

SEED

Sub-Sector Skills Plan

2020-2021





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*ENABLING A SKILLED AND PROSPEROUS
AGRICULTURAL SECTOR*

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ABBREVIATIONS AND ACRONYMS

ABBREVIATION/ ACRONYM	DESCRIPTION
AFASA	African Farmers' Association of South Africa
AFSTA	African Seed Trade Association
AgriSETA	Agricultural Sector Education and Training Authority
ARC	Agriculture Research Council
ATI	Agricultural Training Institute
ATR	Annual Training Report
BMI	Business Monitor International
CAGR	Compound annual growth rate
*DAFF [DALRRD]	*Department of Agriculture, Forestry and Fisheries [changed to Department of Agriculture, Land Reform and Rural Development in June 2019]
*DHET [DHEST]	*Department of Higher Education and Training [was merged with Department of Science and Technology and became Department of Higher Education, Science and Technology in June 2019]
*DRDLR [DALRRD]	*Department of Rural Development and Land Reform [was merged into the Department of Agriculture, Land Reform and Rural Development in June 2019]
*DTI [dtic]	*Department of Trade and Industry [changed to Department of Trade, Industry and Competition]
FETMIS	Further Education and Training Management Information System
GDP	Gross Domestic Product
GMO	Genetically Modified Organisms
GMQ	Good Merchantable Quality
HEMIS	Higher Education Management Information System
HTFVs	Hard-to-fill vacancies
ICAC	International Cotton Advisory Committee
IDGP	Integrated Growth and Development Plan
IDP	Integrated Development Plan
IPAP	Industrial Policy Action Plan

ISF	International Seed Forum
ISTA	International Seed Testing Association
KZN	KwaZulu-Natal
LED	Local Economic Development
MAFISA	Micro Agricultural Financial Institution of South Africa
NAFU	National African Farmers Union
NAMC	National Agricultural Marketing Council
NDP	National Development Plan
NGP	New Growth Path
NPO	Non-Profit Organisation
NQF	National Qualifications Framework
NSDP	National Skills Development Plan
OECD	Organization for Economic Co-operation and Development
PBR	Plant Breeders' Rights
QLFS	Quarterly Labour Force Survey
SACTA	South Africa Cultivar and Technology Agency
SANSOR	South African National Seed Organisation
SAQA	South African Qualifications Authority
SARS	South African Revenue Service
SASA	South African Seed Association
SDA	Skills Development Act
SDL	Skills Development Levies
SIC	Standard Industrial Classification
SSP	Sector Skills Plan
Stats SA	Statistics South Africa
TVET	Technical Vocational Education and Training
WSP	Workplace Skills Plan

* The references and information in the SSP was obtained before the merging and renaming of national government departments in June 2019.

EXECUTIVE SUMMARY

The Seed sub-sector is comprised of three (3) major sections, namely:

- **Agronomy** – It mainly covers grains, beans, sorghum and cotton.
- **Horticulture** – It covers all vegetable and flower seeds (also referred to as hobby market seeds).
- **Forage** – It covers all planted animal feeds, fodder, and turf and crop seeds.

The Seed sub-sector is not large. It has only a few employers registered with the AgriSETA. It is, however, an important sub-sector as its three components – horticulture, agronomy and forage – are critical inputs to the agricultural sector and without these inputs the sector will struggle to survive and will not be able to produce the volumes and quality required to feed the nation.

The agronomy component of the Seed sub-sector uses approximately 50 million kilograms of seeds annually to the total value of R4 billion (Sansor, 2015). It is estimated that 10% of available seed is exported.

Horticulture represents 788 532 kg local planting and 1 103 307 kg for export to a total value of R887 million. Forage represents 20 million tons for local planting and a further 3.6 million tons for the export market to a total value of R512 million.

Overall, the economic outlook of the sectors that depend on seed supply is stable and for some produce there is a marginal growing trend (ARC, September 2017).

The Seed sub-sector is well established and sophisticated. It is geared towards the needs of the commercial sector and with the weak currency, well positioned to participate in the export market. It is also a sector which is highly regulated and legislated due to high export quality standards as well as legislation on plant improvement and plant breeders rights (PBR).

The sector is challenged by the fact that insufficient plant scientists (such as entomologists, plant breeders and seed analysts, phytosanitary specialists) are produced by the educational sector.

Due to its technical nature, it is highly improbable for small-scale seed growers to enter the markets. Large seed producers rather aim their efforts and resources at small-scale crop and horticulture farmers by supporting them with the introduction of high quality seed and advisory services (which, ideally, should be supported by extension officers).

In 2019/20 the subsector contributed 2, 3% of the SDL paid to AgriSETA and the results indicate that there were 702 training interventions to ensure workplace skills development during this period.

RESEARCH PROCESS AND METHODS

AgriSETA carried out various research projects to produce the Seed Sub-sector Skills Plan 2020-2021. The research was conducted through a mixed methodology of qualitative and quantitative techniques. The table below summarises the research process and methods used to construct this sub-sector skills plan.

TABLE 1: RESEARCH PROCESS AND METHODS

Research Topic	Nature (Design) of the study	Purpose	Data Collection	Sample Size	Timeframe
Chapter 1: Sector Profile					
Scope of coverage of the sector	Quantitative	Gives an overview of the sector	AgriSETA employer data	All AgriSETA employer data for 2018/19	May–July 2019
Key role-players in the sector	Quantitative	Investigate key role-players	WSPs/ATRs data	All WSPs received for 2019	May–July 2019
Economic performance	Quantitative	Examine economic performance in the sector	WSPs/ATRs data	All WSPs received for 2019	May–July 2019
Employer profile	Quantitative	Examine employment trends	WSPs/ATRs data	All WSPs received for 2019	May–July 2019
Labour market profile	Quantitative	Examine employment trends	WSPs/ATRs data, Statistics SA	All WSPs received for 2019	May–July 2019
Chapter 2: Key Skills					
Drivers of change for the agricultural sector	Qualitative	Identify skills priorities and change drivers in the agricultural sector	Interviews and focus groups	60 SSC members, 4 focus groups	August 2019
Policy frameworks affecting skills demand and supply	Qualitative	Analyse sectorial policy frameworks	Interviews and focus groups	60 SSC members, 4 focus groups	August 2019
Chapter 3: Occupational Shortages and Skills Gaps					
Critically evaluate the AgriSETA critical and scarce skills list and provide an overview of the skills gap	Qualitative	To provide the sectoral occupational demand, extent and nature of supply	Focus groups WSPs/ATRs data	All WSPs/ATRs data received for 2019, 60 SSC members, 4 focus groups	August 2019
Identification of Sectoral Priority Occupations (PIVOTAL)	Qualitative	Formulate Sectoral Priority Occupations (PIVOTAL)	WSPs/ATRs interviews	All WSPs/ATRs data received for 2019, 11 employer surveys, 60 SSC members	August 2019

Research Topic	Nature (Design) of the study	Purpose	Data Collection	Sample Size	Timeframe
Chapter 4: Partnerships					
Analysis of planned and existing SETA partnerships	Qualitative	Ascertain the AgriSETA partnerships	Interviews	All AgriSETA departments	May–July 2019
Chapter 5: Skills Priority Actions					
Key skills findings from previous chapters	Quantitative	Provide synthesis of previous chapters in the SSP and recommendations of priority actions	NONE	NONE	On-going

DOCUMENT REVIEW

A document review was conducted to establish the economic performance and trends of the Seed sub-sector, 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 list of references. A thematic analysis was conducted to synthesise the key economic, policy and training issues affecting the Seed sub-sector, and to identify key skills issues.

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, Workplace Skills Plans (WSPs), Annual Training Reports (ATRs) and primary data analysis obtained at the two-day AgriSETA stakeholder conference (28 February- 1 March 2019), interviews and data collection.

SUMMARY OF KEY FINDINGS

The economic outlook of the sectors that depend on seed supply is stable and for some produce there is a marginal growing trend (ARC, 2017).

In the Seed sub-sectors:

- Males outnumber females by more than 2:1
- Black employees represent 48% of total workforce and white employees represent 43%
- Employees older than 35 form 66% of the workforce

The above facts are disturbing as they show that (1) gender equality is poor, (2) equity targets have not been achieved, and (3) there is a relatively low presence of young people in employment.

The following five key skills development matters need to be addressed:

1. The development of specialist product technical support.
2. The development of specialist sales personnel in a highly technical and scientific environment.
3. The improvement of the understanding of the export market and the skill to operate in international markets.
4. The enhancement of knowledge about natural resources and economic management.
5. The management of disasters (floods, droughts and wild fires) – at the level of the commercial seed grower.

6. The development of scientists and researchers to contribute to the continual demand for improved seeds and seeds that are resistant to climate change and diseases.

Priority skills and occupations in the Seed sub-sector are the following:

- **Professional Researchers** – The scientific nature of the sub-sector requires skilled researchers and scientists such as plant breeders, pathologists, entomologists, agronomists and technicians such as seed analysts.
- **Technical Product Officers and Seed Inspectors** – Commercial seed growers need support from the industry and at the same time – due to regulatory requirements and international standards – inspectors are needed.
- **Sales staff** – Sales staff operate in a highly technical and scientific environment. There is a need for candidates that have a BSc degree and can be developed into sales professionals.

Furthermore, there is a lack of Labour Market Information for the sub-sector due to the fact that many of the sub-sector's members are registered under incorrect SIC codes and resort under other sub-sectors. This matter requires dedicated attention and it is recommended that it be prioritised on the AgriSETA research agenda.

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CHAPTER 1

SECTOR PROFILE

1.1. INTRODUCTION

Chapter 1 of this report provides an overview of the agricultural sector, paying particular attention to the Seed sub-sector in South Africa. The first section looks at the scope of the Seed sub-sector's coverage. The second section outlines AgriSETA stakeholders and key role-players in the Seed sector.

The third section looks at the economic performance of the overall agricultural sector, zooming into the contribution of Seed to the South African economy. The fourth section explores the employer profile and the last section provides a labour market profile where the number and demographics

of people employed in the sector is explored. Essentially, the chapter sets the scene for the skills issues that are delved into in the subsequent chapters.

1.2. SCOPE OF COVERAGE

The scope of AgriSETA covers the agricultural sector, from input services to a farm to activities on a farm and first level processing activities on a farm. The Seed sub-sector is classified into a single economic activity and is mainly engaged with primary activities. The table below outlines the formal demarcation of the Seed sub-sector.

TABLE 2: ACTIVITIES IN THE SEED SUB-SECTOR BY STANDARD INDUSTRIAL CLASSIFICATION

SUB-SECTOR	SIC CODE	SIC Description
Seed	11140	Seed production and marketing

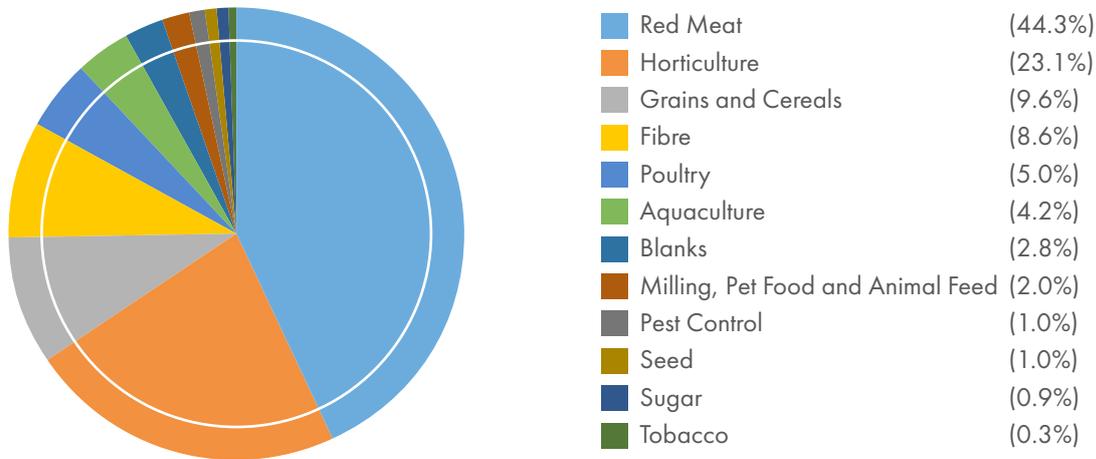
Source: AgriSETA, 2019

The Seed sub-sector is comprised of three (3) major sections:

- **Agronomy** – It mainly covers grains, beans, sorghum and cotton.
- **Horticulture** – It covers all vegetable and flower seeds (also referred to as hobby market seeds).
- **Forage** – It covers all planted animal feeds, fodder turf and crop seeds.

Overall, the agricultural sector consists of 11 sub-sectors, each organised into a sub-sector committee tasked to represent their industry's interest to AgriSETA. The figure below indicates the relative size of employers by sub-sectors, as captured in the AgriSETA employer data for 2019/20. The AgriSETA employer data comprises all the sub-sector data for both levy and non-levy payers.

Figure 1: DISTRIBUTION OF AGRICULTURAL ENTITIES BY SUB-SECTOR



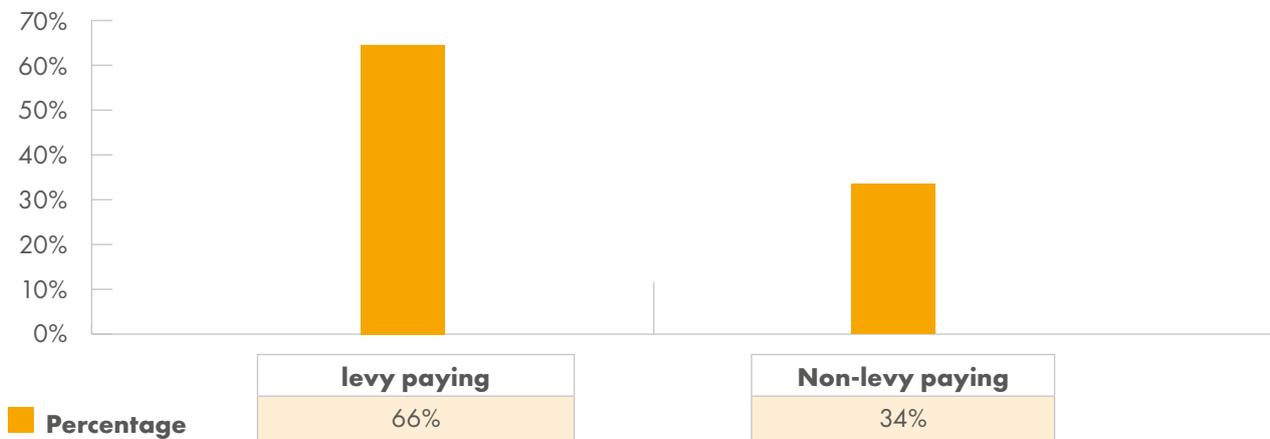
Source: AgriSETA Employer Data, 2019/20

The total number of employers registered in the employer database for 2019/20 is 26 181. The Red Meat (44.3%) sub-sector remains the biggest on the AgriSETA employer data, followed by the Horticulture sub-sector (23,1%) , Grains and Cereals (9,6%), and Fibre (8,6%). The lowest percentages are found in Milling, pet food & animal feed (2,0 %), and Pest control and Seed (1%), Sugar (0,9%) and Tobacco (0,3%).

REVENUE FROM SKILLS DEVELOPMENT LEVIES

The total number of employers registered in the employer database for 2019/20 is 26 181. The Red Meat (44.3%) sub-sector remains the biggest on the AgriSETA employer data, followed by the Horticulture sub-sector (23,1%) , Grains and Cereals (9,6%), and Fibre (8,6%). The lowest percentages are found in Milling, pet food & animal feed (2,0 %), and Pest control and Seed (1%), Sugar (0,9%) and Tobacco (0,3%).

FIGURE 2: SKILLS DEVELOPMENT LEVIES CONTRIBUTION BY ENTITIES IN THE SEED SECTOR



Source: AgriSETA employer data, 2019/20

According to the 2019/20 WSP submissions, the non-payers remain the highest at 66% entities while only 34% of the registered entities contribute to the SDL as shown on Figure 2. In summary, the Seed sub-sector represents 1% of agricultural entities and contributed 2,3% of the total SDL in the agricultural sector in 2019/20. Whilst the Seed sub-sector is small, it consists of a number of relatively large enterprises.

1.3. KEY ROLE-PLAYERS

There are a number of public and private key role-players in the agricultural sector that contribute towards its functioning. They include national government departments, sector representatives and industry bodies. The table below groups these role-players according to their strategic contribution to the sector. Note that while comprehensive, this list is not exhaustive.

Table 3: 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 <i>[changed to Department of Higher Education, Science and Technology in June 2019]</i>	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 <i>[changed to Department of Trade Industry and Competition in June 2019]</i>	Industrial strategy, international trade agreements, agricultural sector strategy and policy implementation desk
	Department of Agriculture Forestry and Fisheries <i>[changed to Department of Agriculture, Land Reform and Rural Development in June 2019]</i>	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

Strategic contribution	Department or organisation	Relevance to agricultural skills development
Planning	Department of Labour	Labour legislation, wage determinations, employment equity
	Department of Economic Development <i>[changed to Department of Economic Development and Tourism]</i>	Sector economic strategies
	National Planning Commission	Identify inter-departmental overlaps and gaps
	Department of Environmental Affairs <i>[changed to Department of Environment, Forestry and Fisheries in June 2019]</i>	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 <i>[changed to Department of Agriculture, Land Reform and Rural Development in June 2019]</i>	Partnering with AgriSETA in mobilising funds for capacity building of claimants
	Department of Co-operative Governance and Traditional Affairs plus 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 organisation providing commodity strategic support and services to South African grain producers to support sustainability

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

While the above is relevant to the agricultural sector at large, certain key role-players need special mention when considering the Seed sub-sector.

TABLE 4: KEY SEED ROLE-PLAYERS

Strategic contribution	Department or organisation	Relevance to agricultural skills development
Import and export	DAFF [changed to Department of Environment, Forestry and Fisheries (DEFF) in June 2019]	Plant breeders rights Act, 1976 for import purposes and the OSTL for exporting purposes, similarly the Agricultural Pests Act, 1983 and GMO Act, 1977 Plant Improvement Act South African Seed Certification Scheme
Lobbying, communication and relations	AGBIZ	Business representation
	NAMC	Marketing matters, assistance with exports
	AFSTA	African seed trade lobbying
	ISF	Matters pertaining to international trade in seed.
	SACTA	Import royalties
	OECD	International Seed Certification Scheme
	ISTA	Quality related matters
Sector support	SANSOR	SANSOR plays a pivotal role in the sector in that it represents seed trade internationally, liaison with sector stakeholders, facilitate consultation and training of members, act as licencing body, promote use of quality seed and ethical standards
	GFADA	Supports small-scale and emerging farmers

1.4. ECONOMIC PERFORMANCE

OVERVIEW

The gross domestic product (GDP) forecast for South African's total annual growth rate showed an increase of 1% from 2018 to 2019 (OECD, 2019). According to the Statistics South Africa (2019), the agricultural sector contracted by 13.2% in the first quarter of 2019, following a growth of 7.9% in the last quarter of 2018. It contributed -0.3 of a percentage point to the contraction of the economy during the first quarter of this year and contributed -0.1 of a percentage point in the second quarter of 2019. 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 R273 544 million for the year ended 30 June 2018, a 2.1% increase from the previous year (DAFF, 2018).

The Seed Market was valued at \$54,469 million in 2016, and is expected to reach at \$68,711 million by 2023, registering a CAGR of 3.4% from 2017 to 2023. The growth of the global seed market is driven by modernisation of agriculture, requirement to increase food production, and rise in usage of biofuels and animal feed. There are two basic types of seed products in South Africa currently: open or self-pollinating (such as wheat, soybean and groundnuts) and the hybrids (such as maize, sunflower, cotton, vegetable seed, forage) (Mordor Intelligence, 2017).

Although maize is a staple crop for the South African population, around half of the maize produced in South Africa is used for animal feed, and about 70% of this is used

for poultry. From mid-2015 to present, the prices for maize have remained unsettled. South African maize exports also continue to gain momentum. The country exported 152,985 metric ton of maize in the last week of Jul 2017. This is 85% higher than the previous week's exports. About 47% was yellow maize, with 53% being white maize (Mordor Intelligence, 2017).

The area under wheat production in South Africa increased by 5% in the 2016/–2017 period, mainly due to the drought conditions in the summer grain producing area that forced farmers to increase winter wheat production as an alternative. As a result, the wheat area in, especially, the Free State province increased by 38% or by 30 000 hectares. However, this trend is not likely to continue as corn area planted drastically increased in 2017 due to more favourable climatic conditions (Mordor Intelligence, 2017). The agronomy component of the Seed industry uses approximately 50 million kilograms of seeds annually to the total value of R4 billion (Sansor, 2015). Approximately 10% of available seed is exported.

Horticulture represents 788 532 kg of seed locally used and 1 103 307 kg to be exported to a total value of R887 million. Forage represents 20 million tons for local consumption and a further 3.6 million tons for the export market to a total value of R512 million.

ECONOMIC OUTLOOK OF THE SEED SUB-SECTOR

Key horticulture produce outlook (based on sales prices) is as follows:

- Tomatoes: Prices are expected to trend sideways with limited upside in the short term due to volume pressure.
- Onions: Onion prices are expected to retain the firmer trend but with limited upside in the short to medium term.
- Carrots: Carrot prices are still expected to remain under pressure in the short term on volume pressure.
- Cabbages: The short term price outlook remains bearish as a result of the increased volumes across markets.
- Lettuce: Prices will trend sideways with limited upside potential in the short to medium term on improved supplies.

Butternut: Prices will trend firmer in the short term on good demand across markets.

In the case of **agronomy** the outlook is as follows:

Maize: The expected lower local maize price levels will put downward pressure on the area to be planted with maize for the 2017/18, especially for the white maize area.

Wheat: With production expected to decline in 2017/18, prices are expected to bottom out, but given the magnitude of current stock levels following years of oversupply, a complete recovery to historic price relationships with other grains is expected to take at least 2 to 3 years.

Sunflower: Global sunflower seed production is projected to grow slightly to 46.1 million tons in 2017/2018. In South Africa, due to sunflower resilience in drought situations and late planting window relative to maize, the area under sunflower increased by 25% in the severely drought affected 2016 season.

Soybeans: Domestically, the production forecast for soybeans in 2017/18 year is 1,316 million tons, an increase of 23% (246000 tons) from 1070 million tons. Soybeans price forecast shows an upward trend in the price.

Sorghum: The demand for sorghum is projected to remain fairly stable in the next decade, increasing by less than 1% per annum as a result of population growth rather than rising per capita consumption.

Cotton: The International Cotton Advisory Committee (ICAC) projects that world cotton production will increase by 8% in 2017/18 to 24.9 million tons, while consumption is projected to rise by 2% to 25 million tons. Locally, the exchange rate movement may continue to affect the domestic market prices.

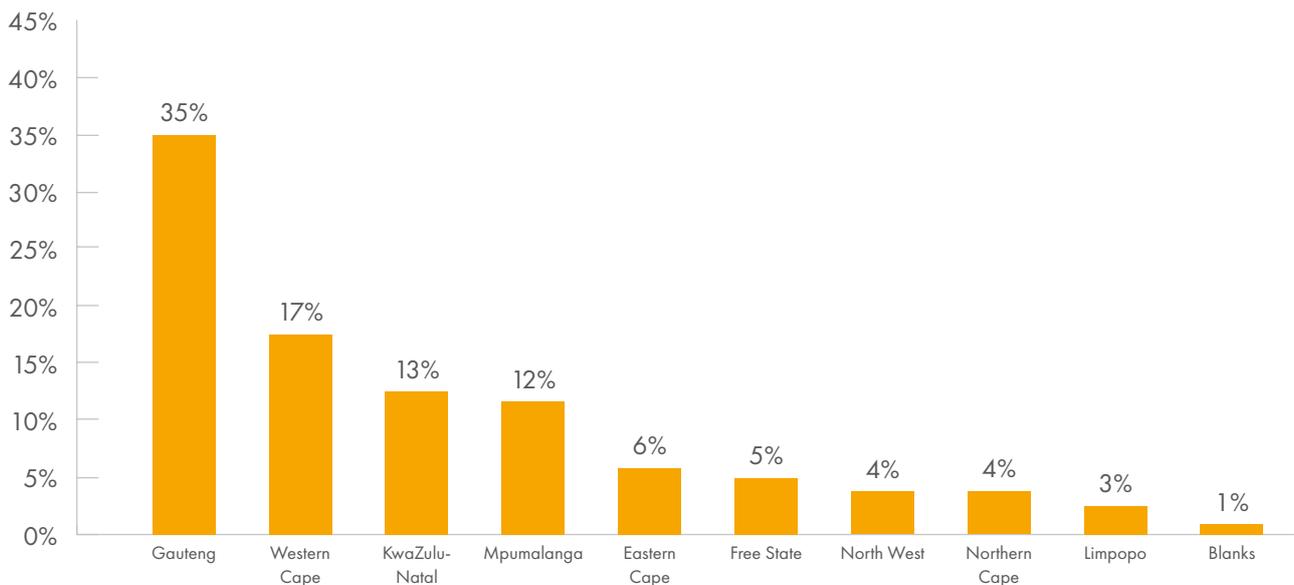
In summary, the economic outlook of the sectors that depend on seed supply, is stable and for some produce there is a marginal growing trend (ARC, September 2017).

The forage component of the sub-sector also reflected a growth of 17.6% from 2015 to 2016.

1.5 EMPLOYER PROFILE

According to the 2019/20 AgriSETA WSP submissions, there are 253 registered Seed employers in South Africa. Of these, 86 contribute to the SDL. Figure 3 below illustrates the distribution of employers across the provinces within the Seed sub-sector.

FIGURE 3: PROVINCIAL DISTRIBUTION OF SEED EMPLOYERS



Source: AgriSETA employer database, 2019/20

The vast majority of seed entities are located in Gauteng (35%) followed by the Western Cape (17), KwaZulu-Natal (13%), and Mpumalanga at 12%. The rest of the provinces each have a distribution of less than 10% of the entities. It should, however, be noted that this may be a reflection of its head office location, while actual activities on farm land may be located elsewhere in the country.

SMALL-SCALE SEED ENTERPRISES

All three components of the Seed sub-sector have very active small-scale and emerging farmer participation.

1.6 LABOUR MARKET PROFILE

The broader South African agricultural sector is one of the biggest employers in the country. In the first quarter of 2019, Stats SA reported that a total of 837 000 people were employed in the sector. The table below illustrates that 27% of employment is in the Western Cape Province for Q1:2019 accounting for the majority of employees in the sector, followed by Limpopo and KwaZulu-Natal.

TABLE 5: DISTRIBUTION OF EMPLOYEES BY PROVINCE IN AGRICULTURE, 2019

Province	Q4 (2018) (Thousands)	Q1 (2019) (Thousands)
Western Cape	213	225
Eastern Cape	78	84
Northern Cape	39	41
Free State	57	60
KwaZulu-Natal	136	134
North West	62	62
Gauteng	31	31
Mpumalanga	96	76
Limpopo	138	124

Source: Statistics South Africa, 2019. Quarterly Labour Force Survey. 1st Quarter 2019

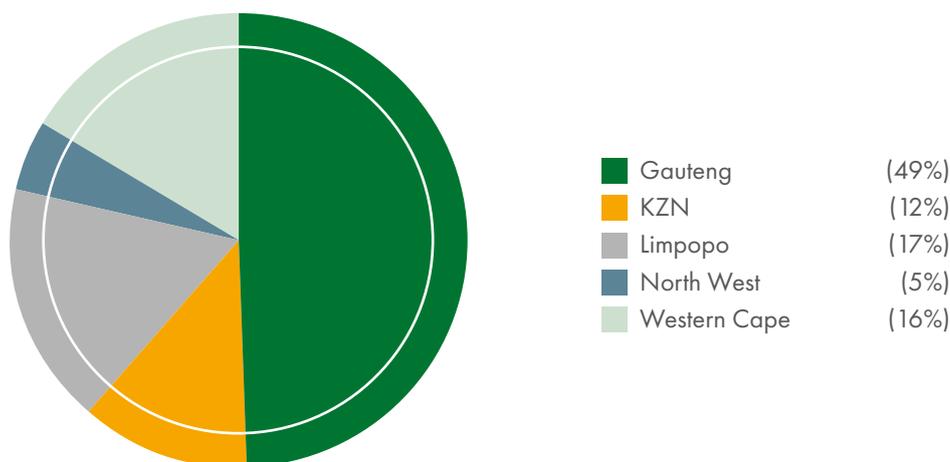
Labour market information is based on WSP/ATR information. The information is expressed in relative terms as the information available to AgriSETA does not represent the full population. According to the 2019/20 WSP submissions, the Seed sub-sector has a total of 2 944 employees.

of employees followed by Limpopo (17%), Western Cape (16%), KwaZulu-Natal (12%), then lastly, Northwest province (5%). It is noted that even though Limpopo has only 3% of the seed employers, it has the second largest number of employees. The results are based on the entities that submitted 2019/20 WSP/ATR.

PROVINCIAL DISTRIBUTION OF EMPLOYEES

Figure 4 shows the provincial distribution of Seed employees across the provinces. Gauteng (49%) has the largest number

FIGURE 4: PROVINCIAL DISTRIBUTION OF SEED EMPLOYEES



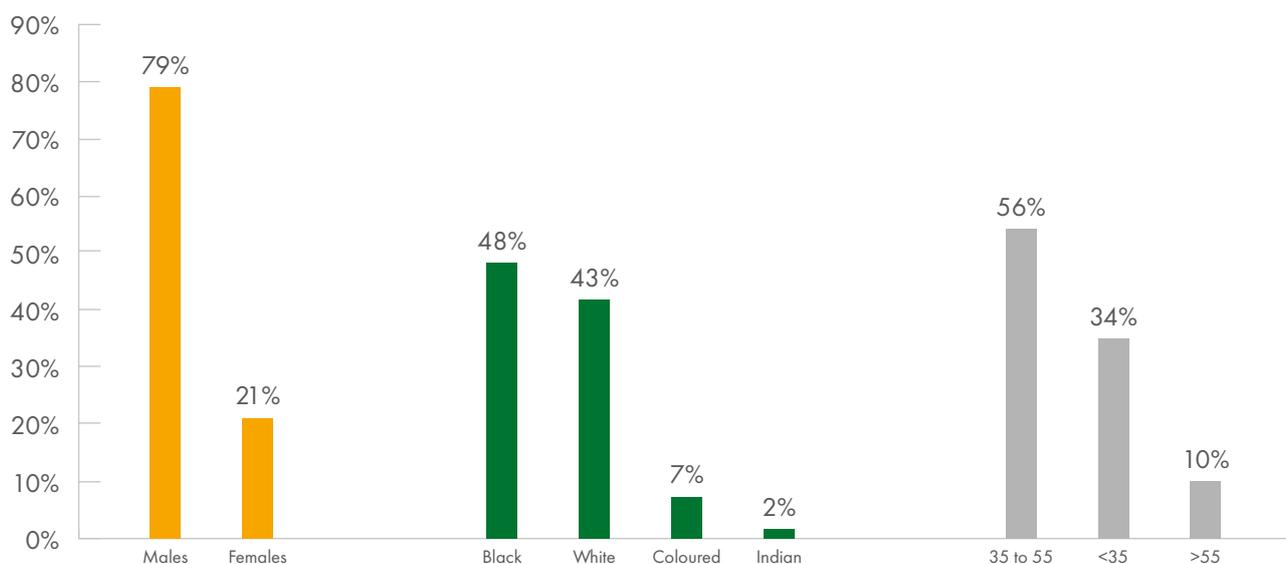
Source: AgriSETA WSP Submissions, 2019/20

GENDER, RACE AND AGE

The graph below summarises the demographics of the sector:

The results indicate that the subsector is dominated by males at 79% with 21% being female. Majority of employees are black Africans (48%) followed by white employees representing 43%. According to the results, the subsector is dominated by employees between the ages of 35 to 55 years (56%), followed by employees younger than 35 years (34%).

FIGURE 5: DEMOGRAPHIC COMPOSITION OF EMPLOYEES



AgriSETA WSP submissions, 2019/20

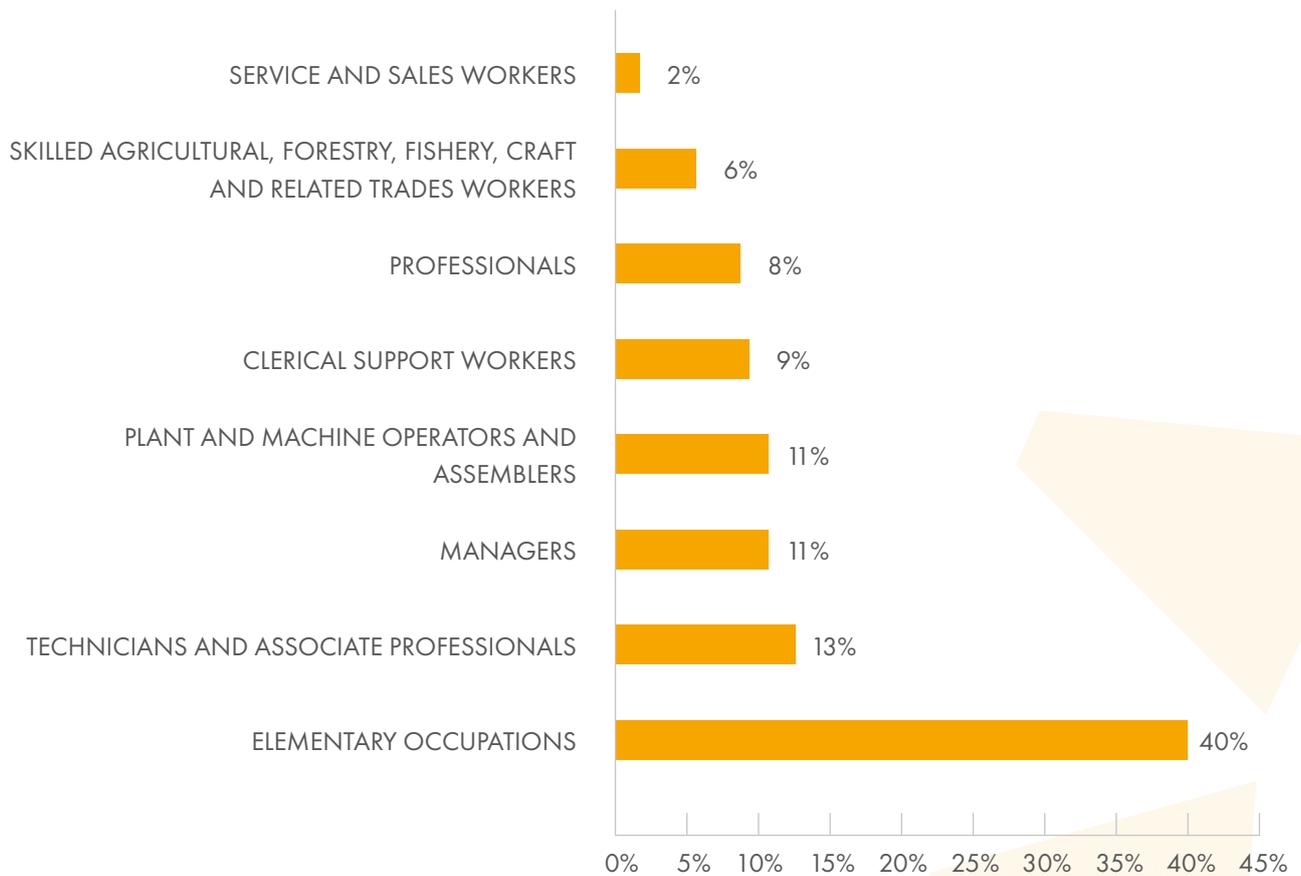
The facts presented on Figure 4 imply that:

- there is high gender inequality in employment in the Seed sub-sector;
- equity targets have not been achieved; and
- there is a relatively low presence of young employees.

OCCUPATIONAL CATEGORIES

Looking at the existing skills levels in the Seed sub-sector as reported in the 2019/20 WSPs, it is clear that skills vary

from highly skilled managerial and professional occupations to relatively low level skilled elementary occupations with majority of employees (40%) on elementary occupations followed technicians and associate professionals (13%), Plant and Machine Operators and Assemblers and Managers (11%). The occupation with the least number of employees is Services and Sales Workers (2%).

FIGURE 6: OCCUPATIONAL CATEGORIES IN THE SUGAR SUB-SECTOR

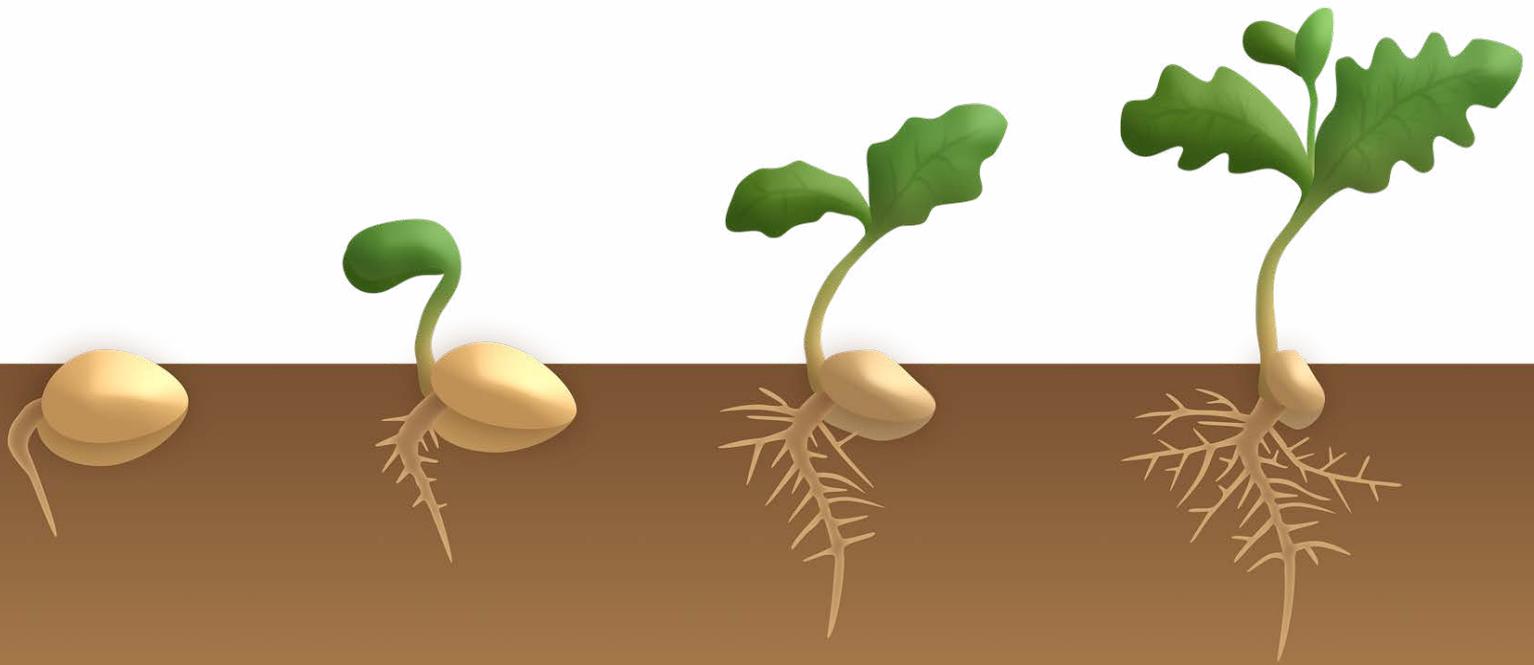
Source: AgriSETA WSP Submissions, 2019/20

1.7. CONCLUSION

The Seed sub-sector is not large. It has only a few employers (correctly) registered with the AgriSETA. The sub-sector is, however, an important one. All three components namely horticulture, agronomy and forage are critical inputs to the agricultural sector and without these inputs the agricultural sector will struggle to survive and to produce the volumes and quality required to feed the nation.

It is concerning that the employees' population leans strongly towards males and generally older employees – this trend requires attention. Being highly sophisticated, the Seed sub-sector relies heavily on scientists and researchers.





CHAPTER 2

KEY SKILLS ISSUES

2.1. INTRODUCTION

This chapter is concerned with two specific areas that shape the key skills issues in the Seed sub-sector. Firstly, it looks at factors that are driving change in the sub-sector. Secondly, the alignment of sector skills planning to national strategies and plans will be analysed to provide a snapshot of the key policy and planning documents that shape skills planning in the Seed sub-sector.

2.2. CHANGE DRIVERS

There are general factors (climate change, the green economy, and weak currency) and specific sub-sector issues (shortage of plant scientists) that presently influence skills demand and supply in the Seed sub-sector. These were identified through thematic synthesis and triangulated through internal and external stakeholder engagement, desktop research and policy documents. It was ensured that sufficient engagement, via SSC sessions, were placed on the needs of the under-resourced sector.

CLIMATE CHANGE

Climate change has a direct impact on the production of seed. Natural disasters such as drought and flood can result in an under-supply of seeds and the need to import seeds arises, which in turn affects the input cost of production of commodities.

STANDARD OF EDUCATION

The Seed sub-sector is highly technical, regulated and scientific in nature. The poor state of general education and specifically poor mathematics and science results limits the country's ability to produce the scientists and technical specialists that are needed in the sub-sector.

POLITICAL UNCERTAINTY

Political uncertainty has a direct impact on the value of the Rand, making it more volatile and difficult to plan when operating in the international markets.

THE GREEN ECONOMY

There is an increasing emphasis on the green economy in government policy documents (see, NDP, NGP). In the agricultural sector, this refers to the use of environmentally sustainable farming practices.

There is a need to apply Good Agricultural Practices (GAP) which satisfies consumers that ethical practices were adhered to. There is a need to develop more hybrid seeds to lower input costs and at the same time more resistant which will lower the use of chemical substances which can be harmful to the environment.

WEAKENING OF THE LOCAL CURRENCY

The investment downgrades, political uncertainty, regress in tax collections and a budget shortfall of approximately R50 billion all contribute to a poor economic outlook for the country. This impacts negatively on the local currency and the rand will remain weak and will most likely weaken more over time as there is no indication of any real short term improvement in the country's economy. The weak rand, however, creates the ideal platform to expand on exports and to find new foreign markets.

PESTS AND DISEASES

This challenge is due to climate change and also because of increased imports and exports of seeds. Fumigation of seeds/pest control on seeds is a challenge as the accredited skills on pest control for quarantine purposes are lacking.

2.3 ALIGNMENT OF SKILLS PLANNING TO NATIONAL STRATEGIES AND PLANS

The following section draws attention to the national strategy and planning documents that frame AgriSETA's mandate for skills development. All of these legislative and policy frameworks speak to AgriSETA's Constitutional mandate, as a Public Institution governed by the Public Finance Management Act, to develop learning programmes and facilitate the implementation thereof 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 Plan (2030). 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.

PESTEL

Political, economic, social, technological and legal (PESTEL) factors need to be taken into consideration when prioritising skills development initiatives in the Seed sub-sector.

TABLE 6: PESTEL FOR THE SEED INDUSTRY

FACTOR	POSSIBLE IMPACT
Political	Poor state of agricultural colleges and no political certainty regarding the future of these colleges – lack of focus from government on agricultural education and training. Lack of disaster funding. Land claims, redistribution of land and farm safety issues. Prolonged process of Accreditation of Seed Analysts as it is done by one department.
Economic	World growth in population and resultant growth in demand for food. From an economic perspective – indispensable industry. Plant health is becoming increasingly important as international competition requires a good quality product – high quality seeds provide the foundation for good produce.
Social	Employees are generally older – need to draw young people into the industry. Equity not well balanced in that the sector is male dominated. Lack of exposure of young people to the industry, absence of good agricultural schools and colleges.
Technological	The Seed industry is scientific and requires high levels of technical know-how. Tertiary institutions have to provide sufficiently aligned qualifications and research.
Legal	Stringent laws covering seed imports and exports. Many regulatory requirements to be met by the industry.

2.4 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 seven skills implications that need to be addressed in the Seed Sub-sector Skills Plan.

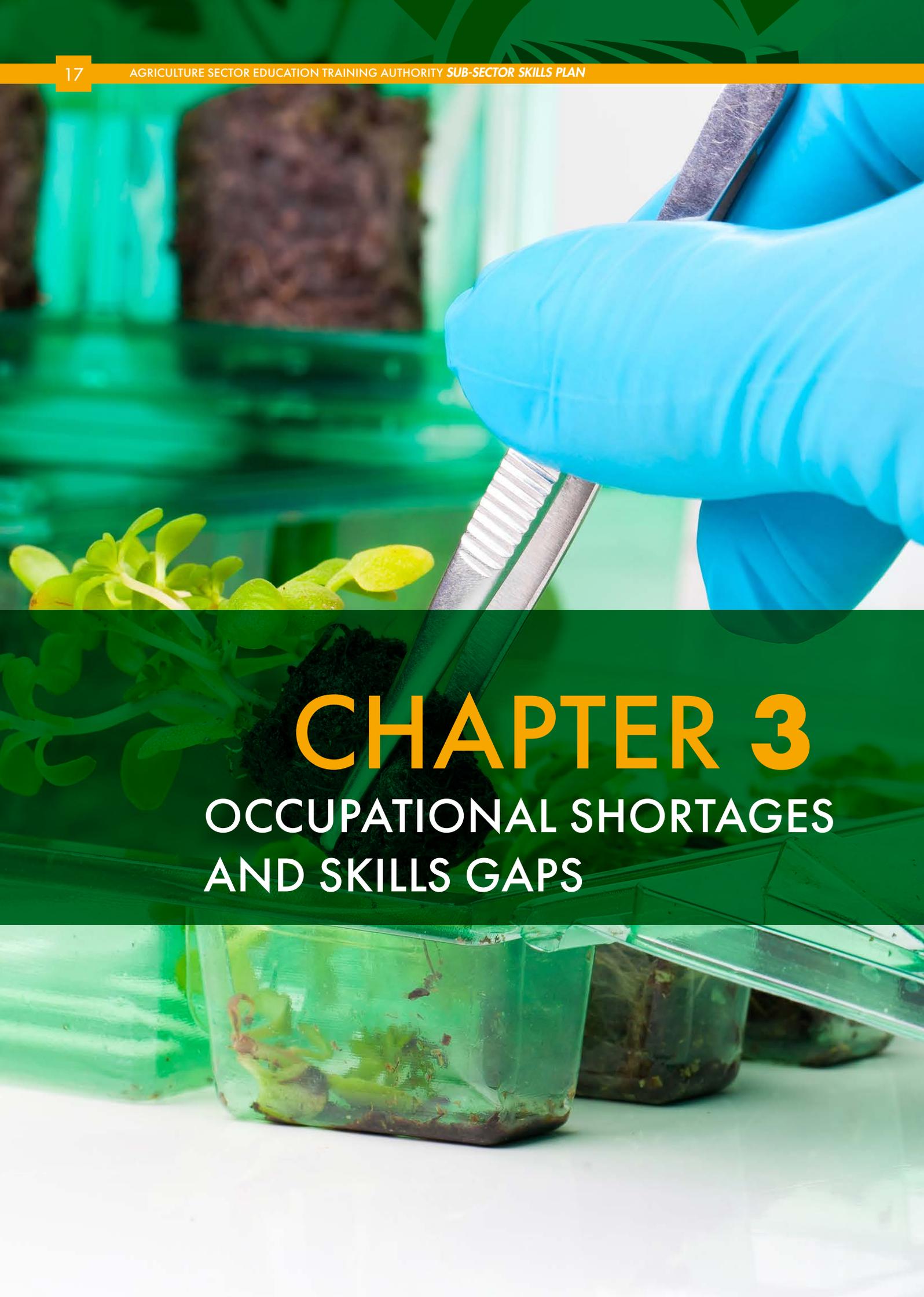
SKILLS IMPLICATIONS:

- Plant specialists that can be equipped with retail and sales skills.
- Understanding of the export market and the skill to operate in the international markets.
- Knowledge of natural resources and economic management.
- Management of disasters (floods, droughts and wild fires).
- The development of Plant breeders and pathologists who will conduct researchers to contribute to improving seeds so that they are resistant to climate change and disease.
- Training and accreditation of quarantine pest control specialists is recommended.
- Agricultural Economists to look at the economic trends as the currency is weakening.

2.5 CONCLUSION

The Seed sub-sector is well established and sophisticated. It is geared towards the needs of the commercial sector and due to the weak currency, well positioned to participate in the export market.

The sub-sector is, however, challenged by the fact that insufficient plant scientists are produced by the educational sector and that there is not sufficient support for small-scale, and emerging farmers. Seed production requires high levels of technical understanding and private sector initiatives in this regard must be supported by knowledgeable and appropriately trained agricultural extension officers.



CHAPTER 3

OCCUPATIONAL SHORTAGES AND SKILLS GAPS

3.1. INTRODUCTION

Chapter 3 reflects on the skills demand and supply in the Seed sub-sector. Information was gathered from the workplace skills plans (WSPs), annual training reports (ATRs) and other relevant sources to enable AgriSETA to accurately define skills mismatches.

The key themes emerging from this chapter corroborate the skills implications identified at the end of Chapter 2.

3.2. EXTENT AND NATURE OF DEMAND

OCCUPATIONAL SHORTAGES AND SKILLS GAPS

A number of factors impact on the demand for skills in the sector. These include international high commodity prices and the weak local currency (which should advance sectoral economic growth, which in turn, should have a positive effect labour demand). In a PESTEL and SWOT analysis of the Seed sub-sector the following were raised as important factors that impact on skills demand and supply in the sub-sector:

- **Labour Demographic Matters**

It is of great concern that the sector's workforce is dominated by older workers; two-thirds of the workforce is above the age of 35. It appears that young people do not enter the industry.

Secondly, the sector is male dominated – 79% of the workforce is male. Compared to other sectors within agriculture (which in itself is generally male dominated), this is high and needs to be unpacked further.

- **Commercial Enterprises**

The focus of commercial enterprises in the Seed sub-sector is on high-level technical and scientific/research matters requiring the expertise of:

- Plant breeders

- Plant pathologists
- Entomologists
- Bio technicians
- Agronomists
- Specialist sales representatives and product specialists

At the same time, seed must be produced physically and thus the sub-sector also requires primary agricultural skills such as:

- Seed production and processing
- Turf expertise
- Farming practice related skills
- Farm management and supervision

- **Technical and Product Officers**

To access the industry is not a simple matter as this is a highly scientific sub-sector that is required to produce seed of an exceptional quality to the agricultural market. Commercial farmers produce seed on behalf of seed companies (i.e. as outgrowers). Although it is a normal primary agricultural farming practice, there are stringent requirements and regulations that apply in the growing of seed. The management and control of the cultivation process is intense and quality standards are high and must be adhered to.

Any out-growers (also called contract growers) initiatives are currently controlled, managed and overseen by seed companies. There is a need for technical and product officers to assist farmers. Similarly, SANSOR has an oversight role to play in the industry – there is a need for well qualified inspection officers that have crop-specific knowledge.

LABOUR MARKET INFORMATION

There is a lack of comprehensive and accurate labour market information on the Seed sub-sector. This is mainly due to employers not registering under the Seed SIC code, but rather under other farming codes such as grain and horticulture. This matter requires urgent attention from AgriSETA.

HARD-TO-FILL VACANCIES

Hard-to-fill vacancies (HTFVs) are vacancies that can take six months or more to fill. The industry identified the six occupations as HTFV, as listed in Table 7.

TABLE 7: HARD-TO-FILL VACANCIES IN THE SEED SUB-SECTOR

HTFV	Reason	Demand and Supply	SETA intervention
Scientists (Entomologists, Plant Breeders, Bio technician, Seed Production Specialists) (2017-213105, 2017-213202, 2017-213109, 2017-314201)	Not sufficiently and appropriately qualified at tertiary level in areas such as plant production, plant breeding, research and development as well as regulatory and stewardship knowledge Equity reasons.	Sector demands very specific scientists but from a supply side it is generic and numbers are low	<ul style="list-style-type: none"> Engage with industry and institutions of higher learning on the development of or adjustment of current curricula Bursaries Internships
Agronomists (2017-213202)	Not sufficiently and appropriately qualified at tertiary level Equity reasons	Each seed growing area requires agronomists and the supply is poor	<ul style="list-style-type: none"> Bursaries
Sales representatives (2017-243301)	Very technical sector and it is difficult to find appropriately skilled and knowledgeable sales personnel relevant to the Seed industry	Continuous demand for sales personnel however no institution produce dedicated sales people for the Seed industry	<ul style="list-style-type: none"> Develop appropriate occupational qualification with specialisation on seed. Learnerships and skills programmes
Sales and Marketing Manager (2017-122101)	There are people with qualification on sales and marketing but not suitable for seed industry because it is not like other industries where as part of advertising consumers can test the product	Continuous demand for sales personnel however no institution produce dedicated sales people for the Seed industry	<ul style="list-style-type: none"> Develop appropriate occupational qualification with specialisation on seed. Learnerships and skills programmes

MAJOR SKILLS GAPS AT A MAJOR OCCUPATIONAL LEVEL IN THE AGRICULTURAL SECTOR

Scarce and top-up skills are determined by considering the HTFVs and what is reported by commodity organisations. Unfortunately, the number and quality of WSP/ATRs for the Seed sub-sector is inadequate for analysis purposes.

SCARCE SKILLS

Scarce skills in the Seed sub-sector are of a scientific nature. The requirement is for qualified scientists as mentioned above:

- Plant Breeders.
- Entomologists.

- Bio Technicians.
- Agronomists.
- Import and Export Specialists.
- Sales Representatives and Product Specialists.
- Marketing Support, Commercial Managers, Seed Analysts, Field Managers, Trail Officers, Agronomists
- Phyto-sanitary skill is required to ensure free but safe trade for imports and exports of seeds.

Because tertiary qualifications tend to be generic in nature, to address this shortfall will require a two-pronged approach by the AgriSETA: the provision of bursaries to study towards becoming a scientist coupled with an intensive internship programme which allows the scientist to work specifically within the context of the Seed industry.

The second category are those workers involved in the actual growing or cultivation of seed and the processing thereof.

These are:

- Seed Production Specialists.
- Seed Processing Specialists.
- Turf Specialists.

A similar approach to that of scientists are applicable: tertiary studies with intensive internships.

TOP-UP SKILLS

Top-up skills are required for product specialists and out-growers:

- Commercial and business acumen.
- Scientists aligned to the Seed industry requirements.
- Import and export specialists knowledgeable on the Seed industry.
- Sales staff aligned to the needs of the Seed industry.

3.3 EXTENT AND NATURE OF SUPPLY

HIGHER EDUCATION INSTITUTIONS

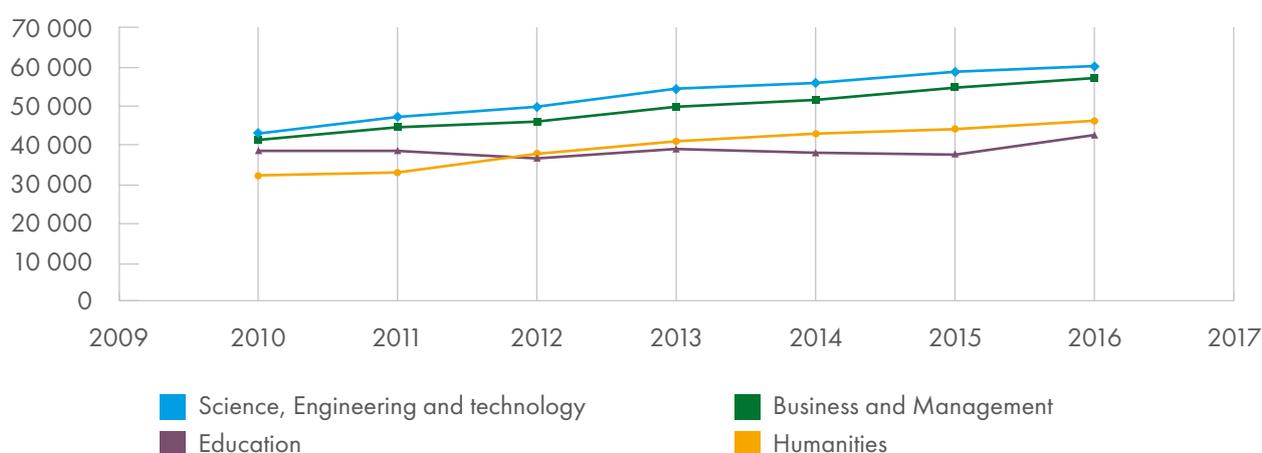
Seed production, seed enhancing and seed processing is not treated as a specific field of study at tertiary institutions. Post-graduate training is, however, being done at tertiary institutions where agriculture is a subject. Much of the training focuses on GMQs and the improvement of plant material.

The Bachelor of Science in Agriculture at the University of Mpumalanga has a subject that specifically focuses on seed production. However, this will not make a significant

difference to the shortage of skills. Seed production, enhancing and processing programmes or subjects need to be introduced on a much wider scale at tertiary level.

Agriculture is categorised under Science, Engineering and Technology. According to the Council on Higher Education (2018), the annual increase rate of learners graduating in science, engineering and technology stands at 5.5%. This low number of learners graduating annually puts a strain on skills supply to the sub-sector and has a negative effect on the skills pipeline to address identified gaps (the data cuts across all qualifications).

FIGURE 7: PUBLIC UNIVERSITY GRADUATES BY MAJOR FIELD OF STUDY

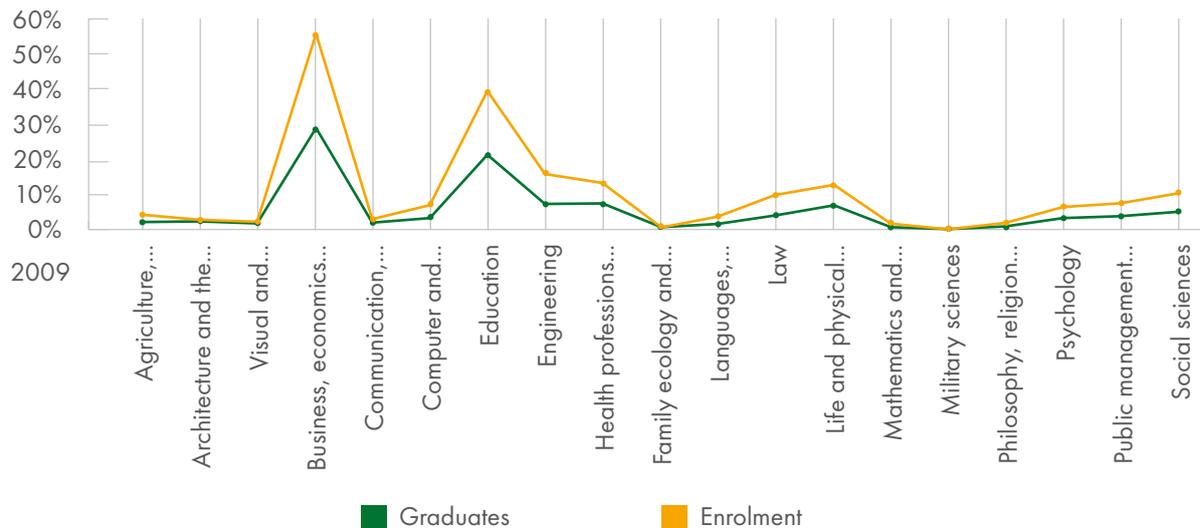


Source: CHET (2018)

Figure below show enrolment and graduation numbers at public universities and technikons by classification of educational subject matter (CESM) during the period of 2000 to 2016. Agriculture, agricultural operations and

related sciences range among the lowest at (2%) CESM for both enrolment and graduates. This has a direct impact in closing the scarce skills gaps in the sector.

FIGURE 8: NUMBER OF ENROLMENT AND GRADUATES FROM PUBLIC UNIVERSITIES AND TECHNIKONS BY CLASSIFICATION OF EDUCATIONAL SUBJECT MATTER (CESM) 2000–2016



Source: DHET (HEMIS)

AGRICULTURAL TRAINING INSTITUTES (formerly Agricultural Colleges)

ATIs deliver diplomas or short courses in plant production which is relevant to the Seed sub-sector). Of special interest are:

- *Cedara*. This college works closely with the Seed industry and seed trails are run at Cedara. It also offers plant production.
- *Elsenburg*. Focus on horticulture.

AGRISETA

Under the auspices of AgriSETA are four relevant qualifications registered at SAQA. These are:

- Seed processing and packaging control, NQF4
- Seed research and development, NQF4
- Seed marketing, NQF4
- Seed production, NQF4
- National Certificate: Seed Analysis, NQF3

- National Certificate: Seed Research and Development Operations, NQF3

There are also a number of registered unit standards relevant to seed production. The list below is an extract reflecting some of the unit standards relevant to the industry;

- Analyse the purity of seed, NQF3
- Analyse the germination of seed, NQF4
- Analyse the viability of seed, NQF4
- Certify a seed unit, NQF4
- Collect and treat Rooibos seed, NQF2
- Conduct controlled pollination, NQF4
- Conduct maintenance of seed testing equipment, NQF3
- Contract seed growers, NQF4
- Control disease and pests in stored seeds, NQF4
- Cultivate seed trials, NQF4
- Demonstrate a basic knowledge of the Seed industry, NQF2
- Demonstrate a basic understanding of the anatomical structures of the plant, NQF3

- Dispatch seed, NQF4
- Field inspection of seed unit, NQF4

These unit standards reflect a mix between primary production and secondary processing standards which, if properly analysed and packaged, could be used in the design of appropriate skills programmes for the Seed sub-sector.

Mentoring and Extension Services

Extension services are poor and do very little to contribute to any form of small-scale or collective farming. Mentoring activities are undertaken by seed companies who contract out-growers and do so to ensure that the quality of seed produced is acceptable and that their investment in the out-growers is secure. Career guidance and career pathing at schools should be included in the curriculum and agriculture should feature prominently. Different career paths should be

explained so that students understand there are more options in agriculture than being a farmer.

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 2019, employers (that submitted training reports) indicated that a total of 702 training interventions were attended by employees in the Seed sub-sector. The table below outlines the training received in the sub-sector by occupational category and gender. The results show that the majority of people trained in the sub-sector were males (71%), while females (29%) make up the remaining proportion. The majority of employees that received training were elementary workers (20%); followed by technicians and associate professionals (17%). Service and sales workers received the least training (2%).

TABLE 8: EMPLOYEES TRAINED BY OCCUPATIONAL CATEGORY AND GENDER

FINANCIAL YEAR	MALE	FEMALE	TOTAL	%
Managers	41	29	70	10%
Professionals	59	32	91	13%
Technicians and Associate Professionals	89	29	118	17%
Clerical Support Workers	27	56	83	12%
Service and Sales Workers	8	9	17	2%
Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	67	17	84	12%
Plant and Machine Operators and Assemblers	93	3	96	14%
Elementary Occupations	112	31	143	20%
Grand Total	496	206	702	100%

Source: AgriSETA, WSP submissions Data, 2019/20

3.4. SECTORAL PRIORITY OCCUPATIONS (PIVOTAL) LIST

The Grant Regulations (DHET, 2012) defines Sectoral Priority Occupations (PIVOTAL) (professional, vocational, technical and academic learning) as “programmes that result in qualifications or part qualifications on the National Qualifications Framework”. AgriSETA understands Sectoral Priority Occupations (PIVOTAL) programmes to be programmes that respond to the supply of identified skills demands. Sectoral Priority Occupations (PIVOTAL) programmes in the main respond to the scarce skills list.

Methods and interventions of arriving at the Sectoral Priority Occupations (PIVOTAL) list are as follows:

The AgriSETA’s Sectoral Priority Occupations (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, sub-sectors 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 Sectoral Priority Occupations (PIVOTAL) list was preceded by the identification of scarce and skills gaps lists, which, in turn, was informed by a labour market demand analysis.

Interventions to implement the AgriSETA Sectoral Priority Occupations (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 Sectoral Priority Occupations (PIVOTAL) list is ranked in order of priority as per the scarce skills identified, WSP 2019/20 needs and the AgriSETA supportive interventions to develop these skills.

Table 9: THE AGRISETA SECTORAL PRIORITY OCCUPATIONS (PIVOTAL) LIST 2018/19

OCCUPATION CODE	OCCUPATION	SPECIALISATION/ ALTERNATIVE TITLE	INTERVENTION PLANNED BY THE SETA	NQF LEVEL	NQF ALIGNED	QUANTITY NEEDED	QUANTITY TO BE SUPPORTED BY SETA
2017-821101	Crop Production Farm Worker / Assistant	Horticultural Farm, Practitioner Mixed Crop, Ornamental Horticultural Farm, Crop, Crop Farm Assistant	Learnerships	2	Yes		
			Skills Programmes: National Certificate: Plant Production	1 and 2	Yes	9 236	6 775
			AET programmes	NA	No		
2017-832904	Food and Beverage Factory Worker	Valve Controller, Silo Worker, Perishable Produce Packhouse Worker, Grain Dryer Attendant, Winery Worker, Line Attendant	Learnerships	1, 2 and 3	Yes	6 025	2 900
2017-862916	Farm Maintenance Worker	No Specialisation/ Alternative Title	Learnership and Skills programmes	1 and 2	Yes	5 676	2 995*
			AET programmes	NA	No		875
2017-131101	Agricultural Farm manager	Horticultural Farm Manager, Livestock Farm Manager, Vegetable Farm Manager, Mixed Crop and Livestock Farm Manager, Ornamental Horticultural Farm Manager, Mixed Crop Farm Manager, Dairy Farm Manager, Arboriculture Farm Manager, Field Vegetable Farm Manager, Agronomy Farm Manager, Sugar Farm Manager	Internships, Bursaries and Learnerships: National Certificate: Animal Production, National Diploma: Crop Production, National Diploma: Agriculture	4 and 7	Yes	5 600	900
			Skills programme	1, 2 and 3	Yes	3 748	1 445

OCCUPATION CODE	OCCUPATION	SPECIALISATION/ ALTERNATIVE TITLE	INTERVENTION PLANNED BY THE SETA	NQF LEVEL	NQF ALIGNED	QUANTITY NEEDED	QUANTITY TO BE SUPPORTED BY SETA
2017-821301	Mixed Crop and Livestock Farm Worker / Assistant	General Farm Worker	Learnerships	1,2 and 3	Yes	3 119	2 995*
			Skills programmes				
			AET programmes				
2017-213202	Agricultural Scientist	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 to 8	Yes	1 759	980
2017-611202	Horticultural Farmer	Horticultural Production Supervisor, Horticultural Farm Foreman	Learnerships	1 and 2	Yes	1 534	2 995*
			Skills programme				
2017-671202	Millwright	Winder Technician, Electromechanician, Machine Tool Millwright, Ground Electromechanician, Millwright (Electromechanician), Printers Mechanic	Artisan	3	Yes	1 470	233
2017-122101	Sales and Marketing Manager	Key Account Manager, Business Development Manager, Business Support Manager	Graduate and Post Graduate Bursaries and Internships	6 to 8	Yes	1 447	1 445

* Note that the 2995 covers exclusively for Learnerships and Skills Programmes

3.5. CONCLUSION

The data presented in this chapter highlighted the current skills gaps in the broader agricultural sector and in the Seed sub-sector. It is important to point out 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. 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

PARTNERSHIPS

4.1. INTRODUCTION

To achieve the 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, AgriSETA recognises 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; and
- 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

Partnerships reach across a number of strategic areas. It is important to be aware of these partnerships and to nurture them. Established arrangements with private and public providers must be maintained because it is through long-standing partnerships that institutional knowledge is developed which will impact positively on future training programmes. The table below summarises the sub-sector's existing partnerships and the relevance of these partnerships.

TABLE 10: KEY EXISTING PARTNERSHIPS IN THE SEED SUB-SECTOR

Strategic Partnerships	Department or organisation	Relevance of partnership
Skills development	AgriSETA	Funding the Seed industry as a commodity organisation where the industry select the type of intervention which must be industry-wide Funding of learning interventions of individual industry enterprises based on applications put forward to AgriSETA. Specifically earmark bursaries for post-graduate studies in plant science.
	Private training providers including Buhle Farmers Academy, MASDT, Grain SA, GFADA, Schools	These providers focus on skills development for small-scale and new farmers with the eventual aim to assist them to increase their market share.
Farmer development	DAFF <i>[changed to DALRRD – Department of Agriculture, Land Reform and Rural Development]</i>	Support for small-scale cotton farmers. Re-alignment of agricultural extension officers Raise awareness of the sector and engage in publicity such as TV and radio programmes focusing on the Seed industry.
Establishment of outgrowers	DRDLR <i>[changed to DALRRD – Department of Agriculture, Land Reform and Rural Development]</i>	Joint programme with DRDLR to establish out growers on reformed land.
Agriculture development and expansion	Operation Phakisa (DAFF)	The Seed industry, as a key input supplier to the agricultural sector, must engage with and participate fully in Operation Phakisa: Agriculture, Land reform and Rural development.

Strategic Partnerships	Department or organisation	Relevance of partnership
Scientific progress	Universities	Act as drivers for the delivery of more in-depth theory and facilitate research into the seed sector.
Sector representation	SANSOR	Body representing the industry, acting as a lobby structure and providing statistical information to the sector.

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 recognises 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. The following SETAs were identified for collaboration and partnership on matters related to skills development:

FoodBev (Food & Beverage) SETA: There are a number of secondary agricultural industries that share skills needs with industries located in the food and beverages sector.

FP&M (Fibre Processing & Manufacturing) SETA: 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.

W&R (Wholesale & Retail) SETA: For 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 contract to supply to a supermarket and/or local markets, such as the Pretoria and Johannesburg markets, is provided with training from AgriSETA.

4.4 CONCLUSION

The AgriSETA partners with national government departments, universities, private training providers, colleges and the South African National Seed Organisation (SANSOR) to address occupational shortages, skills gaps and hard-to-fill vacancies in the Seed sub-sector. New partnerships especially with other SETAs and with universities will be pursued to align the AgriSETA's priority skills areas and Sectoral Priority Occupations (PIVOTAL) skills lists to national interests.

Due to the sector's demand for scientists and researchers, one consideration is to establish a research chair at a university or university of technology. Of particular importance is the sector's participation in Operation Phakisa for Agriculture, Land Reform and Rural Development. Seed is a key agricultural input and the sub-sector should be active and supportive of all the agronomy and horticulture projects defined in operation Phakisa.





CHAPTER 5

SKILLS PRIORITY ACTIONS

5.1. INTRODUCTION

This chapter aims to synthesise the findings of the previous chapters and establish a set of skills priority actions for the Seed sub-sector. The intention of recommended skills priority actions is that they articulate the micro concerns of the Seed sub-sector.

These recommendations are founded on 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 Seed sub-sector.

5.2 KEY FINDINGS FROM PREVIOUS CHAPTERS

Chapter 1 illustrated that the Seed sub-sector may not be one of the largest sub-sectors demarcated to AgriSETA, but it has two important characteristics: it is sophisticated and requires a high level of technical expertise, and it is absolutely crucial to food security for the country. The sub-sector consists of three components namely agronomy, horticulture and forage. The immediate economic outlook is positive and coupled to the weak local currency, creates opportunities for increased export and growth of the sub-sector.

The fact that the industry is male dominated and that the workforce is generally older requires attention and needs to be addressed by the SETA and the SSC on how best to intervene and change this profile going forward.

The Seed sub-sector is economically stable and will grow as the world population grows and the demand for food increases.

Chapter 2 explored factors that influence the demand for skills. These include climate change (which impact on how and type of seeds produced), the need for technical production advisors (assisting commercial seed growers),

the current low standard of education in the country (resulting in poor maths and science which has a negative impact on producing scientists) and the green economy (in this case referring to resistance to GMOs as well as procuring seeds that are resistant and reduce the dependency on chemical substances). The weakening of the local currency, if it continues over time, will benefit the industry in that it boosts the sub-sector's competitiveness in the export market.

From a supply perspective, the biggest challenges are that there are insufficient numbers of scientists and researchers that are critical to the advancement of the Seed sub-sector.

Chapter 3 shows that skills are needed at two distinct levels:

- Firstly, the need for high level scientists in researching matters such as plant pathology, entomology, agronomy and related. To address this need requires funding at post graduate study level.
- Secondly the need to provide specialist support and inspectorate services to the commercial seed grower as well as technical sales personnel who have to operate in a highly scientific environment.

As seed is key in the sustainable production of food, it is necessary to nurture existing partnerships in the sub-sector and establish new ones. The most pressing need is to form partnerships between skills development institutions (AgriSETA and other SETAs) and higher education institutions (universities) with the emphasis on producing more plant scientists.

5.3 RECOMMENDED ACTIONS

It is imperative for the AgriSETA to align development initiatives with industry demands and further ensure relevant skills are available to the industry. The priority skills and key priority actions needed in the fibre sub-sector are summarised below:

(1) Research agenda

It is recommended that AgriSETA commission research into climate change and drought. This will ensure that the sub-sector is well prepared and finds innovative ways of dealing with the relevant issues in the future.

(2) High level skills

At a commercial scale, the SETA needs to be responsive to the changing nature of the sub-sector by recognising and investing in high level skill qualifications to address technological advancement and mechanisation of the sub-sector. Similarly, there is a need for research (beyond the level of the AgriSETA's own research agenda). It is necessary that the AgriSETA engage with industry players to ensure that it funds post graduate bursaries aligned to the research needs of the Seed sub-sector.

(3) Specific skills

- **Professional Researchers.** The scientific nature of the sub-sector requires skilled researchers and scientists such as plant breeders, pathologists, entomologists, agronomists and technicians.
- **Seed Production Specialists/ Advisors and Inspectors.** There is a need for specialists and inspectors who will ensure that the production of seed is of an internationally acceptable standard.
- **Sales Personnel.** Sales staff needs to be technically qualified (relevant BSc) and then developed as sales staff.

(4) Demarcation of the sub-sector

There is a lack of labour market information for the sub-sector due to the fact that some Seed entities are registered under incorrect SIC codes and resort under other sub-sectors. This will require dedicated attention and it is recommended that the matter be prioritised on the AgriSETA research agenda.

5.4 CONCLUSION

The Seed sub-sector is crucial to food security for the country and it has good prospects for earning foreign revenue. Some of the priority skills and key priority actions needed in the Seed sub-sector include: that AgriSETA commission research into climate change and drought; that the sub-sector invests in high level skill qualifications such as professional researchers and seed production specialists training; and that partnerships are forged between skills development institutions (AgriSETA and other SETAs) and higher education institutions (universities) with the emphasis on producing more plant scientists. As many Seed entities are registered under incorrect SIC codes, the AgriSETA needs to assess the extent of the problem and take the necessary steps to rectify it.

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