POLICY BRIEF – SEPTEMBER 2025

Staple food price trends in South Africa: A case for buffer stocks?

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Summary of findings

Since 2020 South Africa has experienced persistent food price rises and volatility, linked to climate change, global market disruptions, high input costs, and concentrated corporate control over food value chains. Stapled foods like maize, wheat, and cooking oil have experience rising consumer prices, linked to global disruptions, climate change, structural inefficiencies, and corporate pricing power. This disproportionately affects low-income households, where food accounts for the bulk of expenditure, worsening food insecurity — currently affecting nearly one in five households.

The policy brief makes the case for public food buffer stocks in South Africa, beginning with white maize, which is central to diets and highly vulnerable to drought and climate shocks. Buffer stocks involve buying grain when prices are low and releasing it during price spikes, thereby stabilising markets, protecting consumers, and supporting producers. International examples, from Asia, Africa, and Latin America demonstrate that, when well-governed, buffer stocks can reduce volatility, strengthen food security and support climate resilience.

Critics highlight risks such as high costs, inefficiencies, and trade distortions. However, the brief contends these can be mitigated with transparent governance, careful stock management, and regional cooperation through SADC, linked to a regional buffer stock system. A phased approach is recommended — given the relatively low nutritional contribution of white maize alone, the system should be expanded to wheat and indigenous grains (like sorghum and millet), incentivise agroecological production, and support smallholder farmers to build resilience.

Ultimately, buffer stocks are positioned as a potentially important instrument within a broader food sovereignty strategy — complementing competition regulation and other food price stabilisation interventions, agroecological investment, and regional integration — to protect vulnerable households, stabilise staple food prices, and strengthen climate resilience in South Africa's food system.

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Proposals

We propose key considerations that should underpin a public buffer system that contributes to food price stability, climate resilience, and production and nutritional diversity.

Establish clear objectives and governance

- Define transparent goals for price stability and food security.
- Create a clear governance framework with accountability, transparency, and farmer/civil society participation.
- Ensure professional administration, adequate financing, and coordination with broader food policies.

Prioritise agroecology for resilience

- Procure preferentially from farmers using ecological methods.
- Support transition to sustainable farming while strengthening smallholder inclusion.
- Link buffer stocks with agroecological production to build long-term climate resilience.

Implement critical components

- **Public stockholding:** Build maize reserves and link them to supporting ecologically friendly production models.
- **Price stability:** Set bands for floor and ceiling prices with buy-low/sell-high interventions.
- **Small farmer support:** Help ensure markets for smallholder farmers at fair prices and use support aggregators where needed.
- **Stocking/de-stocking:** Develop clear mechanisms for market release and replenishment.
- **Capital investment:** Expand storage, transport, and credit facilities, with potential for regional scale-up.

Phase in commodities

- Start with maize, then expand to wheat and indigenous crops (sorghum, millet) for diversification and nutrition.
- Encourage decentralised, regional stockholding under SADC for shared resilience and food security.

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1. Introduction

The dramatic 2022 food price inflation, along with major food shortages in several regions, marks the most recent global food price crisis. The sharp price increases, triggered by the 2022 war in Ukraine, occurred against the backdrop of lingering Covid-19-induced supply chain disruptions. These disruptions pushed millions of additional people into food insecurity and hunger. A decade earlier, the 2007–12 food price surge, emerging from the convergence of multiple crises, including climate, finance, and energy, similarly led to a sharp increase in global hunger (Clapp, 2023). Following 2022, food inflation remains high, particularly in low- and middle-income countries (LMICs), which generally show more persistent food inflation following an initial shock than richer countries (Weber & Schulken, 2024; IPES-Food, 2022; Joala and Urhahn, 2022). In many Global South countries, such as Egypt, Uganda, Kenya, and Nigeria, food price increases accounted for more than half of overall price increases in 2023 (UNCTAD, 2023; Weber & Schulken, 2024). With the resurgence of food price volatility in recent years and its contribution to rising global hunger and food insecurity (that had already been worsening since 2014; FAO et al, 2023), food price stabilisation has returned as a key priority of the G20. The 2025 South African G20 Presidency has established a Task Force on Food Security, with a central focus on food prices (G20 South Africa, 2025).

In South Africa, despite the sustained downward trend in commodity prices following the decline in fuel and fertiliser costs since early 2023 and late 2024 respectively, consumers have yet to see these reductions reflected in food prices at supermarkets. In February 2025, Stats SA reported that white maize meal prices rose by 4.8% between December 2024 and January 2025, taking the annual rate to 10.1%. The annual increase for samp[1] was 15.4% (Stats SA, 2025). White maize is a staple crop in South Africa — between 67% and 83% of the population consume maize-meal or maize-based products daily (Alberts, 2019).

South Africa's highly corporatised and concentrated agro-food system, in which a few firms dominate significant central nodes and specific commodity value chains, makes it particularly vulnerable to both internal and external shocks that manifest in higher food prices. Examples include input supply, grain storage and handling, and feedlots (Greenberg, 2017). The large-scale commercial farming sector is linked to the well-established upstream sector, which has strong linkages with international agribusiness and finance. Conversely, in a context of continued racialised agrarian inequality, (predominantly Black) smallholders in South Africa grapple with low productivity at varying levels, as measured by output per unit of land and of labour. Underlying this are two key factors: low access to farm inputs and land, and weak linkages to markets or adverse terms of market incorporation (Cousins et al, 2020; Du Toit, 2009).

Furthermore, food price volatility is driven by both non-market factors, such as crop failures and extreme weather, and external market trends that affect agricultural commodity prices, such as Global North energy policies that increase demand for

biofuels and financial activity in food commodity markets. All of these lie largely beyond the control of individual governments (Ali et al 2022; Okou et al, 2022; IPES-Food, 2022). In South Africa, rising food prices represent one of the main drivers of household food insecurity (Mtero et al, 2020), especially for poor households that spend a large proportion of their income on food. High food prices can trigger inflationary pressures that erode the purchasing power of households, while increasing fiscal demands for safety net and support programmes to deal with the fallout. In so doing they amplify risks of higher interest rates and slower economic activity in countries such as South Africa (Soni & Karodia, 2014; Van Wyk et al, 2018). Therefore, the significance of food price stability relates to consumer welfare, as well as macroeconomic stability and long-term economic growth.

Given the context of high food import dependency of some developing countries and increasing food price volatility, there is renewed interest in active policy tools to stabilise domestic food prices, to contribute to food security goals. Buffer stocks, which involve the publicly-managed strategic accumulation and release of commodities to stabilise prices, offer a pathway to mitigate the adverse effects of price volatility, protect supply during crises, and foster more stable and predictable markets, thereby enhancing food security.

Public buffer stocks essentially involve the purchasing of grain when prices are low and selling to the market when prices rise above a certain level, so ensuring more stable food price patterns in ways beneficial to both producers and consumers. The Agreement on Agriculture (AoA) of the World Trade Organisation (WTO), does not prohibit a government from setting up a buffer stock, although it does set conditions on how governments acquire and release stocks that in practice have proved contentious (WTO, 2018; Manduna and Murphy, 2024). Nonetheless, South Africa, like other developing nations, could establish a public buffer stock for food. It is worth noting that in July 2025 the European Union announced its stockpiling strategy to cover all essential goods (European Commission, 2025). To minimise conflicts with WTO rules, the programme would ideally be designed to fall within the "Green Box" (Annex 2 of the WTO Agreement on Agriculture, see box to the left) by ensuring procurement is at current market prices and releases are consistent with food security objectives (WTO, 2024).

In light of these considerations, this policy brief presents an initial case for establishing food buffer stocks in South Africa, particularly for white maize in a first phase, given its central role in the country's food security, and which could be linked to a wider system of buffer stocks in the region. While South Africa is not generally import-dependent for white maize, its maize production is highly sensitive to climate changes and shocks. South Africa also remains an important supplier to the Southern African region, especially during climate events like droughts, and white maize has shown relatively high levels of price volatility. The buffer stock system should be expanded in the longer term to include a second staple like wheat and, importantly, indigenous options like sorghum and millet. Given maize's high vulnerability to climate impacts and its relatively low contribution to nutritional security, crop and nutritional diversification and climate resilience is salient. A tailored buffer stocks programme in South Africa should be deliberate about not only stabilising maize prices, but also about distributing stocks, with the aim of ensuring that not all stocks are centralised, and focusing on varied crops for nutritional diversity.

Once established, South Africa's food buffer stocks programme could contribute to a regionally-governed mechanism for emergencies across the Southern African Development Community (SADC) region. As a major white maize exporter, South Africa's surplus production and exports have been crucial in meeting the food needs of other SADC countries during periods of regional deficits. A more active coordination of a regional food buffer stocks mechanism would broaden the supply base in the face of climate-induced harvest failures and food shortages, while also strengthening price support for smallholder farmers and ensuring overall food security for the region. Regional buffer stocks could either replace national buffer stocks or complement them. Regional economic integration organisations are well placed to set up and manage a regional buffer stock on behalf of their members (McClintock, 2020). A regional stockholding system, managed through a grain facility, could also

"GREEN BOX"

Paragraph 3 of Annex 2 of the WTO Agreement on Agriculture reads as follows:

3. Public stockholding for food security purposes

(a) Expenditures (or revenue foregone) in relation to the accumulation and holding of stocks of products which form an integral part of a food security programme identified in national legislation shall be considered in the Green Box if the following criteria are met:

(i) the support to producers shall be accounted for in the Aggregate Measurement of Support;

(ii) the volume of the stock accumulation and disposal shall be on the basis of predetermined targets related solely to food security;

(iii) the process of stock accumulation and disposal shall be transparent;

(iv) the government purchase price for food security stocks shall be the current market price or less;

(v) the government sales from food security stocks shall be made at a price not less than the current domestic market price for the product in question.

(b) For developing country members, the accumulation of public stocks and the release of such stocks at a price lower than the acquisition price, in the context of food security programmes for the poor, are also covered by this paragraph.

serve as a key price-stabilisation tool by addressing volatility and promoting food sovereignty, sustainable cultivation, and resilience to shocks.

In the following sections, this Policy Brief provides an overview of recent food price trends in South Africa with a particular focus on wheat, oil seeds, and white maize. We suggest these trends, and the factors behind them, point to the potentially significant contribution of buffer stocks to food price stability in the interests of food security and climate resilience in the food system, with a particular focus on white maize. It does not expand on the technicalities and economics of how such a system should work but rather presents an initial rationale and set of considerations for a buffer stock system as a basis for further research and policy work.

2. Food price volatility and insecurity in South Africa

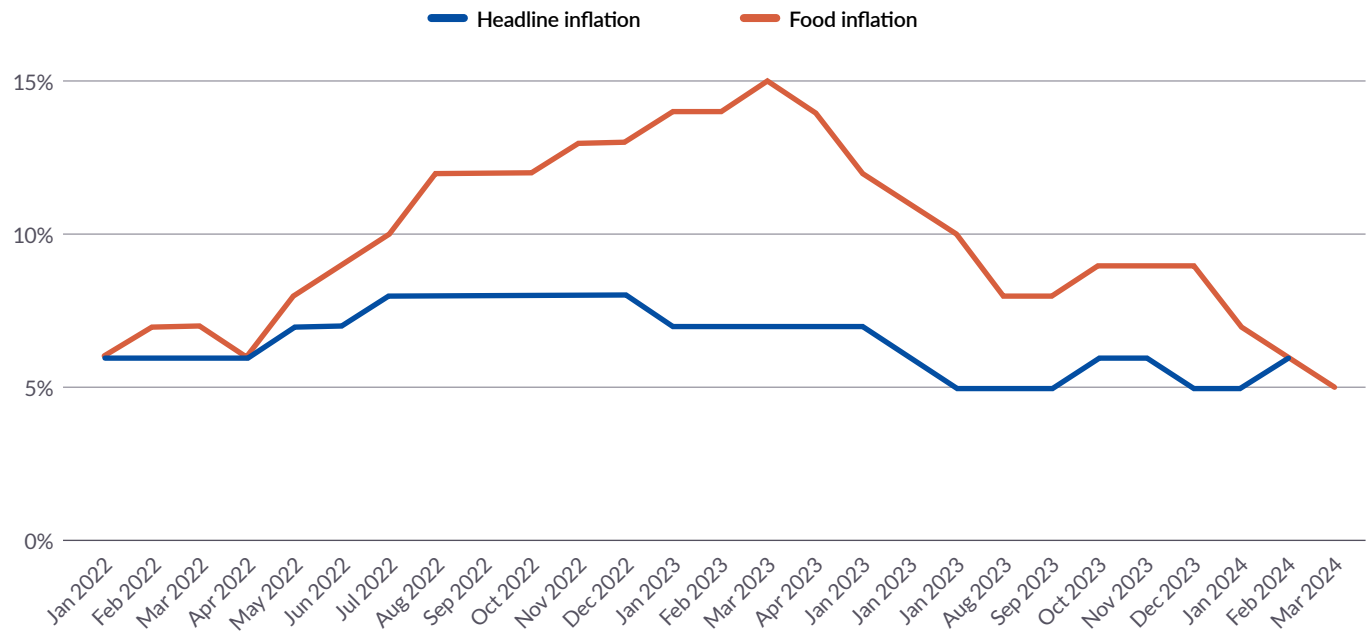
The issue of food price volatility is particularly acute in Southern Africa, where production variability due to rain-fed agriculture leads to volatile marketed surpluses. Even though South Africa's agricultural production is dominated by large, technologically-advanced commercial farms with access to irrigation, its agricultural system remains highly vulnerable to the impacts of climate change, such as rising temperatures and drought (Engelbrecht et al., 2024).

South Africa has experienced food price volatility since 2022. During the 2022/2023 inflationary episode, food inflation peaked at 15% in March 2023, while general inflation peaked at 7% (see Figure 1 below). While it subsequently levelled off, food prices remained high, and in April 2025 food inflation was 4%.

Households with the lowest incomes face the highest inflation and inflation erodes their purchasing power quicker and to a greater extent than higher-income households (see Figure 1 below). One of the main culprits in this respect is the price of food, since a larger proportion of the incomes of the poor goes towards expenditure on food. Indeed, as Figures 1 and 2 show the inflation trend for the poorest households (Decile 10 in Figure 2) clearly tracked food inflation, whereas the trend for the wealthiest households (Decile 1 in Figure 2) tracked overall inflation in Figure 1, owing to a more diverse consumption basket. In a country characterised by severe poverty, stubborn unemployment, and low economic growth, high food prices relative to incomes are a leading cause of food insecurity.

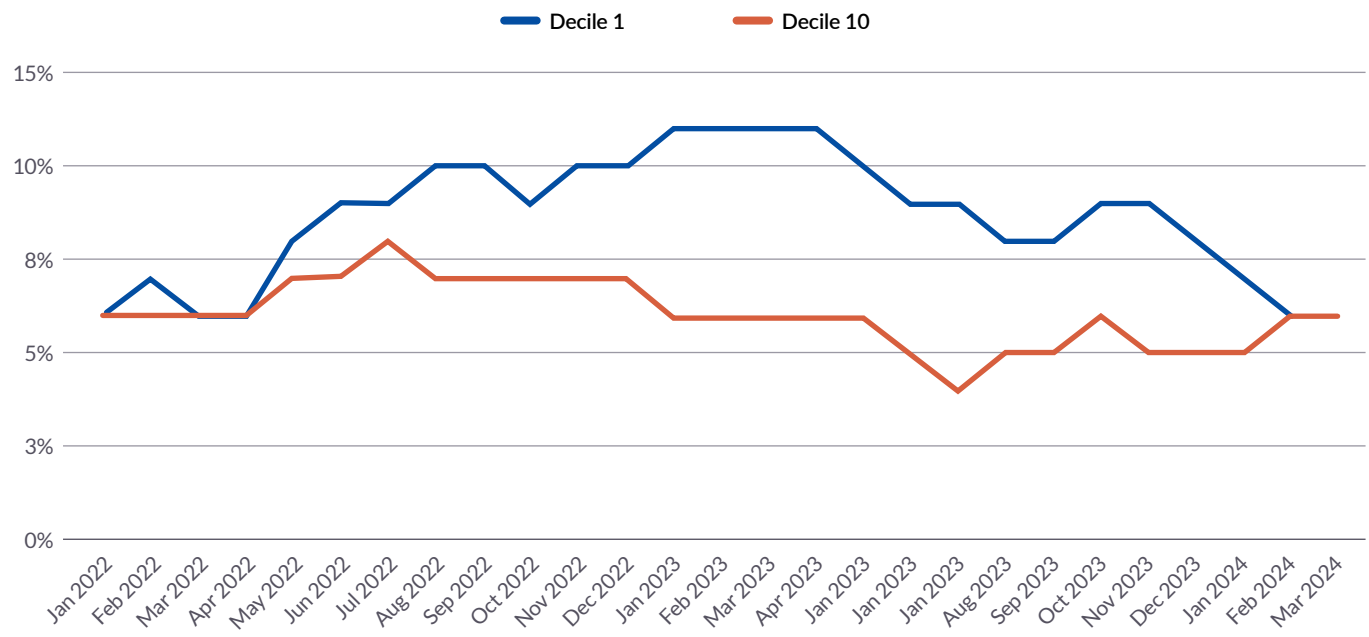
South Africa is confronted with worsening food insecurity, with the latest numbers showing nearly 1 in 5 households experience moderate-to-severe food insecurity and 1 in 12 suffer from severe food insecurity (Stats SA, 2025). There are several structural economic factors that contribute to this (Mbajiorgu & Odeku, 2022). The 'triple challenge' of poverty, inequality, and unemployment plays a significant role in exacerbating this crisis (Maluleke, 2025). Households without employed members face double the risk, as evidenced by the alarming 2023 levels of severe food insecurity at 12.7% compared to 5.9% in households with at least one employed member. South Africa's high unemployment rate of 43.1% (using the expanded definition, which includes discouraged job seekers) in the first quarter of 2025 underscores the gravity of the situation (Stats SA, 2025). However, the issue of food insecurity and hunger extends beyond the unemployed and impoverished: compelling evidence suggests that many households with a member earning minimum wage and employed full

Figure 1: South African headline inflation compared to food inflation 2022-2024



Source: Author's own graph using Stats SA data

Figure 2: Inflation households (Decile 1) compared to households (Decile 10) 2022-2024



Source: Author's own graph using Stats SA data

time also face these daunting challenges. Limited access to affordable, healthy food options among these households contributes to both undernutrition and obesity (Simelane, 2025). Stunting, a sign of chronic undernutrition, affects approximately 29% of children under the age of five in South Africa (HSRC, 2024). Lastly, food security has also historically been exacerbated by the decline of smallholder farming in rural areas under challenges of accessing affordable inputs as well as accessing markets for their produce on equitable terms (Wegerif, 2024). We turn now to food price trends of key staples highly relevant to low-income households.

2.1. Bread, cooking oil and maize price trends

In this policy brief, we focus on wheat, white maize, and oilseeds. Cereals and oilseeds are an important element of household diets throughout the world. Their consumption features in directly processed products such as bread, maize meal, and cooking oils, but also through other processed foods that use them as ingredients. They are used to manufacture animal feed, which is the largest cost driver in meat and poultry value chains. The cereal and oilseed value chains have been under considerable price pressure.

2.1.1. BREAD

The South African wheat-to-bread value chain relies on a combination of locally produced and imported wheat. South Africa produces approximately 50% of its wheat requirements, with the balance imported from Russia, Germany, and Argentina (Department of Agriculture, Land Reform and Rural Development, 2020). As such, the local industry is vulnerable to global shocks.

CONCEPTS USED IN PRICE ANALYSIS

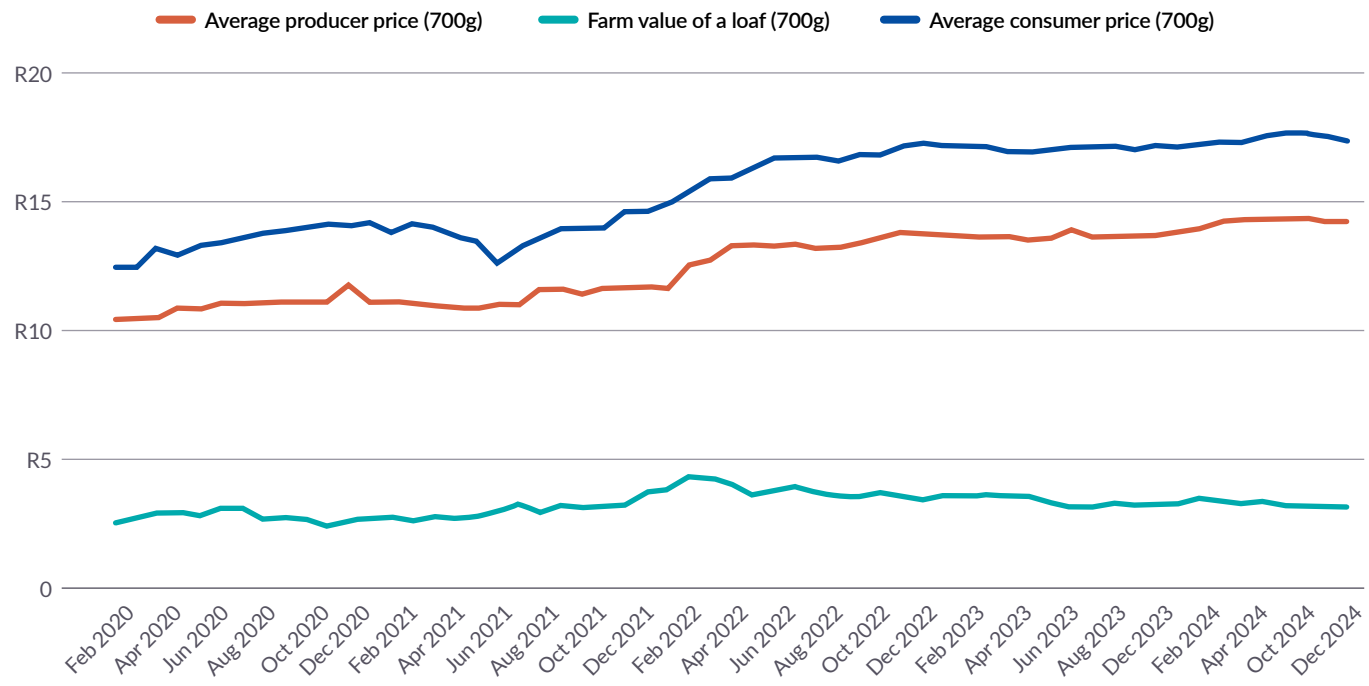
FARM VALUE: The monetary value of the farm product equivalent to the quantity in the final product produced by processors or purchased by consumers. This is derived from spot prices on the JSE Commodity Derivatives Market, commonly known as SAFEX, where farmers and buyers can trade fixed quantities of agricultural commodities for future delivery. Farm value represents the farmers earnings from the sale of produce, before accounting for their on-farm and marketing costs.

PRODUCER (FACTORY-GATE) PRICE: The price the producer of processed foods receives for their output at the wholesale level before the goods reach the consumer. The Stats SA data cited below is an average of a sample of prices collected throughout the country.

CONSUMER PRICE: The prices paid by final consumers when purchasing goods from retailers. The Stats SA data referenced below reflects average prices gathered from a national sample.

Wheat prices on the South African Futures Exchange (SAFEX) have become less volatile since 2020; the annualised standard deviation of monthly fluctuations has fallen from 22% in 2020 to 11% in 2024 due to more stable wheat prices following the Covid-19 pandemic, supply chain disruptions, and the onset of war in Ukraine. However, producer and consumer prices have risen. Figure 3 below shows the values in a 700-gram loaf of brown bread from 2020 to 2024.

Figure 3: Farm value and producer and consumer prices of brown bread loaf (700g) 2020-2024



Source: Author's own graph using Stats SA and Grain SA data[2]

Figure 3 shows a slow downward trajectory of the farm value since May 2022, following a significant increase from February to April 2022. However, the retail and producer prices of bread have increased even as the price of wheat has fallen, as wheat supplies globally have stabilised. This divergence suggests that the challenge with bread prices may be in the rising share of intermediaries operating between the farm and consumers at the processing and retail levels of the value chain, rather than in the price of wheat.

2.1.2. COOKING OIL

Like bread, the inputs for the sunflower-to-oil value chain are also made up of local supply and imports. While sunflower seed imports are less than 1% of local production, processors also import crude vegetable oil for further refining and marketing in South Africa (NAMC, 2023).

Following a steady increase from the beginning of 2021 to the end of 2022, SAFEX prices for sunflower seeds have been fairly stable. However, price stability at the primary input level of the value chain did not insulate consumers of cooking oil. Figure 4 below shows the average consumer and producer prices and farm values for 750ml of cooking oil from 2020 to 2024.

As Figure 4 shows, the producer price of cooking oil increased considerably following the onset of the war in Ukraine. These increases were passed on to consumers, albeit to a slightly reduced extent. It therefore seems that during this period (the first half of 2022) cooking oil producers drove the rapid rise in cooking oil pricing as they were able to implement large price increases that retailers then passed on to consumers.

Subsequently, retail and producer prices have been on a long and slow downward trajectory. Another example of this effect played out in 2023. Here, a strong harvest resulted in a steep fall in the SAFEX price of sunflower seeds. A smaller reduction in producer prices followed later. Retailers have not followed suit at all, which is an indication of the durable pricing power held by retailers in South African food markets.

2.1.3. MAIZE MEAL

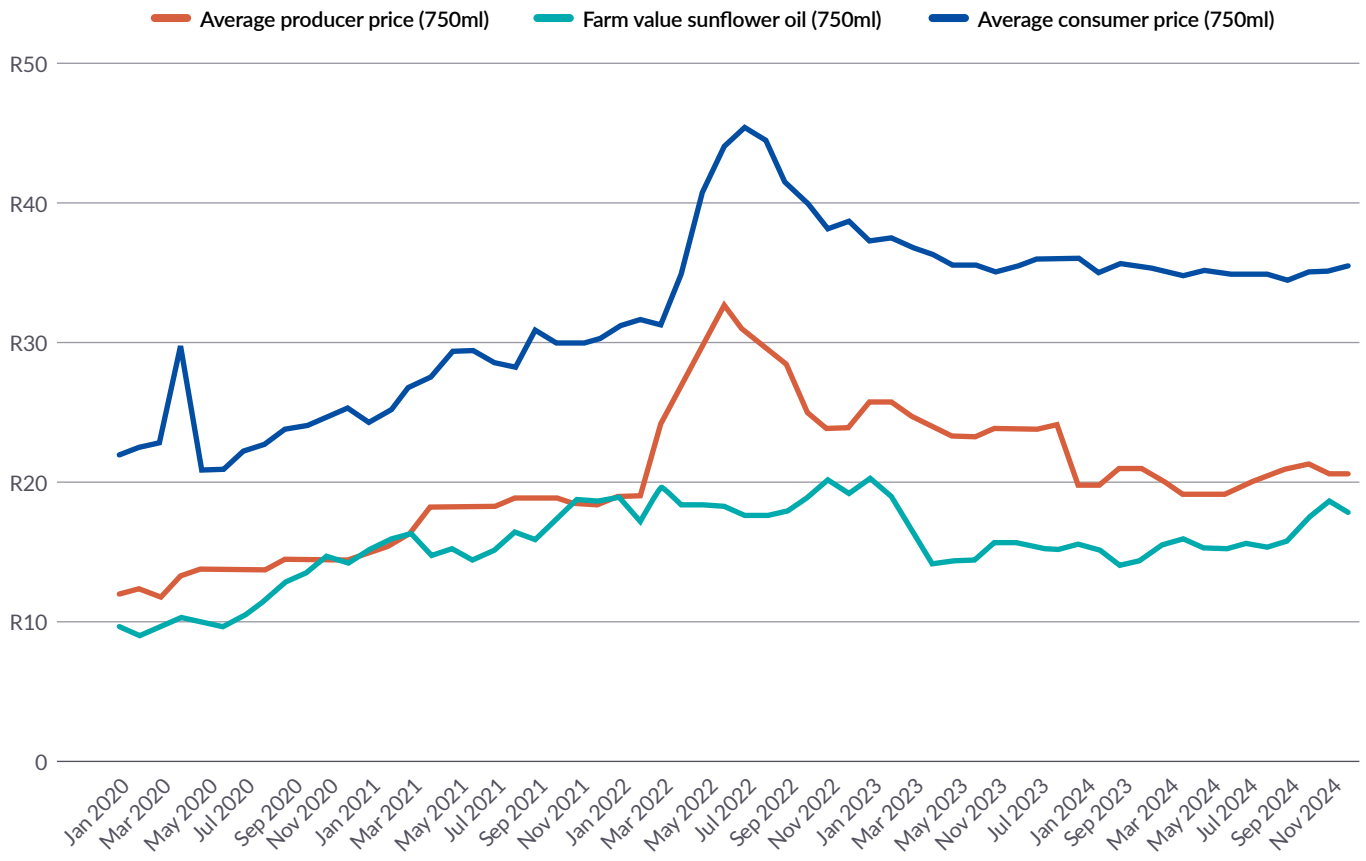
The SAFEX price of white maize has been very volatile since 2021 and is prone to very large upward and downward swings. South Africa is largely self-sufficient in white maize and is also a net exporter to the Southern Africa region. Unlike wheat and sunflower seeds, there have been very few months of stable prices (see Figure 5 below).

There is clear pass-through of higher white maize prices to both producer and retail prices. Until the end of 2022, the farm value of maize and maize meal producer prices appeared to move together, while retail prices were reasonably stable.

However, from the beginning of 2023, there has been a decoupling of this relationship and maize meal producer prices did not fall along with falling farm value prices (white maize). Retail prices also remained higher as farm value prices fell. The result of this decoupling is potentially higher margins being earned at both the retail and producer levels of the value chain for this essential food item.

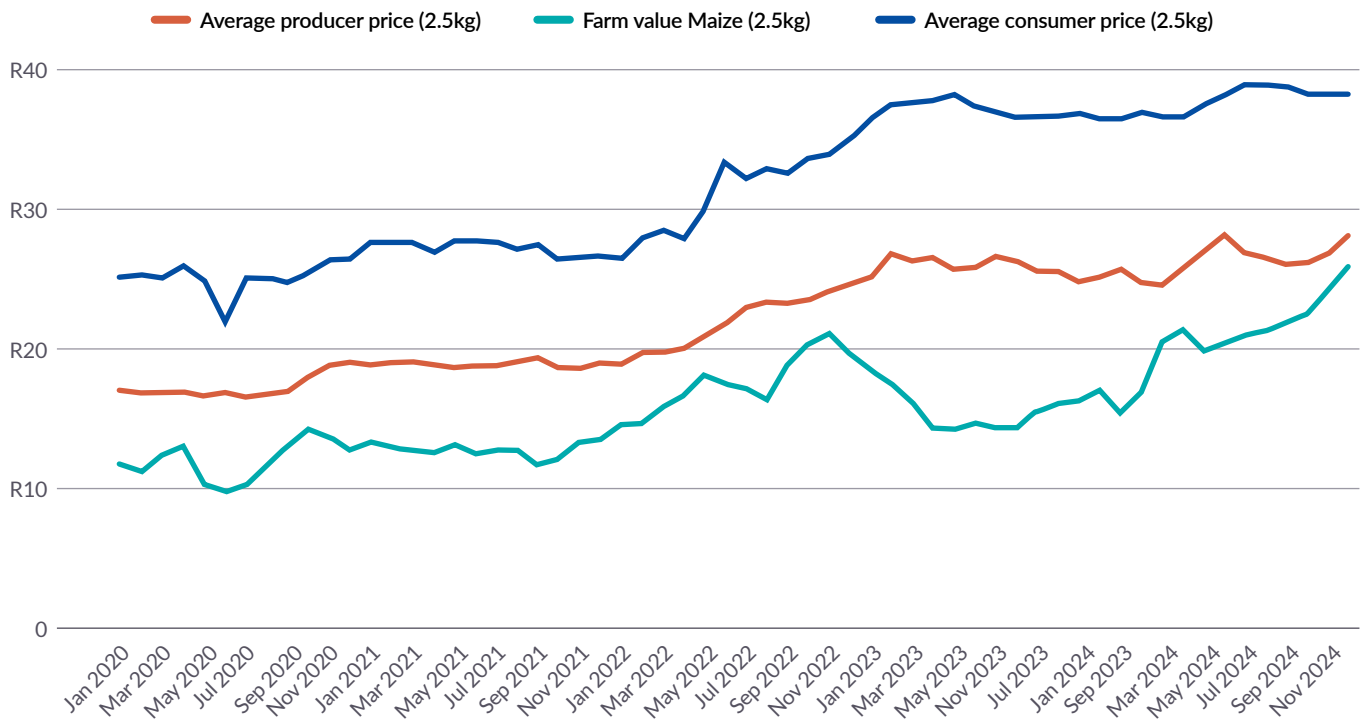
The 2024/25 maize marketing season was particularly challenging for the Southern Africa region as the effects of a mid-summer drought took hold. As a result, the SAFEX white maize

Figure 4: Farm value and producer and consumer prices of cooking oil (750ml) 2020-2024



Source: Author's own graph using Stats SA and Grain SA data[3]

Figure 5: Farm value and producer and consumer prices of maize meal (2.5kg) 2020-2024



Source: Author's own graph using Stats SA and Grain SA data[4]

price surged above import parity for much of the season. Additionally, higher import demand from South Africa's neighbouring countries placed even more pressure on local white maize prices. Retail and producer prices did not rise by the same extent this time around. Given that retail and producer prices were already at unprecedented levels at this point, price setters may have decided to protect volumes at the existing price point, rather than face the risk of lower volumes at even higher prices. However, we cannot draw definitive conclusions on pricing decisions from the data at hand.

On the supply side, large-scale commercial maize farmers, like smallholders, are price-takers in commodity markets, albeit with differentiated capacities and bargaining power. There is wide-ranging variability in production costs among producers, depending on region, farming practices and individual farm circumstances, but the escalation of input prices has emerged as the most critical driver of overall production costs. Inputs such as fuel, fertiliser, and agro-chemicals account for a significant share of variable costs, with fertiliser alone typically contributing between 30% and 40% of expenditure for maize producers (NAMC, 2022).

Between July 2020 and July 2024, international fertiliser markets experienced sharp price increases. The price of Di-Ammonium Phosphate (DAP) rose by 88% (from US$312 to US$586 per ton), while Ammonia increased by 68% (from US$212 to US$356 per ton). Domestic markets mirrored these trends, with notable price spikes from August 2020 to August 2024. For example, Mono-ammonium Phosphate (MAP) increased by 96% (from R8 751 to R17 126 per ton), Limestone Ammonium Nitrate (LAN) by 76% (from R5 363 to R9 452), Urea Granular by 52% (from R6 692 to R10 185), and Potassium Chloride (KCL) by 35% (from R6 682 to R8 997). These shifts were compounded by a volatile exchange rate, which further amplified domestic cost pressures as most of these inputs are imported, with a weaker exchange rate leading to higher costs. Similarly, petrol and diesel prices increased over the same period by 44% (from R16.03/litre to R23.11/litre) and 41% (from R14.41/litre to R20.38/litre), respectively. Crude oil prices rose more moderately, by 11% in US dollar terms (from US$75.06 to US$83.55 per barrel). In South African Rand terms however, the increase was far steeper, at 52% (from R1 004.88 to R1 523.12 per barrel) (NAMC, 2024).

Together, these trends underscore the structural vulnerability of South African agriculture to global commodity cycles, currency fluctuations, and energy price shocks. Rising and volatile fertiliser and fuel costs raise the break-even point for maize producers. This highlights a broader threat to the sustainability and resilience of the country's staple food production systems.

2.2. The causes of price volatility

2.2.1. VULNERABILITIES IN THE FOOD CHAIN

The last five years have put the spotlight on the vulnerabilities in cereal and oilseeds value chains throughout the world. These vulnerabilities broadly fall into two categories: global shocks and systemic market features. As a small open economy, South Africa is particularly vulnerable to spillovers from events in other parts of the world.

The Covid-19 pandemic: The pandemic, and the various measures put in place to contain it, caused immense disruptions across food value chains. In South Africa, there was a notable surge in white maize prices in the days after the lockdown was announced. This increase was corrected after predictions of a bumper crop for the 2020/21 season. However, prices remained elevated due to the weaker exchange rate, which also increased the price of other grains and oilseeds. The loss of household income, however, had the most direct and severe impact on food security. In 2020, almost 24% of South Africans reported moderate to severe insecurity and almost 15% experienced severe food insecurity (Stats SA, 2022).

Geopolitical conflict: A prominent example of disruptions stemming from geopolitical conflict is the disruptions in global supply of grains and fertilisers following the onset of the war in Ukraine, which converged with other factors like the dynamics of grain futures markets and concentration in the global grain trade to raise prices. The Black Sea Grain initiative was supposed to ensure continued grain and fertiliser exports but most was diverted to richer countries (Ghosh, 2023). This initiative was not renewed after July 2023.

Climate change: Frequent and severe climate events continue to pose a challenge to farmers and consumers alike. Brazil, a leading exporter of maize and soybeans, experienced persistent drought conditions from 2020 to 2023, compromising yields in southern parts of the country and raising global prices.

South Africa has experienced warming at a rate twice the global average. The country is headed towards a 3-degree Celsius increase in temperature by 2050 under unconstrained emissions in the eastern parts of the country, accompanied by rapidly worsening water challenges (Scholes et al., 2021; UNU-WIDER, 2016). This accelerated warming is projected to lead to more frequent and intense heat waves, adversely impacting agriculture, water security, biodiversity, and human health. The country's agro-food system is estimated to account for approximately 18% of the country's total greenhouse gas emissions, with 49% attributed to livestock and crop production, and an additional 41% coming from energy use and transportation within the food system (Greenberg et al., 2024). Irrigation for farming dominates water use in South Africa, accounting for over 60% of the total water used in the country (Bonthuys and Jordaan, 2021).

Maize and wheat, staple crops, are expected to experience yield declines due to drier conditions. This highlights the need for integrated policy approaches to safeguard arable land and support smallholder farmers in enhancing agricultural production at the household level (Masipa, 2017). During the 2023 2024 season, the white maize harvest experienced a 29% reduction because of a harsh drought, with output falling to 6.007 million tonnes (NAMC, 2024), despite the increased maize planted area. This significantly affected the country's staple food supply and heightened concerns about food security.

While the commercial sector dominates production, in a 2024 study, authors estimated that smallholder farmers in South Africa contribute a significant, albeit smaller, amount to overall maize production, especially in regions like KwaZulu-Natal, where they accounted for 13,352 tonnes in 2023 2024. KwaZulu-Natal produced a total of 835,900 tonnes of maize that year (2023-2024), accounting for 5.1% of the country's total maize yield (NAMC, 2024; Rapheal et al, 2025). There is a pressing need for strategies not only to mitigate the impacts of climate-related shocks on agricultural production and food availability, but to support smallholder production, which not only contributes to household food security for producers, but provides a source of livelihoods and income (Raphel et al., 2025). One possible strategy is public procurement for buffer stocks from these smallholder farmers, as part of supporting and incentivising sustainable and resilient crop production.

2.2.2. SYSTEMIC FEATURES CONTRIBUTING TO PRICE INCREASES

In addition to these vulnerabilities, there are several concerning systemic features in food value chains that may contribute to higher prices in and of themselves or that worsen the impact of periodic supply shocks.

Concentrated market power throughout the value chain: At a global level, the grain trade is largely controlled by four major companies, referred to as the ABCD — Archer-Daniels-Midland, Bunge, Cargill, and Louis Dreyfus. These corporations dominate an estimated 70-90% of the market (Harvey, 2022).

In South Africa, apart from the actual farming of wheat, maize, and sunflower seeds, there is high concentration throughout the value chains. Many input markets, such those for seeds, pesticides, and fertiliser, are dominated by a handful of firms, whose position is enforced by high barriers to entry and the strong enforcement of intellectual property rights (Department of Agriculture, 2021; WhoOwnsWhom, 2021). The important intermediation functions of trading, grain handling, and storage continue to exhibit path dependence from the regulated agricultural marketing dispensation that existed until 1996. The former cooperatives became corporatised and continued to control the key marketing infrastructure throughout grain and oilseed producing areas (Bowman & Robb, 2025). Concentration extends to the milling and crushing components of the value chain. For example, the top ten maize millers processed about 61% of locally produced white maize as of 2019/20 (Hodge et al, 2021). Similarly, five vertically integrated bakery groups produced nearly 80% of the country's bread as of 2018-19 (Hodge et al, 2021).

The JSE-listed producers of bread and maize meal have, in the last few years, reported profit growth enabled by 'margin management' – a euphemism for simply raising prices:

- Premier Foods' Millbake division increased revenue by 25% in 2023. Of this increase, 24% came from higher prices and 1% came from higher volumes. In 2024, revenues increased by a further 4%, driven by "efficiencies, margin management and service level excellence" (Premier Foods, 2024).
- Tiger Brand's milling and baking division increased prices by 16% in 2023. However, given their more premium market positioning, volumes fell 11%, resulting in an overall revenue increase of 5%. In 2024, a 6% price increase came with a 15% fall in volume. Tiger Brands highlighted their "deliberate strategy to protect naked margins by not participating in some of the heavy discounting that took place in the previous year" (Tiger Brands, 2024).

As bread and maize meal are essential foods, consumers tend to have low demand elasticity and suffer what they must in terms of price increases. While retailers and producers may, through withholding price increases or engaging in short-term discounting, offer consumers some reprieve, there is a general lack of incentives for price restraint where these foods are concerned. Therefore, and without other policy instruments, private profit maximisation could undermine the aims of buffer stocks. In addition to robust competition policies, and efforts to provide more targeted support to smallholder farmers, policies aimed at increasing transparency and regulating the practices of intermediaries, in particular, could help ensure fairer prices for both producers and consumers.

Commodity market speculation: Commodity markets allow farmers and buyers to manage the risks associated with selling and buying their produce. Recently, the role of speculators in these markets has been called into question. While speculators are an important source of market liquidity, excessive speculation could drive prices away from levels implied by supply and demand. Excessive speculation was among the causes of the 2008-09 food price spike (Robles et al, 2009). The value of outstanding white maize contracts on SAFEX has been noted to be "large and growing in relation to physical production" (Bowman & Robb, 2025). This trend lends itself to speculative trading by local and international traders. However, further investigation and data is required to understand the full impact of speculation on the price trends of white maize, wheat, and oilseeds in South Africa.

Thin global markets: On the household level, Southern Africa is unusual in having white maize as the preferred maize variant for human consumption. So, the region can only rely on itself, and to a limited extent on Mexico, to meet its maize demand. The 2023-2024 drought highlighted how this leaves the region vulnerable to food shortages and high prices. In the absence of outside options for imports, there was above average demand for South African white maize, since Zimbabwe, Zambia, and Malawi experienced much deeper crop failures than South Africa. As a result, white maize prices throughout the region skyrocketed (Sihlobo, 2025), which had a negative effect on regional food security.

Given these factors, public buffer stocks for white maize can play an important role in securing supply during climate shocks and stabilising prices (including by countering the price effects of margin management by incumbent processors), guarding against shocks from the global market in the case of wheat, supporting climate resilience, and in the medium- to longer-term incentivising production diversification.

3. Examples of the use of buffer stocks around the world

The concept of buffer stocks can be traced back to ancient China, where state-operated granaries were used to stabilise grain prices by buying during surpluses and selling during shortages (Weber & Schulken, 2024). Modern buffer stock schemes gained prominence in the 20th century in many parts of the world, particularly in the context of commodity agreements aimed at stabilising prices for agricultural products. Although approaches vary across countries and results have been mixed, these interventions have made gains in some countries in supporting both low-income consumers and producers, while also making contributions to agricultural development (Cummings, 2012). The results of buffer stock experiences have often been mixed and they are not easy to get right, but they continue to operate in many parts of the world with important impacts.

3.1. Asia

Today, China operates the world's largest food buffer stocks. By the middle of 2022, China's state-owned China Oil and Food Stuffs Corporation (COFCO) was estimated to hold a significant portion of global grain reserves, including 69% of the world's corn, 60% of its rice, and 51% percent of its wheat (Mooney, 2022). In India, buffer stocks are primarily managed by the Food Corporation of India (FCI) (Swaminathan, 2016). The primary food grains included in these reserves are wheat and rice, which are staple foods for a significant portion of the population. Since the 1960s, many governments in the region have implemented food grain price stabilisation as a central policy tool.

Malaysia, an upper middle-income country like South Africa, has demonstrated remarkable consistency in stabilising rice prices, viewing this as essential for political stability and for preventing volatility from spilling over into other areas of the economy (Sembiring & Sibuea, 2018). Since the early 1960s, Malaysia's rice policy has three core objectives: securing high farm-gate prices for paddy producers; achieving a targeted self-sufficiency level (SSL) in rice; and ensuring stable, high-quality rice at affordable prices for consumers (Dorariraj and Govender, 2023).

Delivering on these objectives has required sustained state intervention, including price controls, input subsidies, market regulations, and the establishment of a state trading enterprise (STE). PadiBeras Nasional Berhad (BERNAS), Malaysia's rice STE, operates across the entire rice value chain — procurement, processing, imports, warehousing, distribution, and marketing — while also managing the national rice stockpile. Under its concession agreement, BERNAS was required to raise its stockpile volume to 290,000 tonnes by the end of 2023, with the Guaranteed Minimum Price set at MYR 1,200 per tonne to pre-empt disruptions (WTO, 2022). Although Malaysia's BERNAS has drawn criticism for market dominance, acting as the main inputs supplier and market for a large section of the country's farmers, and its concession (as the country's designated paddy and rice importer) extending until 2031 (Arshad, 2023), the system has nonetheless delivered over 50 years of price stability, guaranteed supply, predetermined pricing, effective subsidy deployment, and stock adequacy. With approximately 40% of farmers relying solely on paddy cultivation, the programme is a vital lifeline for rural livelihoods (Rahmat et al, 2019).

3.2. United States and Europe

The United States and European Union also have a long history of government intervention in agriculture, including the use of grain reserves to manage price volatility and ensure food security (Abokyi et al., 2018). These policies were largely abandoned in the 1980s (in the United States) and 1990s (in Europe), but the European Union in 2025 has indicated plans to launch a public stockpiling programme for essentials, which may include food (European Commission, 2025).

3.3. Africa

Following the 2005-2011 food price crisis, approximately 70% of sub-Saharan African countries have maintained some form of public food reserves (Curtis, 2014). These reserves are held for three main purposes: to meet urgent needs in a disaster; to prevent excessive price fluctuations in local markets; and to provide food for ongoing social protection programmes.

In 2011, the East African Community (EAC) developed a regional food security strategy that included provisions for establishing a regional food reserve system (ECAS Secretariat, 2011). Eastern and Southern African governments have either re-established or implemented new national grain marketing through strategic reserves and marketing boards (Mason & Myers, 2013). Examples include Kenya, Malawi, Zimbabwe, Ethiopia, Tanzania, and Zambia.

The members of the Economic Community of West African States (ECOWAS) maintain the Regional Food Security Reserve, which was established in 2013 to pool cereal resources for countries in the region to respond to food crises. It intervened 21 times between 2017 and September 2024 to support six countries (Burkina Faso, Cape Verde, Ghana, Mali, Niger, and Nigeria), with 60,477 tons of food grains and 205 tons of fortified flour (Regional Agency for Agriculture and Food, 2024).

Ghana's National Food Buffer Stock Company (NAFCO) serves as a key African example of a food buffer stock programme on the continent, with a model that combines public authorities with opportunities for new and small private enterprises to participate. Established in response to the 2007-2008 global food price crisis as part of a stabilisation policy targeting rice

and maize, NAFCO plays a key role in supporting smallholder farmers and ensuring food security. During harvest gluts or oversupply, NAFCO purchases excess produce from smallholder farmers at a government-set floor price, calculated annually by the Post-harvest Committee (consisting of representatives of NAFCO, farmer associations, and the Ministry of Food and Agriculture) to include at least a 15% margin over production costs. The purchase is spread across five regions and carried out by licensed buying agents, which are private companies that buy on behalf of NAFCO at the floor price on a commission basis, in various rural communities. NAFCO sells the stocks during periods of lean supply to stabilise price and availability. The grain stocks are kept in GrainPro Cocoon structures, which are airtight and offer a cost-effective solution to minimise losses (Abokyi et al, 2018).

Empirical analysis shows that these operations have successfully reduced price volatility of these staple grains with positive spillovers, including higher farm incomes. NAFCO associated households report about 15% higher subjective well-being in terms of health outcomes and farm productivity (Abokyi, 2021).

Following the dismantling of agricultural marketing boards in the 1980s, several SADC members have maintained food reserve agencies for stockpiling strategic grains for food security. Malawi's Agricultural Development and Marketing Corporation (ADMARC), which was established in 1971 and later dissolved and restructured as a limited liability company with government owning 99%, and Zambia's Food Reserve Agency (FRA), established in 1995, are among the oldest stockpiling agencies of their kind in the region (Chapoto et al, 2016).

The Southern African region has previously considered regional buffer stocks, but tangible steps towards implementation remain slow. With broader participation, such as through regional collaboration, the associated risk for individual member states decreases, lowering the per-member cost.

South Africa operates in a free market environment with no official state-supported price controls or buffer stocks for strategic commodities (Kirsten, 2012), despite growing levels of food insecurity and hunger.

4. Addressing arguments critical of buffer stocks

Historically, stockpiling food reserves is a function that has been performed domestically by public authorities and traditional forms of leadership, especially in the case of Global South countries, as a national security and food strategy. In response to increasing price volatility and global inflation in 1973, the Director-General of the FAO emphasised two key points about buffer stocks in stabilising food prices. First, boosting food production was a central FAO priority. Second, maintaining adequate food reserves is critical to smoothing consumption and countering yearly fluctuations in output. However, a growing body of literature exploring the welfare benefits of buffer stocks was countered by arguments against buffer stocks. These emphasised the potential for market distortions, the costs associated with storage and management, the risk of mismanagement and corruption, and the fact that governments used them to tax farmers rather than remunerate them (Just et al, 1976, 1977). Yet, despite these arguments and the challenges faced with buffer stocks, they can be highly effective and continued to be implemented in various forms and on various scales across the world.

The mixed experiences with buffer stocks, and especially the political decision in both Europe and the United States to get the state out of holding stocks since the 1980s, has led to a progressive decline in the number of buffer stocks worldwide, and to an emphasis on other mechanisms for ensuring price stability. These alternative strategies have focused most prominently on increased reliance on international trade and increased productivity (i.e. raising supplies and relying on markets to provide the distribution mechanism).

In this section, we examine some of the key arguments against public buffer stocks, particularly in light of the current geopolitical, climate, and economic context. This provides important insights and lessons to support the design of an effective buffer stock system in South Africa that contributes to both price stability and climate resilience.

4.1. They distort trade

A common argument made against public buffer stocks is that they distort trade. Many developing countries, especially since the 1980s, were advised by the World Bank and IMF to turn away from measures like public food stocks in favour of open, international trade as a less expensive means to achieve domestic price stability, in the context of structural adjustment policies and the global drive for liberalisation and deregulation. However, this trend has recently been shifting, with greater acknowledgement of the need to move from a primary reliance on trade to introduce other complementary measures, in a more comprehensive strategy to achieve supply and price stability. Often as a result of debt and trade relations, many low-income countries lack the foreign exchange to purchase grains when needed (IPES-Food, 2023). This was particularly evident in the food crisis linked to the Russia-Ukraine war, where the bulk of grain from the Black Sea region was diverted to richer countries, as they outcompeted developing countries that faced foreign exchange constraints in the context of rising prices (Ghosh, 2024). World markets for some commodities can also be 'thin' — even if developing countries have the currency to purchase on the world market, the grains they need may not be available to them when needed (Murphy, 2009). Public food stocks can be useful to exporting countries, too, by smoothing supply shocks and reducing demand surges, which in turn reduces the political pressure on governments to impose export prohibitions or restrictions at the expense of their trade partners (Manduna and Murphy, 2024).

The World Bank, World Food Programme, and FAO (2025) recently released a report on strategic grain reserves which argues that, because international trade is under increased pressure from geopolitical tensions and other supply shocks, developing countries can no longer rely primarily on world trade to meet their grain needs. They therefore advocate for strategic grain reserves at national level, albeit within defined limits and operated according to market principles. Recognition is growing that in a world of intensifying climate, economic, and geopolitical crises and shifts, it is unwise to rely unduly on imports to ensure stable food supply and prices. Rather, policy-makers are recommending that governments adopt a number of measures in addition, and complementary, to trade.

Buffer stock strategies require contextual specificity. For example, in South Africa, the limited amount of white maize offered on international markets means that when there are shortages, an outcome that most often results from weather-related events, finding sufficient white maize is both expensive and logistically challenging to source (Farming Portal 2025). The small and uncertain nature of international trade in white maize further makes the case for maintaining public reserves as a form of insurance against shortfalls.

Critics also raise concerns that public stocks distort prices in international markets, particularly if national or regional buffer stock purchases divert significant amounts of grain from the world market. This is a risk, given that South Africa is one of the few major white maize exporters in the world. However, it can be addressed through limiting stock sizes and ensuring predictable pricing policies (Manduna 2024).

This argument of trade distortion also relates to what is currently possible under rules on farming in the AoA, which provide guidelines on the manner in which buffer stocks can be used and how they should be implemented and managed (McClintock, 2020). The main criterion on government support for farming is that such support should not unfairly affect trade or change how much food is produced. Countries can spend without limit on food security stocks, as long as they do not interfere with trade. However, the WTO rules also become more difficult to comply with if governments are hoping the stocks will not just stabilise consumer prices, but prices for producers, too. Purchasing a guaranteed amount, or at guaranteed prices, is considered trade distorting and is not allowed under WTO rules (although those countries already employing this system by the time of the Bali Peace Clause in 2013 have been allowed to continue; see Vutula, 2022). The WTO rules are more stringent for public corporations than private (especially for state trading enterprises) as the rules ignore the high levels of concentrated market power enjoyed by global commodity traders and food processing companies. If governments choose to use their purchasing power to provide farmers with price stability, rather than placing a request for bids on the open market without conditions, they are more likely to help small-scale producers but they will risk violating the footnote found in the Green Box that specifies purchases at market prices (Dommen et al, 2025) (presuming they are not countries included under the Bali Peace Clause). An open bid for any significant quantity of grain without conditions on purchase prices for the farmer will require a level of consolidation beyond the reach of smaller-scale producers, who will then have to take what the consolidator offers from a hugely unequal bargaining position.

Thus, a public food buffer stock for maize, whose sole purpose is to ensure that the South African government can directly intervene to ensure people do not go hungry due to high food prices, falls within the parameters of the AoA. However, if the system also seeks to contribute developmentally to small farmers by guaranteeing producer prices, a consideration that is also heightened if a regional buffer stock system for Southern Africa is being considered (see below), barriers may be posed by WTO rules. This points to the need for further coordination amongst developing country governments to push for a permanent solution on public stockholding at the WTO negotiations; or at the least an extension of the list of countries included under the Bali Peace Clause (Vutula, 2022).

4.2. They distort markets

Linked to trade distortion is the concern that buffer stocks distort the smooth functioning of markets. Indeed, strategically operated buffer stocks are aimed at influencing market conditions to maintain stability. While certain conceptions of economics assume perfect undistorted markets, in the real world it is seldom possible for a market to be 'undistorted', whether that be by climate shocks, geopolitical shocks, speculation, or corporate concentration. Buffer stocks can thus be seen as an important instrument for correcting such market distortions and their consequences (like supply shortages and price volatility) for the good of market stability (and thus are seen by even the World Bank, WFP, and FAO, 2025) as able to functioning within 'market principles'. That is, buffer stocks can rely on supply and demand to set the minimum and maximum price band, which can change over time, purchasing transparently at market prices, and releasing stocks through market channels (Manduna, 2024). The efficacy of public buffer stocks in contributing to price and market stability, however, also rests on an accurate identification of the cause of volatility and whether the buffer stock is designed to adequately address it and its consequences (FPMC, 2003).

4.3. They are expensive

A third major reservation concerning public buffer stocks is that they are expensive to maintain and operate, and that such spending could rather be focused on more direct food security interventions and enhancing agricultural productivity. The potential for high expenses arise from purchasing the grain, building and maintaining the storage infrastructure, and maintaining the stock (FPMC, 2003). A different but very important cost related to public stockholding is their dependence on effective administration to succeed.

However, at an overarching level, the costs of responding to a prolonged glut or serious food shortages could be greater (Murphy, 2009). In the South African case, an outright shortage of white maize has not occurred, but the costs should be assessed in the context of the social benefits of price stability

and accessibility of maize, as well their ability to support crop and nutritional diversification. In addition, climate impacts on maize production and therefore supply are intensifying. It is not trivial that when food shortages do occur, if there is no public intervention, the costs are not borne equally – people living in poverty will be the first to suffer. Secondly, the high expense of a buffer stock can be managed through its strategic operation, including by managing the size of the stock held (which is a main cost-driver), optimising timing of stock procurement, and investing in good infrastructure that reduces costs in the form of stock losses (Murphy 2009; World Bank et al 2025).

4.4. They don't achieve price stability

A fourth, prominent reservation is that public buffer stocks are not effective in achieving price stability. It is true that there have been cases, such as in Zambia (FPMC, 2003), where the design or implementation of a buffer stock or strategic reserve have either been ineffective in stabilising prices, or have destabilised prices and favoured certain commercial enterprises over smaller enterprises and farmers (DAI and CIRAD, 2018). However, when properly designed and implemented (such as having clear trigger mechanisms for grain purchases and releases), they remain an important instrument for mitigating sharp price increases. One feature for ensuring this is that they are not expected to meet too many objectives at once. The objectives, informed by a clear understanding of the problem, need to be well defined and somewhat limited, and the stock holding operation must be designed carefully in accordance with the objectives (Murphy 2009; World Bank et al. 2025).

5. Conclusions and proposals

5.1. Conclusions

The multiple food price crises that have occurred since the early 2000s, affecting both consumers and farmers, demonstrate that private grain stocks cannot fully replace the stabilising role of public food buffer stocks. One key reason is that private stocks are influenced by commercial speculation — buying and selling based on expected price changes rather than actual supply and demand. This speculative behavior, driven by profit motives, has caused private stocks to become increasingly disconnected from real market conditions (van Heullen, 2022). They are inherently unreliable and inadequate in times of crisis, when public intervention is crucial to ensure food security and price stability (IATP, 2008). For example, the UN Food and Agriculture Organisation (FAO) reported that in April 2008, maize and soybean prices were 30% to 40% more volatile than was justified by actual supply and demand (FAO, 2008). Furthermore, such private firms have no obligation to disclose data such as their stockholding or the information they have on relevant markets (IPES-Food, 2022).

Buffer stocks could play an important role in both supply security and price stability. The cases of bread and sunflower oil, where prices have become disconnected from raw commodity prices, show that cost structures and market dynamics at the processing and retail stages — rather than input costs — also drive price increases. In these cases, buffer stocks can protect supply, and provide a cushion against external price rises. However, in order for buffer stocks to stabilise prices to maintain affordability they need complimentary tools aimed at increasing participation and constraining profiteering. Therefore, they can be a core component of a broader food price stabilisation system aimed at enhancing food sovereignty and food and nutrition security.

South Africa can no longer afford to leave its food security at the mercy of volatile markets, climate shocks, and corporate pricing power. The current food price crisis demands a proactive and multi-pronged response from the government to reduce hunger, poverty, and inequality. A strategic public food buffer stocks programme, combined with clear price regulation, can anchor staple food prices, protect poor and vulnerable households, and integrate smallholder farmers into the economy, by providing guaranteed fair minimum prices and reliable markets. A well-governed food buffer stock system, initially focused on maize but eventually expanded to wheat and indigenous crops, would provide an important lever for government leadership in a deeply divided and uneven sector. Embedded in a broader strategy that includes robust competition policy, transparent market oversight, and targeted investment in infrastructure and storage, public stockholding can become a cornerstone of an agricultural development agenda that provides a promise for real rural economic development, addresses poverty and inequality, and builds a climate-resilient food system. A well-designed and well-operated buffer stock system can provide an important mechanism for complementing markets so that they support producers, diversify production, support climate resilience, and more directly contribute to food security.

5.2. Proposals

For South Africa, where maize and wheat markets are exposed to varying external shocks in the form of climate variability and geopolitical disruptions affecting wheat imports in particular, Malaysia's model offers a compelling precedent. A maize and wheat buffer-stock system, structured with strategic reserves, guaranteed producer prices, and targeted subsidies, could cushion farmers against market downturns and shield consumers from sharp price spikes. Crucially, South Africa would need to incorporate governance safeguards to the buffer stock system to prevent market capture or exclusion of smallholder producers.

Such a programme should aim to complement existing market structures where possible, rather than replacing them entirely, and actively promote competition among buyers, to ensure farmers truly benefit from fair prices. Transparency in stock

data, accountability in price setting (such as publishing contracts with farmers and intermediaries), and infrastructure for coordinated storage and logistics will be essential (especially in light of recent drought concerns and rising import volumes). Done correctly, such a system would anchor price stability, support rural livelihoods, and enhance food security, mirroring the resilience Malaysia has sustained in its rice sector. This can also be scaled up to support a regional buffer stock system: given the expenses involved, South Africa could take responsibility as a richer country compared to its regional neighbours and as a regional exporter to share the load in helping to stockpile maize that may be needed by neighbours in times of price shocks or poor harvests.

5.2.1. ESTABLISH CLEAR OBJECTIVES AND WELL-STRUCTURED GOVERNANCE

In the light of legitimate concerns about public buffer stocks arising from the mixed results of their track records, measures can be undertaken to enhance the likelihood of their success. These include: having clear and viable objectives; being well administered and operated in relation to markets and pricing; maintaining appropriate stock sizes to contain costs; transparency in stock levels; and high-quality monitoring and management of physical stocks. Key to this is therefore ensuring a carefully structured governance framework. This can encompass both the direct management of the stock, as well as considerations about how it influences and relates to the economic context, such as market power dynamics between small and large producers, processors, and distributors (Manduna, 2024). Its governance can also be structured to be responsive to the developmental realities and needs of the country and its food system. In South Africa, a comprehensive governance framework to ensure transparency and accountability, as well as minimise the risk of corruption, is an essential component. The participation of farmer groups in the governance and management of buffer stocks, and the involvement of civil society in monitoring and oversight, are critical.

Overall, to address the possible drawbacks of public buffer stocks, it is important that they are established and designed to achieve clear, contextually impactful objectives, have a well-designed governance structure, are staffed with the required capacities for strategic administration, are adequately financed, and are coordinated with other interventions of a wider policy architecture to stabilise food prices and enhance climate resilience.

5.2.2. PRIORITISE AGROECOLOGY FOR RESILIENCE TO CLIMATE CHANGE

Given the reality of hotter and drier agro-environments in South and Southern Africa, current practices in food production, not only in commercial farming but in manufacturing, packaging, and distribution, need to be adapted to ensure food security and sustainability. A food buffer stock approach that prioritises agroecology, such as through preferential procurement from farmers adopting more ecological farming, can integrate diverse food producers to foster an integrated and diversified production system. Marrying agroecology and food buffer stocks could enhance long term resilience to climate-related shocks. This hybrid approach, combining coherent policy design with targeted incentives, would encourage commercial farms to transition towards sustainable agroecological production methods, while providing direct production support to smallholder farmers, alongside inclusive market structures, thereby creating a more equitable and climate-resilient food system.

5.2.3. IMPLEMENT CRITICAL COMPONENTS

To ensure the efficacy of this national buffer stock mechanism, several critical components must be considered and implemented, through cooperation between national government departments and agencies, provincial governments and farmers' groups:

- **Public Stockholding:** Build national maize reserves by establishing production targets. Public buffer stock programmes can promote targeted agricultural production models, supporting smallholder farmers to transition to more sustainable farming practices that reduce reliance on costly chemical fertilisers and pesticides.
- **Price Stability:** Set minimum and maximum prices for maize to protect farmers and consumers from market changes. A common operational model involves the establishment of a dual pricing mechanism, with price bands for floor and ceiling prices. Within this range, prices are allowed to fluctuate according to market forces. When prices fall below the floor, the government intervenes by purchasing grain for the public stocks, typically during harvest periods, at a fixed price above the prevailing market rate. Conversely, when prices exceed the ceiling — often during lean seasons — the government releases grain into the market at a subsidised rate, to stabilise prices. Effective implementation requires systematic and frequent price monitoring, often using data already collected for economic planning.
- **Small Farmer Support:** Help ensure markets for small farmers' produce at fair prices, increasing their income and encouraging more production, especially of identified indigenous crops. This could take place through organising intermediaries/aggregators to purchase from smallholders to feed into the buffer stock system, such as takes place in Ghana (see MOFA, no date). This would need to be coordinated with existing small farmer support programmes and their improvement, such as improving the extension system.
- **Stocking and De-stocking:** An appropriate mechanism must be developed to guide when and how to inject maize into the market to stabilise prices, as well as when to withdraw maize from the market to replenish the buffer stocks.
- **Capital Investment:** An effective buffer stock mechanism requires collaboration with financial institutions to provide credit for stock purchases and storage and transportation infrastructure (Rukuni & Bernsten, 1988). This would particularly need to be considered if the system were scaled up or connected to a regional, Southern African one, where capital investment in storage and transportation would need to be coordinated across member states. Ongoing operational costs, however, may be modest and partially offset through strategic buy-low, sell-high practices.

5.2.4. PHASE IN COMMODITIES

Given its notable price volatility in recent years, its status as a key staple food in South Africa, its level of production, and its vulnerability to the effects of climate change, we suggest that South Africa starts with a specific focus on stabilising maize prices, while supporting small farmers, and improving food security. Based on models like Ghana's NAFCO, the government would buy extra maize when prices are low and release it when there are shortages, to stabilise the market. In the medium term (for example, five years after this programme is established), it could be expanded to include wheat, and indigenous and climate-resilient staple crops that offer nutritional advantages like sorghum and millet, to serve as substitutes and/or supplements for maize (Galtier et al, 2018).

Buffer stocks are also potentially needed in the wheat and oilseed market, to protect and stabilise base prices. In the light of South Africa's vulnerability to climate change, with its direct impact on agricultural land and crop yields, the proposed expansion of the buffer stock, to include indigenous and climate-resilient crops like sorghum and millet, is crucial for diversifying production and enhancing overall food system resilience. The Malaysian example suggests that a South African buffer stock entity could play a role in promoting the cultivation of climate-resilient crops by providing a source of demand, thereby incentivising farmers to diversify and adapt to changing agro-environments. This also points to important considerations about the appropriate structure of a buffer stock system to achieve this. For example, the system could include decentralised yet coordinated sub-national stocks that store grains from more localised regions and so may integrate more naturally into and support local markets.

Given the role of other factors in food price inflation, such as concentrated market power, buffer stocks are only one proposed part of a wider strategy of interventions needed to enhance food availability and accessibility. They are, however, a crucial part of that larger strategy. Stabilising food prices at levels that consumers can afford while ensuring farmers are remunerated and environmentally destructive models of agriculture are reformed is a complex yet vital objective. This is a particularly urgent task in the face of advancing climate changes and climate shocks.

This system could also be scaled up to join a regional buffer stock mechanism under SADC, where inter-country cooperation can ensure grains are moved from buffer stocks located in each country to the countries and localities in need due to climate and supply shocks, and food price volatility. Such a regional system could still ensure autonomy is given to individual countries to manage their own stocks. Public stocks have a long, if not perfect, record of meeting an important part of this objective. It is time to explore what they can do for an upper-middle-income country such as South Africa, which plays a critical role in not only its domestic food supply, but also the supply of the larger region in which it is situated.

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Endnotes

1 A Southern African food item made from husked maize kernels.

2 Wheat prices were converted to farm values using the National Agricultural Marketing Council methodology for calculating farm values.

3 For comparability, producer prices (20L) were converted to consumer units (750 ML)). Sunflower seed prices were converted to farm values using the National Agricultural Marketing Council methodology for calculating farm values.

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