

Mapping market concentration across South Africa's agricultural value chain: a case of fresh produce production and trade.

Mogau Aphane¹ and Nonjabulo Sambo^{2 3}

Abstract

Market concentration is a defining characteristic of the South African economy, and this is particularly evident within the agricultural sector. Extensive research in this area has consistently demonstrated that elevated levels of concentration exist throughout the South African food system, spanning from primary farming activities to retail operations. This high concentration means that only a small number of firms exert significant control over the production side of agriculture through to the retailing of agricultural products.

On the input side, there is a notable concentration, with only a few firms supplying essential inputs such as seeds, fertilisers, and agrochemicals. Closer examination reveals that the degree of concentration remains pronounced even when considering specific seed types, agrochemical categories, or fertiliser types. In terms of production, a limited number of companies are responsible for the majority of field crop, fruit, and vegetable production.

At the wholesale trade level, the landscape remains largely unchanged, as a handful of markets and market agencies control roughly 80% of fresh produce trade in this segment. Similarly, retail trade is dominated by a few large retailers, which collectively account for approximately 83% of the market.

Drawing on data from the South African Fresh Produce Market Inquiry (FPMI), this paper explores the market structures at various levels of the agricultural value chain in South Africa. It analyses the concentration levels and examines the challenges encountered by market participants, with a particular emphasis on small, medium and microenterprises (SMMEs) as well as Historically Disadvantaged Persons (HDPs). The focus is specifically on fresh produce production and trade. In addition, the paper provides policy recommendations aimed at supporting the entry and growth of smaller market participants across the value chain.

Key words: Market concentration, agricultural value chain, barriers to entry, fresh produce, small, medium and microenterprises.

¹ Principal Analyst, Market Conduct Division of the Competition Commission of South Africa.

² Analyst, Market Conduct Division of the Competition Commission of South Africa.

³ The views expressed in this paper are of the authors and do not reflect the position of the Competition Commission of South Africa

1. Introduction

Globally, the high degree of concentration in various markets within agrifood supply chain has been a concern among policymakers, civil society and researchers, given the potential influence that a small number of dominant firms may have on the entire food systems outcomes (Clap, Laila, Conti, Hicks, Vriezen, Gordon and Rao, 2025). This is mainly because high market concentration is associated with market power, which may lead to various forms of anticompetitive conduct such as abuse of dominance and collusion. As a result, the efficiency of food systems is likely to be diminished, often leading to the exclusion of smaller participants or exposing them to unfair practices that compromise their sustainability. Ultimately, consumer welfare is adversely affected, manifesting in limited innovation, reduced product choices and ultimately higher prices (Hernandez, Espinoza, Berrospi, Deconinck, Swinnen and Vos, 2023).

In South Africa, the agricultural value chain is similarly characterised by significant market concentration. This stems partly from historical legacies of state ownership in some markets that created monopolies and some product markets in the agrofood value chain, such as fertilisers, seeds, and agrochemicals, having ties with global markets. Although there are notable players that are South African firms in the value chain such as fertiliser, there is still a need for the country to import most of its farming inputs (Dube, Das Nair, Nkhonjera and Tempia, 2018).

The recent report by the African Competition Forum (2024) found that the South African agrofood markets are generally characterised by high import dependencies, low prices for Small and Medium Enterprises (SMEs) producers, and high prices for end consumers, which is often related to the concentration of market power of large integrated firms that operate along regional or international value chains. The participation of Small, Medium and Micro Enterprises (SMMEs) and Historically Disadvantaged Persons (HDPs) is widely recognized as a critical driver of inclusive growth, particularly in small but developing economies like South Africa. Therefore, it is essential for SMMEs and HDIs operating in this sector to access and expand within diverse markets without encountering strategic entry barriers imposed by prevailing market structures.

Despite the above challenges, agriculture remains vital to South Africa, showing higher growth than the overall economy. In 2025, agriculture played a significant role in South Africa's economy. While the overall economy grew by approximately 1.1% between 2024 and 2025, the agricultural sector grew by approximately 17.4%. This strong performance translated to 0.4 % contribution towards total GDP growth, making agriculture the largest contributor to economic growth in 2025 (StatsSA, 2026). This underscores its importance and potential for

advancing food security, job creation, supply to industry, and exports. Despite these strengths, challenges like concentration at various levels of the value chain need to be addressed to unlock further growth.

Drawing on data from the South African Fresh Produce Market Inquiry, this paper explores the market structures at various levels of the agricultural value chain in South Africa. It analyses the concentration levels and examines the challenges encountered by market participants, with a particular emphasis on SMME and firms owned by HDPs. The focus is specifically on fresh produce production and trade. In addition, the paper provides policy recommendations aimed at supporting the entry and growth of smaller market participants across the value chain.

The paper is structured as follows. Section 2 provides an overview of the global and local concentration trends in key inputs markets (seeds, fertilisers and agrochemicals), Section 3 outlines market structure at farming level, Section 4 deals with the structure at wholesale marketing of fresh produce, Section 5 outlines the structure at retailing of fresh produce, Section 6 crystallises observations in prior sections, Section 7 outlines the key challenges related to structural issues observed and Section 7 conclude and make policy recommendations.

2. Trends in global and local concentration in the key inputs markets (seeds, fertiliser and agrochemicals)

2.1. Seeds market.

Seeds serve as the foundation of crop production and are fundamental to the long-term viability of the entire agrofood system (Bonny, 2017). Seeds are more than just agricultural inputs; they shape production methods, influence food availability, and serve as a crucial livelihood resource for numerous indigenous communities worldwide (Ghale and Upreti, undated). Therefore, concerns regarding market power and concentration in this market are justified, considering the critical role of seeds in the overall value chain.

Seed companies are often regarded as large firms and powerful players in the agri-food chain (Bonny, 2017). This power has mostly been amassed through significant mergers and acquisitions in recent decades. Among the most prominent transactions in this sector are Bayer's acquisition of Monsanto, the merger of Dow and DuPont, and ChemChina's acquisition of Syngenta.

Competition authorities worldwide have reviewed these acquisitions, generally granting approval with certain conditions to address competition concerns in their jurisdictions. For example, the Bayer-Monsanto, Dow-DuPont, and ChemChina-Syngenta mergers were

approved in the USA, Europe, and South Africa subject to divestiture conditions. These divestiture conditions aimed to eliminate overlaps arising from high concentration that would otherwise lead to anti-competitive behaviour. In the European Union, the Dow- DuPont merger was approved on the condition that DuPont divest a sizeable portion of its insecticides business (Kaziboni and Chisoro-Dube, 2017).

According to ETC Group (2025), there are just 4 firms that control approximately 56% of the global seed markets. These are Bayer (German), Corteva (US), Syngenta (China/Switzerland) and BASF and their combined revenue for 2023 amounted to US\$27 958. Amongst the top 4, the largest is Bayer (23%) followed by Corteva (19%), Syngenta (10%) and BASF (4%) being the smallest. Table 1 below depicts the top 4 global seed suppliers.

Table 1: Top four global seed suppliers

Ranking	Company	Sales (\$) 2023	Market share
1	Bayer	\$11 613	23%
2	Corteva (spin off- DowDuPont)	\$9 472	19%
3	Syngenta	\$4 751	10%
4	BASF	\$2 122	4%
Total world market		\$50 000	100%

Source: ETC Group, 2025

In South Africa, the recent Fresh Produce Market Inquiry (FPMI) conducted by the Competition Commission of South Africa (Competition Commission) found that the seed market in the local setting is fragmented with close to 35 firms active across breeding, production, treatment and distribution of seeds (FPMI, 2025). As expected, from Table 2 below, the large global players such as Syngenta and Bayer are also active in this market. The FPMI focused on vegetable seeds, excluding other categories where large companies like Corteva and BASF operate, so they are not listed in the table below. Nevertheless, the structure of the market seems to not depart from the global picture where all top 4 firms are also found to be active, albeit in different segments of the market.

Table 2: South African Seed market participants

Market Participant	Market Share
Starke Ayres	30% - 50%
Sakata Seeds	20% - 30%
Enza Zaden	5% - 10%
Rijk Zwaan SA	5% - 10%
Hydrotech SA	5% - 10%
Hazera Seeds	5% - 10%

InteliSeeds	less than 5%
Nuvance	less than 5%
Syngenta SA	less than 5%
Bayer Crop Science	less than 5%
Ball Straathof	less than 5%
Alliance Seeds	less than 5%
European African Seed Initiative	less than 5%
ZAR Seed	less than 5%
McDonalds Seeds	less than 5%
GWK	less than 5%
Others	less than 5%
Total	100%

Source: FPMI, 2025

While the horticultural seed market may initially seem somewhat fragmented, a detailed analysis of specific seed segments presents a more nuanced perspective. For instance, although Starke Ayres's overall market share is estimated at between 30% and 50%, its dominance in certain categories such as onions and tomato seeds may be even greater. Similarly, for companies like Sakata, aggregate market shares can underrepresent their actual influence within niche seed markets defined by particular types of produce.

Large multinationals such as Syngenta and Bayer have a minimal share of the domestic market. However, market concentration is evident within certain segments: the top four firms control 83% of the cabbage seed market, 83% of carrot seeds market, 45% of onion seeds market, and 24% of spinach seeds markets. This analysis indicates that while the overall seed market appears fragmented, there is significant concentration in particular segments. Notably, the spinach seed market is the least concentrated, whereas the other segments exhibit elevated levels of market dominance by the leading firms.

Table 3: Market participants and share based on type of crop.

Market participant	Cabbage	Carrots	Tomato	Onion	Spinach
Starke Ayres	37%	26%	38%	45%	11%
Enza Zaden	-	-	2%	17%	10%
Sakata Seeds	31%	41%	10%	13%	2%
Nuvance	9%	6%	2%	3%	
GWK				3%	
McDonalds Seeds	6%	1%	<1%	<1%	1%
InteliSeeds	4%	3%	5%		<1%
Upot Seeds	-	-	-	2%	

Hydrotech SA	4%	2%	10%	4%	10%
Syngeta SA	3%	1%	5%		>1%
Hazera Seeds	3%	14%	5%	1%	
European African Seed Initiative	2%	1%	2%	4%	2%
BASF		<1%		<1%	
Bayer Cropscience	1%	<1%	3%	2%	-
Zar Seed	1%	<1%	1%	6%	
Rijk Zwaan	<1%	-	2%	-	62%
Alliance seeds	<1%	<1%	12%		
Ball Strathof	<1%	<1%	<1%	<1%	<1%
Shalom	<1%	<1%	<1%	<1%	-
Total	100%	100%	100%	100%	100%

Source: FPMI, 2025

Based on the above, the seed sector is strategically important but has become increasingly concentrated due to major global mergers. In South Africa, the horticultural seed market appears fragmented (around 35 firms), yet strong concentration exists in specific crop segments. Firms such as Starke Ayres and Sakata are especially dominant in certain categories.

2.2. Fertiliser market

According to Sihlobo and Kirsten (2023), there are three major fertiliser producing regions in the world, being the Black Sea region (Eastern Europe), USA Gulf of Mexico, and the Middle East. More specifically, Russia, China, Canada, United States, Morocco and Belarus are the top six countries responsible for over half of the world's export of fertilisers. South Africa imports most volumes of fertiliser from Saudi Arabia, Russia, Qatar, Oman, and China. Specifically, South Africa imports approximately 80% of its requirements. This therefore implies that the agricultural sector in South Africa is inherently exposed to shocks in the international environment.

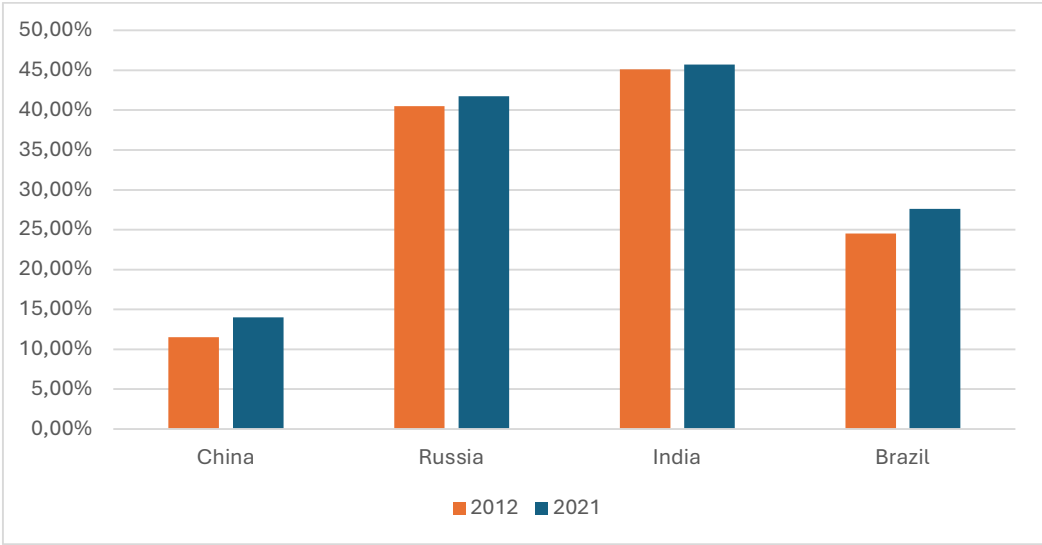
The South African Fertilizer Analysis report (2020) by the Department of Agriculture, Forestry and Fisheries (DAFF) highlighted the sector's heavy reliance on imports and thus sensitivity to global price movements and exchange rate fluctuations. Similarly, the Centre for Competition, Regulation and Economic Development study on fertiliser markets in the East and South Africa found that fertilizer markets were highly concentrated with a small number of large firms dominating importation, production and distribution. The paper further indicated that the barriers to entry are substantial due to capital intensive nature of fertiliser infrastructure such as blending plants, storage facilities and port terminals.

The data from the International Food Policy Research Institute (IFPRI) 2023 report and the FPMI (2025) show that most of the global production capacity for the main fertilizers (ammonia, urea, ammonium nitrate, monoammonium phosphate, MAP; diammonium phosphate, DAP; and phosphoric acid, potash, and nitrogen-phosphate-potassium, NPK, compounds) is concentrated in a few countries.

Specifically, the FPMI reported that for potash, Canada, Russia, Belarus, China, Germany, Israel, United Kingdom, and Spain are the top eight manufacturers accounting for approximately 90% of the global production of potash, while in the case of phosphate, China, US, Morocco, Russia, India, and Saudi Arabia accounted for approximately 90% of the global production. With regards to ammonia, urea, DAP/MAP, and phosphoric acid, China, India, Russia, and the US are among the countries that dominate their production capacity.

Figure 1 below shows the concentration ratio for China, Brazil, Russia and India for the years 2012 and 2021 using information on company shares for annual production turnover of fertilizers and nitrogen compounds at current prices (in US dollars applying year-over-year exchange rates) taken from the 2023 IFPRI report.

Figure 1: Top 4 concentration (%) of fertilizer and nitrogen compounds in main producing countries, 2012 and 2021



Source: International Food Policy Research Institute (IFPRI) 2023

According to Figure 1 above, India and Russia have maintained a CR4 index of more than 40% since 2012, while in Brazil and China it increased from 24,5% and 11,5% to 27, % and 14%, respectively. The IFPRI (2023) also noted that the same companies remained among the top producers in each country and in the same ranking with the exception of Yunnan

Yuntianhua Co Ltd in China that was not among the top four producers in 2012 and became the most important producer in 2021.

The report further highlighted since fertilizer production requires high capital investment, companies tend to merge or expand to achieve economies of scale. However, this tend to create high barriers to entry, making it difficult for smaller firms to compete. Another observation is that many large companies also operate globally, setting up subsidiaries in developing regions either to reduce production costs (e.g., access to raw materials) or to be closer to key markets. Further, some firms coordinate exports through joint trading organizations like Canpotex and Belarus Potash Company, which further contributes to concentration in the distribution channel and could increase market power.

In South Africa, fertilisers are either imported by wholesalers and sold to retailers who then on-sell to end users or and co-operatives. There are three categories where a firm can be active in the fertiliser industry in South Africa:

- Import of fertiliser - Fertiliser companies/ distributors, agents, traders or retailers and wholesalers import fertilisers to sell in the South African market.
- Production/manufacture of fertilisers - Three companies are acting in the manufacturing of inputs into fertilisers in South Africa, namely. Sasol, Foskor, and Omnia; and
- Blending of fertilisers.

Figure 2: Top 3 concentration (%) of fertilizer in South Africa for the years 2019 to 2022

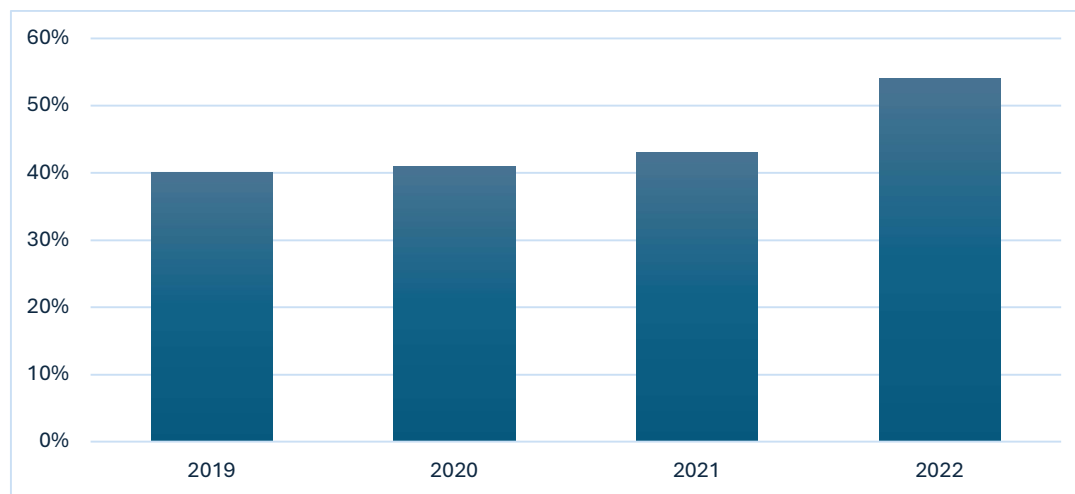


Figure: owns construct using the FPMI data

Figure 2 above shows the CR3 concentration for the South African fertilizer industry for the years 2019 to 2022. Between 2019 and 2022, market concentration increased notably, with the ratio rising from 40% in 2019 to 54% in 2022. In South Africa three firms dominate the

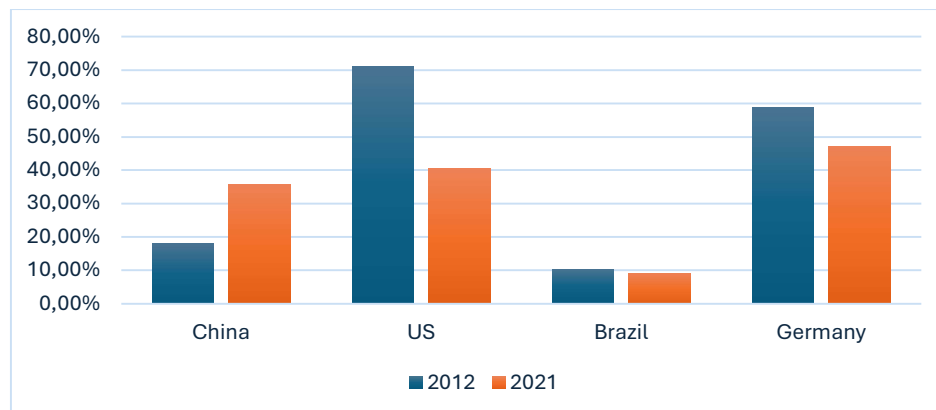
fertilizer market namely Kynoch, Foskor and Omnia which collectively account for more than 40% of the total market share. Among these, Kynoch is the leading producer of fertiliser products, followed by Omnia and Foskor.

2.3. Agrochemicals

Agrochemicals are broadly categorised into five segments: i) herbicides, which target weeds and invasive alien plants; ii) insecticides, for controlling insects, parasites and other harmful organisms; fungicides, for preventing or eliminating the growth of parasitic fungi and the spores that cause mould, mildew, fungal rust, blight and other fungal contamination; v) rodenticides, which are used to kill mice, rats and other rodents; and vi) nematicides, for controlling roundworm infestations. Agrochemicals are available in solid, liquid and gas form.⁴ The agrochemicals industry exhibits elevated level of concentration.

IFPRI (2023) reports that the agrochemical industry has been the most recognizable example of consolidation in the agri-food system in recent years, with some of the largest deals in mergers and acquisitions history (both within this industry and expanding to the seed sector), which have additionally renewed a public debate on its implications. This was in line with the FPMI (2025) finding that indicated that the mergers and acquisitions deals in the broader agrochemicals drove the market shares of the top four companies. These firms are Syngenta Group, Bayer, BASF and Corteva and account for approximately 62% of the global supply of agrochemicals. Figure 4 below shows the concentration (%) ratio for China, the US, Brazil and Germany for pesticides and other agrochemical products 2012 and 2021.

Figure 3: Top four concentration (%) of pesticides and other agrochemical products in main producing countries, 2012 and 2021



Source: International Food Policy Research Institute (IFPRI) 2023

⁴ See FPMI final report, 2025.

From figure 3 above shows that the CR4 index in China increased substantially between 2012 and 2021, increasing from 18% in 2012 to 35.8% in 2021. During this period, Wuhai He Ye Chemical Engineering Co Ltd further strengthened its position as the dominant firm in market. In contrast, the concentration ratio decreased in the US and Germany, although still remained over 40%, while in Brazil it decreased from 10% to 9%.

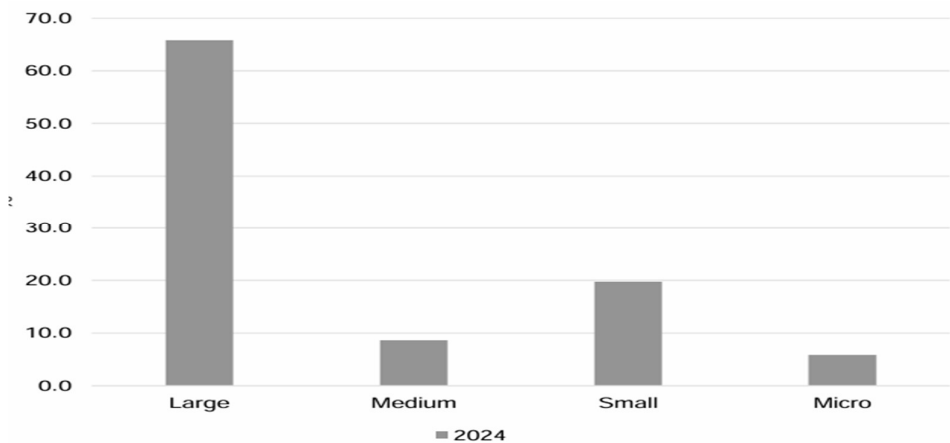
Similar to fertiliser, South Africa is a nett importer of agricultural remedies such as pesticides, fungicides, and herbicides. Multinational firms such as Bayer, Syngenta, Corteva, BASF and other local formulators produce a large number of these products in South Africa, from imported active ingredients. The FPMI found that most active ingredients are sourced from overseas, where they are formulated in various parts of the world (including South Africa). These formulated products are then packaged and labelled and then sold to agrochemical distributors. The agrochemical distributors will then market and sell these crop-protection products to growers through their own agents. Firms Villa Crop, Bayer, UPL, Syngenta and BASF accounted for more than 50% of the market share for the supply of agricultural remedies in 2020.

3. Farming level of the value chain

The commencement of the value chain is attributed to the grower/producer. The production and distribution of fresh produce in South Africa illustrates the presence of a dualistic economic system with a sophisticated, developed economy coexisting alongside a developing economy. According to the 2022 Agricultural Census by Statistics SA (2022), the large-scale agricultural sector consisted of 40,122 farms, while small-scale farming consisted of more than 300,000 units.⁵ More recent data from the 2024 Agricultural Survey indicates that large commercial enterprises continue to dominate sectoral output, although updated counts of total farming units are not reported. These producers supply fresh produce to various stakeholders, namely wholesalers, retailers, processors, or traders.

⁵ Stats SA Statistics South Africa (S. S. A.) (2020) Census of commercial agriculture 2017 – Report-11-02-2017.

Figure 4: Percentage contribution of income by enterprise size in the agriculture and related services industry, 2024



Source: Agriculture statistics survey, 2024.

Figure 4 above shows the Income by enterprise size in the agriculture and related services industry for 2024. The survey included animals, horticulture, field crop and other agriculture products. Large enterprises contributed 65,8% (R353,4 billion) to the total income in 2024, followed by small enterprises with a contribution of 19,8% (R106,1 billion). Medium and micro enterprises contributed 8,6% (R46,3 billion) and 5,8% (R31,3 billion) respectively.

4. Market concentration at wholesale marketing of fresh produce.

In South Africa, approximately 40% of the fresh produce marketing is undertaken through National Fresh Produce Markets, which are municipal or publicly owned market platforms that are associated with the local or district municipalities. The remainder of the produce is traded through formal retailers who have established direct links with the commercial farmers (FPMI, 2025). While direct contracting with retailers typically incurs higher transaction costs, NFPMs are considered a cost-effective market channel that enables farmers of all scales to sell their agricultural products efficiently.

The NFPMs are therefore important because they serve as a public marketing infrastructure that are key for food security and local economic development. While NFPMs have associations with municipalities, there are different ownership and control structures that exist in their relationships with local governments or municipalities. Table 4 describes ownership and control structures of various NFPMs in the country. There are fundamentally four types of operating models for NFPMs, namely, (i) a department or business unit in the municipal structure; (ii) a corporatised entity (with a separate budget, executive and board of directors),

but which still reports into the overall municipal structure; (iii) a public-private partnerships; and (iv) a wholly privately-owned and operated entity.

Table 4: Ownership structures or operating models of NFPMs

CATEGORY	MARKETS
Municipally owned and operated markets (Department/business units)	Tshwane, Sol Plaatjie (formerly Kimberly), 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 Van der Bijl Park

Source: FPMI, 2025

The NFPMs vary across South Africa based on their size and the revenues generated. The total market size for NFPMs was estimated to be approximately R21 billion in 2024/25⁶. The four largest markets of fresh produce in South Africa are Johannesburg, Tshwane, Cape Town and Durban with a combined turnover market share of approximately 84% in 2024/25. Markets classified as medium-sized include Springs, Bloemfontein, Pietermaritzburg, Gqeberha, Klerksdorp, Welkom and East London with a combined market share of 15%⁷. The rest of the markets are classified as small and account for the remainder of the markets share. In addition, there are private markets, predominantly owned and controlled by the Freshling Group that are not listed.

Table 5: HHI and CR4 for the National fresh produce in South Africa

	2020/21	2021/22
CR4	83,2%	83,9%
HHI	2852,64	2873

Source: Authors own calculation based on the FPMI data

⁶ NAMC., (2025). Smallholder Access Estimates. Quarter 4 2024/2025. Available at: <https://www.namc.co.za/wp-content/uploads/2025/04/SMAE-Report-Q4.pdf>. Accessed on 09 April 2026.

From Table 5 above, The top four fresh produce markets, namely, Joburg, Tshwane, Cape Town and Durban market account for more than 80% of the national fresh produce markets which reflects that only a few markets dominate trade flows. The increase of the CR4 from 83,2% in 2020/21 to 83,9% in 2021/22 suggests a slight reinforcement of dominance by the four large markets and a possible decline of the smaller markets. The HHI values of 2 852 in 2021 and 2873,8 in 2022 fall above the 2500 range which is classified as a highly concentrated. This may imply that a few large markets handle large volumes.

When assessing the market shares of market agents active in these markets, who are responsible for price discovery and handling of trades, the overall landscape remains largely unchanged. The FPMI estimated Herfindahl-Hirschman Index (HHI) and the Concentration Ratio of the top four firms (CR4) in the top 4 markets. The Joburg Fresh Produce Market is currently the largest in the country, accounting for more than 40% of fresh produce traded. Within the Joburg Market, a limited number of agents oversee a substantial proportion of trading volumes. According to the FPMI (2025), the CR-4 IN THE Joburg Market is approximately 80% whereas the HHI is 1995.

In Cape Town, approximately five market agents are engaged in fresh produce trading, and the CR4 is roughly 98% whereas the HHI is 3 354. Durban has four market agents with a CR4 of 100%, while the HHI is 3 707. Similarly, the situation in the Tshwane Market shows slight variation, with CR4 of 80% and HHI of 1 963. Regardless of the concentration metric applied, the data indicates that significant market concentration exists both at the overall market level and among individual market agencies. This issue is compounded by structural linkages between some of the larger agencies, many of which operate across multiple markets nationwide.

5. Market concentration at retailing level

The South African grocery retail chains within which fresh produce is sold consist of four major national retail groups, namely, Shoprite Checkers, Pick n Pay, Woolworths, and SPAR. These four groups constitute a sizeable portion of the national retail market in South Africa. The leading retailer with the biggest market share is Shoprite/Checkers with approximately 39% - 49% share, including all its brands and liquor sales. Woolworths follows with a market share of approximately 15% - 25%, then Pick n Pay with market share of approximately 8% - 28%, with its share including boxer and liquor sales and lastly Spar accounted for approximately 12% - 22%, excluding liquor from its revenue.

The FPMI further identified Food Lover's Market as a small but significant competitor in the market for fresh produce. In addition, the FPMI also observed that one of the challenges that

Food Lover's Market faces is the need to adopt a similar distribution model to the larger competitors which is using a centralised, large and complex distribution centres. Moreover, it has also had to expand its product offering with a similarly wide product range of groceries as its larger competitors (which includes fresh produce, dairy, meat, baked goods and general groceries).

Table 6: The HHI and CR4 for the retail markets in South Africa for the year 2022/23.

	2022/23
Shoprite Checkers	39% - 49%
Woolworths	15% - 25%
Pick n Pay	8% - 18%
SPAR	12% - 22%
CR4	82,50%

Source: FPMI and authors calculation

Potential and existing new entrants in retail often face a major hurdle in that they must adopt the same distribution model as incumbent players. This raises supply costs and reduces pricing agility. If new entrants want to compete with large retailers, they are expected to mirror their operations, which creates significant barriers to entry. These obstacles affect how well competition works and, in turn, impact consumer choices, innovation, pricing and the ability of SMEs and/or HDPs to participate.

From Table 6 above, The top retail stores account for more than 80% of the retail markets which reflects an oligopolistic structure, where the top 4 firms have considerable influence over the South African grocery retail space. A summary of key structural issue is discussed in the section that follows summarising observations thus far.

6. Summary of market structures across the value chain

Across South Africa's fresh produce value chain, market structure is characterised by high concentration at multiple nodes, with a small number of firms (or platforms) exerting disproportionate influence over pricing, access and the terms of participation. In the upstream markets (seeds, fertiliser, agrochemicals), the markets are concentrated, shaped by global consolidation and import dependence.

Globally, the seed market is dominated by four firms (Bayer, Corteva, Syngenta, BASF) controlling about 56%. In South Africa, while the horticultural seed market appears fragmented (around 35 firms), concentration is pronounced within specific crop segments (e.g., top four firms hold 83% of cabbage and carrot seed markets). Fertiliser and agrochemical supply is also concentrated, with South Africa relying heavily on imports and a small set of large firms dominating key stages such as importation, blending and distribution.

At a primary farming level, the market is characterised by a dualistic structure with many farming units, but output and income concentrated among large commercial enterprises. For example, large enterprises contribute the majority of agricultural income (2024 survey), implying that scale, capital intensity and productivity differences translate into uneven market power and market access.

At a Wholesale marketing (NFPs and market agencies), the market structure is highly concentrated. The top four NFPs (Johannesburg, Tshwane, Cape Town and Durban) account for roughly 80%+ of NFP turnover (CR4 $\approx$ 83–84%) and the HHI is above 2,500, consistent with a highly concentrated market. Within markets, the number of market agents is limited (e.g., Durban CR4 = 100%), reinforcing concentration in intermediation and price discovery.

Lastly, at a retail level, there is an oligopolistic structure dominated by a few national chains (Shoprite/Checkers, Pick n Pay, Woolworths and SPAR). The CR4 is reported at about 82.5%, indicating that a small number of retailers account for the bulk of grocery sales, with additional barriers linked to centralised distribution models and stringent procurement requirements.

Table 7: Market structures at various levels of the value chain

Stage of Value Chain	Degree of Concentration	Key Features
Input supply (Seeds, Fertilisers, Agrochemicals)	High	Few firms dominate supply; concentration persists across specific product types.
Production (Field Crops, Fruit, Vegetables)	High	Majority of production controlled by a small number of farming units.
Wholesale trade	Very High	A handful of markets/agencies control ~80% of trade.
Retail trade	High	Few large retailers account for ~80% of the market.

Source: Author's construct

Concisely, there appears to be elevated concentration levels across the entire fresh produce value chain in South Africa. Although at varying levels, the concentration observed appears to replicate itself from input markets, farming, wholesale marketing and retail trade. This should be understood in the context of competition concerns that typically arises in concentrated markets such as the possibility for tacit collusion amongst market participants, lack of choice for consumers, heightened barriers to entry for new entry and ultimately higher prices for end-consumers which diminishes their welfare. In the section that follows, some of the key challenges at the various stages are outlined and discussed.

7. Key issues and challenges faced by SMME/HDP market participants.

South Africa being a net importer of fertilizer means that it is easily affected by the foreign exchange rate and developments in the global markets (such as the Wars in Ukraine and Iran) which leads to price fluctuation causing uncertainty in the market. Locally, issues such as

shipping and associated costs at the harbour affect the ultimate prices. Fuel prices also have a significant impact on the cost of transporting fertiliser inland to the production areas. The FPMP noted that the key cost drivers are labour, water and electricity, research and development costs, the cost of capital purchases (e.g., specialised equipment to be used in the formulation of fertilisers), freight cost, port costs, and the price of raw materials.

Whilst the country has local manufacturing capacity for MAP and urea. The FPMP noted wide price differentials in local prices versus international prices over a 5-year period (2017 - 2022). The FPMP also analysed the differences in domestic prices of MAP versus international prices for four consecutive years (2020 - 2023). The FPMP noted wide disparities in international and domestic prices of MAP for the four-year period, with 2020 having the largest difference of 40%. The FPMP noted that import parity pricing ("IPP") is utilised to price in the domestic market. However, when additional costs are considered of moving MAP to South Africa, the gap between domestic prices and international prices narrows significantly.

In the seeds market, the limited or lack of local (South African) companies with established research and breeding capabilities to meet the needs of local farmers has been noted as a concern. This creates reliance on international seed companies, which provide disease-resistant varieties at higher prices. Additionally, inputs used in the seed business, such as fuel and fertiliser for farming, are also imported. All these costs drive local costs of production for manufacturers, which are passed down the value chain (partially or wholly). An increase in any of the costs mentioned above affects the price charged to growers/farmers. A percentage of the costs are absorbed by distribution, but the majority is passed onto growers.

Farmers play a significant role in the country's fresh produce value chain, as they are involved in the primary agricultural activities of producing fruits and vegetables. The main risks that limit the participation of small-scale farmers in formal, high income value chains are at two levels. At the production level, farmers face risks from the procurement of inputs through to the post-harvest stage of the food supply chains. At the retail and consumption level, risks are tied to meeting the quality and quantity standards (which include packaging, grading, and labelling), and traceability and transport requirements.

Because of these risks materialising, small scale farmers tend to resort to distributing their products in informal, low-income markets. Consequently, this implies that these farmers are less likely to effectively participate in the fresh produce market facilities, and thus, market access may be limited. The FPMP (2025) analysed the barriers to entry, expansion and participation faced by small scale farmers with the focus mostly on (i) Market access for SME/HDP farmers; (ii) Discriminatory practices against SME/HDP farmers (for inputs and outputs); (iii) SME/HDP farmers' access to financial support; and (iv) Challenges relating to

access to water. In relation to quality standards, the FPMI noted that legislated standards and Good Agricultural Practice ("GAP") standards are difficult and expensive to comply with and raise concerns around market access particularly SME and HDP farmers.

Thus, even though these farmers may comply with the legislated food health and safety standards, they would still not be able to contract with large retailers, who require various levels of GAP certification. In relation to access to finance, the FPMI made a provisional finding that the decline in the funding provided by the Land Bank negatively affects farmers, and that the delays in the implementation of the Blended Finance Scheme disproportionately affect SME and HDP farmers.

These farmers are more likely in need of a grant which, in some instances, acts as their contribution (or deposit) when seeking to secure a loan. With regards to access to the challenges to access to water, the FPMI noted that delays in finalising water licence applications disproportionately affects SME and HDP farmers, and that the requirement for a technical assessment makes it more difficult for SME and HDP farmers to secure water licenses due to the cost of these assessments.

The NFPMs in South Africa have over the years faced criticism from various industry stakeholders about the diminishing prominence of the NFPMs as a route to market. This concern was informed by indications that the volumes of fresh produce being sold at the NFPMs had been steadily declining over several years. The cause of the concern was attributed to be the lack of upkeep and investments by local municipalities. This lack of maintenance with an emphasis on cleanliness, hygiene, food safety, and cold and ripening rooms was believed to have caused large scale retailers, wholesalers and processors to instead contract directly with (large-scale) growers. The impact of such switching was thought to have further eroded the volumes and income from the NFPMs.

One of the main challenges faced by NFPMs was the revenue and expenditure of the major NFPMs on maintenance (as an operational expenditure) and upgrades (as capital expenditure) surpassed revenue generated. In addition, local governments did not prioritise the NFPMs capital expenditure (given the various other demands on and priorities for local government resources).

There was also inconsistencies in the NFPMs by laws across the different NFPMs which can be a barrier to entry for SME and HDP farmers and may contribute to the lack of participation by these stakeholders.

8. Conclusion and policy recommendations

This paper mapped the extent and implications of market concentration along South Africa's fresh produce value chain, drawing primarily on evidence from the FPMI. Across the upstream segments, the analysis shows that concentration in strategic input markets being seeds, fertilisers and agrochemicals, reflects and is reinforced by global consolidation, extensive import dependence, and capital-intensive infrastructure requirements.

Although the domestic horticultural seed market appears fragmented, concentration becomes pronounced within specific crop segments, underscoring the importance of disaggregated assessment when evaluating competitive conditions. Downstream, concentration remains evident at the production level, where a relatively small number of large enterprises account for the bulk of agricultural income, and is further reproduced in marketing and distribution.

At the wholesale level, trade through NFPMs is dominated by the four largest markets, with indications of similarly concentrated market agency activity, while grocery retailing is characterised by an oligopolistic structure in which the leading chains collectively account for the majority of sales. Taken together, these structural features shape the terms of participation for SMMEs and historically disadvantaged participants by raising barriers to entry and expansion, including compliance burdens associated with quality, grading and traceability standards, constraints in accessing finance and water rights.

The findings therefore suggest that efforts to promote inclusive growth in fresh produce require a coordinated policy response that addresses both upstream and downstream sources of market power through measures that lower entry barriers, strengthen and modernise public market infrastructure, improve access to productive resources and finance for smaller participants, and enhance competitive conditions across key nodes of the value chain.

In trying to address some of these issues, the FPMI made several policy-oriented recommendations. Some of these recommendations touches on improving the efficiencies of the NFPMs as core public market infrastructure, including ring-fenced maintenance and upgrade budgets, minimum norms and standards for hygiene and cold-chain facilities, and more consistent by-laws to reduce compliance uncertainty across markets especially for SMME and/or HDP agents and farmers.

At a farming level, there is a need to improve access to affordable finance and de-risk investment for smaller participants by restoring and streamlining developmental finance instruments (including blended finance) and aligning these with working-capital needs, post-harvest infrastructure, and climate-resilient production investments.

Although a lot has been done by the government in ensuring speedy access to water licence rights, it would be paramount to accelerate and simplify water licensing and related technical processes for SMME/HDP farmers, including support for required assessments, to reduce delays that constrain productive expansion. In fact, access to finance should not only cover capital requirements for farming but also include compliance costs.

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