GRAINS AND CEREALS SUB-SECTOR SKILLS PLAN 2018-2019

Prepared on behalf of the Sector by AgriSETA

April 2018

ABBREVIATIONS AND ACRONYMS

ABBREVIATION/ACRONYM	DESCRIPTION
AFASA	African Farmers Association of South Africa
AGOA	African Growth and Opportunity Act
AGRISETA	Agricultural Sector Education and Training Authority
APAP	Agricultural Policy Action Plan
ATR	Annual Training Report
BMI	Business Monitor International
CoS	Centres of Specialization
DAFF	Department of Agriculture, Fisheries and Forestry
DHET	Department of Higher Education and Training
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
FETMIS	Further Education and Training Management Information System
GCSA	Grains and Cereals Association of South Africa
GDP	Gross Domestic Product
HEMIS	Higher Education Management Information System
HSRC	Human Sciences Research Council
HTFV	Hard To Fill Vacancies
IGDP	Integrated Growth Development Plan
IDP	Integrated Development Plan
IPAP	Industrial Policy Action Plan
KZN	KwaZulu-Natal
MTF	Mpumalanga Trout Forum
NAFU	National African Farmers Union
NAMC	National Agricultural Marketing Council
NDP	National Development Plan
NGP	New Growth Path

NSDS III	National Skills Development Strategy III
NSFAS	National Students Financial Aid Scheme
QLFS	Quarterly Labour Force Survey
QCTO	Quality Council for Trade and Occupations
RPL	Recognition of Prior Learning
SAAA	South African Grains and Cereals Association
SACAU	Southern African Confederation of African Unions
SADC	Southern African Development Community
SAIVCET	South African Institute for Vocational Continuing Education and Training
SAQA	South African Qualifications Authority
SARS	South African Revenue Service
SDA	Skills Development Act
SIC	Standard Integrated Project
SIP	Standard Industrial Classification
SSP	Sector Skills Plan
SIZA	Sustainability Initiative of South Africa
STATSSA	Statistics South Africa
TAUSA	Transvaal Agricultural Union South Africa
TLUSA	Farmers Union
TVET	Technical Vocational Education and Training
WSP	Workplace Skills Plan
WTO	World Trade Organization

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EXECUTIVE SUMMARY

There are eleven agricultural activities in the Grains and Cereals subsector, as set out in the Agricultural Product Standards Act, 1999 (Act 119 of 1990).

Grains consist of the following:

- Cereals
- Leguminous seeds
- Oil seeds
- Grass seeds
- Processed grains

Cereals consist of:

- Maize
- Wheat
- Grain sorghum
- Barley
- Millet

Maize is a major staple food crop grown in diverse agro-ecological zones and farming systems, and consumed by people with varying food preferences and socio-economic backgrounds in South Africa. Sorghum is the second most important cereal after maize, followed by millets (pearl and finger). These are undoubtedly in high demand in the country.

The Grains subsector accounts for about 30% of total gross agricultural production in the country. Reports are that the gross income from field crops increased by 11. 3% to 57 018 million in December 2016; while similarly, income from maize at R27 336 million was 11. 7% more than in the previous 12 months (DAFF, 2016).

Maize remains the most prominent field crop in South Africa. The maize industry contributes 0.4% to the national GDP and the industry is interlinked with many industries in the manufacturing sector. Approximately 70% of agricultural output is used as intermediate products, which further illustrates that the sector is a key driver in the South African economy (AgriSA, 2017).

During the period 2010 to 2015 the total farmland planted with maize in the country was 3076 million hectares, followed by sunflower at 555 million, wheat 531 million and soybeans 519 million hectares. Groundnuts, barley, canola and dry beans respectively accounted for 100 000 hectares (DAFF, 2017). On account of the drought in 2015/2016 the area planted with grains was significantly less than the previous years.

TABLE 1: RESEARCH PROCESS AND METHODS

RESEARCH TOPICS	OBJECTIVES OF THE STUDY	RESEARCH METHODS	NATURE OF THE STUDY	SAMPLE SIZE	DATA COLLECTION TOOLS	TIMEFRAME OF THE STUDY	RESEARCH OUTPUTS
Labour Market Profile and Economic Contribution	Provide an overview of the subsector and economic contribution	Qualitative and quantitative method	Analysis of most recent information on the sector	210 registered Grains & Cereals industry stakeholders	Desktop research (secondary) 2016/17 WSP/ATR data (primary) 2016/17 Huge file data (primary)	September – November 2017	Chapter 1: Sector Profile
Occupational shortages & emerging skills needs	Establish occupational shortages & emerging skills needs of the Grains and Cereals subsector	Qualitative method	Non-probability sampling method was employed to identify stakeholders from whom specific information was required	210 registered Grains and Cereals industry stakeholders	Key informant interviews (primary) & desktop data analysis (secondary)	September – November 2017	Chapter 2: Key Skills Issues Chapter 4: Sector Partnerships Chapter 5: Skills Priority Actions
Skills issues & demands	Identify key occupational shortages, demands & supply with regard to unskilled, skilled, generic Grains and Cereals subsector occupations and emerging skills needs in the agricultural sector	Quantitative method	Gathering empirical evidence using primary data sources, as well as undertaking theoretical, desktop research using secondary data sources	7% were cooperative farmers, 20% were small and emerging farmers and 73% were commercial farmers	The quantitative survey gathered data on the unskilled, skilled and generic occupational shortages & skills gaps	September – November 2017	Chapter 2: Key Skills Issues Chapter 3: Occupational Shortages and Skills Gaps

1. DOCUMENT REVIEW

A document review was conducted to establish the economic performance and trends of the Grains and Cereals subsector, geographic concentration and employers. Government policy and strategy

documents, as well as the key statistical and industry publications were reviewed and these are included in the bibliography. A thematic analysis was conducted to synthesize the key economic, policy and training issues affecting the Grains and Cereals subsector, and to identify key skills issues.

2. SCARCE AND PIVOTAL LIST FORMULATION

The scarce skills, skills gaps and pivotal skills lists were arrived at through both secondary data analysis and the numbers made available in previous Sector Skills Plans, large and small workplace skills plans (WSPs), large and small annual training reports, (ATRs), and primary data analysis obtained at the two-day AgriSETA stakeholder conference (30-31 August 2017), interviews and data collection.

3. SUMMARY OF KEY FINDINGS

Government should pay special attention to Grains and Cereals subsector because it is an integral part of food security in South Africa. The Grains and Cereals subsector accounts for about 30% of total gross agricultural production in the country. Reports are that the gross income from field crops increased by 11. 3% to 57 018 million in December 2016; while similarly, income from maize at R27 336 million was 11. 7% more than in the previous 12 months (DAFF, 2016).

CHAPTER 1: SECTOR PROFILE

1. INTRODUCTION

Chapter 1 of this report provides an overview of the agricultural sector, paying particular attention to the Grains and Cereals subsector in South Africa. The first section of this chapter looks at the scope of the Grains and Cereals subsector's coverage. Followed by the second section, which outlines AgriSETA stakeholders and key role-players in the sector. The third section looks at the economic performance of the overall agricultural sector, zooming into the contribution of Grains and Cereals to the South African economy. The fourth section explores the employer profile, based on the AgriSETA WSP/ATR data submitted for 2016. Finally, the last section provides a labour market profile where the number and demographics of people employed in the sector is explored. Essentially, chapter one of this document is intended to set the scene for the skills issues delved into in the subsequent chapters.

1.1 SCOPE OF COVERAGE

The scope of AgriSETA covers the agricultural sector, from input services to the farm, activities on the farm and first level processing activities from the farm. The Grains and Cereals subsector is classified into five (5) agricultural and economic focuses, namely, the growing of Cereals and other crops; manufacture of grain mill products and starches; handling and storage of grain; wholesale and retail trade in agricultural machinery; and sales and distribution of agricultural raw materials and other farming inputs. The table below outlines the various agricultural and economic focus areas in the Grains and Cereals subsector.

TABLE 2: ACTIVITIES WITHIN THE GRAINS AND CEREALS SUBSECTOR BY SIC CODE

SUBSECTOR	SIC CODE	SIC DESCRIPTION
GRAINS & CEREALS	**11110**	Growing of Cereals and other crops (not elsewhere classified)
	30300	Manufacture of grain mill products and starches
	30313	Handling and storage of grain

SUBSECTOR	SIC CODE	SIC DESCRIPTION
	61502	Wholesale & retail in Agricultural machinery
	62111	Sale and distribution of Agricultural raw materials and other farming inputs

Source: AgriSETA, 2016

The table below illustrates that the subsector is comprised of 11 agricultural activities, as set out in the Agricultural Product Standards Act, 1999 (Act 119 of 1990). Under Grains, this includes; Cereals; leguminous seeds; oilseeds; grass seeds; and the processed grains thereof. While Cereals include; maize; wheat; grain sorghum; barley; millet; and buckwheat.

TABLE 3: GRAINS AND CEREALS LIST OF DEFINITIONS

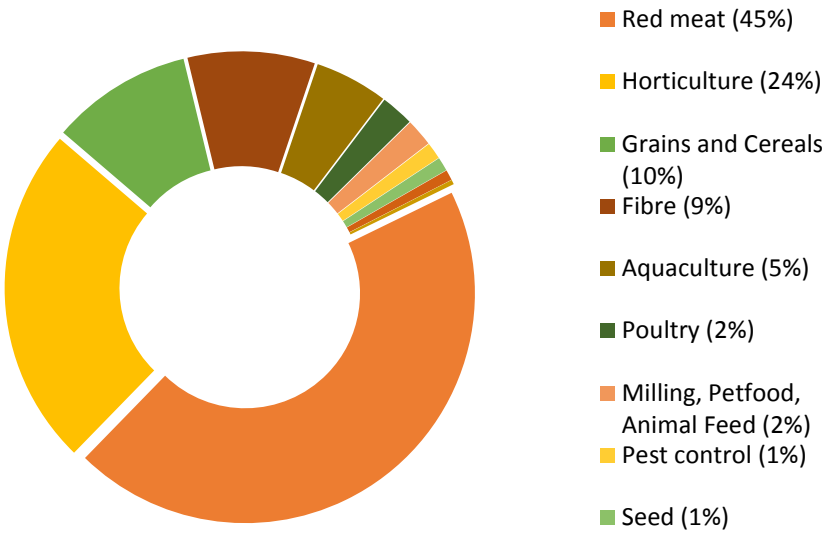
GRAINS	DEFINITION
Cereals	Means maize, what, grain sorghum, barley, millet and buckwheat
Leguminous seeds	Means the threshed seeds of soya beans, dry beans, velvet beans, sword or jack beans, cowpeas, pulses, peas, lupons, lentils, and chick peas or mung beans
Oilseeds	Means sunflower seed, soya beans, canola, castor beans, groundnuts, linseed, cotton seed and safflower seed
Grass seeds	Means the threshed seed of the following types of grasses: (a) Babala, also called pearl millet (b) Boer and German millet (c) Japanese Millets (d) Japanese barnyard millet (e) Canary seed
Processed grains	Means maize products, wheat products and other unspecified processed grains
CEREALS	**DEFINITION**
Maize	Means white maize, yellow maize, bread maize, lesser-known types of maize (including waxy maize, popcorn, sweet corn, and bread maize)
Wheat	Means bread wheat, soft wheat and durum wheat and what products (which refers to commodity derived from the processing of wheat or into which wheat or any part of wheat has been converted
Grain sorghum	Means the seed of any sorghum except a broom sorghum, hay sorghum or cane sorghum
Barley	
Millet	Means the threshold seeds of the plant *pennisetum glaucum*
Buckwheat	Means the seed of the plant *fagopyrum esculentum*

Source: Agricultural Product Standards Act, 1990 (Act No. 119 of 1990)

Overall, the agricultural sector comprises of 11 subsector committees, which represent their industry interest to AgriSETA. These include: 1) Red Meat; 2) Horticulture; 3) Grains and Cereals; 4) Fibre; 5) Aquaculture; 6) Poultry; 7) Milling, Pet Food, and Animal Feed; 8) Pest Control; 9) Seed; 10) Sugar; 11) Tobacco. The Grains and Cereals subsector constitutes 10% of the overall distribution of entities

represented by AgriSETA. The graph below outlines the relative size of membership number by subsectors, as captured in the AgriSETA member database of 2016.

FIGURE 1: DISTRIBUTION OF AGRICULTURAL ENTITIES BY SUBSECTOR

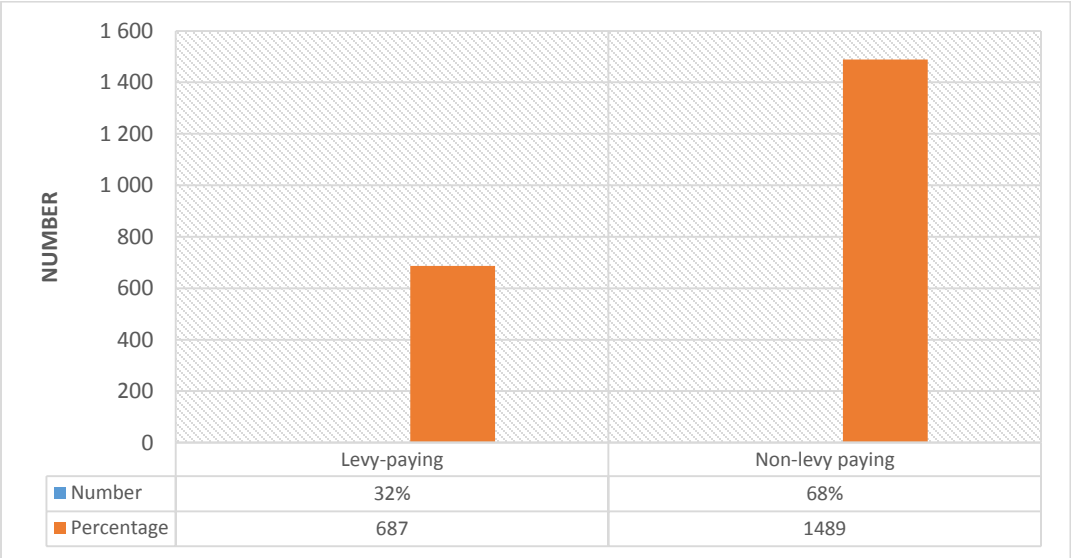


Source: AgriSETA member database, 2016

1.1.1 Revenue from Skills Development Levies

In 2016/17, there was a total of 2176 Grain subsector entities registered with the South African Revenue Services (SARS), contributing 10% of total entities in the agricultural sector. Of these 2176 entities the figure below illustrates that 32% of them contribute to the skills development levy. A total of R73 million SDL was generated from the Grain subsector, accounting for 17% of total agricultural revenue from SDL.

FIGURE 2: SKILLS DEVELOPMENT LEVIES



Source: AgriSETA members' database, 2016

1.2 KEY ROLE PLAYERS

There are a number of public and private key role-players in the agricultural sector which contribute towards its functioning, including: national government departments, sector representatives and industry bodies. For the sake of brevity, the table below groups these role-players according to their strategic contribution to the sector. Please note that while as comprehensive as possible, this list is not exhaustive.

TABLE 4: KEY AGRICULTURAL ROLE-PLAYERS

Strategic contribution	Department or organisation	Relevance to agricultural skills development
Skills Development and Research	Department of Basic Education	Quality of education of entrants to labour market, career awareness programmes to expose agriculture as a possible career choice
	Department of Higher Education and Training	Responsible for TVETs, HETs, agricultural colleges and skills development. Sets the national skills development agenda through regulation of SETAs.
	Statistics SA	Provision of updated statistics on agricultural sector economics & labour force.
	Agricultural Research Council	Scientific research on agricultural production issues.
Strategy and Policy	Department of Trade and Industry & Provincial Departments of Economic Development	Industrial strategy, international trade agreements, agricultural sector strategy and policy implementation desk.
	Department of Agriculture Forestry and Fisheries	Sector regulatory framework, strategy and leadership, provision of extension services, Broad Economic Empowerment funding of development interventions including provision of bursaries for scarce skills.
	National Treasury & SARS	Financial planning, incentives, accountability of Land Bank, skills levies.
Planning	Department of Labour	Labour legislation, wage determinations, employment equity
	Department of Economic Development	Sector economic strategies
	National Planning Commission	Identification of inter-departmental overlaps and gaps
	Department of Environmental Affairs	Policy and guidelines on environment protection and natural resource management, partner in environmental education
	Department of Transport	Planning for transport needs in rural areas
Rural Development and Land Reform	Department of Rural Development and Land Reform	Partnering with AgriSETA in mobilising funds for capacity building of claimants.

Strategic contribution	Department or organisation	Relevance to agricultural skills development
	Department of Cooperative Governance and Traditional Affairs & Municipalities	Linking agricultural and rural development to IDPs and LED, infrastructure and services to agricultural enterprises
Services	Department of Water Affairs	Water Boards manage local irrigation schemes
	Department of Energy	Strategy to supply electricity to rural areas
	South African Police Service	Collaboration with agricultural community to address issues of farm security, including attacks, stock and property theft
Credit and assistance	Land and Agricultural Development Bank of South Africa	Financial services to commercial farming sector, agribusiness, and emerging farmers.
	Micro-Agricultural Financial Institutions of South Africa (MAFISA)	Production loans to smallholder operators
Union and Sector representatives	Agri South Africa (AgriSA)	Agricultural Union serving some 32 000 large and small commercial farmers.
	National African Farmers' Union of South Africa (NAFU)	Represents black farmers to level the field in all agricultural matters.
	The African Farmers' Association of South Africa (AFASA)	Represents commercial African farmers to bring black commercial farmers into mainstream agribusiness.
	Transvaal Agricultural Union South Africa (TAU SA)	A national agricultural union serving commercial farmers
Agribusiness	Agricultural Business Chamber	Fosters a favorable agribusiness environment
	Grain SA	Conglomerate organization providing commodity strategic support and services to South African grain producers to support sustainability.

Source: 2015 GCIS Handbook, Agriculture and AgriSETA SSP 2011-2016

1.3 ECONOMIC PERFORMANCE

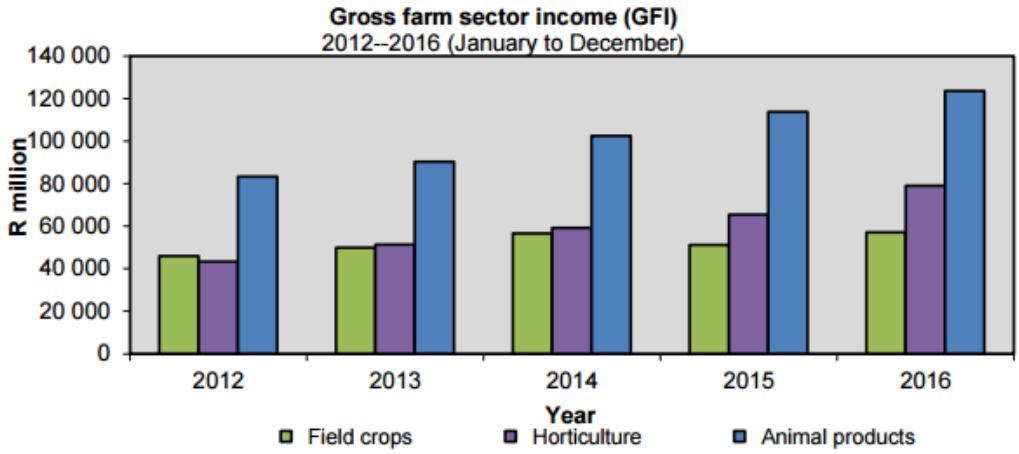
1.3.1 Overview

Overall, Agriculture contributes 2. 4% to South Africa's gross domestic product (GDP) and 4. 4% of total employment (IRR, 2016). Notwithstanding the relatively small share of the total GDP, primary agriculture is an important sector in the South African economy; the value of primary agricultural production in South Africa was R263, 2 billion in 2016, while its contribution to the GDP was estimated at 72. 2 billion in 2015 (DAFF, 2016). In addition, the sector plays an important role in job creation, especially in the more rural parts of the country.

The Grains and Cereals subsector accounts for about 30% of total gross agricultural production in the country. The graph below illustrates that the gross income from field crops increased by 11. 3% to 57 018

million in December 2016; while similarly, income from maize at R27 336 million was 11.7% more than in the previous 12 months (DAFF, 2016).

FIGURE 3: GROSS FARMING SECTOR INCOME



Source: Economic Review of the South African Agriculture, DAFF, 2016

Maize remains the most prominent field crop in South Africa. The maize industry contributes 0. 4% to the national GDP and the industry is interlinked with many industries in the manufacturing sector. Approximately 70% of agricultural output is used as intermediate products, which further illustrates that the sector is a key driver in the South African economy (AgriSA, 2017).

During the period 2010 to 2015 the total farmland planted with maize in the country was 3076 million hectares, followed by sunflower at 555 million, wheat 531 million and soybeans 519 million hectares. Groundnuts, barley, canola and dry beans respectively accounted for 100 000 hectares (DAFF, 2017). On account of the drought in 2015/2016 the area planted with grains was significantly less than the previous years.

According to the International Grain Council (IGC), South Africa was expected to import a total of 4.1 million tons of grain in 2016-17. Exports are forecast to export 900 000 tons of maize, compared to 700 000 in the previous year. Imports of rice were projected to remain unchanged in 2016-17 with 900 000 tons (IGC, 2017). Overall the agricultural sector contributed approximately 12% of South Africa's total export earnings in 2016-2017. South Africa imported $7 billion in agricultural and food products between 2016 and 2017. The major agricultural products imported by South African included rice ($424 million) and wheat ($367 million). Wheat is usually a net exporter of corn, but due to a severe drought in the 2015/16 season, which decreased production by almost 50%, imports of more than three million tons of corn were needed to fulfill local demand (Export.gov, 2017)

3.2 Economic Outlook of the sub-sector

The weak Rand, weather volatility and falling farm incomes are predicted to exert downward pressure on the market. However, in the longer term it is predicted that revenue in the sector will be boosted by growth of about 40% from food consumption due to the growth of the middle class and disposable income. Business Monitor International (BMI) estimates that annual food consumption revenue will reach over R609 billion in 2018.

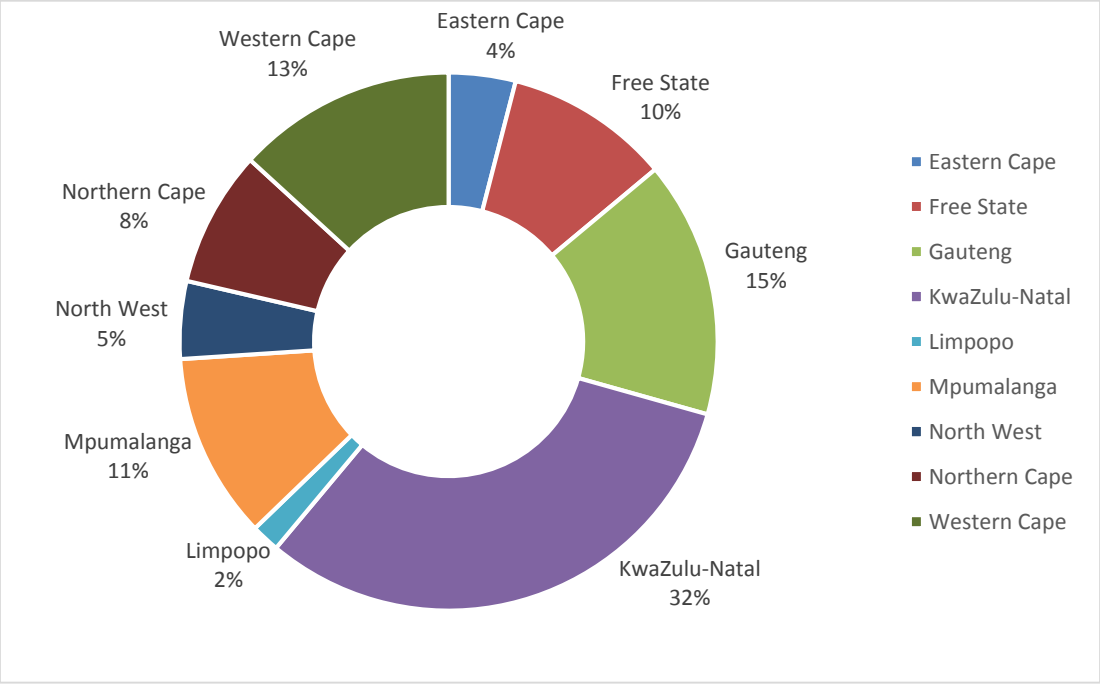
According to the International Grains Council (IGC), South Africa's total grain production in 2016-2017 will be 14.9 million tons, increasing from 10.1 million tons the previous year. Similarly, production of wheat is forecast at 1.9 million tons, increasing from 1.4 million tons the previous year. The projected import total of grains is 4.1 million tons 2016-17, while the exports are forecast at a total of 1 million tons up from 900 000 the previous year. Wheat imports on the other hand are estimated at 1.9 million tons, down from 2.3 million the year before. South Africa is expected to export 900 000 tons of maize in 2016-2017, compared to 700 000 the previous year.

1.4 EMPLOYER PROFILE

The AgriSETA members' data base includes some 21 429 employers, 2 176 (10%) of which are from the Grain subsector. The data shows that the majority of registered Grain entities (84%) are small (1-49 employees, followed by 12% medium (50-149) and 4% large entities (more than 149 employees).

The provincial distribution of Grain employers registered with AgriSETA is reflected in the pie chart below, with provincial distribution by employer size in figure 4.

FIGURE 4: PROVINCIAL DISTRIBUTION OF GRAIN EMPLOYERS REGISTERED WITH AGRISETA



Source: AgriSETA members' database, 2016

The figure above shows that the majority of Grain employers registered with AgriSETA are in KZN (32%), followed by Gauteng (15%), and Western Cape (13%). The provinces with the least number of registered employers in the Grain subsector include: Limpopo (2%), Eastern Cape (4%) and North West (5%). It is important to note that the AgriSETA database does not represent all farming enterprises in the country, and thus must be treated with a fair degree of caution when applying it to a national context. For instance, Limpopo is a known farming province, but is underrepresented in AgriSETA numbers. Nevertheless, there is significant number of stakeholders expressing an interest in skills development in the agricultural sector.

1.5 LABOUR MARKET PROFILE

1.5.1 Provincial Distribution of Employees

The South African Agricultural sector is one of the biggest employers in the country. In the first quarter of 2017, STATSSA reported that a total of 875 0000 people were employed in the sector, with the Western Cape (25%) accounting for the majority of employees in the sector, followed by Limpopo and Kwazulu-Natal, respectively accounting for 16% of employees.

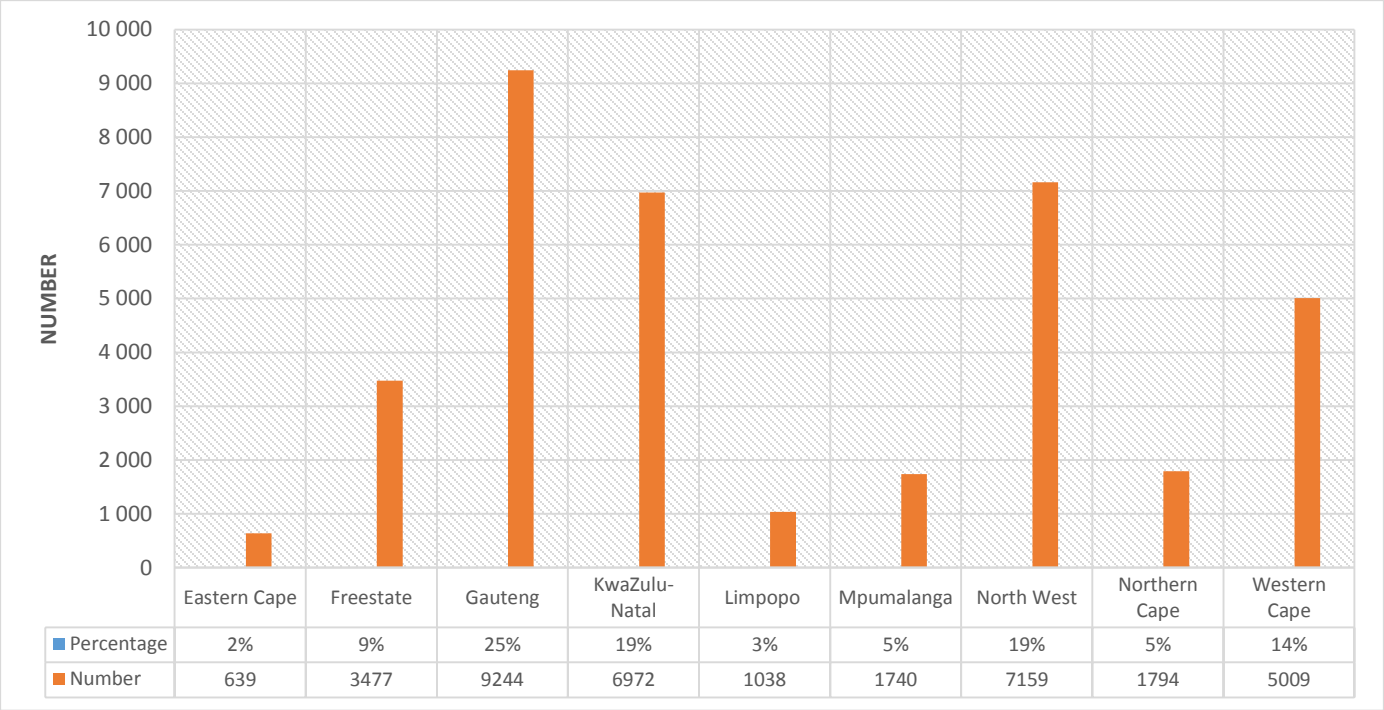
TABLE 5: DISTRIBUTION ON EMPLOYEES BY PROVINCE IN AGRICULTURE, 2016/2017

PROVINCE	2015/2016		2016/2017	
Western Cape	228 000	26%	215 000	25%
Eastern Cape	95 000	11%	87 000	10%
Northern Cape	40 000	5%	47 000	5%
Free State	72 000	8%	70 000	8%
KwaZulu-Natal	131 000	15%	141 000	16%
North West	54 000	6%	50 000	6%
Gauteng	37 000	4%	36 000	4%
Mpumalanga	95 000	11%	89 000	10%
Limpopo	118 000	14%	140 000	16%
TOTAL	**870 000**	**100%**	**875 000**	**100%**

Source: Statistics South Africa, 2017. Quarterly Labour Force Survey. 1st Quarter 2017

The figure below outlines the Grains and Cereals employment distribution by provincial breakdown. Contrary to the figure above, data from the AgriSETA WSP submissions (2016) shows that the province with the highest proportion of both permanent and seasonal/temporary employees in the Grains and Cereals subsector is Gauteng, accounting for 25% of employees, followed by North West and KwaZulu-Natal which respectively account for 19%, and the Western Cape employing 14% of both seasonal/temporary and permanent employees in the subsector.

FIGURE 5: PROVINCIAL BREAKDOWN – GRAINS & CEREALS EMPLOYEES



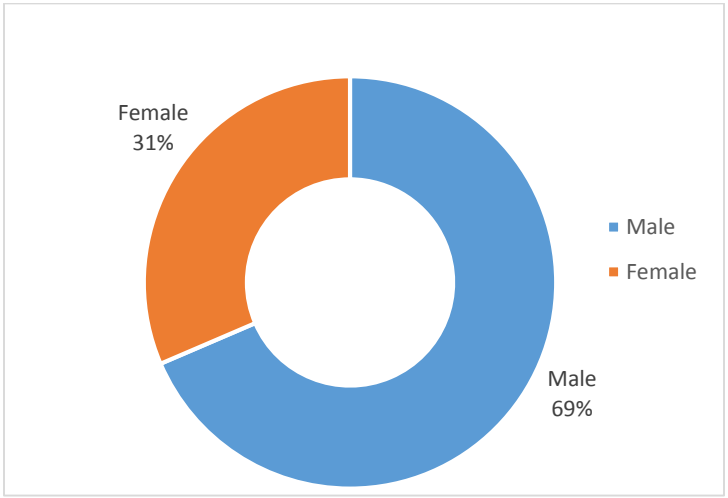
	Eastern Cape	Freestate	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape
Percentage	2%	9%	25%	19%	3%	5%	19%	5%	14%
Number	639	3477	9244	6972	1038	1740	7159	1794	5009

Source: AgriSETA WSP Submissions, 2016

1.5.2 Gender

The graph below gives a breakdown of the Grains and Cereals subsector by gender as reported in the WSP submissions (2016). Consistent with national agricultural statistics, the data shows that the vast majority of employees in the subsector are male, accounting for approximately 70% of overall employment in the subsector, while females make up the other 30%.

FIGURE 6: GENDER BREAKDOWN

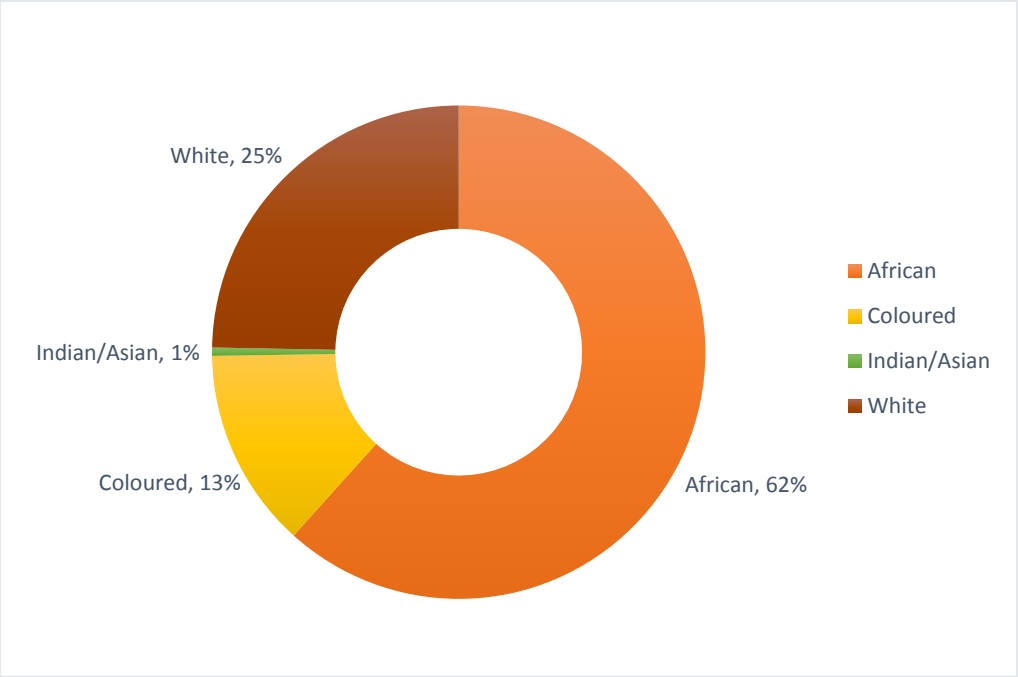


Source: AgriSETA WSP Submissions, 2016

1.5.3 Race

The WSP (2016) shows that the majority of employees in the subsector are African (62%), followed by White employees (25%), and Colored employees (13%). Indian/Asian employees only represent 1% of people employed in the subsector.

FIGURE 7: EMPLOYEES BY RACE



Source: AgriSETA WSP Submissions, 2016

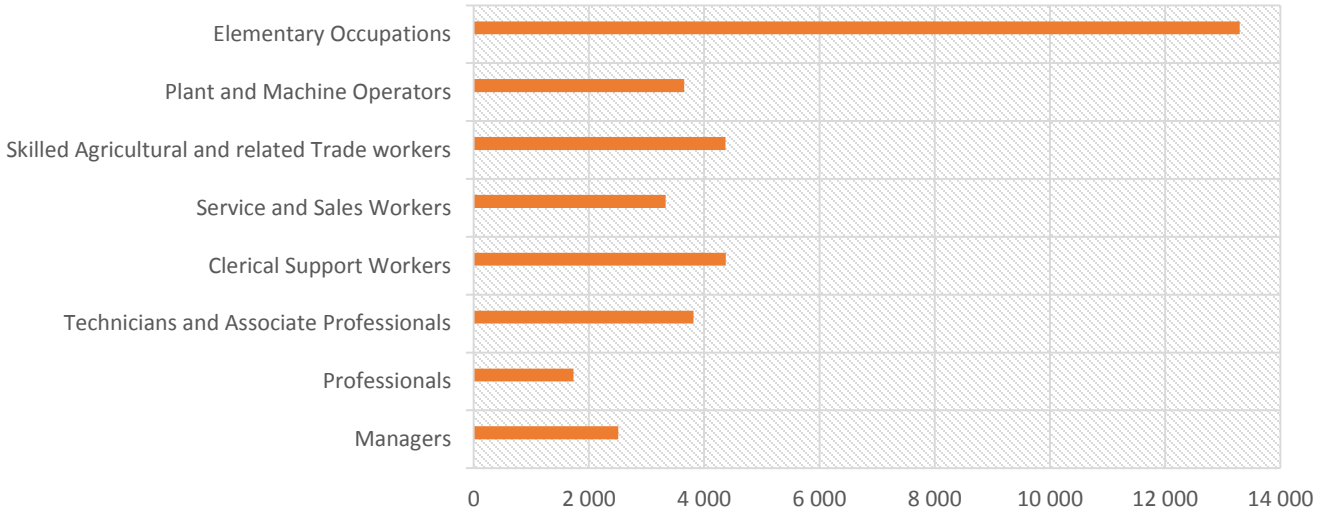
1.5.4 Age

The majority of people employed in the Grains and Cereals subsector by employers submitting WSP, are between the ages 35 and 55 (46%). People that are considered "Youth" constitute 42% of people employed, whilst 11% are above the age of 55. Thus, 88% of people employed in the subsector in 2016 are below the age of 55.

1.5.5 Occupational Categories

The last section of chapter one looks at the existing skills levels in Grains & Cereals enterprises as reported in the WSPs submitted for 2016. Skills vary from highly skilled managerial and professional occupations to relatively low level skilled elementary occupations. The figure below illustrates that the majority of people employed in the subsector occupy elementary positions (36%), followed by clerical support workers and skilled agricultural and related trade workers, each accounting for 12% of employees in the subsector. As can be expected, the lowest number of employees occupy the Professionals (5%), and Managers (7%) occupational categories.

FIGURE 8: EMPLOYMENT BREAKDOWN WITHIN THE GRAINS & CEREALS SUBSECTOR



	Managers	Professionals	Technicians and Associate Professionals	Clerical Support Workers	Service and Sales Workers	Skilled Agricultural and related Trade workers	Plant and Machine Operators	Elementary Occupations
Number	2507	1734	3813	4374	3330	4368	3651	13295
Percentage	7%	5%	10%	12%	9%	12%	10%	36%

Source: AgriSETA WSP Submissions, 2016

1.6 CONCLUSION

Having a firm sense of the Grains and Cereals subsector contribution to the economy in terms of production and employment, we can now more readily identify key skills issues that speak to this economic reality. The subsequent chapters identifies key skills issues as framed by government legislation, policies and frameworks; and identifies key macro socio-economic and environmental factors that function as key change drivers in addressing skills development in the agricultural sector.

CHAPTER 2: KEY SKILLS ISSUES

2.1 INTRODUCTION

Having outlined the Grain and Cereals subsector profile in chapter one, this chapter is concerned with two specific areas that shape the key skills issues in the subsector. Firstly. The alignment of sector skills planning to national strategies, and plans will be analyzed to provide a snapshot of the key policy and planning documents that shape skills planning in the Grains and Cereals subsector. Secondly, the bulk of this chapter will be concerned with identifying factors that are driving change in the sector, which are influencing the need for a particular skill set or rendering them irrelevant in an ever changing world.

2.2 CHANGE DRIVERS

This section of the report identifies the key themes and issues driving change and influencing skills demand and supply in the Grains and Cereals subsector. These change drivers were identified through thematic synthesis and triangulated through internal and external stakeholder engagement, desktop research and relevant policy documents.

2.1.1 Consumer Behavior

The increase in population growth and rising disposable income and changing consumer habits have helped fuel domestic food consumption growth supporting local production. In addition to this, huge sums have been invested in the 'Proudly South African' food campaign, which is designed to encourage consumers to buy

domestically grown and produced goods and advertise their quality. Euromonitor International (2017) says that optimism appears to have rebounded after a period of low consumer confidence and sluggish consumer spending growth. The growing number of single-person households is driving increased demand for products catering to single consumers, such as single-serve ready meals and other packaged food, and this is expected to continue in coming years. In addition, SA population growth has put pressure on the maize supply as more maize is required for consumption, compared to previous years. What usually happens when process go up is that people buy less, however that has not been the case with white maize since it is a staple in the country. The demand for maize as animal feed is also at a higher level.

2.1.2 Technology and Mechanization

Development and production concerns in agriculture place an emphasis on technological advancement, to increase productivity to keep up with increasing demands for food; however there has not been a concomitant focus on technological skills advancement in the sector. The threatening maxim of the sector is that "as agriculture becomes more mechanised, the unskilled labour force is replaced by a significantly smaller skilled labour force" (Employment Conditions Commission, 2013). However, BMI (2016) reported that, "the agricultural mechanisation rate in Africa is the lowest in the world". Nevertheless, South Africa's situation is somewhat different to the rest of Africa. For instance, South Africa, Morocco and Tunisia comprise the majority Africa's new tractor sales (BMI, 2016). Thus, to remain competitive globally, skills training in agriculture needs to keep up with technological progress. Internal consultation with AgriSETA staff reveals that there is an increasing demand for artisans and technically qualified workers in response to increased mechanisation in the sector.

2.1.3 Climate Change and Draught

The 2015/2016 drought, a result of the worldwide El Niño effect, is said to be the worst to hit the country since 1992, and has shifted the domestic maize market into a net important situation (BMI, 2016, GrainSA, 2015, AgriSA). Maize production is expected to decline by 38.8% year-on-year, while sugar production will decline by 20.2% 2015/16 (BMI, 2016). Already only 45.6 % of South Africans are food secure (HSRC, 2014), and the drought could have further deleterious effects on food security. The drought, along with other challenging environmental factors, could act as a disincentive from pursuing an agricultural career. National food security depends on a "capital-intensive agricultural sector based on economies of scale" (Kane-Berman, 2016), and thus smaller producers are even more at risk during the drought – a difficult economic and environmental climate in which to take risks. Subsistence and smaller commercial farms should be offered support, but equally commercial farms need to attract those with "green" knowledge skills to ensure food security for South Africans generally.

2.3 ALIGNMENT WITH NATIONAL STRATEGIES AND PLANS

The following section draws attention to the national strategy and planning documents that frame AgriSETA's mandate for skills development. The legislative and policy frameworks speak to AgriSETA's constitutional mandate as a public institution governed by the Public Finance Management Act to develop skills programmes in accordance with the Skills Development Act, (1998), the Skills Development Levies Act (1999), and the National Qualifications Framework Act (2008).

There are two seminal strategic documents that underpin AgriSETA's mandate for skills planning, namely: the White Paper on Post School Education & Training (2013) and the National Skills Development Strategy III (NSDS III) (2011 – 2016). Both of these documents highlight the SETAs roles in developing clear, sector-specific linkages between education and the workplace through an analysis of the demand and supply of skills in their sector. These documents call for credible institutional mechanisms for skills planning, programmes that are occupationally oriented, and responsive higher and further education and training institutions. Furthermore, attention should be given to the needs of local, community enterprises, co-operatives and the like, with a focus on developing their skills capacities to meet the needs of their particular environments, thereby closing the gap between the rural and urban South African economies.

The NSDS III is informed and guided by the following overarching government plans: The National Skills Accord as one of the first outcomes of the New Growth Path, the Industrial Policy Action Plan, 2013/14 – 2015/16 (IPAP), the Comprehensive Rural Development Programme, the Human Resources Development Strategy for South Africa 2030, the National Development Plan 2030 (NDP), and the Integrated Sustainable Rural Development Strategy (ISRDS). Collectively, these government plans and programmes recognize the need for correcting structural imbalances in the economy through "decent employment through inclusive growth", "a skilled and capable workforce to support an inclusive growth path", "vibrant equitable and sustainable rural communities contributing towards food security for all", to "protect and enhance our environmental assets and natural resources", with the support of "an efficient, effective and development-oriented public service" (NDP). All these priorities speak to the need for relevant and targeted skills provision that promotes economic sustainability in the agricultural sector, as well as meeting the needs of all South African communities, both rural and urban, in terms of food provision and sustainable livelihoods.

2.4 PESTEL

The table below summarizes the factors influencing skills development in the subsector:

TABLE 6: PESTEL FOR THE GRAIN SUBSECTOR

FACTOR	POSSIBLE IMPACT
Political	The agricultural sector is mainly guided by the standards set out by DAFF. The Department ensures ongoing development and maintenance of uniform standards for South African inspection and weighing procedures for grain. Grading regulations promote fair business practices and a competitive marketing environment for grain and oilseeds. With the correct application of these grading regulation, the sector is able to promote fair and competitive trading practices for the overall benefit of consumers and agricultural industry, Land reform is one of the key issues facing the agribusiness. Some government figures had proposed expropriation without compensation in order to facilitate land redistribution on ethnic lines. This could be harmful to the South African agricultural economy and the agribusiness landscape of the country, due to the potential for mismanagement at the political and administrative level.
Economic	Chapter 1 outlined the economic significance of the Grain subsector in South Africa. The local Grain industry is one of the largest agricultural subsectors making a major contribution to the country's total gross agricultural production. The functioning of the Grain and Oilseeds industries are highly dependent on domestic grain information as well as local and international macro-economic information to enable

FACTOR	POSSIBLE IMPACT
	role players in the grain industry commercial and emerging sectors, to continue making meaningful decisions. Profitability in grain is largely driven by input cost management, the lower the total of input costs the greater the profits yielded. With that said, the depreciating Rand between 2016 and 2017, coupled with the prolonged draught, farmers are currently have the input costs and not the yields. According to the National Crop Estimates Committee, South Africa's total maize production for 2016 was estimated to close at 7.1 million tons, 28% lower than the 2015 harvest, and 30% lower than the 2014 harvest.
Social	Similar to a number of agricultural subsectors, the Grain industry provides employment and development opportunities in rural areas across South Africa. Youth, people aged 15 – 35, comprise 36% of the South African population, and 70% of the unemployed (StatsSA, 2016; Merten, 2016). This presents a huge challenge for skills development generally, and specifically for the agricultural sector, with a waning interest in agriculture and rapid urbanization. The South African Confederation of Agricultural Unions (SACAU) has called on stakeholders to recognize agriculture as a "high skilled business with great opportunities" (AgriSA, 2016). Perhaps the most significant social project is the Grain SA Farmer Development programme. The programme was established by Grain SA and seeks to assist farmers in the form of personnel and financial management. The following services are made available to farmers: study groups, demonstration trials, farmers' days, and farmer of the year and information dissemination through various publications. The project is funded through the Land Redistribution of Agricultural Development, and seeks to address food security and food sovereignty, and income generation (amongst other things).
Technical	As discussed in the section covering change drivers in the subsector. There is a need for research and development in the sector to facilitate changing nature of consumer demands and the growing South African population. The mechanization of farming operations means that the unskilled labour force is being replaced by a significantly smaller skilled labour force. For instance satellites, aircraft, and unmanned aerial vehicle (UAV) systems, commonly known as drones are the aerial technologies used in more recent years in the agricultural industry. These technologies allow for the use of remote sensing to identify certain production trends, taking out the human factor of decision-making in this regard (Farmers Weekly, 2016). This coupled with other technological advancements happening within the subsector across the globe indicates that the subsector needs to also invest and research and development initiatives, and mentoring and coaching youth into more technical positions within the subsector. The investment in research and development will further assist in finding innovative ways in dealing with climate change.
Legal	There are legal barriers which impact negatively on the industry – it is up to the industry to clearly identify, ring fence and engage with those barriers to enable legislative and regulation changes.
Environment	The 2015/2016 drought is said to be the worst to hit the country since 1992, and has shifted the domestic maize market into a net important situation (BMI, 2016, Grain). South Africa is home to many environments ranging from dry to more temperate, the country is able to grow in an array of climates, and maize is one of the highest produced crops in South Africa. With that said, the rising temperatures and with

FACTOR	POSSIBLE IMPACT
	rainfall becoming more irregular and unpredictable in some parts of the country, the production of agriculture in the country is expected to take a large hit. South Africa's water supply is already at a disadvantage, with rising temperatures means that groundwater and surface water will be increasingly evaporated, leaving the soil salty, limiting food production.

2.5 IMPLICATIONS FOR SKILLS PLANNING

In this chapter we have seen that the legislative and policy frameworks established by government, coupled with the contextual change drivers and industry specific perspectives on skills development point to the following 4 skills implications that need to be addressed in the Grain Subsector Skills Plan.

1. Practical skills transfer through mentoring and on-the-job training.
2. Partnerships with Higher Education Institutions (HEIs) for research and development into the subsector.
3. Partnerships with key role players in the industry for farmer and farmworker development programmes.
4. The development of green knowledge qualifications.

2.6 CONCLUSION

In this chapter we have seen that the legislative and policy frameworks established by government, coupled with the contextual change drivers and industry specific perspectives on skills development point to the following 4 skills implications that need to be addressed in the Grains and Cereals Subsector Skills Plan. Chapter 3 will elaborate on the specific demand and supply of skills in the agricultural sector to identify gaps and mismatches in skills provision, providing evidence that the skills issues identified in this chapter articulate with what is happening on the ground.

CHAPTER 3: OCCUPATIONAL SHORTAGES AND SKILLS GAPS

3.1 INTRODUCTION

Chapter 3 reflects the research completed on skills demand and supply in the Grains and Cereals subsector. The outcome is the result of an analysis of previous Sector Skills Plans, 2014/15 and 2015/16 WSP data, as well as engagement with AgriSETA stakeholders. Engagements included interviews, surveys and limited focus groups with external partners, stakeholders and AgriSETA member companies, as well as consultation with internal stakeholders, conducted between 2015 and 2016. Effort was taken to ensure cross sectoral inputs were obtained by reaching out to large levy payers, industry bodies, government departments as well as emerging small scale entrants in the sector.

3.2 OCCUPATONAL SHORTAGES AND SKILLS GAPS

3.2.1 Hard-to-fill Vacancies (HTFVs)

The analysis conducted has identified the hard-to-fill vacancies (HTFVs) and skills issues as they pertain to the Grains and Cereals subsector. The skills issues, gaps, as well as the emerging skills needs as identified through the survey and WSP submissions analyses are outlined in the tables below. Firstly, the needs of small-emerging farmers and co-operatives are addressed, followed by the needs of commercial farmers.

TABLE 7: SMALL EMERGING FARMERS AND CO-OPERATIVES HTFVs

Subsector	Skills and/or Qualifications Gaps	OFO Code
Grain	Further Education and Training Certificate: Milling	2017-313909
	General Education and Training Certificate: Grain Handling Controller	2017-313911
	National Certificate: Sales and Marketing Manager	2017-122101
	National Certificate: Milling	2017-313909

TABLE 8: COMMERCIAL FARMERS HTFVs

Subsector	Skills and/or Qualifications Gaps	OFO Code
Grain	National Diploma: Grain Depot Manager	2017-132408
	General Education and Training Certificate: Grain Handling Controller	2017-313911
	National Certificate: Agricultural Machinery Mechanic	2017-653301
	General Education and Training Certificate: Grain Handling Operator	2017-716113
	National Certificate: Importer or Exporter	2017-142101
	National Diploma: Sales and Marketing Manager	2017-122101
	Further Education and Training Certificate: Milling	2017-313909
	National Certificate: Sales and Marketing Manager	2017-122101
	National Certificate: Milling	2017-313909

The following table outlines the top HTFVs as identified by external stakeholders in the Grains and Cereals subsector:

TABLE 9: TOP HTFVs (STAKEHOLDER ENGAGEMENT)

HTFVS	REASON FOR SCARCITY	DEMAND & SUPPLY	SETA INTERVENTION
SILO MANAGER	• Urbanization • Qualifications • Non availability	New curriculum – no suppliers	Learnerships and funding
SILO OPERATOR	• Urbanization • Qualifications • Non availability	New curriculum – no suppliers	Learnerships and funding
GRAIN GRADER	• Urbanization • Qualifications • Non availability	Approval pending	Learnerships and funding
AGRICULTURE TECHNICIANS	• Urbanization • Non availability	High demand	Apprenticeship funding

AGRI-RETAIL BRANCH MANAGER	• Qualifications	Limited providers	Learnerships and funding
GRAIN MARKETERS AND TRADERS	• Qualifications	Limited providers	BURSARIES LEARNERSHIP
FINANCIAL MANAGEMENT AND ADMINISTRATION	• Urbanization	Affordability	Learnership funding Bursaries
WORKSHOP MANAGERS	• Urbanization • Affordability • Qualifications • Non availability	High demand	Learnership funding
GRAIN MILLERS	• Non availability • Urbanization	Specialized skills Extended training	Apprenticeships

The following table presents the top emerging skills and future demand needs in the Grains and Cereals subsector drawn from the results of the external stakeholders' survey (2016):

TABLE 10: TOP EMERGING SUBSECTOR SKILLS AND FUTURE OCCUPATIONAL SHORTAGES

Subsector	Top Emerging Skills and Future Demand Needs
Grain	Grain handling
	Information Technology
	Operations management

A series of key-informant interviews were conducted with top levy payers and top industry players. The findings emerging from these interviews corroborate the skills needs outlined above. Overall, similar to other agricultural subsectors, stakeholders across occupations in the Grains and Cereals subsector expressed having challenges with recruiting and retaining skilled staff in rural areas. Furthermore, they highlighted the need for technical and specialized skills that were being lost when experienced professionals exited the workforce. There are nine occupations that are HTFVs identified for both small emerging farmers and co-operatives, and commercial farmers:

1. Further Education and Training Certificate: Milling
2. General Education and Training Certificate: Grain Handling Controller
3. National Certificate: Sales and Marketing Manager
4. National Certificate: Milling
5. National Diploma: Grain Handling Controller
6. National Certificate: Grain Handling Operator
7. National Certificate: Agricultural Machinery Mechanic
8. National Certificate: Importer or Exporter
9. National Diploma: Sales and Marketing Manager

3.2.2 Major Skills Gaps at a Major Occupational Level in the Agricultural Sector

Given the preceding evidence of stakeholder engagement and analysis, the following scarce skills and skills gaps list has been compiled to guide AgriSETA in its skills development priorities going forward. Table 11 gives a list of occupations of scarce skills and skills gaps relevant to the Grains and Cereals subsector at a major occupational level.

TABLE 11: SCARCE SKILLS AND SKILLS GAPS LIST

Occupation code	Occupation	Specialization / alternative title
2017-213202	Agricultural Scientists	Plant Breeders, Plant Pathologists, Animal Scientists, Plant Scientist , Soil, and Pasture Scientists
2017-314201	Agricultural Technician	Seed Research Technician, Seed Production Technician, Irrigation Technician
2017-131101	Farm Manager	Agronomy, Horticulture, Crop, Mixed Crop, Livestock, and Ornamental Horticultural Managers, Grains and Cereals and Mariculture Farmer
2017-325703	Agricultural Produce Inspectors	Meat Inspector, Fruit and Vegetable Inspector, Produce Inspector, and Quality Controller
2017-214905	Agricultural Engineer	Agricultural Product Process Engineer, Irrigation Engineer, Agricultural Structures and Facilities Engineer, Crop Production Mechanization Engineer
2017-214906	Agricultural Engineering Technologist	Agricultural Product Processing Engineering Technologist, Agricultural Structures and Facilities Engineering, Engineering Technologist, Crop Production Mechanization, Engineering Technologist, Irrigation Engineering Technologist, Natural Resources Engineering Technologist
2017-215101	Electrical Engineer	Control Engineer, Electric Power Generation Engineer, Electrical Design Engineer, Electromechanical Engineer, Illumination Engineer, Power Distribution Engineer, Power Systems Engineer, Power Transmission Engineer
2017-214401	Mechanical Engineer	Air-conditioning, Automotive, Diesel, Fluid Mechanics, Heating and Ventilation, Machine Design and Development , Maintenance Management, Mechatronics, Piping, Pressurized Vessels, Rotational Plant, Structural Steel, Thermodynamics
2017-653301	Industrial Machinery Mechanic	Agricultural Machinery Mechanic, Farm Machinery Repairer
2017-734101	Mobile Plant Operators	Agrochemical Spraying Operator, Tractor driver, Harvester Operator, and Farm Equipment /Machinery Operator.
2017-134915	Operations Managers	Feed Mill Manager, Seed Processing Plant Manager
2017-134903	Small Business Manager	Entrepreneurial Business Manager, Owner Manager
2017-132401	Supply And Distribution Manager	Acquisitions, Depot, Freight Forwarding Customs Clearing, Freight, Goods Clearance, Parts, Procurement, Purchase, Supply Chain Executive, Supply Chain, Supply Lead Manager
2017-821301	Mixed Crop and Livestock Farm Worker	Agronomy, Horticulture and Crop
2017-122301	Research and Development Manager	Product Development Manager, Research Managers
2017-213201	Agriculture Consultant	Agriculture Advisor, Agriculture Economic Advisor, Agriculture Extension Officer, Agriculture Field Officer, Agriculture Mentor, Animal Husbandry

		Consultant / Advisor, Farm Consultant / Advisor, Farm Economic Techniques Advisor, Field Husbandry Consultant / Advisor, Landcare Officer
2017-821101	Crop Production Farm Worker / Assistant	Basic farm skills
2017-122101	Sales and Marketing Manager	Marketing and sales, Brand Manager; Product Manager; Sales Account Manager
2017-684301	Crop Produce Analyst	Seed analyst, Grain grader, seed lot inspector, crop quality inspector
2017-313911	Grain Handling Controller	Grain Depot Controller
2017-313909	Miller	Maize Miller, Wheat Miller, Oats Miller, Rice Miller, Wet Grain Miller, Mill Silo Operations Controller/ Manager

3.3 EXTENT AND NATURE OF SUPPLY

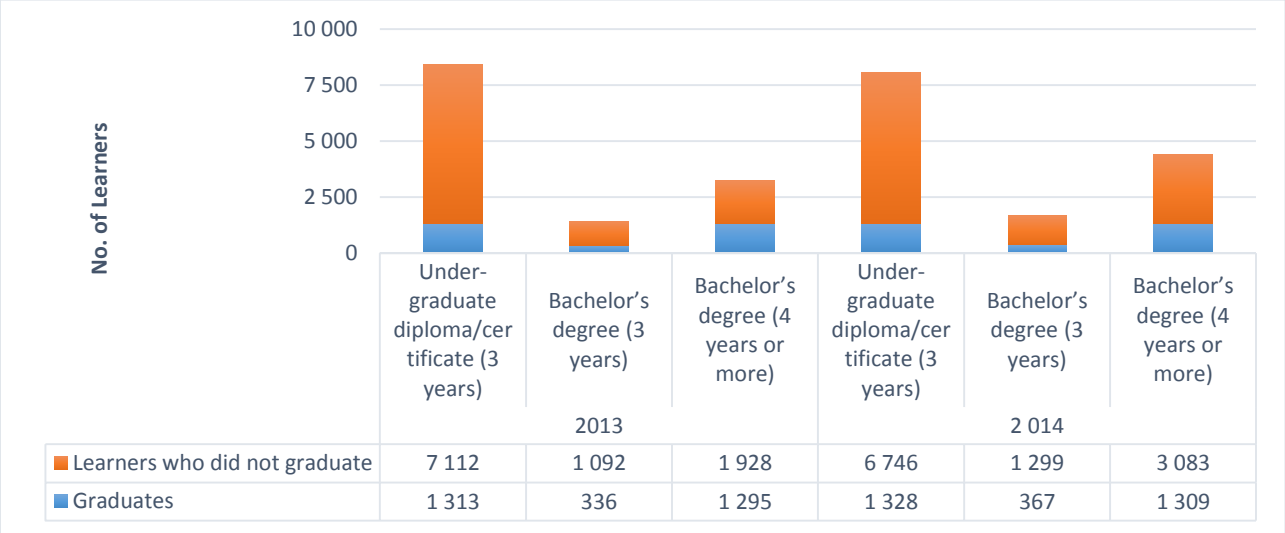
This section aims to examine the extent of occupational supply in the sector, the state of education and training provision and challenges that may be affecting the supply of skills to the agricultural sector. Furthermore, this section supplies details on the learners currently enrolled at training institutions, as well as the learners graduating into the labour market.

Higher Education Institutions

There is a high dropout rate of students in undergraduate programmes according to DHET data sourced from the Institute of Race Relations for 2013 and 2014. The initial phase of university seems to be the most challenging as the dropout rate tapers off as professionals advance in their careers.

The chart below shows the universities' throughput rate for agricultural programmes for 2013 and 2014 respectively:

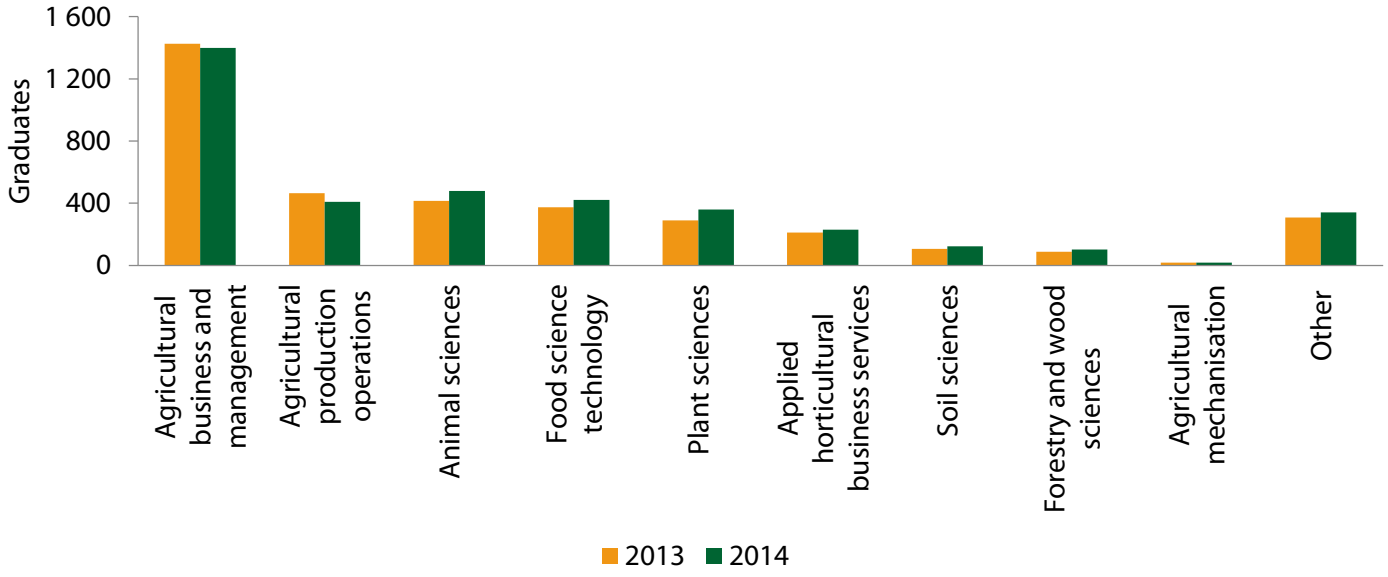
FIGURE 9: UNIVERSITIES THROUGHPUT FOR AGRICULTURAL STUDENTS GRADUATING IN 2013-2014



Source: Institute of Race Relations, 2016

The graph above shows that on average, just over 20% of the learners enrolled for agriculture related qualifications graduated. This puts a strain on skills supply to the sector as the majority of enrolled learner's dropout, negatively affecting the skills pipeline to address identified gaps. The survey conducted with skills development practitioners (External Stakeholder Engagement, 2016) reported dropout rates of less than 20% for all the respondents, which is a vast improvement on the DHET figures cited above. A total of 3,703 and 3,878 degrees, diplomas, and certificates were awarded in 2013 and 2014, respectively. The figure below shows how the graduates were distributed across the various agricultural qualifications.

FIGURE 40: NUMBER OF POST-SCHOOL GRADUATES IN AGRICULTURAL SECTOR



Source: Institute of Race Relations, 2016

Skills Supply through Mandatory Grants

In addressing scarce and skills gaps needs in the sector, there are various skills development interventions that the AgriSETA and the employers in the sector undertake. In 2015/16, employers submitting training reports have indicated a total of 14 138 training interventions were attended by employees in the Grain subsector. The table below outlines the training received in the subsector by occupational category and gender. The results show that the vast majority of people trained in the subsector were Male (72%), while females (28%) make up the remaining proportion. Contrary to the employment breakdown of the subsector outlined in chapter 1, the majority of employees that received training were Professionals (19%); followed by Managers (15%), Skilled Agricultural, Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers (15%), and Elementary Occupations (15%). The occupations that employees were least trained on was Service and Sales Workers (3%), and Plant and Machine Operators and Assemblers (6%).

TABLE 122: EMPLOYEES TRAINED BY OCCUPATIONAL CATEGORY AND GENDER

OCCUPATION GROUP	TOTAL MALE	TOTAL FEMALE	TOTAL
Managers	1554	626	**2180**
Professionals	1997	750	**2747**
Technicians and Associate Professionals	1323	512	**1835**
Clerical Support Workers	1424	493	**1917**
Service and Sales Workers	356	91	**447**
Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	1486	592	**2078**
Plant and Machine Operators and Assemblers	528	296	**824**
Elementary Occupations	1484	626	**2110**
Grand Total	10152	3986	**14138**

Source: AgriSETA, ATR Data, 2016

3.4 PIVOTAL LIST

The Grant Regulations (DHET, 2012) defines PIVOTAL (Professional, Vocational, Technical and Academic Learning) as "programmes that result in qualifications or part qualifications on the National Qualifications Framework". AgriSETA understands PIVOTAL programmes to be programmes that respond to the supply of identified skills demands. PIVOTAL programmes in the main respond to the scarce skills list.

Methods and interventions of arriving at the PIVOTAL list are as follows:

The AgriSETA's PIVOTAL list was derived through a number of measures. These included the list of scarce and skills gaps, the national list of occupations in high demand, analysis of performance information and interaction with key stakeholders. A series of surveys were sent out and telephonic interviews were undertaken with major agriculture players, subsectors and industry representatives throughout all the provinces within South Africa to determine key skills gaps, future perceived skills gaps and to identify which programmes and models would best mitigate these gaps. The identification of the PIVOTAL list was preceded by the identification of scarce and skills gaps lists, which, in turn, was informed by labour market demand analysis.

Interventions to implement the AgriSETA PIVOTAL list are informed by the status of supply such as the existence of registered qualifications, the adequacy of accredited providers and appropriate or relevant learning interventions to address the qualifications and skills in demand.

The PIVOTAL list is ranked in order of priority as per the scarce skills identified, WSP 2017-18 needs and the AgriSETA supportive interventions to develop these skills.

TABLE 133: THE AGRISETA 2018/19 PIVOTAL LIST

Occupation Code	Occupation	Specialization/ Alternative Title	Intervention Planned by the SETA	NQF Level	NQF Aligned	Quantity Needed	Quantity to be supported by seta
2017-821101	Mixed Crop and Livestock Farm Worker / Assistant	General Farm Worker	Learnerships: National Certificate: Mixed Farming Systems	2	Yes	200 000	3980
			National Certificate: Plant Production	1	Yes		
			Skills Programmes: National Certificate: Plant Production National Certificate: Mixed Farming Systems	1 and 2	Yes		
			AET programmes	NA	No		827
2017-131101	Farm Manager	Agronomy, Horticulture, Crop, Livestock Mixed Crop and Livestock, and Ornamental Horticultural Managers	Internships, Bursaries and Learnerships: National Certificate: Animal Production National Diploma: Crop Production National Diploma: Agriculture	4 and 7	Yes	5600	516
2017-653301	Industrial Machinery Mechanic	Agricultural Machinery Mechanic, Farm Machinery Repairer	Apprenticeships: Electricians Millwrights Mechanical Fitters Tractor Mechanics Diesel Mechanics Fitter and Turners	NA	No	1517	230
2017-134915	Operations Managers	Abattoir Manager, Feed mill Manager, Pet Food Mill Manager, Seed Processing Plant Manager	Bursaries Internships and Learnerships: National Certificate Abattoir supervision; Further Education and Training Certificate: Grain Milling Further Education and Training Certificate: Dry Pet Food Advanced	4 and 7	Yes	1449	134

			Processing Technology				
2017-325703	Agricultural Produce Inspectors	Meat Inspector, Fruit and Vegetable Inspector, Produce Inspector, and Quality Controller	Internships, Bursaries: Further Education and Training Certificate: Meat Examination Further Education and Training Certificate: Perishable produce Exportation National Certificate Perishable produce export Technology	4 and 5	Yes	1844	132
2017-213202	Agricultural Scientists	Agronomists, Plant Breeders, Plant Pathologists, Animal Scientists, Plant Scientist, Soil, and Pasture Scientists	Graduate and Post Graduate Bursaries and Internships BSc Agriculture BSc Plant Breeding BTech: Crop Production BTech: Horticulture BSc Crop Science MSc Animal Health	6 and 8	Yes	1759	126
2017-734101	Mobile Plant Operators	Agrochemical Spraying Operator, Tractor driver, Harvester Operator, and Farm Equipment /Machinery Operator.	Learnership: National Certificate: Plant Production Level 2 Skills Programmes Harvest agricultural crops Plant the crop under supervision Operate and maintain irrigation systems	1 and 2	Yes	1213	86
2017-214905	Agricultural Engineer	Agricultural Product Process Engineer, Irrigation Engineer, Agricultural Structures and Facilities Engineer, and Crop Production Mechanization Engineer	Bursaries: Industrial Engineering Mechanical Engineering	6	Yes	1449	20

2017-122301	Research and Development Manager	Product Development Manager, Research Managers	Bursaries : National Certificate: Seed Research and Development operations National Certificate: Seed analysis	3	Yes	1129	15

3.5 CONCLUSION

The aim of this chapter has been to analyze the extent of the skills mismatch in terms of demand and supply in the sector. However, it is important to note that when trying to measure demand against supply, attaining a qualification and the supply of skills, are not synonymous. Indeed, a numeric comparison of skills supplied and demanded would overlook the essential component of workplace experience and broader contextual factors that influence the sector as a whole. In this chapter we have seen that the overarching issues framing skills supply and demand draw attention to challenges with South Africa's rural/urban divide and adequately servicing the needs of the rural sector.

CHAPTER 4: SECTOR PARTNERSHIPS

4.1 INTRODUCTION

To achieve the relevant and targeted skills provision that promotes economic sustainability in the sector, as well as meeting the needs of all South African communities, both rural and urban, in terms of food provision and sustainable livelihoods, AgriSETA recognizes that it must create partnerships with:

- SETAs in other sectors
- Public service and government
- Public TVET colleges
- Large employers and industry bodies within the sector
- Co-operatives, NPOs and community based organisations

The purpose of this chapter is to assess the nature of partnerships that AgriSETA has established and propose measures for deepening such partnerships in the future.

4.2 EXISTING PARTNERSHIPS

TABLE 144: AGRISETA PARTNERSHIPS

STRATEGIC PARTNERSHIPS	DEPARTMENT OR ORGANISATION	RELEVANCE OF PARTNERSHIP
PUBLIC SERVICE AND GOVERNMENT	**DRDLR**	This is a co-funded project between National Skills Fund (R44 million) and AgriSETA (R20 million). The aim of this project is to identify those beneficiaries of land reform who might be supported to establish viable agri-businesses on their newly acquired land. These beneficiaries include co-operatives, emerging farmers as well as subsistence farmers. In the FY2015/16 220 beneficiaries were supported through learnerships, skills programmes and mentorships. Funding for the FY2016/17 has already been allocated.
	National Rural Youth Service Corps (NARYSEC - Youth Development)	This is a joint project that aims to motivate and incentivize young people to work on the land and thereby have a stake in their rural communities rather than gravitate to towns.
	DAFF (Farm Together):	This partnership supports agricultural co-operative development through mentorship and learnerships. DAFF and DRDLR have provided the farms and projects, whilst the AgriSETA provides and quality assures the training required to develop, skill and mentor farmers to sustainably run and manage co-operatives with the ultimate goal of moving emerging farmers to commercial farmers.
	DAFF (Career Awareness Programme):	This focuses on the promotion of agriculture, forestry and fisheries as careers and livelihoods of choice. This is particularly aimed at school-going youth in order to build a skills base to address skills gaps identified in the sector. The Career Awareness Programme is used as a vehicle to eliminate the negative perception towards agriculture and forestry and to raise the profile of fisheries, especially to the inland schools.
	The Land Bank:	With some 300 emerging market farmers on its books, there is an opportunity for the AgriSETA to partner with The Land Bank to help emerging farmers graduate to commercial status. In doing so, this will

		support the implementation of the Sector Infrastructure Projects (SIPS) (in particular, those that are aligned to the local government sector) and other local economic development activities, as part of achieving Goal 6 of the National Skills Development Strategy III (NSDS III).
Public TVET colleges	**AGRISETA**	The AgriSETA has initiated and funded several projects with 17 public colleges in its sector (Mthashana, Umfolozi, Waterberg, Nkangala, Gert Sibande, Taletso, Boland, South Cape, Sivananda, Westcol, Maluti, Motheo, Goldfield, Midlands, Lovedale and the East Cape Midlands TVET Colleges). AgriSETA in partnership with these TVET and Agricultural colleges currently offers 92 registered learnership programmes aimed at addressing the identified scarce skills.
Large employers and industry bodies within the sector	**Green partnerships**	AgriSETA will explore possible partnerships to provide support to viable Green business initiatives that show potential for job creation. Research needs to be conducted to identify new industries that must be supported with skills development in this area.

4.3. EMERGING PARTNERSHIPS

The AgriSETA currently does not have any joint projects it is running with other SETAs outside of the normal inter-SETA collaboration. The AgriSETA recognizes the need for skills development along value chains. In mid-term horizon, AgriSETA aspires to engage a number of SETAs in areas of common interest. Specific SETAs it has identified for cross-SETA collaboration and partnership are:

FoodBev SETA: There are a number of secondary agricultural industries that share skills needs with industries located in the food and beverages sector. There are overlaps in relation to producers in the citrus fruit and wine industries and a need to develop a set of skills interventions that recognize the need for a more coordinated approach to beneficiation (i.e. the production of fruit products from fruit).

FPM SETA: The FPM SETA is engaged with Forestry, a responsibility of DAFF. There are common skills needs between Agriculture and Forestry, including the need for effective extension services. The two SETAs need to work together on such services. There are a number of secondary production processes that fall between the two SETAs, including leather, hemp, cotton, and new industries such as the Eastern Cape goats hair initiative. A joint approach is needed to work in these industries, so as to maximize the potential for job creation.

W&R SETA: In working with co-operatives one of the most difficult challenges is access to markets. The logical market is supermarkets located in the Wholesale and Retail sector. There is a trend of established farmers

supplying supermarkets directly and forming direct relationships rather than trading through intermediaries. A partnership approach whereby co-operatives contracted to supply produce to a supermarket and/ or local markets such as the Pretoria and Johannesburg markets is provided with training from AgriSETA needs to be explored.

4.4. CONCLUSION

This chapter presented the AgriSETA partnerships. The AgriSETA aims to strengthen its existing partnerships by specifically engaging with partners to meet its occupational shortages, skills gaps and HTFVs. New partnerships especially with other SETAs will be pursued ardently to align the AgriSETA's priority skills areas and pivotal skills lists to national interests. Future SSPs will also report on partnerships that work and those that do not work. Best practice partnerships will be highlighted in future SSPs to benchmark partnership criteria with successful, effective and efficient partnership models. The next chapter presents the AgriSETA skills priority actions.

CHAPTER 5: SKILLS PRIORITY ACTIONS

5.1 INTRODUCTION

This chapter aims to synthesize the findings of the previous chapters and establish a set of skills priority actions for the subsector. The intention of these recommended skills priority actions is that they articulate the micro concerns of the Grains and Cereals subsector.

These recommendations are founded in national policy and sectoral change drivers (chapter 2), as well as the skills concerns identified by employers and training providers in terms of their skills needs (chapter 3). This chapter is not a strategic or operational plan, but rather serves to identify priorities that should be taken forward and further developed in the AgriSETA Strategic Plan and Annual Performance Plan and to reflect the needs of the Grain industry.

5.2 KEY FINDINGS

Overall the Grains and Cereals subsector contributes significantly to the agricultural sector in South Africa. The Grains and cereals subsector accounts for 30% of total agricultural production in the country, and maize remains the most prominent field crop. An analysis of data from the subsector shows that the majority of people employed in the subsector are in Elementary occupations.

External stakeholder engagements identified changing **Consumer Behavior; Technology and Mechanization of the subsector; and Climate Change and Draught** as the key change drivers currently affecting the subsector.

Based on the legislative and policy frameworks and identified change drivers, the four skills implication that need to be addressed in the Grain subsector include the following:

- Practical skills transfer though mentoring and on-job training.
- Partnerships with HEIs for research and development in the subsector.
- Partnerships with key role players.
- Development of green knowledge qualifications for innovative solutions to address climate change and the draught.

The HTFVs identified for both small emerging farmers and co-operatives, and commercial farmers, the following are important occupations that the AgriSETA should direct its Grains and Cereals funding mainly towards:

- **Milling**
- **Grain Handling Controller**
- **Sales and Marketing Manager**
- **Grain Handling Operator**
- **Agricultural Machinery Mechanic**
- **Importer or Exporter**

In addressing scarce skills gaps needs in the subsector, there are various skills development interventions that AgriSETA and employees in the sector should undertake. In 2016/17, a total of 14 138 training interventions were attended by employees in the Grains and Cereals subsector, and the majority of employees that received this training were male. Contrary to the finding that the majority of people employed in the subsector occupy Elementary positions, the majority of employees that received training were Professionals.

Finally, existing AgriSETA partnerships are with Public Service and Government, Public TVET Colleges, and large employers and industry bodies. AgriSETA currently does not have joint ventures running with other SETA. AgriSETA recognizes the need for skills development initiatives with other SETA and has identified various SETAs aligned with the mandate and objectives of AgriSETA.

5.3 CONCLUSION AND RECOMMENDED ACTIONS

The AgriSETA should take note of the developments in the Grains and Cereals subsector; it is imperative for the SETA to align development initiatives with industry demands and further ensure relevant skills are available to the industry.

Research Agenda

It is recommended that AgriSETA take research into Climate Change and Draught onto its research agenda. This will ensure that the subsector is well prepared and finds innovative ways of dealing with the issues in the future.

High Level Skills

At a commercial scale the SETA needs to be responsive to the changing nature of the subsector by recognizing and investing in high level skill qualifications to address technological advancement and mechanization of the

subsector. Similarly, as a new industry, there is a need for research (beyond the level of the AgriSETA's own research agenda). It is necessary that the AgriSETA engage with the sector to ensure that it funds post graduate bursaries aligned to the research needs of the Grains and Cereals subsector.

Elementary Occupations

AgriSETA initiatives should focus on reaching Elementary employees in the Grains and Cereals subsector, to ensure equal opportunities to skills development initiatives and practical skills transfer through mentoring and on-job training experience.

BIBLIOGRAPHY

Agricultural Products Standards Act, 1990 (ACT No. 119 of 1990).

Agri SA (2017) Implications of a Carbon Tax and Offset System for Agriculture in South Africa. 2017.

https://www.agrisa.co.za/about-us/role-of-agriculture-in-sa/

Business Monitor International. (2016). Southern African Drought: Food Security and Inflation Consequences. http://www.bmiresearch.com/news-and-views/southern-african-drought-food-security-and-inflation consequences.

Department of Agriculture, Forestry and Fisheries (2016) Economic Review of the South African Agriculture. 2016.

http://www.daff.gov.za/Daffweb3/Portals/0/Statistics_and_Economic_Analysis/Economic_Analysis/Economic Review 2016.pdf

Export.Gov (2017) South African Agricultural Sector (2017).
https://www.export.gov/article?id=South-Africa-agricultural-equipment

Kriel, G. (2016) Drones Can Take Precision Farming To The Next Level. Farmers Weekly (2016).
https://www.farmersweekly.co.za/agri-technology/farming-for-tomorrow/drones-can-take-precision-farming-to-the-next-level/

Lyddon, C. (2017) Focus on South Africa. World Grain (2017).
http://www.wold-grain.com/Departments/Country-Focus/Country-Focus-Home/Focus-on-South-Africa.aspx

Statistics South Africa (2017) Quarterly Labour Force Survey.

http://www.statssa.gov.za/publications/P0211/P02111stQuarter2017.pdf

Trademap (2017) List of exporting markets for product imported by South Africa. 2017.

http://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1|710||||10|||2|1|1|1|2|1|2|1|1

Trademap (2017) List of importing markets for a product exported by South Africa. 2017.

http://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1|710||||10|||2|1|1|1|2|1|2|1|1

IMAGES

Cover Page	Agrodaily (2011), South African Wheat Rises to Record as Rand Slumps; Corns Fall, November 2011 Accessed: http://agrodaily.com/2015/11/11/south-african-wheat-rises-to-record-as-rand-slumps-corn-falls/
Chapter 1	Bio Health Blog (2017), Top 3 Cereals to Lose Weight Accessed: https://biohealthblog.com/2017/12/16/top-3-cereals-lose-weight/
Chapter 2	Borgen Magazine (2015), Sorghum in Beer Increases Crop Production in Africa, December 2015 Accessed: http://www.borgenmagazine.com/sorghum-in-beer/
Chapter 3	South East Farm Press (2014), Kentucky producer talks about why he invested in on-farm grain storage, November 2014 Accessed: http://www.southeastfarmpress.com/grains/kentucky-producer-talks-about-why-he-invested-farm-grain-storage
Chapter 4	Antrexinc, December 2017 Accessed: http://antrexinc.com/
Chapter 5	CPA Africa (2015), South Africa Maize Futures Take 2015 Gains To 120%, 2015 Accessed: https://www.cp-africa.com/2016/01/04/south-africa-maize-futures-take-2015-gains-to-120/