

# **INDUSTRY STUDY**

# **Horticulture Value Chain** March 2024

TIPS industry studies aim to provide a comprehensive overview of key trends in leading industries in South Africa. For each industry covered, working papers will be published on basic economic trends, including value added, employment, investment and market structure; trade by major product and country; impact on the environment as well as threats and opportunities arising from the climate crisis; and the implications of emerging technologies. The studies aim to provide background for policymakers and researchers, and to strengthen our understanding of current challenges and opportunities in each industry as a basis for a more strategic response.

This study maps the horticulture subsector. The main activities in the fruit and vegetable value chain include production; packing and cold storage; processing; and distribution and marketing.

Author: Wendy Nyakabawo, TIPS Economist

Contact: Gillian Chigumira, TIPS Senior Economist

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#### **ABBREVIATIONS**

AAMP Agriculture and Agro-Processing Master Plan

AgBiz Agricultural Business Chamber

AgriSETA Agriculture Sector Education Training Authority

APAC Agricultural Produce Agents Council

APAP Agriculture Policy Action Plan

ARC Agricultural Research Council

CRG Citrus Growers' Association

DAFF Department of Agriculture, Forestry and Fisheries

DRDLR Fisheries Department of Rural Development and Land Reform

DALRRD Department of Agriculture, Land Reform and Rural Development

DRDLR Fisheries Department of Rural Development and Land Reform

dtic (the) Department of Trade, Industry and Competition

EU European Union

FAWU Food and Allied Workers Union

IPAP Industrial Policy Action Plan

NAMC National Agricultural Marketing Council

NDP National Development Plan

PPECB Perishable Products Export Control Board

R&D Research and Development

SAMAC South African Macadamia Growers' Association

SATI South African Table Grape Industry

SGASA Seedling Growers' Association of South Africa

SIZA Sustainability Initiative of South Africa

SPS Sanitary and Phytosanitary

Subtrop South African Subtropical Growers' Association

TPO Tomato Producers' Organisation

UAE United Arab Emirates

UK United Kingdom

US United States

WSP Workplace Skills Plan

#### **SECTION 1: MAPPING THE HORTICULTURE SUBSECTOR**

The horticulture industry is a branch of agriculture that deals with the growing, processing and marketing of fruits, vegetables, nuts and ornamental plants, and its role in South Africa's agricultural sector has increased over time, particularly its contribution to country's agriculture exports.

Figure 1 provides a simplified presentation of South Africa's horticulture value chain's distinguishing key activities and participants from the input level to the end user or consumer. The main activities in South Africa's fruit and vegetable value chain include production; packing and cold storage; processing; and distribution and marketing. Each activity involves specific processes and technologies that transform and add value to the product at each different stage within the value chain.

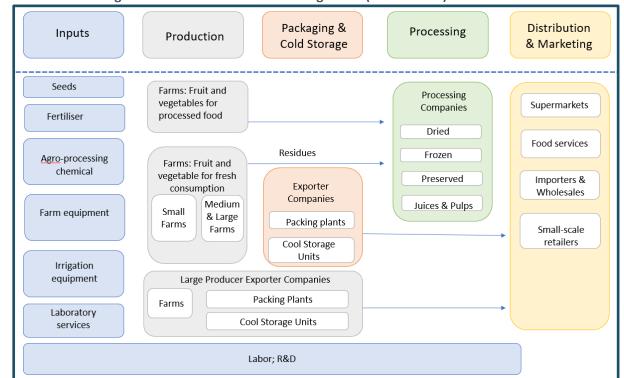


Figure 1: Illustration of fruit and vegetable (horticulture) value chain

Source: Compiled by author using Bamber et al., 2011m and Mahomedy, 2022.

The first key element in the value chain is the input level, with main inputs including seeds, fertilisers, agrochemicals, irrigation, farm equipment and labour. These inputs are used in the production stage, when large, medium and small farmers produce fruit and vegetable products for either fresh consumption or processing. Commercial production takes place mainly among the large-scale growers that may supply various players in the value chain including processors, wholesalers, intermediaries, exporter companies and retailers (the dtic, 2022). Two factors driving this production stage of the fruit and vegetable value chain are quality and volume. The whole process is aimed at ensuring the best possible quality product and volume in order to maximise on value.

At this production level of the value chain, fruit and vegetables in South Africa are mainly produced for the fresh market rather than for processing, with the sale of fresh fruit as the most profitable segment of the value chain (Sterras et al., 2018). It is estimated that 72% of total fruit production is sold in the export market, while approximately 28% is sold in the local market. As such, this high export share makes it crucial for producers to comply with global farming standards relating to pesticides use, water quality and other requirements in order to maintain access to high-value export markets (Chisoro-Dube et al., 2018).

After production, the next stage of the fruit and vegetable value chain involves packing and cold storage. Harvested products are sent for packing and storage in cold units. This stage requires the use of sophisticated packaging and cold storage units to preserve the freshness and quality of the fruits and vegetables, as well as increase shelf life (Sterras et al. 2018). Fruit and vegetable packing requires investment in a wide range of equipment as well as onsite laboratories for product testing to ensure high standards of hygiene within the packing houses. According to Bamber et al. (2011), economies of scale are required at this stage of the value chain because of the high costs associated with cold storage and the other capital investment required, and this is therefore mainly done by large producer exporter companies.

Due to the highly perishable nature of fruits and vegetables, investment in an efficient logistics network is critical to ensure that the produce is transported and stored while maintaining freshness and quality throughout the supply chain. Therefore, the handling and transport of such fresh produce requires a highly efficient logistic system to avoid post-harvest losses (Sterras et al, 2018). In the South African fruit and vegetable value chain, there are opportunities to invest in more sophisticated cold chain facilities and computerised logistics.

As the bulk of South Africa's fresh produce is sold for fresh consumption, the rejected fruit and vegetable are channelled to processing facilities for value addition and to produce dried fruits, purees, pulps, preserves and juice concentrates (the dtic, 2022). Within the fruit industry, about 29% of total production constitutes the lower grade or rejected fruit that goes for processing. Manufacturers source the fruits and vegetables directly from fresh produce producers and sell their processed goods to the export market under their own brand or the buyer's.

The final stage of the fruit and vegetable value chain comprises various distribution and marketing channels. End products are distributed through supermarkets, small retailers, wholesalers which include fresh produce markets, food services as well as the export market.

# 1. Trends in South Africa's horticulture industry

#### 1.1 Production

The contribution of South Africa's horticulture industry was estimated at R108 billion in 2022, representing a share of 27% of total agriculture sales (DALRRD, 2023a). As presented in Table 1, the overall contribution the horticulture industry to the agriculture sector has shown little variation over the years, ranging between 27% and 30% for the past two decades, making it the third largest contributor to South Africa's agriculture sector.

Table 1: Contribution of horticulture to total agriculture sales, 2008 to 2022

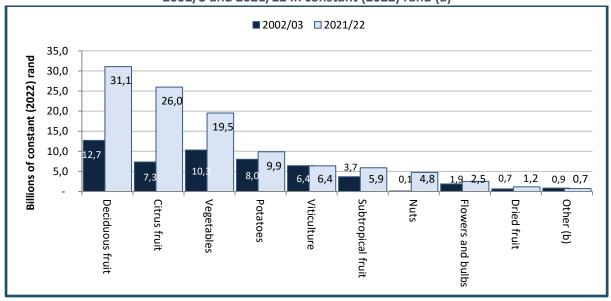
YEAR	AGRICULTURE GROSS VALUE (R MILLION)	CONTRIBUTION OF HORTICULTURE TO AGRICULTURE GROSS VALUE (R MILLION)	CONTRIBUTION OF HORTICULTURE AS PERCENTAGE OF TOTAL AGRICULTURE GROSS VALUE (%)
2003	72 925	19 551	27%
2004	73 581	21 739	30%
2005	77 110	20 695	27%
2006	79 150	20 230	26%
2007	98 534	23 410	24%
2008	129 163	28 835	22%
2009	134 566	33 588	25%
2010	132 654	33 771	25%

YEAR	AGRICULTURE GROSS VALUE (R MILLION)	CONTRIBUTION OF HORTICULTURE TO AGRICULTURE GROSS VALUE (R MILLION)	CONTRIBUTION OF HORTICULTURE AS PERCENTAGE OF TOTAL AGRICULTURE GROSS VALUE (%)
2011	144 276	36 791	26%
2012	168 598	41 875	25%
2013	184 527	47 737	26%
2014	210 202	53 890	26%
2015	225 562	61 460	27%
2016	248 558	74 911	30%
2017	270 764	77 940	29%
2018	287 148	84 725	30%
2019	284 455	85 882	30%
2020	310 361	92 287	30%
2021	357 792	105 979	30%
2022	401 555	108 000	27%

Source: DALRRD, 2023b. Abstract of Agriculture Statistics.

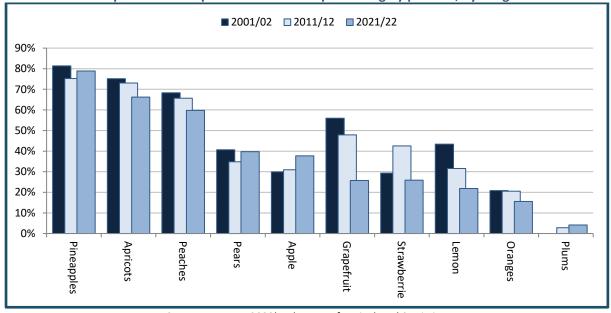
Within the fruit and vegetable industry, deciduous fruits and citrus are by far the highest contributors in terms of production value. The value of deciduous fruits has more than doubled since 2003, increasing from a value of R12.7 billion in 2003 to R31.1 billion in 2022, while the value of citrus has tripled between 2003 and 2022, increasing from R7.3 billion to R26 billion in 2022.

Graph 1: Production of different types of fruit and vegetables, 2002/3 and 2021/22 in constant (2022) rand (a) **■** 2002/03 **□** 2021/22



Source: DALRRD, 2023b. Abstract of Agriculture Statistics. Note: (a) Deflated using CPI rebased to 2022 rand.

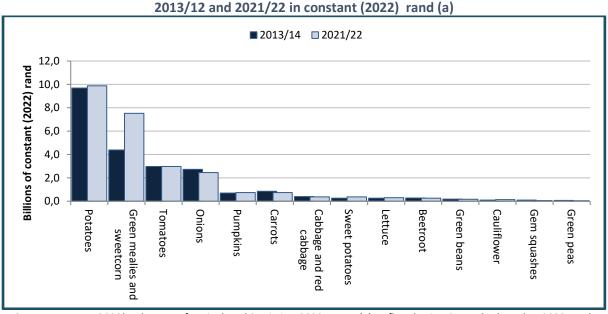
With the fruit industry, fruit that goes for processing accounts for about 30% of total fruit production. Accordingly, in value terms fruit used for processing is therefore often much lower than fresh fruit sold locally or exported, estimated at about a tenth of the export price (TIPS, 2017). Graph 2 presents the share of various fruit groups that goes for processing. Pineapples, apricots and peaches have the largest share of fruit sold for processing by tonnes, accounting for 79%, 66% and 60%, respectively of total fruit production in their respective fruit group. Among the citrus group, 26% of grapefruits goes for processing, while 22% of lemons and 16% of oranges is taken in for processing.



Graph 2: Share of production sold for processing by product, by weight

Source: DALRRD, 2023b. Abstract of Agricultural Statistics.

For vegetables, it is estimated that South Africa processes about 200 000 tonnes of vegetables annually (TIPS, 2017). Potatoes are the single most important vegetable crop in South Africa, accounting for about 85% of gross value of vegetables in 2022. It is estimated that around 20% of South Africa's total table potato crop is sold for processing annually (NAMC, 2017). Potatoes are processed into various products, mainly dominated by frozen french-fries and crisps. It is estimated that approximately 90% of potatoes are processed into potato chips, that is french-fries and crisps, while the remaining 7.8% and 1.3% are used for freezing and canning, respectively (Bryden, 2020).



Graph 3: Production of different types of vegetables, 2013/12 and 2021/22 in constant (2022), rand (a)

Source: DALRRD, 2023b. Abstract of Agricultural Statistics, 2023. Note: (a) Deflated using CPI and rebased to 2022 rand.

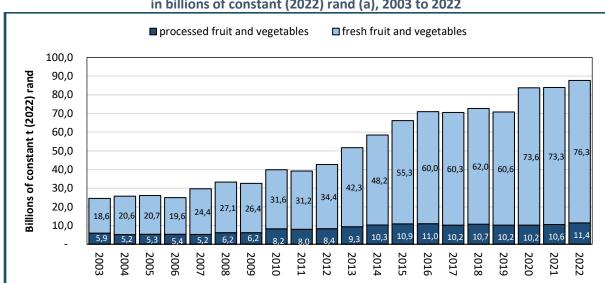
According to the Agricultural Research Council (ARC), only 10% of locally produced tomatoes are sold for processing. Of these, the largest share (85%) is used in the production of tomato sauce, and 10%

for frozen tomato products. The ARC suggests that a lack of industry capacity in the agro-processing sector has resulted in the limited processing of tomato-based products (Bryden, 2020).

Overall, the processing of fruit and vegetables has not seen much growth over the past years, with most groups showing a decline in the share of fruits that goes for processing. Most experts suggest that most consumers now prefer fresh fruit and vegetable over processed.

## 1.2 Exports of fresh and processed fruit and vegetables

In 2022, South Africa's exports of fruits and vegetables amounted to R87 billion (US\$5.3 billion), contributing to 4.3% of South Africa's total exports. The share has steadily increased since 2012 from 3.2%, reaching its highest level of 5.4% in 2020.



Graph 4: The value of South African exports of processed and fresh fruit and vegetables in billions of constant (2022) rand (a), 2003 to 2022

Source: ITC Trade Map, n.d. Note: (a) Deflated using CPI and rebased to 2022 rand.

The growth in exports of fresh versus processed fruit and vegetables differs significantly over the period of 2013 to 2022, with the latter growing at a slower rate. Between 2013 and 2022, exports of processed fruits and vegetables grew by 22%, while fresh fruit and vegetable exports rose by 88%.

According to the Agriculture Business Chamber, the growth in fresh fruit and vegetable exports has been primarily driven by an increase in output due to favourable weather conditions, as well as a weaker currency resulting in horticulture products selling more competitively in the global market. Important to note is the sharp increase in 2020 as a result of the Covid-19 pandemic. Consumer preferences shifted towards fresh fruit and vegetable as they demanded healthier alternatives and "super foods" (Botha, 2020).

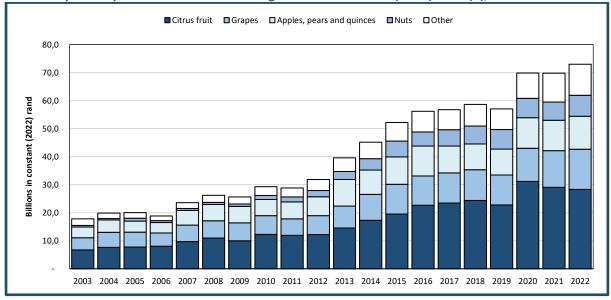
Graph 5 presents South Africa's exports of fresh fruits and vegetables. The Netherlands and the United Kingdom (UK) are the main export markets, taking up a share of 23% and 13%, respectively. China accounted for a share of 9%, United Arab Emirates (UAE) 6%. and the United States (US) 5%. Between 2013 and 2022, the combined export share of Netherlands and UK fell from 39% in 2013 to 36% in 2022, while the export share of China increased from 1% to 9% in the same time period. The UAE export share remained unchanged at 6%, and US share increased from 3% to 5%.

the UK and other countries in billions of constant (2022) rand (a) ■ Netherlands ■ United Kingdom ■ Other 0.08 70,0 45,0 44,0 60,0 Billions of constant (2022) rand 38.9 36.2 50,0 33 9 28,6 40.0 24,2 30,0 19,8 9,1 15.1 9,7 20.0 9,6 8,5 8,3 10,8 17,1 6,2 16.2 10,0 5,0 4,6 9,8 9,1 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Graph 5: Exports of fresh fruit and vegetables to the Netherlands, the UK and other countries in billions of constant (2022) rand (a)

Source: ITC Trade Map, n.d.. Note: (a) Deflated using CPI rebased to 2022 rand.

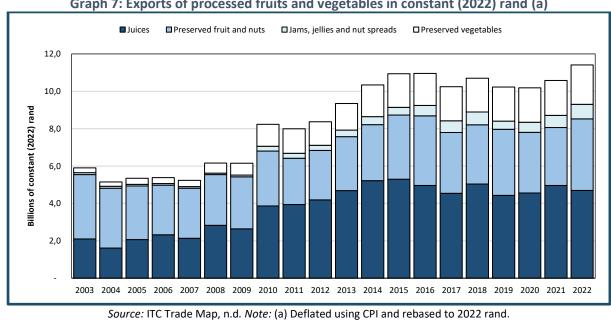
The top export products of fresh fruits and vegetables in value terms were citrus, grapes, and apples and pears. Since 2003, citrus fruits have dominated South Africa's exports of fresh fruit and vegetables exports. In 2022, the share of citrus in South Africa's fresh fruit exports was 39%, while grapes took a share of 20%.



Graph 6: Exports of fresh fruit and vegetables in constant (2022) rand (a), 2003 to 2022

Source: ITC Trade Map, n.d.. Note (a) Deflated using CPI rebased to 2022 rand.

Processed fruit and vegetable exports are dominated by juices and preserved fruit and nuts, altogether accounting for three quarters of South Africa's processed fruit and vegetable exports. Since 2014, the share of juice exports has declined from 50.5% to 41.1% in 2022. As consumers have increasingly become more health conscious, the demand for fruit juice has declined in most markets because of its high sugar content, with consumers demanding more of the healthier vegetable juices (Maharaj, 2022). This could be one of the contributing factors to the decline in export share of juices. The main markets for South Africa's fruit and vegetable juices in 2022 included Netherlands (17%), US (14%), Botswana (10%), Namibia (7%) and Mozambique (6%).

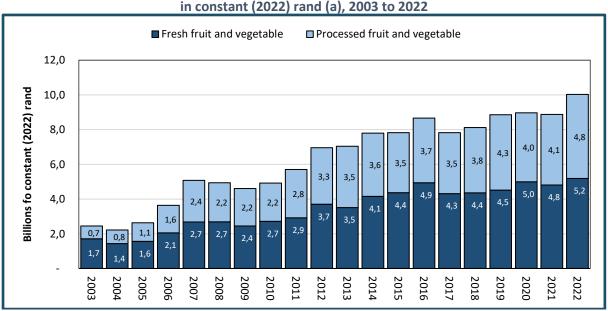


Graph 7: Exports of processed fruits and vegetables in constant (2022) rand (a)

Overall, South Africa's exports of fresh fruit and vegetables have grown significantly compared to processed products, with growth being driven by increased demand, establishment of new markets, and a depreciating currency. The European markets continue to dominate South Africa's export markets for fresh fruit and vegetables.

# 1.3 Imports of fruits and vegetables

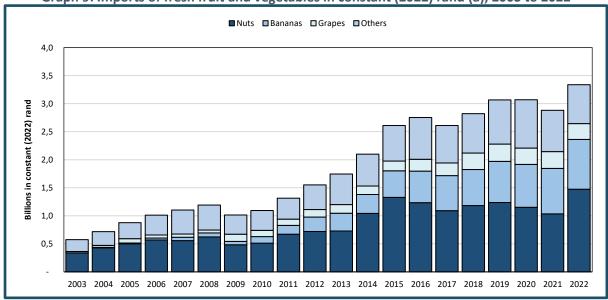
South Africa's fruit and vegetable imports have increased since 2003, with fresh fruit and vegetables growing from R1.7 billion in 2003 to R5.2 billion in 2022 in constant (2022) rand terms, while processed fruit and vegetables grew from R0.7 billion in 2003 to R4.8 billion in 2022.



Graph 8: The value of South African imports of processed and fresh fruit and vegetables in constant (2022) rand (a), 2003 to 2022

Source: ITC Trade Map, n.d. Note (a) Deflated using CPI and rebased to 2022 rand.

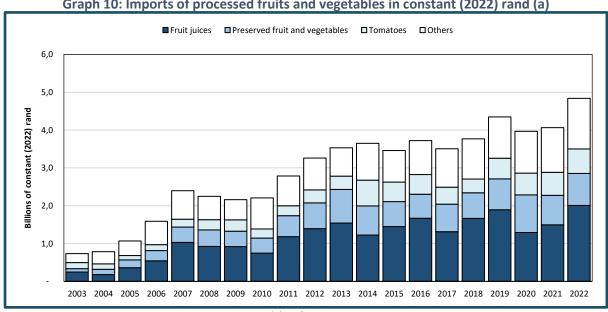
South Africa's fresh fruit product imports are dominated by nuts, bananas and grapes. Approximately 44% of South Africa's fresh fruit imports are nuts, while bananas and grapes each take a share of 27% and 9%, respectively, mainly sourced from Mozambique, US and Vietnam.



Graph 9: Imports of fresh fruit and vegetables in constant (2022) rand (a), 2003 to 2022

Source: ITC Trade Map, n.d. (HS08). Note (a) Deflated using CPI and rebased to 2022 rand.

South Africa's top imports of processed fruit and vegetables are juice, preserved fruit and vegetables, and preserved tomatoes. These three products together claim a share of 72% of South Africa's total imports of processed fruit and vegetables. China is by far the largest supplier of South Africa's processed fruit and vegetables, providing a third of the country's imports of processed fruits and vegetables in 2022<sup>1</sup>, followed by Italy (10%) and Belgium (9%).

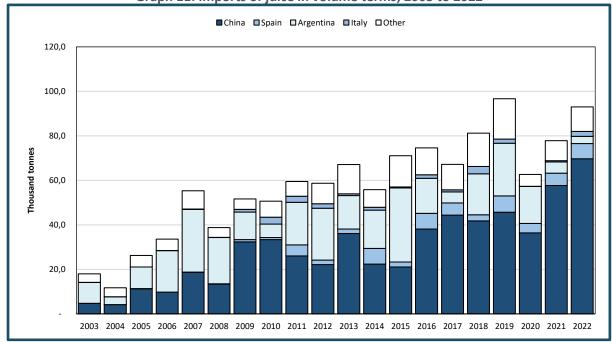


Graph 10: Imports of processed fruits and vegetables in constant (2022) rand (a)

Source: ITC Trade Map, n.d. Note (a) Deflated using CPI and rebased to 2022 rand.

<sup>&</sup>lt;sup>1</sup> Apple juice (HS20097900) is by far the largest processed fruit and vegetable import product from China, which amounted to R1.3 billion in 2022, followed by preserved tomatoes (HS20029000), amounting to R240 million.

South Africa sources its juice mainly from China, Spain and Argentina. Graph 11 presents South Africa's imports of fruit and vegetable juice in volume terms. In 2014, South Africa imported 40% of its juices from China, and this has since increased to 74% in 2022. From the Chinese market, South Africa mainly imports apple juice, with import volumes having increased from 4 400 tonnes in 2003 to 69 000 tonnes. One of the reasons is that land suitable for growing apples in South Africa is now limited, and growers have been mainly focusing on exporting fresh apples since they are guaranteed much higher prices compared to selling for juicing and receiving much lower prices. So most of the apple juice is imported, used in the production of South Africa's fruit juices and then packaged for sale both locally and for exports.



Graph 11: Imports of juice in volume terms, 2003 to 2022

Source: ITC Trade Map, n.d. Note (a) Deflated using CPI and rebased to 2022 rand.

# 1.4 Market structure and major firms

In South Africa, fresh produce from small-scale growers is normally harvested and sold directly at farm gate for local consumption or to intermediaries (the dtic, 2022). For large-scale producers, fresh fruits and vegetables are sent to packing houses for washing and packaging before they are distributed to fresh produce markets and processing industries. There are, however, some large-scale commercial farmers who, through contract farming, sell directly to some of the large supermarkets and exporting agents.

Retailers increasingly dominate the fruit and vegetable market and attach supply conditions to both quantity and quality of the fresh produce throughout the year (De Visser and Dijkxhoorn, 2012). The main supermarkets in the South African market are Pick n Pay, Shoprite, Woolworths, SPAR, Walmart, and Food Lovers Market. The supermarkets source fresh fruit and vegetables from municipal markets as well as directly from contract farmers. Among the main supermarkets, Food Lovers Market sources most of its fresh fruit and vegetables from municipal markets. The other supermarkets mainly procure directly from farmers during low demand periods, only buying from municipal markets at high demand periods when fresh produce is in short supply and can only be sourced at a central market (Das Nair and Chisoro-Dube, 2015).

About 20 major national fresh produce markets operate in South Africa. In 2019, approximately 3.4 million tons of fresh fruits and vegetables were sold at national fresh produce markets, with an annual

turnover of R18 billion (DALRRD, 2019). Total revenue was estimated at R19 billion in 2020 (the dtic, 2022). There are four types of national fresh produce markets in terms of ownership or management, which are department (business) units; corporatised (municipal) entities; public-private partnerships; and privately owned and operated entities (see Table 2).

Table 2: Type of National Fresh Produce Markets in South Africa

CATEGORY	MARKET
Municipally owned and operated markets (department/business units)	Tshwane; Sol Plaatjie (formerly Kimberley); Port Elizabeth; East London; Durban; Mangaung (formerly Bloemfontein); Pietermaritzburg; Matjhabeng (formerly Welkom); Matlosana (formerly Klerksdorp); Springs; Vereeniging and eMalahleni (formerly Witbank)
Corporatised/Municipal Entity	Joburg and Kei
Public-private partnerships (municipally owned but privately operated)	Cape Town
Privately owned and operated	George; Nelspruit; Mpumalanga; Mooketsi; Polokwane and Vanderbijlpark

Source: DALRRD, 2020.

The municipal fresh produce markets are a key source for fresh fruits and vegetables for independent retailers, hawkers and regional food importers. The City of Johannesburg municipal fresh produce market is South Africa's the largest fresh fruit and vegetable wholesaler, and accounted for a market share of 48% of national fresh produce and also the first point of sale for more than 6 000 farmers in the country in 2015 (Das Nair and Chisoro-Dube, 2015).

In terms of processing of fruits and vegetables, Table 3 provides a list of notable players within the agro-processing industry, which have their operations normally at close proximity to the areas where the produce is cultivated. These include large companies such as Tiger Brands, Pioneer Foods and Rhodes Food Group.

Table 3: Main fruit and vegetable processing companies in South Africa

	Tubic 5	· mam mare an	a regetable pi	occosing com	pariles in South	, tillied	
COMPANY NAME	PROVINCE	PRODUCTS	NUMBER EMPLOYED	REVENUE	FACTORIES/ PRODUCTION PLANTS	PRODUCTION CAPACITY	SHARE HOLDER TYPE
Tiger Consumer Brands Ltd	Gauteng	Canned fruit Canned vegetables Carbonated fruit juice Fruit juice concentrate Jam Tomato sauce	10 543 (Group)	R15 432.2m (2019) (R12 762.0m – Consumer Brands Food: R5 100.4m – Groceries; R2 249.4m – Snacks and treats; R1546.9m – Beverages)	19		Private
Clover S.A. (Pty) Ltd	Gauteng	Dairy fruit juice blends Desserts Short life juice Yoghurt	8500		12		Private

COMPANY NAME	PROVINCE	PRODUCTS	NUMBER EMPLOYED	REVENUE	FACTORIES/ PRODUCTION PLANTS	PRODUCTION CAPACITY	SHARE HOLDER TYPE
Libstar Operations (Pty) Ltd	Gauteng	Chutney Dairy blends Dried fruit Fruit nectar Soup Yoghurt	7592 (group)	R9892.54m (2019) (R4688.1m – Perishables R3177.8m – Ambient grocery; R537.9m – Snacks and confectionery R699.8m – Baking)	31 sites		Foreign
In 2 Food Group (Pty) Ltd	Western Cape	Pressed fruit and vegetable juice and beverages Soup	7500	G,	16		Private
Rhodes Food Group (Pty) Ltd	Western Cape	Canned fruit Canned vegetables Fruit purées Jams Juice and juice products	6242 (Group)	R5413.6m (2019) (R4339.0m – Regional) (R1759.8m – Regional fresh products sales R2579.4m – Regional long life product sales)	(one in Eswatini)		Private
Pioneer Foods Groceries (Pty) Ltd	Western Cape	Dried fruit Fruit concentrate mixes Fruit juice	2800	R5795.4m (2019) (Pioneer Food Group's groceries segment)	Foods and cereals businesses: 18 Ceres: two		Private
McCain Foods (South Africa) (Pty) Ltd	Gauteng	Frozen vegetables Oven-ready entrees Potato products Prepared meals	1000		2		Foreign
Granor-Passi (Pty) Ltd	Limpopo	Fruit base concentrates Fruit juice Yoghurt bases	460	R922.0m (2019)	3	250 000 tons per season (fruit)	Private
Ceres Fruit Processors (Pty) Ltd	Western Cape	Fruit concentrates Fruit purées	359		2		Private
Eastern Trading Co (Pty) Ltd t/a Darsot Food Corporation	Gauteng	Canned vegetables Tomato paste	350		2		Private
Giants Canning CC	Gauteng	Canned soup Canned vegetables Jams Tomato paste and purées	300		1		Private
Magaliesberg Sitrus Maatskappy (Pty) Ltd t/a Magalies Citrus Company	North West	Fruit juice concentrates	250		1	60 000 tons	Private

COMPANY NAME	PROVINCE	PRODUCTS	NUMBER EMPLOYED	REVENUE	FACTORIES/ PRODUCTION PLANTS	PRODUCTION CAPACITY	SHARE HOLDER TYPE
Southern Canned Products (Pty) Ltd t/a SCP	Western Cape	Fruit juice concentrates Fruit juices	105		1	27.5 million litres	Institution
Associated Fruit Processors (Pty) Ltd t/a AFP	Western Cape	Apple and pear fruit concentrates and aromas	104		1	70 000 tons (fruit)	Private
Summerpride Foods (Pty) Ltd	Eastern Cape	Pineapple fruit juice	100		1	40 000 litres/hr	Private
Granor-Passi (Langkloof) (Pty) Ltd	Eastern Cape	Apple concentrates	78	R166m (2019)	1	80 000 tons	Private
Dried Fruit Direct Marketing (Pty) Ltd	Western Cape	Dried fruit Spiced dried mushrooms			2		Private
Campers Corner Rentals CC t/a Komati Foods	Western Cape	Dried fruit and nuts			1		Private
Fruit SA (Pty) Ltd	Western Cape	Frozen fruit and vegetables Fruit juice concentrates Dried products including sweetened and juice infused cranberries, coconut, goji berries and pumpkin seeds			1		Private

Source: Bryden, 2020.

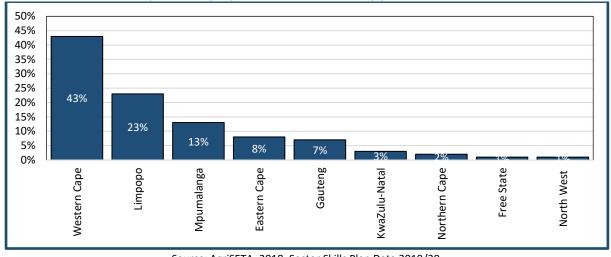
Tiger Brands is one of South Africa's main fruit and vegetable processing companies. It sources its fruit and vegetables from commercial farms, with the bulk of its manufacturing taking place in its factory in Boksburg, Gauteng. Canned fruit production is done in Langeberg and Ashton Foods, which is approximately 180km east of Cape Town. This factory is among the top global producers and exporters of canned fruit, estimated to process over 100 000 tonnes of fruit per year. Tiger Brands also has a facility in Paarl in the Western Cape, which focuses on the production of jam. The company houses some of South Africa's well-known brands such as KOO, All Gold, Mrs Balls, Crosse and Blackwell and Black Cat (Tiger Brands, n.d.).

The Rhodes Food Group operates 14 manufacturing plants across the country and an additional fruit processing plant in Eswatini. The Western Cape houses its fruit processing facilities, which produce purées, juice and fruit products, while its vegetable processing plants are located in Limpopo and the Free State (Rhodes Food Group, 2022).

# 1.5 Employment in the industry

Detailed employment data categorised by race, gender and qualifications for South Africa's horticulture sector is not available from Statistics South Africa's quarterly labour force survey, as the database does not disaggregate the food and beverage sector to the subsector level of fruit and vegetables. However, the Agriculture Sector Education Training Authority (AgriSETA)'s subsector skills

plan has employment data for South Africa's horticulture industry from its workplace skills plan (WSP) database. The data comprises of the sector's employment by province, gender, race and age.

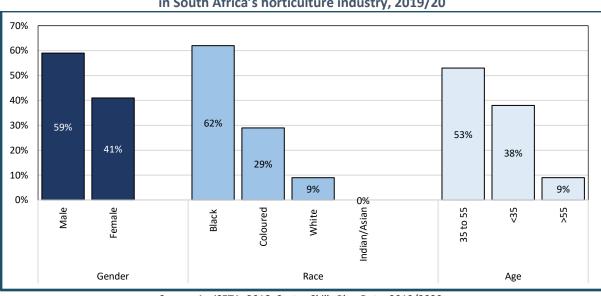


Graph 12: Employment in horticulture by province for 2019

Source: AgriSETA, 2018. Sector Skills Plan Data 2019/20.

According to the WSP data, in 2019/20 South Africa's horticulture industry comprised of 92 000 employees under the 5 879 employers registered on the AgriSETA database. Graph 12 presents the distribution of employees in the sector across the province, with the Western Cape accounting for the highest share of 43%, followed by Limpopo (23%) and Mpumalanga (13%). The provinces with the least employees in the horticulture industry include the Northern Cape with 2% and the Free State and North West each accounting for 1%.

In employment by gender, the horticulture industry mirrors the overall trend in national agriculture statistics, as men make up the highest number of employees in the industry. Men account for 59% of total employment in horticulture, while women make up 41%. Black Africans have a share of 62%, followed by coloured employees taking up 29%. The industry employs mostly individuals within the age group of 35 to 55 years, which account for 53% of those employed in the horticulture sector.



Graph 13: Demographic composition of employment in South Africa's horticulture industry, 2019/20

Source: AgriSETA, 2018. Sector Skills Plan Data, 2019/2020.

#### 1.6 Main locations

South Africa's fruit and vegetable industry spans diverse production areas, each suited to specific crops due to variations in climate, soil and geography. The Western and Eastern Cape are the key hub for deciduous fruit production such as apples and pears due to their warm, dry summers and cold winters (DALRRD, 2022). Sub-tropical fruit in general require much warmer conditions as they are more sensitive to temperature fluctuations and frost hence are mainly produced in Limpopo, Mpumalanga and KwaZulu-Natal. The citrus fruit producing areas include Limpopo, the Eastern Cape, Mpumalanga, Western Cape and KwaZulu-Natal, which are the subtropical regions characterised by warm to hot summers and mild winters.

Vegetables are produced in most parts of the country, with specific crops concentrated in certain areas, such as onions in Caledon, Pretoria and Brits and green beans mainly produced in Kaapmuiden, Marble Hall and Tzaneen. Potatoes are produced in various regions in the country including Free State, Western Cape, Limpopo and Mpumalanga. Currently, approximately 80% of potato plantings fall under irrigation (DALRRD, 2023b). Table 4 provides a summary of selected fruit and vegetables and their main production areas.

Table 4: Production areas where selected fruit and vegetables are produced

Table 4. I Todaction areas where selected trait and refetables are produced			
COMMODITIES	PROVINCES		
FRU	JITS		
Apples	Western Cape, Eastern Cape		
Citrus (oranges and soft citrus)	Limpopo, Eastern Cape, Western Cape (oranges)		
	Mpumalanga, Eastern Cape (soft citrus)		
Bananas	Mpumalanga, KwaZulu Natal		
Pears	Western Cape		
Table Grapes	Western Cape, Northern Cape		
VEGET	TABLES		
Potatoes	Free State, Limpopo, Northen Cape, Western Cape		
Onions	Western Cape, Limpopo, Free State		
Carrots	Gauteng, North-West		
Cabbage	KwaZulu-Natal, Gauteng		
Tomatoes	Limpopo		

*Source:* Stats SA Fact Sheet: Census of Commercial Agriculture 2017, p3-11. Note: Table does not include all provinces where a commodity is produced in every instance, but focusses on provinces with the largest production volumes.

# 1.7 Changes in marketing regulations from 1994

South Africa's fruit and vegetable industry has a long history dating back to 1652, when the Cape of Good Hope was colonised by the Dutch East India Company as a refreshment outpost for its passing ship, suppling them with fresh fruit and vegetables. In the early years, South Africa's agriculture output was produced primarily for domestic consumption, with the government offering commercial farmers a set price for their produce regardless of the yield. This policy resulted in commercial farmers facing greater financial risk from exporting their produce independently, as they would not be guaranteed the set price which was available domestically. Therefore the exporting of agricultural and horticulture goods was not common practice until the 1960s, when better farming practices were being implemented resulting in higher output.

The horticulture industry experienced major shifts after the end of apartheid in 1994 when the country underwent a process of transformation and integration into global markets (Barrientos and Visser, 2012). This has entailed two aspects: opening up the economy to competition in the global markets; and expanding export industries, alongside social, economic and political transformation including changes in legislation especially aimed at eliminating overtly discriminatory laws, extending labour and tenants' rights to farmworkers, and supporting historically excluded Black farmers.

With the opening up of the economy, South Africa's fruit sector was particularly affected in 1997, when the government enforced the disbandment of a regulated single marketing channel for fruit exports (Unifruco and Outspan), giving way for private exporters to participate through a free market (Visser, 2012). As a result, South Africa's fruit producers were open to direct global competition. The deregulation of the industry led to a shift in power dynamics within the value chain. Prior to deregulation, the fresh fruit export sector was highly producer-driven as Unifruco and Outspan negotiated collectively for the producers with overseas importers and supermarkets.

#### **SECTION 2: GOVERNANCE STRUCTURES AND STAKEHOLDERS**

There are a number of public and private key roleplayers in the horticulture sector that contribute towards its functioning. They include national government departments, sector representatives and industry bodies. The following subsection identifies the main departments according to their strategic contribution to the horticulture sector in terms of their mandates.

# 2.1 Key departments in South Africa's horticulture sector

The three spheres of government, that is national, provincial and local government all have a key role to play in the horticulture sector. National government is involved through the Department of Agriculture, Land Reform and Rural Development (DALRRD), and various public entities. The national department is responsible for the formulation of policy frameworks, norms and standards and equitable distribution of national resources, including facilitating access by historically disadvantaged groups.

The role of the provincial departments is in the implementation of policies especially ensuring effective use of agricultural land. Provincial departments are also responsible for provision of extension services.

Local governments ensure the provision of water and roads. Furthermore, they are involved in the administration of fresh produce markets, food safety standards and property taxes.

DALRRD aims to develop agriculture value chains, provide agricultural inputs, monitor production and consumption in the sector and facilitate comprehensive rural development. DALRRD has six programmes which include administration; agriculture production, biodiversity and natural resource management; food security, land reform and restitution; rural development; economic development, trade and marketing and land administration. These programmes focus on increasing production in agriculture, revitalising infrastructure, accelerate land reform and increase research and development in agriculture.

Table 5 presents the various programmes under the department that include the horticulture sector.

Table 5: Department of Agriculture, Land Reform and Rural Development programmes for the horticulture sector, 2024

PROGRAMME	OBJECTIVE
Agricultural Production, Biosecurity and Natural Resources Management	<ul> <li>Manage biosecurity and related sector risks over the medium term by:         <ul> <li>Conducting nine countrywide surveys of plant pests and diseases, in particular the exotic fruit fly, citrus greening disease and banana bunchy top virus, to manage their spread and/or incursion and eradicate them<sup>2</sup></li> </ul> </li> </ul>
Economic Development, Trade and Marketing	<ul> <li>Promote economic development, trade and market access for agriculture products, and foster international relations for the sector:         <ul> <li>Upskill agro-processing entrepreneurs by training 600 of them on food manufacturing norms and standards by 2024/25.</li> <li>Increase market access and maintain existing markets by certifying and accrediting producers of fresh produce for export through good agricultural practice certification and an accreditation programme by 2024/25.</li> <li>Build national skills capabilities in international market research by providing for the transfer of marketing skills to small and medium agro-processing entrepreneurs by 2025.</li> <li>Provide technical sector leadership in trade negotiations and implement trade agreements to improve market access by linking producers to high-value markets by March 2025.</li> </ul> </li> </ul>

State agencies that support the national department and provide various services to the provincial agriculture department and farmers include ARC, the National Agricultural Marketing Council (NAMC), the Land Bank and the Perishable Products Export Control Board (PPECB).

The **Agricultural Research Council** is the main agriculture research institution in South Africa, established in 1990 with the mandate to conduct research and development and effect the transfer of technology to promote agriculture and the industry to contribute to better quality of life and facilitate and ensure the conservation of natural resources. With regards to the horticulture sector, the council focuses on generating knowledge and technology aimed to improve efficiencies of crop production.

The **National Agricultural Marketing Council**'s mandate falls under the Marketing of Agricultural Products Act No. 47 of 1996, which is aimed at the provision of authorisation, establishment and enforcement of regulatory measures to intervene in the marketing of agricultural products. NAMC is involved in conducting research and development (R&D) focusing on food costs, commodity value chains, trade policy, marketing opportunities and models to integrate smallholder farmers into formal agriculture markets.

(BBTV) affects subsistence farmers and commercial farmers in the southern coastal area of KwaZulu-Natal, an area where banana is a staple food for resource-poor communities.

<sup>&</sup>lt;sup>2</sup> Fruit flies have a direct and indirect economic impact as they affect South Africa's lucrative export market's maintenance and access to new countries, an industry worth approximately R30 billion. It also directly affects fruit production as fruit flies can cause up to 100% fruit loss if not controlled, especially in poorer communities. The Banana Bunchy Top Virus

The **Perishable Products Export Control Board** is an independent service provider which focuses on quality assurance, food safety and cold chain management services for producers and exporters of perishable food products. Its mandate is to:

- Ensure the orderly export of perishables and monitor the proper maintenance of a continuous cold chain for exports, and
- Monitor the minimum quality standards of perishable exports as required by government and bilateral agreements with export markets.

Water is a key input in the horticulture sector, and government is responsible in ensuring the availability of water resources for irrigation.

The **Department of Water and Sanitation** is the custodian of South Africa's water resources, and its primary role is the formulation and implementation of policies to ensure sustainable and equitable use of water resources, and regulating the access and management of water for agricultural use.

The **Department of Trade, Industry and Competition (the dtic)**, is responsible to ensure a dynamic industrial, globally competitive South African economy, characterised by meaningful economic transformation, inclusive growth and development and decent employment and equity. The dtic has nine programmes of administration, trade, investment and spatial industrial development, sectors, regulation, incentives, exports, transformation and competition, and research. These programmes cover several sectors including the horticulture sector as part of agro-processing. The preservation of fruit and vegetables form part of the 12 downstream subsectors<sup>3</sup> of the food processing/agro-processing industry. Through the agro-processing chief directorate, the dtic aims to:

- Conduct research and analysis for major agro-processing sectors,
- Develop and review policies, strategies in the mature agro-processing sectors, and target key interventions along the value chain,
- Monitor and evaluate policies, strategies and interventions in the major agro-processing sector
- Facilitate support for niche agro-processing sectors,
- Support provincial players to deal with on-ground projects,
- Strengthen private sector engagements through structured forums, and
- Supplier upgrading and implementation of standards.

#### 2.2 Business associations and unions

The role played by business or industry associations in South Africa's horticulture industry is to provide a collective voice for the industry, and to establish strength and unity towards common goals that need to be achieved by the various businesses in the industry. Unions represent the collective interests of workers in negotiations with employers regarding wages, working conditions, benefits and other employment related issues. Furthermore, unions advocate for workers' rights and interests including government bodies, to influence laws, regulations and policies (Armstrong and Steenkamp, 2008). In the horticulture industry, several business associations and unions exist for the various fruit and vegetable product groups.

#### **HORTGRO**

HORTGRO focuses on production, research and technology, communications, markets and transformation for the deciduous fruit industry. It was initially established in 1926 as a governing body

<sup>&</sup>lt;sup>3</sup> The food processing industry has 12 downstream subsectors: meat processing; dairy products; preservation of food and vegetables; canning and preserving fish; fruit canning and jams; vegetable and animal oils and fats; grain mill products; sugar mills and refineries; chocolate and sugar confectionery; prepared animal foods; bakery products and other food products, such as starch and starch products; and ready-made meals

supporting exporters of deciduous fruit known as Deciduous Fruit Exchange, which became the Deciduous Fruit Board (1939), Universal Fruit Trade Co-operative (1987), Unifruco (1989), Deciduous Fruit Producers' Trust (1997) and eventually becoming the HORTGRO in 2013. This industry association represents apple and pear producers through Hortgro Pome, previously known as South African Apple and Pear Producers' Association, which was established in 1970. It focuses on promoting the production and marketing of apples and pears and ensuring open dialogue with government and other stakeholders in the industry. The association facilitates activities such as R&D, trade and market access, market development, plant improvement and certification, and many others.

Hortgro Stone is responsible for supporting producers of stone fruit which include plums, peaches, apricots, nectarines and cherries. Established in 2018, Hortgro Stone evolved from South African Stone Fruit Producers' Association which was formed in 1996 after the Plum Producers' Association and the Nectarine and Peach Producers' Association were dissolved. Its functions are similar to Hortgro Pome, with just a different focus on the fruit group.

Dried Fruit Tree forms part of Hortgro and focuses on land reform, training, economic and social development, technical support and research for dried tree fruits for peaches, pears, prunes, apricots, apples and nectarines.

#### Citrus Growers' Association (CGA)

CGA was established in 1997 by citrus growers and is responsible for assisting citrus industry players with access to global markets, how to optimise cost-effective production of high-quality fruit, R&D and communication with all stakeholders and environmental awareness. The association represents interests of producers of citrus targeted for the export markets, and currently has approximately 1400 growers across Southern Africa including Zimbabwe and Swaziland as its members (Citrus Growers' Association, n.d.).

The R&D supporting arm of the CGA is the Citrus Research Institute, whose main role is to ensure adequate and sustainable research funding for the growers and direct research efforts and expenditure.

#### **Citrus Academy**

The Citrus Academy was established by the CGA in 2005 with the mandate to develop human resources for the citrus industry in Southern Africa. It focuses on addressing industry challenges of low production skills levels, employment equity, scarce and critical skills, Black economic empowerment and quality of skills delivery.

#### South African Table Grape Industry (SATI)

SATI is the industry representative for South Africa's table grape producers and was established in 2004. Its strategic objectives are to ensure a progressive, equitable and sustainable table grape industry in South Africa. It has the mandate to invoice for and collect statutory levies due on all table grapes targeted for the export market. Funds raised from the levy are used to facilitate four key areas of intervention, that is market access and development, research and technical transfer, transformation and training, and information and knowledge management for the industry (SATI, n.d.).

#### South African Subtropical Growers' Association (Subtrop)

Subtrop is an association of associations that manages activities of the South African Avocado (SAAGA), Litchi (SALGA), and Mango (SAMGA) Growers' Associations. It was formed in 2006 and represents members ranging from smallholder growers to large corporate operations. The main objective of the association is to promote and enable farming, marketing and distribution of South

Africa's avocados, litchis and mangoes. It co-ordinates research and provides services and market development for the different growers' associations (Subtrop, n.d.).

#### South African Macadamia Growers' Association (SAMAC)<sup>4</sup>

SAMAC was formed in 1970 by a group of macadamia growers with the aim of collectively addressing common industry related challenges. It represents producers from South Africa, Mozambique and Southern Malawi. SAMAC supports industry through facilitating research and development to improve yields, processing and quality and establishing collaborative relationships with government to facilitate favourable markets, quality standards and long-term goodwill with legislators.

#### **Potato South Africa**

Potato South Africa is the industry association that represents a network of key roleplayers and individuals in South Africa's potato industry. It was established in 2008 with the aim of providing strategic support in the form of knowledge and management support (industry strategic research – market, production and macroeconomic information); supports services on potato consumption (market development support, product promotion); producer development services (competency development, technical support – best practice, cultivar trials); and establishment of internal business excellence.

#### Tomato Producers' Organisation (TPO)<sup>5</sup>

TPO represents farmers, packers, by-product producers and sellers of fresh tomatoes in South Africa. It represents its stakeholders by providing a co-ordinated view of the industry to government and encouraging cooperation on addressing matters affecting the industry. The association's objective is to establish and maintain co-operation within the industry through collective action. It also focuses on ensuring systematic development of the industry for the preservation of key resources such as land and water, production and marketing methods.

#### Seedling Growers' Association of South Africa (SGASA)<sup>6</sup>

The Seedling Growers' Association of South was established in 1982, to represent the interests of commercial seedling growers in South Africa. Its main role is to ensure that seedling growers and members have access to up-to-date information on the industry and also to assist with solving common problems the growers face. The association offers certification, membership and research.

#### Food and Allied Workers Union (FAWU)

FAWU is South Africa's trade union that represents workers in the food processing industry. The union was established in 1986, though the consolidation of the Food and Canning Worker's Union, the Sweet, Food and Allied Workers' Union and the Retail and Allied Workers Union. The South African Agricultural Plantation and Allied Workers Union was integrated into the union in 2006. FAWU's membership had grown to approximately 128 000 members but then declined to 124 000 members in 2022.

#### Other business associations and unions in horticulture

There are many other business associations and unions apart from the above-mentioned associations. Table 6 provides a list of other associations that are affiliated with the horticulture industry in South Africa.

<sup>&</sup>lt;sup>4</sup> https://www.agrijob.co.za/helpful-industry-organisations-and-bodies/

<sup>&</sup>lt;sup>5</sup> https://southafrica.co.za/tomato-producers-organisation.html

<sup>&</sup>lt;sup>6</sup> https://seedlinggrowers.co.za/membership/

Table 6: Business associations and unions in South Africa's horticulture industry

- Agri SA
- Agricultural Business Chamber
- Agricultural Produce Agents Council
- Bureau for Food and Agricultural Policy
- Canning Fruit Producers' Association
- Deciduous Fruit Plant
   Improvement Association
- Fresh Produce Exporters Forum
- Fruit SA
- Global Cold Chain Alliance
- Produce Marketing Association
- SA Agricultural Machinery Association
- SA Fruit & Vegetable Canners' Association
- South African Association for Food Science and Technology

- South African Cherry Growers' Association
- South African Pecan Nut Producers Association
- South African Strawberry Growers' Association
- Banana Growers' Association of South Africa
- Guava Producers' Association
- Pomegranate Association of South Africa
- Hluhluwe Pineapple Marketing Association
- Institute of Market Agents of South Africa
- National African Farmer's Union of South Africa

- South African Irrigation Institute
- South African National Seed Organisation
- South African Nursery Association
- Southern African Society for Horticultural Sciences
- Water Institute of Southern Africa
- Water Shortage South Africa
- Wines of South Africa
- South African Society for Enology & Viticulture

Source: Compiled by author, 2023.

# 2.3 Platforms for stakeholder engagement

There are several platforms for stakeholder engagement within South Africa's horticulture industry. These platforms help in generating collaborative opportunities in project activities, supporting information and knowledge sharing, and also amplifying research and development outcomes within the industry.

Below are examples of forums that provide stakeholders within the horticulture sector a platform to engage.

The **Fruit Industry Value Chain Round Table** is a stakeholder engagement platform dedicated to bringing together various key stakeholders in the fruit industry in South Africa. The stakeholders involved in the round table include the DALRRD, the dtic, Department of Employment and Labour, PPECB, NAMC, various labour unions, fruit industry commodity groups which are members of Fruit SA, and the South African Consumer Union, representing civil society. The aim of the round table is to speedily engage and solve challenges by fostering collaborative action among stakeholders. The round table works through work streams, which are groups of focused areas covering employment and worker welfare; transformation; research and development; trade and marker access; and resources and infrastructure.

Fresh Produce Exporters' Forum facilitates engagement and collaboration among stakeholders involved in South Africa's fresh produce export industry. The stakeholders range from fruit and vegetable producers and exporters, export and marketing agents, pack-houses, logistics, and other service providers. The provides training programmes, market access support for emerging farmers and also manages the Post-Harvest Innovation programme, which is a public-private partnership involved in post-harvest research projects across the various horticulture industries in South Africa.

The Hortgro Economic Development New Roots unites producers, industry experts, researchers and other stakeholders in the horticulture industry, providing a platform for knowledge sharing and collaboration to drive transformation and facilitate progress and impact within the industry. Stakeholders are able to share insights and strategies that can help other navigate challenges.

Sustainability Initiative of South Africa (SIZA) was established in 2016, after South Africa's fruit industry took a decision to provide retailers and consumers with assurance of fair labour practises and

support the establishment of a harmonised ethical code to assist growers with ethical labour practises. SIZA provides a platform for stakeholders to engage on ethical and environmental sustainability of trade within the sector, focusing on market engagement and monitoring and verification of ethical compliance and best practices.

AgriSETA provides a platform for stakeholders to engage and create opportunities for skills development for industries within the agriculture sector, including horticulture. In collaboration with various stakeholders, AgriSETA facilitates the implementation of learnerships, skills programmes, adult education and training and tertiary education. The aim is to ensure increased access to relevant skills that will have impact in the industry and lead to inclusive economic growth.

#### 2.4 Policies and infrastructure initiatives

The horticulture industry in South Africa operates in an environment influenced by various policies that shape its development and sustainability. Major policies affecting the horticulture industry focus on the sector's ability to contribute to production, trade, employment and decent work, and overall economic growth. Below are examples of these policies.

#### National Development Plan (NDP) Vision 2030

The NDP acknowledges the importance of the agriculture sector, including horticulture as a key driver of economic growth, job creation and food security. Some key objectives related to the fruit and vegetable industry in the NDP include:<sup>7</sup>

- Expanding irrigated agriculture. Evidence shows that the 1.5 million hectares under irrigation (which produce virtually all South Africa's horticultural harvest and some field crops) can be expanded by at least 500 000 hectares through the better use of existing water resources and developing new water schemes.
- The NDP identifies agricultural subsectors with the potential for long-term, sustainable expansion
  in production and value adding processes, which include citrus, table grapes and vegetables. For
  example, with citrus
  - The employment requirement to produce citrus fruit is estimated at one worker per hectare of an estimated 60 000, translating into about 60 000 workers employed on citrus farms. Direct downstream labour requirements for citrus are estimated at one labourer per 2500 cartons packed: with about 100 million cartons packed per year, some 40 000 jobs are created in packing plants for a period of six months, or 20 000 full-time equivalents. In addition, there are labour requirements for transportation, warehousing, port handling, research and development, and processing.
- Land reform and redistribution is highlighted as an important issue to be addressed and promote
  equitable access to land for historically disadvantaged communities, including aspiring fruit and
  vegetable farmers
- Emphasis on the need to support fruit and vegetable producers in accessing international markets and promoting South African fresh produce globally in order to contribute to economic growth and foreign exchange earnings

#### Agriculture Policy Action Plan (APAP), 2015-2019

The policy identifies fruit and vegetable production as a critical industry for employment opportunities and as a key industry for the agro-processing sector in South Africa. It emphasises the need for

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<sup>&</sup>lt;sup>7</sup> The list provides extracts from the National Development Plan.

increased investment to create opportunities that will tackle rural unemployment, and contribute to GDP and exports. Suggestions on how the industry can add value to the economy are highlighted as:

- Assisting exporters to produce high-quality innovative products,
- Providing a reliable supply of quality products to the domestic market,
- Ensuring a high degree of co-ordination to ensure pack houses adhere to set standards and requirements for potential markets, and
- Developing a competitive advantage by focusing on non-cost factors such as quality, and also innovative value chain aspects such as packaging, marketing and logistics

The main targets or aspiration of the policy with regard to the horticulture sector is to increase the production of deciduous fruits, particularly subtropical fruits and citrus, and also vegetables. The policy aimed to increase participation of previously disadvantaged farmers from 4% to 5% by 2019 and also grow the number of jobs in deciduous fruit, subtropical fruits, citrus and vegetables, specifically tomatoes, onions and carrots.

The policy levers set out to achieve these targets included providing input subsides in the form of grant funding; intensify infrastructure investment via the Strategic Infrastructure Project 11 (SIP11) which focuses on Agri-Logistics and Rural Infrastructure; reviewing trade policies to favour intra-Africa trade and bilaterals; implementing the Wholesale Finance Facility; AgriBEE Fund; integrating grant funds between the Department of Agriculture, Forestry and Fisheries (DAFF) and Department of Rural Development and Land Reform (DRDLR) using one funding guideline; and the industrial policy action plan (IPAP).

Key programmes highlighted by the APAP are presented in Table 7.

Table 7: Horticulture programmes in the Agriculture Policy Action Plan 2015-2019

START DATE	KEY OUTPUTS	LEAD DEPARTMENT/ AGENCY	SUPPORTING DEPARTMENT/ AGENCY
Q1 2015/16	<ul> <li>National Fruit and Vegetable Production Programme:</li> <li>Recapitalisation and development support provided to smallholder farmers, and provide on-farm infrastructure to new farmers;</li> <li>Standardised and targeted input supply package for smallholder and commercial producers;</li> <li>Standardised and targeted input and on-farm infrastructure supply package for producers;</li> <li>Support provided to equity schemes linked to identified value chains.</li> </ul>	DAFF (Plant Production and Health)  Comprehensive Agricultural Support Programme	DRDLR
Q1 2015/16	<ul> <li>Land allocation – spatial planning:</li> <li>Strategically located land acquired to support smallholder farmers aligned to value chains;</li> <li>Tenure security of farm dwellers;</li> <li>Land acquired to decongest communal spaces.</li> </ul>	DRDLR	DAFF
Q3 2015/16	National Horticultural Research and Development Programme:  • Breeding;  • Pest disease control;  • Lowing of input costs.	ARC	Universities, Department of Science and Technology
Q3 2015/16	National Fruit and Vegetables Training Programme:  • Establish a training programme on Horticultural production and agro-processing geared at subsistence and smallholder farmers, to be implemented via extension service.	DAFF (Sector Capacity Development)	ARC

Source: DAFF, 2015

#### **Industrial Policy Action Plan**

IPAP highlights the importance of fruits and vegetables as significant inputs in the agro-processing sector, with some being high-value crops with large employment multipliers. In the horticulture sector, the following initiatives and targets were implemented –

#### IPAP (2016/17):

- The new Economic Partnership Agreement concluded with the European Union (EU) aimed at improving market access for agricultural products such as canned fruit and wine.
- Successful negotiations of friendlier protocol with China negotiated by the South African Table Grape Industry and DAFF, which will lead to significant growth in South Africa's table grape exports to China
- Setting up a non-profit entity for the citrus industry to assist emerging growers with market entry, with the CGA contributing R13 million to the development of this platform. This platform is known as the Economic Transformation of Black Citrus Growers programme, which was implemented from April 2020 to March 2023.
- A R100 million tomato processing plant by Dursots-All Joy was launched by the dtic in Tzaneen, with the aim of addressing the increase in demand for tomato paste in the domestic market, and secure business for 15 commercial farmers in the area creating 300 jobs.
- The Western Cape provincial government in partnership with National Treasury and the deciduous fruit industry established the Deciduous Fruit Development Chamber Commercialisation Programme, which will provide R120 million in funding to support emerging fruit farmers to grow their businesses to commercialisation status. This grant money will support renewal and expansion of orchards, purchasing of production equipment and the upgrading of farming infrastructure.

#### IPAP (2017/18):

The targets for the horticulture sector were mainly around establishing support measures to increase South Africa's exports of processed goods and niche agriculture products to the global markets. The role of the dtic in promoting exports was in upgrading trade facilitation and agreements, and assisting with international marketing. Through the agro-processing export strategy, the aim is to:

- Develop costed measures for increasing exports to the Middle East and China, including priority products, specific marketing channels and modalities, phytosanitary and trade-policy requirements
- Engaging key partners in the public and private sector.
- Identifying infrastructural and logistics requirements for expanding exports.

The targeted outcomes are to ensure continued growth in horticulture and processed exports in spite of global economic fragility.

#### Agriculture and Agro-Processing Master Plan (2022)

The Agriculture and Agro-Processing Master Plan (AAMP) forms part of the country's efforts to rebuild and restructure the economy, while collaborating in areas that will drive:

- Equity in access to land and water,
- Ensuring growth and transformation in agriculture and in related value chains,
- Unlocking greater value in the economy including through local value addition,
- Modernising and enhancing competitiveness,

- Enhancing access to appropriate technologies,
- Broadening participation by small-scale, emerging and Black farmers,
- Maximising rural livelihoods through promotion of employment-intensive farming and agroprocessing,
- Ensuring national and household level food security for all in the country, and
- Ensuring the safety of all people living in rural areas, including farm dwellers, farmers and others;
   and maximising the well-being of all residents in farming areas, including improving the conditions of labour of farm workers.

The vision of the AAMP is to foster a thriving, fair and inclusive agricultural and agro-processing sector that generates jobs, while promoting low-carbon practises and sustainability. Emphasis is also placed on enhancing the involvement and inclusion of Black farmers, small-scale, and emerging farmers throughout agricultural production and the entire value chain.

The policy identifies six key pillars that form a guiding framework to address issues across the value chains and cross-cutting interventions which include:

- The resolution of policy ambiguities and the creation of an investment-friendly environment, Increased investment and maintenance of critical infrastructure such as electricity, logistics including roads, rail and ports,
- Provision of development finance, increased comprehensive assistance to farmers, R&D and extension services,
- Increased food security, production and employment growth while ensuring decency and inclusivity,
- Trade promotion, including facilitation of market expansion, and
- Improving local food production, while reducing imports and expanding ago-processing exports

Based on these six pillars, AAMP targets to achieve specific goals and outcomes, presented in Table 8.

#### Table 8: Goals and targets of the AAMP

#### **GOALS**

- Reiterate the objective of the National Development Plan, which aims to strengthen food security, foster inclusive growth in agriculture and agro-processing, facilitate substantial job creation, and promote export growth.
- Expedite the revision of crucial laws regulating water, agricultural inputs, chemicals, food safety, biosecurity and traceability in order to enhance business confidence.
- Enhance state capacity and strength public-private partnerships to boost:
  - Farmer support programmes
  - o Biosecurity control measures and protocols
  - o Improve R&D and technical adoption
  - Increase market access
- Raise approximately R9.4 billion to accelerate infrastructure maintenance and expansion of irrigation schemes, dams, dipping tanks, roads, rail and port facilities, fresh produce markets and processing infrastructure.
- Appoint 10 000 new extension and industry officers and technicians and second them to various industry associations and seed companies.
- Further public-private sector collaboration in developing better capitalisation models to increase state support for the sector.
- Utilise the Blended Finance Scheme, Agro-processing Fund, Statutory Levies, State Grants, Industry Trust and Supplier Development Programme to unlock R7 billion to support farmers and SMMEs.
- A 3% minimum allocation of retailers and supermarkets' net profit targeted towards BBBEE Supplier Development Programme.

#### **OUTCOMES**

- Attain an additional R32 billion in real growth in agricultural value added beyond the typical baseline.
- Sustain 865 000 primary and 263 000 secondary agriculture jobs while generating 75 000 new decent jobs.
- Enhance commercial production by adding 700 000 hectares of crop land and 19 550 hectares of irrigation land.
- Enhance food security.
- Increase share of Black farmers in overall production to 20% by 2030.

Source: Agriculture and Ago-processing Master Plan, 2019.

Specific to the horticulture value chain, under the six key masterplan pillars of intervention, Table 9 provides a summary of some the main interventions.

**Table 9: Summary of some horticulture cluster outcomes** 

OPPORTUNITIES AND COMMITMENTS	DELIVERY MODEL	RESPONSIBILITIES
<ul> <li>Pillar 1: Resolving policy ambiguities and creating an investment-friendly environment</li> <li>Offer convenient access to alternative energy sources such as wind and solar</li> <li>Monitor the Agricultural Produce Agents Council (APAC)<sup>8</sup> Amendment Bill which is before Parliament and the portfolio committee.</li> <li>Conduct a multidisciplinary (legal, social) review of institutional arrangements in the Communal Property Associations, Trusts, and other land reform programmes to advise the fruit industry on how to resolve some of the institutional challenges in land reform projects.</li> </ul>	Round tables on fruits, nuts, vegetables and wine value chains – Review the TOR on inclusivity according to the AAMP. Establish value chain round tables that have not yet been established. Participate in the Liaison Committee on Act 36.	Labour, Communities, Government, Organised agriculture and commodity Associations
<ul> <li>Pillar 2: Creating enabling infrastructure</li> <li>Increase, upgrade and maintain water irrigation infrastructure which will enable the addition of 30 000 additional hectares of land from new water developments such as: Western Cape: Clanwilliam Dam – 5000 ha; KwaZulu Natal: Makhathini Flats – 8 605 ha.</li> <li>Promote agricultural goods transport migration from roads and rail: Transnet review of 2012 Road to Rail strategy developed by the fruit industry; increase the share of fruits currently transported by rail (strategy and targets are subject to cabinet for approval); and increase port efficiency and capacity (strategy and targets are subject to cabinet for approval).</li> <li>Increase R&amp;D Infrastructure investments.</li> <li>Expand market infrastructure, access and opportunities for exports and domestic sales</li> <li>Improve trading environment for informal traders:</li> </ul>	Monitoring and evaluation progress on AAMP infrastructure interventions through the Fruit Industry Round Table.	Labour, Communities, Government, Organised agriculture and commodity associations

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<sup>&</sup>lt;sup>8</sup> The Agricultural Produce Agents Act No. 12 of 1992, as amended by the Agricultural Produce Agents Amendment Act No. 47 of 2003 provides for the establishment of APAC, the Fresh Produce Agents Fidelity Fund in respect of agricultural produce agents and the control of certain activities of agricultural produce agents. The objects of the APAC are to regulate the occupations of fresh produce, export and livestock agents, and to maintain and enhance the status and dignity of those occupations and the integrity of persons practicing those occupations. The functions of the APAC include the formulation of policy and the establishment of rules and codes of conduct. In preparation for the publication of the Agricultural Produce Agents Amendment Bill, 2020, the Department of Agriculture, Forestry and Fisheries consulted widely with and obtained inputs from representatives of agents, industry stakeholders and organisations (Parliament of SA, 2022).

	OPPORTUNITIES AND COMMITMENTS	DELIVERY MODEL	RESPONSIBILITIES
	<ul> <li>Education and training to local government officials on the informal trade's legal and regulatory framework.</li> <li>Capital investment planning to provide shelter, storage, cooling rooms, electricity, and tight security to reduce theft from trading facilities.</li> <li>Facilitate efficient transportation of fresh produce from points of purchase to points of sale for informal traders. Business costs will be significantly reduced as a result.</li> <li>Provide informal traders with training and education on business processes and procedures and the regulatory environment</li> </ul>		
	affecting their business to enhance compliance.		
•   6	Provide comprehensive farmer assistance, allopment finance, R&D and extension services  Provide comprehensive producer support, including affordable credit, land, water, and training to commercial and emerging farmers  • For financing, several programmes exist, but they are small in scope and do not address the needs of the horticultural sector, in which establishment costs are high; a blended financing approach could be considered expand research and development infrastructure and capacities in the horticultural sector.	Fruit, nuts, vegetables and wine value-chain round tables	Labour, Communities, Government, Organised agriculture and commodity associations
• I	r 4: Improving food security, increasing production and loyment and ensuring decency and inclusivity  Increase production growth in the horticulture sector for grapes, pomes, citrus, avocados and potatoes.  Accelerate implementation of land reform projects: The government has evaluated all acquired land in its spatial evaluation, but it will be necessary to look at specific farms and territories that have already received some analysis.	Land and Agriculture Agency	DALRRD and Organised agriculture
	analysis. r 5: Facilitating market expansion, improving market		
•     •	Increase international market access opportunities by negotiating and concluding new markets.  Increase domestic market access opportunities for all famers: supermarkets should endeavour to purchase from smaller, Black producers — explore market opportunities.	Strengthen the operations of the fruit industry value chain round table.	Government (the dtic and DALRRD) and Commodity associations
	6: Developing localised food, import replacement	Strengthen the	Government (the
• 1	Agro-Processing: Expand processing to grow market, add value and explore alternative products.  Import protection: Import protection against cheap and dumped, and illicit products; potatoes anti-dumping duty on frozen projects has expired and needs to	operations of the fruit industry value chain round table	dtic and DALRRD) and Commodity associations

OPPORTUNITIES AND COMMITMENTS	DELIVERY MODEL	RESPONSIBILITIES
reapply; apply SPS requirements on imports similar to that of local produce.  • Expanding markets and market access: Increased access for smaller independent producers to supermarkets in South Africa – leverage on competition commission recommendations to secure market share and shelf space funding for Black-owned brands in the wine sector.		

Source: NAMC, 2019.

#### **Climate Change Bill**

With the horticulture industry being part of the agriculture sector, it is also affected by the Climate Change Bill. In South Africa's Nationally Determined Contribution under the Paris Agreement, the agriculture sector features as one of the key sectors for prioritisation because of its significant contribution to economic activity, job creation and foreign direct investments – and most importantly its vulnerability to changes in weather parameters such as extreme temperature and rainfall due to climate change. Increases in temperature and rainfall are likely to have significant impact on crops and trees (CSIR, 2021).

Efforts aimed at supporting the long-term adaptation of the sector and its industries to climate change include:

- Development of Climate Change Needs and Response Assessments.
- Operationalisation of the National Climate Risk and Vulnerability Assessment Framework.
- Rolling-out of specific climate-smart agriculture tools and early warning systems.

# The Agri-Industrial Fund9

The Agri-Industrial Fund is an initiative by the Industrial Development Corporation in partnership with the DALRRD, aimed at supporting various economically viable activities in the agro-processing sector. The objective of the fund is to:

- Develop a competitive industry in the food and agro-derivatives industry.
- Utilise and develop local and regional resources to supply domestic demand.
- Increase participation in international trade.

For horticulture, the Agri-Industrial Fund focuses on supporting Black-owned large commercial agricultural projects in high-value export-oriented crops, which include citrus, avocado, table grapes, blueberries and tree nuts.

#### 2.5 Main policy debates

Policy debates in the horticulture industry revolve around strategic legislative bills and non-tariff barriers, including phytosanitary and climate change issues that have a significant impact on the industry.

Agricultural Produce Agents Amendment Bill: The Bill aims to insure the fidelity fund of the fresh
produce industry; establish trust accounts for export agents; ensure insurance coverage for export
agents and fresh produce agents; and mandate the auditing of the financial statements of the

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<sup>&</sup>lt;sup>9</sup> https://www.idc.co.za/agriindustrial-fund/

Agricultural Produce Agents Council by the Audit-General. Concerns raised and debated by several organisations and stakeholders included the issues of overregulation of the industry, increased costs across the value chain, reduction in market access, and limited competition for farmers and agents if the Bill is passed in its current form. Further concerns relate to the provision in the Bill simply being a copied and pasted from a previously drafted Bill that did not pass.<sup>10</sup>

- Non-tariff barriers to trade: Impact of export regulations on the citrus industry which have been affected by discriminatory regulations imposed by the European Union market, in particular the new false coddling moth regulation (Masiwa, 2022). With the EU market accounting for over 40% of South Africa's citrus exports, the industry recognises the importance of these phytosanitary standards, and discussions are around increasing investment in research and technology to ensure high-quality produce that is pest and disease free. The importance of not misusing standards and increased transparency in the process of designing and applying them is being emphasised.
- Infrastructure development: Issues of on-going deterioration of public infrastructure such as roads, rail and ports operations has had an impact on the horticulture value chain, particularly for exporting subsectors. According to the citrus industry's association, Transnet is among the biggest threats to the fruit export industry. Debates are centred around how to increase export efficiency and investment requirements.
- Climate change: Debates revolve around the impact of climate change on crop yields, water availability and pest management. In South Africa, the impact has been evident from the severe droughts experienced in recent years as well as floods that led to significant crop damage. Stakeholder discussions are focused on strategies for adapting to changing weather patterns, implementation of sustainable practices and innovation relating to resilient crop varieties. Focus is also being placed on methods of mitigating greenhouse gas emissions from agricultural activities to reduce the sector's overall carbon footprint.
- Land reform: Discussions are centred on addressing the historical injustices by redistributing land to Black beneficiaries while avoiding any land markets or business confidence. It involves mechanisms such as restitution, redistribution and tenure reform to achieve equitable land access and ownership.

#### **SECTION 3: MAIN CONSTRAINTS**

South Africa's horticulture industry faces a range of constraints that have an impact on its growth and sustainability. These constrains include factors such as inadequate transport infrastructure, non-tariff barriers in the form of restrictive sanitary and phytosanitary standards, loadshedding, fluctuating climate conditions, and rising input costs. Understanding and addressing these constraints is crucial for the industry's long-term success, and its ability to achieve inclusive industrialisation, job creation, increased investment and economic growth.

#### **Transport infrastructure**

Transport infrastructure has a significant impact on the fruit and vegetable industry in South Africa. Limited or inadequate infrastructure in the form of poor road networks, inadequate cold storage facilities, and unreliable transport services can lead to challenges in efficiently moving fresh products from farms to markets, both domestically and for exports. This can hinder the industry's ability to maintain product freshness and quality due to longer transit times that can potentially result in product loss. Furthermore, inefficient transportation can also affect the competitiveness of South

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<sup>&</sup>lt;sup>10</sup> https://pmg.org.za/committee-meeting/34809/

Africa's produce in international markets, as timely delivery is crucial to meeting customer demands and maintaining a positive reputation.

Congestion at the ports and poor rail and logistics infrastructure has affected the industry in a significant way. South Africa's main ports have been plagued with high levels of congestion and delays (Chisoro-Dube and Mondliwa, 2019). In 2022, exports of table grapes and other deciduous fruit were disrupted at the Port of Cape Town, with cargo ships delayed by 14 days due to lack of investment and maintenance of critical infrastructure at the port. This resulted in exporters absorbing the additional financial cost as they sorted alternative ways to transport their produce.<sup>11</sup> Such logistical challenges and supply chain disruptions at the ports have not only negatively affected the profitability of exporters, but have generally dampened trade within the sector.

Improvements in transportation infrastructure, such as better rail and road networks, modernised cold storage facilities, and efficient logistics, are essential for the industry's growth and success by ensuring that fresh produce reaches its destination in optimal conditions and on time. That said, increased investments in technology such as integrated digital systems can assist in addressing delays at the ports.

# Non-tariff barriers: Compliance with sanitary and phytosanitary standards in different markets

Complying with sanitary and phytosanitary standards in different markets is a major constraint for the horticulture industry, as the process requires a lot of technical and scientific expertise to reassure export markets of the elimination of any risk to pests and diseases. However, SPS measures are sometimes used as non-tariff barriers, and can affect the export of certain products to another country. In the case of the citrus industry for example, in June 2022 the European Union imposed protectionist measures on South Africa by changing regulations on plant safety for citrus, specifically introducing new cold treatment requirements to combat "false codling moth", without sufficient notice period to trading partners (Sihlobo, 2022). This was a contentious issue as South Africa's citrus industry had already implemented highly effective measures to control the moth. According to the CGA, the implementation of this measure could possibly reduce South Africa's orange exports to the EU market by approximately 20% (Banya, 2023).

Improving compliance with SPS measures from various importing markets requires technical and negotiation skills particularly for key institutions within the agriculture and trade sector to perform regulatory functions and ensure market access.

#### Loadshedding

Loadshedding has become a critical concern for the horticulture industry in South Africa. The impact of these planned power outages is evident at all levels of operation, including irrigation, conveyer belt movement of produce, alarm systems for security, logistics and cold chain management, at both the farms and ports (Arnoldi, 2023). It has resulted in disrupted operations, decreased productivity and financial instability.

The importance of electricity in chain management is highlighted in the transportation of fruit such as bananas and avocado, which require uninterrupted cold storage throughout the transportation

<sup>&</sup>lt;sup>11</sup> https://www.foodformzansi.co.za/cape-town-port-congestion-eases-up-as-workers-return/

process. Any disruption in this cold chain can led to them ripening or even rotting overnight. As highlighted in the case of citrus, cold chain management is an important prerequisite for products exported to markets such as the EU, which have imposed stringent requirements for temperature and timeframe in the cold chain process to ensure that products are safe for consumption (Arnoldi, 2023).

With regards to financial instability, loadshedding has resulted in farmers experiencing profit losses due to spoiled produce, decreased productivity and increased costs from investing in alternative power sources such as diesel generators. Furthermore, farmers are losing out on the benefit of reduced electricity tariffs offered during off-peak times by Eskom's Ruraflex system, as farmers end up operating during peak periods which have higher tariffs, due to loadshedding. This has implications particularly on irrigation, as farmers end up manually restarting pumps and water systems after loadshedding, a process which consumes more electricity than normal.

The Agriculture Business Chamber (AgBiz) highlights some suggestions on how farmers can be assisted in addressing the impact of loadshedding as follows:<sup>12</sup>

- Increase regulatory revision and subsidies related to renewable energy generation.
- National Treasury must award rebates on the petrol and diesel that farmers use to generate electricity, as extra production costs caused by loadshedding threaten food security.

In addition, AgBiz notes efforts that are being implemented to lessen the impact of loadshedding on farmers, and these include the establishment of a loadshedding task team by the Minister of Agriculture, Land Reform and Rural Development with the objective of monitoring how farm operations have been affected by rolling blackouts and lobbying on behalf of industry for consideration for reduced loadshedding for areas where planting or irrigation is taking place.

#### **Rising input costs**

The increase in input costs has been a critical constraint for the horticulture industry in South Africa in recent times partly due to the Russian invasion of Ukraine, which has impacted the price of inputs such as fertiliser as Russia was the leading global producer of fertiliser, responsible for approximately 14% of fertiliser exports to the global market.

Increases in electricity and fuel costs have contributed to the rise in input costs across the value chain from farmers through to manufacturers and logistics. Since April 2021, electricity tariffs have been increased by approximately 16%, putting pressure on the horticulture industry which is highly dependent on irrigation an energy intensive process (Bryden, 2020). Since the distribution of horticulture is mainly by road, the increase in fuel costs for both petrol and diesel put pressure on the industry.

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<sup>&</sup>lt;sup>12</sup> Wandile Sihlobo's comments in an article titled *Farmers seek new deal as loadshedding threatens industry and food security*, cited by Arnoldi, 2023.

# **SWOT Analysis**

A SWOT analysis establishes the strength, weaknesses, opportunities with a specific sector. The following table below, presents a SWOT analysis for South Africa's horticulture industry

Table 10: SWOT Analysis for South Africa's horticulture industry

Table 10: SWOT Analysis for South Africa's horticulture industry		
STRENGTH	WEAKNESSES	
<ul> <li>Well-developed commercial farming industry.</li> <li>Well established distribution channels through supermarkets, fresh produce markets, exports, and processor:         <ul> <li>A well- developed retail sector, and linkage to the rest of Sub-Saharan Africa.</li> </ul> </li> <li>Significant exporter of high-value fruit.</li> <li>Counter-seasonality to key export markets.</li> <li>Strong government and private support.</li> <li>Strong research and development.</li> <li>Steadily increasing processing capacity.</li> </ul>	<ul> <li>Highly susceptible to disasters such as drought and consequently the climate crisis.</li> <li>Phytosanitary systems are adequate but could be improved to facilitate exports.</li> <li>Concerns about electricity and transport interruptions, especially impact on cold chain.</li> <li>Concerns about working conditions, which may affect exports.</li> <li>Very difficult for small farmers to get into formal value chain.</li> </ul>	
OPPORTUNITIES	THREATS	
<ul> <li>Growth in exports to Asia and Middle East.</li> <li>Technological innovation driving efficiency in production and marketing.</li> <li>Increased demand for healthy foods.</li> <li>Snackification opens an opportunity for dried fruits.</li> <li>Supplying private label ranges for major retailers</li> <li>Increased support for smallholders and upgrading in labour conditions to improve sociopolitical context in South Africa and overseas.</li> <li>Strengthen irrigation, off-grid solar power systems and other measures to improve resilience to climate change and loadshedding.</li> </ul>	<ul> <li>Unstable electricity supply.</li> <li>Increasingly stringent export regulations in the EU markets:         <ul> <li>Food safety and phytosanitary restrictions may affect exports of food products and certain food ingredients.</li> </ul> </li> <li>Inefficiencies at ports are a significant constraint on the export of value-added goods.</li> <li>Rising costs for petroleum and fertilisers.</li> <li>Overall food inflation means consumers substitute lower-cost products.</li> <li>Climate change.</li> <li>Security of water supply and water quality from local authorities which could impact production.</li> <li>Lose support from government due failure to expand representativity and smallholder production, and to improve conditions for workers.</li> <li>Rising minimum wage and other labour costs.</li> </ul>	

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