)		Skills programme, ABET	1	y	200 000	14858	10 809	195 951	200 850	205 872	212 049	221 592	231 564	Poor educational level
841903	Irrigationist (Skill Level 2)		Skills programme	2	y	1 000	510	868	1 358	1 392	1 427	1 470	1 537	1 607	Technological changes require constant up-skilling
841905	Chemical Mixer (Skill Level 1)		Skills programme, ABET	1	y	1 000	146	214	1 068	1 095	1 123	1 157	1 210	1 265	Poor educational level
841906	Harvester / Picker (Skill Level 1)		Skills programme, ABET	1	y	15 000	13820	3 645	4 825	4 946	5 070	5 223	5 459	5 705	Poor educational level
TOTALS						**295 130**	**50 762**	**29 958**	**274 326**	**281 189**	**288 225**	**296 878**	**310 245**	**324 211**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 1: MANAGERS															
111101	Chief Executive Officer / Managing Director (Enterprise / Organisation)		HET	7		73	134	114	53	55	57	59	62	65	Mainly equity and geographical reasons
111201	Corporate General Manager		HET, mentorships	7		45	239	300	106	109	112	116	122	128	Mainly equity and replacement
121201	Agronomy Farmer / Farm Manager		FET, mentorships	5	y	1 285	49	102	1 338	1 372	1 407	1 450	1 516	1 585	Lack of farm managers on land reform projects
121204	Horticultural Farmer / Farm Manager		FET, Learnerships, mentorships	5	y	250	269	276	257	264	271	280	293	307	For equity and replacement reasons
121205	Mixed Crop Farmer / Farm Manager		FET, Learnerships, mentorships	5	y	250	58	56	248	255	262	270	283	296	Equity and replacement
121301	Livestock Farmer / Farm Manager		FET, Learnerships, mentorships	5	y	1 762	65	54	1 751	1 795	1 840	1 896	1 982	2 072	Land reform beneficiaries, but also equity and replacement
121401	Mixed Crop and Livestock Farmer / Farm Manager		FET, Learnerships, mentorships	5	y	1 750	31	31	1 750	1 794	1 839	1 895	1 981	2 071	1000 towards land reform and balance for equity and replacement reasons
122201	Agronomy Farm Production Manager/Foreman		Learnerships	4	y	555	83	102	574	589	604	623	652	682	New occupation for large and growing agronomy farms
122202	Ornamental Horticultural Farm Production Manager / Foreman		Learnerships, skills Programmes	4	y	40	39	129	130	134	138	143	150	157	Equity and replacement
122204	Horticultural Farm Production Manager / Foreman		Learnerships, skills	4	y	750	574	726	902	925	949	978	1 023	1 070	Equity and replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
			Programmes												
122205	Mixed Crop Farm Production Manager / Foreman		Learnerships, skills Programmes	4	y	600	59	81	622	638	654	674	705	737	Equity and replacement
131102	Sales and Marketing Manager	**Clip marketing**	Skills Programme	5	y	9	226	170	170	175	180	186	195	204	Equity, **Export market growth**
132101	Corporate Services Manager		Skills Programme	5	y	14	44	33	3	4	5	6	7	8	Equity and replacement
132102	Resources Manager		Skills Programme	5	y	30	32	37	35	36	37	39	41	43	Equity and replacement
132301	Personnel / Human Resource Manager		Learnerships, skills Programmes	5	y	35	212	141	141	145	149	154	161	169	Equity and replacement
132501	Research and Development Manager		HET, Learnerships	5	y	115	20	17	112	115	118	122	128	134	New. None geographical, EE and replacement
133202	Engineering Maintenance Manager		HET, FET	6		70	55	32	47	49	51	53	56	59	Geographical, equity, replacement
133301	Importer or Exporter		Learnerships	6	y	110	10	15	115	118	121	125	131	137	New, none, geographical, equity replacement
133502	Production / Operations Manager (Manufacturing)		Learnerships	6	y	129	427	310	12	13	14	15	16	17	New, none, geographical, equity replacement
133504	Operations Manager (Non Manufacturing)		Learnerships	6	y	185	299	262	148	152	156	161	169	177	None, Geographical, EE, Replacement
133601	Supply & Distribution Manager		Learnerships, skills Programmes	6	y	374	246	205	333	342	351	362	379	397	None, Geographical, EE, Replacement
139903	Laboratory Manager		Learnerships	6	y	28	28	10	10	11	12	13	14	15	Geographical, equity, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
139906	Quality Assurance Manager		Learnerships	6	y	195	105	75	165	170	175	181	190	199	None, Geographical, EE, Replacement
142101	Retail Manager (General)		Learnerships	6	y	15	553	340	340	349	358	369	386	404	Equity
TOTALS	**24**					**8 669**	**3 857**	**3 618**	**9 362**	**9 609**	**9 860**	**10 170**	**10 642**	**11 133**	
GROUP 2: PROFESSIONALS															
221101	Accountant (General)		Learnerships	6	y	222	329	163	56	58	60	62	65	68	None, Geographical, EE,
221102	Management Accountant		Learnerships	6	y	10	102	58	58	60	62	64	67	71	EE
221201	Company Secretary		Learnerships	6	y	5	16	19	8	9	10	11	12	13	EE
221203	**External auditor**	**Auditor**					1	0	1	2	3	4	5	6	**Water**
221204	Internal Auditor		HET	6		106	90	58	74	76	78	81	85	89	None, Geographical, EE, Replacement
221205	**Compliance Officers**						0	1	1	2	3	4	5	6	**Red meat sub-sector: Standards and quality; Health, hygene and safety**
222101	Commodities Trader	**Agricultural procurer, buyer**	HET Programmes, **HET Module**	6		37	106	49	49	51	53	55	58	61	Geographical, equity, replacement, **Environmental sector input**
223301	Training and Development Professional	Skills strategy related	Skills Programme	5	y	81	69	52	64	66	68	71	75	79	None, geographical, EE
223302	Technical Instructor / Trainer		Learnerships, skills Programmes	5		50	24	10	36	37	38	40	42	44	None, EE, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
224301	Economist	**Agricultural economist, Environmental / natural resource economist**	**HET Pivotal Programmes, Bursaries**	**6**		**10**	19	22	13	14	15	16	17	18	**Equity, DAFF - trends analysts, Environmental sector input**
224402	**Policy Analyst**	**All, including Risk advisor**	**HET Pivotal Programmes, Bursaries**	**6**			3	1	1	2	3	4	5	6	**Environmental sector input**
224703	Skills Development Facilitator	SDF	Skills Programme	5	y	8	15	12	5	6	7	8	9	10	Equity and replacement
225103	Marketing Practitioner	Agricultual produce	Learnership	5	y	27	101	73	73	75	77	80	84	88	Equity and replacement
225401	Sales Representative / Salesman (Industrial Products)	Agricultural produce	Skills Programme	5	y	110	164	121	67	69	71	74	78	82	Geographical, equity, replacement
232102	Landscape Architect	Golf courses and related	HET, Learnership	7		50	1	0	49	51	53	55	58	61	Geographical
232601	**Urban and regional planner**	**Natural resource management consultant/ officer/planner, environmental policy planner, land use planner**	**HET Pivotal Programmes, Bursaries**	**6**			0	0	0	0	0	0	0	0	**Environmental sector input**
233101	Chemical Engineer	Various but mainly sugar industry	HET	7		45	83	15	15	16	17	18	19	20	None, geographical, equity
233501	Industrial Engineer	Secondary industry	HET	7		45	30	30	45	47	49	51	54	57	None, geographic, equity
233502	Mechanical Engineer	Secondary industry	HET	7		47	126	43	43	45	47	49	52	55	New, Geographical, Equity, **Sub-sectors, DAFF**

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
233902	**Agricultural Engineer**	**Natural resources engineer**	**HET Pivotal Programmes, Bursaries**	**6**			19	17	17	18	19	20	21	22	**Environmental sector input; DAFF, all sub-sectors - depleted pool**
234101	Agricultural Consultant	**Agricultural advisor, extension officer, field officer, farm consultant / advisor etc**	**BURSARIES, FET, HET, PIVOTAL programmes; On-line services**	**6**	**y**	594	113	85	566	581	596	614	642	671	None, Geographical, Equity, **Environmental sector input; DAFF - need to train and fill 700 vacancies to hit target of 1 officer to 400 farmers**
234102	Agricultural Scientist	Pomologists, Viticulturalists, Animal Genetics, Acqua scientists, **Pomologist, Immunologist**	HET, \fet	7		35	162	191	64	66	68	71	75	79	New, EE, **DAFF; Western Cape**
234202	Food Technologist	Primary and secondary industry	HET, FET	5		215	28	18	205	211	217	224	235	246	None, Geographical, EE
234301	**Conservation officer**	**Environmental officer, forestry conservationist, landcare facilitator, species protection officer**	**HET Pivotal Programmes, Bursaries**	**6**			1	2	1	2	3	4	5	6	**Environmental sector input**

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
234303	**Environmental research scientist**	**Conservancy advisory scientist, , ecological researcher, land degradation analyst**	**HET Pivotal Programmes, Bursaries**	**6**			19	13	13	14	15	16	17	18	**Environmental sector input**
234403	**Earth and Soil Scientist**	**Soil conservationist, advisor**	**HET Pivotal Programmes, Bursaries**	**6**			11	1	1	2	3	4	5	6	**Environmental sector input; Green industries**
234508	**Zoologist**	**Entomologist**					2	0	2	3	4	5	6	7	**Green Industires**
234701	Veterinarian	**State veterinarians**	HET	7		750	6	14	758	777	797	821	858	897	Geographical, equity, replacement, **All relevant sub-sector, DAFF**
251302	Occupational Health and Safety Advisor	Primary and secondary industry	HET, FET	6		305	56	47	296	304	312	322	337	353	Geographical, EE, **Occupational health and safety and Hygene - scarce skills sets and training throughout workforce**
251901	Health Promotion Officer	Primary sector	FET	5		50	4	5	51	53	55	57	60	63	Replacement
254404	Registered Nurse (Community Health)	On-farm	FET	5		50	22	22	50	52	54	56	59	62	Geographical, EE
262103	Systems Administrator	IT systems	HET, FET	6		100	112	113	101	104	107	111	116	122	Replacement
TOTALS	**32**					**2 952**	**1 834**	**1 255**	**2 783**	**2 873**	**2 964**	**3 072**	**3 226**	**3 386**	
GROUP 3: TECHNICIANS AND TRADES WORKERS															
311101	Agricultural Technician	Farming implements	FET	5		74	473	539	140	144	148	153	160	168	None, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
311302	Livestock Inspector	Mainly in abattoirs	FET, Learnership, Skills Programme, workplace experience	5	y	250	0	47	297	305	313	323	338	354	Geographical, EE, replacement
311304	Agricultural / Horticultural Produce Inspector	Export readiness	Learnership, skills programme	5	y	170	524	669	315	323	332	342	358	375	Geographical, EE, replacement
311402	Food Technician	Export readiness	Learnership	5	y	428	86	49	391	401	412	425	445	466	None, Geographical, EE, Replacement
311502	Crop Produce Analyst (Level 3)	Seed produciton	Learnership, skills programme	4	y	110	177	110	43	45	47	49	52	55	Geographical, EE, replacement
311503	Livestock Product Analyst (Level 3)	Meat science	Learnership, skills programme	4	y	490	37	55	508	521	535	552	577	603	Geographical, EE, replacement
321201	Automotive Motor Mechanic	Artisan	Apprenticeship	4	y	23	34	21	10	11	12	13	14	15	Geographical, EE
321202	Diesel Motor Mechanic	Artisan	Apprenticeship	4	y	700	153	214	761	781	801	826	864	903	Geographical, EE, replacement
321205	Motor Mechanic (General)	Artisan	Apprenticeship	4	y	30	53	29	6	7	8	9	10	11	Not available in sector
322301	Metal Fabricator	Boilermaker	Apprenticeship	4	y	508	106	58	460	472	484	499	522	546	None, Geographical, EE, Replacement
322303	Welder / Welder (First Class)	Welder	Apprenticeship	4	y	450	71	90	469	481	494	509	532	556	None, Geographical, EE, Replacement
323201	Fitter (General)	General	Apprenticeship	4	y	315	609	334	40	41	43	45	48	51	None, new, geographical, EE, replacement

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
323202	Fitter and Turner		Apprenticeship	4	y	540	55	59	544	558	572	590	617	645	None, new, geographical, EE, replacement
323203	**Fitter-Welder**		**Apprenticeship**	**4**	**y**		0	0	0	0	0	0	0	0	
323501	Millwright		Apprenticeship	4	y	837	67	44	814	835	856	882	922	964	None, new, geographical, EE, replacement
341101	Electrician (General)	General, light current	Apprenticeship	4	y	664	215	163	612	628	644	664	694	726	None, new, geographical, EE, replacement
342101	Air-conditioning and Refrigeration Mechanic	Cooling specialists, mainly fresh produce pack-houses	Apprenticeship	4	y	340	14	12	338	347	356	367	384	402	None, Geographical, EE, Replacement
342304	Electronic Instrument Trades Worker (General)	Sugar mills	Apprenticeship	4	y	14	27	26	13	14	15	16	17	18	New, EE, replacement
361101	Animal Attendant / Groomer	Shearer	Learnership, skills programme	3	y	300	5	33	328	337	346	357	374	391	Old age – replacement
399802	Sugar Juice Extraction Process Controller		On-job, workplace experience	3		10	141	63	63	65	67	70	74	78	New occupation in sugar industry
399803	Miller	Miller	Learnership	4	y	50	87	63	26	27	28	29	31	33	Geographical, EE, replacement
399804	Bulk Storage Controller	Silos	Skills programme	3	y	14	188	114	114	117	120	124	130	136	EE, replacement
399805	Cotton Ginning Process Controller		Skills programme	4	y	27	0	0	27	28	29	30	32	34	Geographical reasons
399806	Tea Maker	Bush tea	Skills programme	3	y	10	0	1	11	12	13	14	15	16	EE, replacement
399808	Perishable Produce Packing Controller	Packing line controller	Skills programme	3	y	150	248	155	57	59	61	63	66	69	None, geographical, EE
TOTALS	**25**					**6 504**	**3 370**	**2 948**	**6 387**	**6 559**	**6 736**	**6 951**	**7 276**	**7 615**	

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
GROUP 5 CLERICAL AND ADMINISTRATIVE WORKERS															
551101	Accounts Clerk		Learnership, skills programme	4	y	15	575	0	0	0	0	0	0	0	EE, replacement
551301	Payroll Clerk		Learnership, skills programme	4	y	15	139	90	90	93	96	99	104	109	EE, replacement
591102	Production Administrator		Learnership, skills programme	4	y	350	379	359	330	339	348	359	376	393	None, geographical, EE
591104	Sales Clerk / Officer		Skills programme	4	y	45	415	255	255	262	269	278	291	305	EE, replacement
591106	Warehouse Administrator / Clerk		Skills programme	4	y	250	159	105	196	201	207	214	224	235	None, geographical, EE
599504	Noxious Weeds and Pest Inspector		Skills programme	3	y	500	11	13	502	515	528	544	569	595	New legislated occupation
TOTALS	**6**					**1 175**	**1 678**	**822**	**1 373**	**1 410**	**1 448**	**1 494**	**1 564**	**1 637**	
GROUP 6: SALES WORKERS															
611101	Auctioneer		Skills programme	3	y	20	1	0	19	20	21	22	23	25	EE, replacement
611308	Agricultural Chemical Sales Representative		Skills programme	3	y	15	28	29	16	17	18	19	20	21	Replacement
621302	Automotive Parts Salesperson		Skills programme	3	y	15	178	64	64	66	68	71	75	79	Replacement
TOTALS	**3**					**50**	**207**	**93**	**99**	**103**	**107**	**112**	**118**	**125**	
GROUP 7: MACHINERY OPERATORS AND DRIVERS															
711911	Agricultural Produce Processing and Handling Plant Operator		Skills programme	3	y	65	1268	1 237	34	35	36	38	40	42	EE, replacement
712901	Boiler/Engine Operator		Skills programme	3	y	15	110	211	116	119	122	126	132	138	New occupation in sugar industry

OFO Code	Occupation	Specialisation	Intervention	NQF Level	NQF Aligned	No required 09-10	No trained 09-10	No planned 10-11	Baseline	No required 11-12	No required 12-13	No required 13-14	No required 14-15	No required 15-16	Comments
712902	Bulk Materials Handling Plant Operator		Skills programme	3	y	10	260	42	42	44	46	48	51	54	EE
721101	**Farm Equipment / Machinery Operator**						3055	4 175	1 120	1 148	1 177	1 213	1 268	1 326	**All sub-sectors**
733101	Truck Driver (General)		Skills programme	3	y	480	811	1 147	816	837	858	884	924	966	None, Geographical, EE, Replacement, **Especially for highly technical machines**
TOTALS	**5**					**570**	**5 504**	**6 812**	**2 128**	**2 183**	**2 239**	**2 309**	**2 415**	**2 526**	
GROUP 8: ELEMENTARY WORKERS															
831109	Coffee and Tea Process Worker	Bush tea	Skills programme	2	y	10	39	34	5	6	7	8	9	10	Replacement
839301	Product Examiner	Red meat	Skills programme	3	y	630	366	363	627	643	660	680	711	743	None, Geographical, EE
841902	Pest or Weed Controller		Skills programme	2	y	1 020	321	415	1 114	1 142	1 171	1 207	1 262	1 319	New legislation requirements
TOTALS	**3**					**1 660**	**726**	**812**	**1 746**	**1 791**	**1 838**	**1 895**	**1 982**	**2 072**	

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