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Namibia

A globally recognised regulator of a sustainable, agile and innovative agronomy and horticulture sector

SEEDS MARKET INTELLIGENCE REPORT

GRAIN SEEDS FOR SOWING (PLANTING)

White Maize



Wheat



Millet



ISSUE 2 OF 2025

1. INTRODUCTION

The global seed market is primarily driven by rising demand for staple crops such as maize, wheat, and millet. These crops are critically important in Africa, where they serve as dietary staples and play a key role in food and nutritional security (Nabuuma et al., 2022). Central to agricultural productivity is access to quality seeds, which not only support crop cultivation but also enable the adoption of modern farming technologies (Agrawal & Varier, 2018).

Despite the global recognition of seeds as a strategic input in agriculture, Namibia's local grain seed production remains relatively underdeveloped. Several constraints hinder its growth, including erratic weather patterns, particularly irregular rainfall and recurring droughts, which discourage investment in improved seed varieties. Additionally, the lack of irrigation infrastructure limits farmers' ability to produce seed during the off-season periods, further constraining production capacity. Namibia's heavy reliance on imported agricultural inputs, such as fertilisers and grain seeds, also exposes the sector to international market fluctuations and price volatility (NAB, 2023). This dependency is especially pronounced in the maize and wheat seed segments, which are predominantly sourced from external suppliers to meet national demand (NAB, 2023).

According to the International Trade Centre (ITC) (2025), from 2018 to 2022, Namibia imported an average of 1,638 tonnes of grain seeds annually, with a total import bill of approximately N\$31.7 million. In stark contrast, seed exports averaged only 191 tonnes per year during the same period. Although the export volume was minimal, the value remained relatively high at N\$890 thousand. This highlights a deepening trade imbalance and increasing reliance on foreign seed markets.

Considering these challenges, this market intelligence report focuses on grain seeds for sowing (planting). It analyses seed tonnage, pricing trends, and trade statistics from global, regional, and domestic perspectives. The report further explores strategic opportunities to strengthen Namibia's domestic grain seed production systems, reduce dependence on imports, and enhance national food security. Lastly, it offers actionable policy recommendations and identifies key value-chain actors pivotal to driving transformation in the local seed industry.

NOTE: This report only includes data for maize seeds for sowing under HS100510, wheat seeds for sowing (HS100191 & HS10011100) and millet seeds for sowing (HS100821). Maize seeds include both white and yellow seeds for planting, while millet seeds include all the different types of millet, i.e., pearl millet, finger millet, foxtail millet, finger millet, and proso millet.

2. GLOBAL OVERVIEW

This section covers global production, consumption, exports, and imports of white maize, wheat, and millet seeds in recent years.

2.1 PRODUCTION

MAIZE SEEDS: Maize (*Zea mays*) is one of the most versatile cereal crops, known for its adaptability, diverse types, and broad range of uses. Erenstein et al. (2022) state that maize ranks as the second most widely cultivated crop globally, thriving mainly in tropical, subtropical, and temperate regions. The maize seed market has significantly transformed in recent years, with maize seeds accounting for a dominant 65% share of the global grain and cereal seeds market in 2022.

Major global producers include the United States of America (USA), China, and Brazil (FAOSTAT, 2025). Between 2018 and 2022, global maize seed production averaged 1.1 billion tons, peaking at 1.2 billion tons in 2021 before declining slightly to 1.16 billion tons in 2022 (**Figure 1**). The drop in production was mainly due to widespread drought in European countries. The most significant decline was recorded in Ukraine, where adverse weather conditions combined with war led to a sharp 37% drop (FAO, 2023).

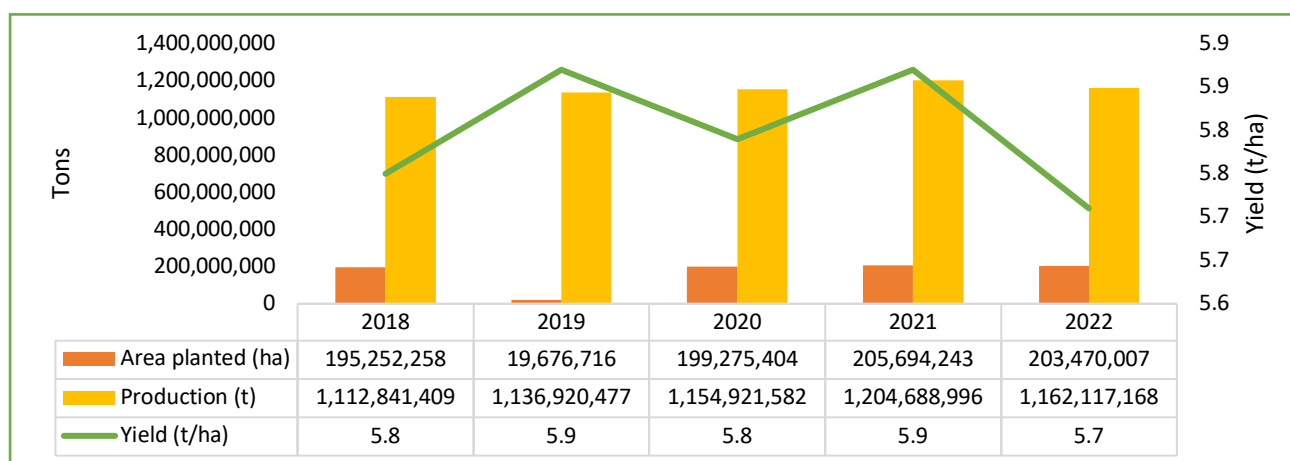


Figure 1: Global maize seed production trends (2018 to 2022)

Source: FAOSTAT (2025)

As illustrated in **Figure 2** below, the United States of America is the leading global producer of maize seeds, with a production volume of 359.3 million tons and an area planted of 33.1 million hectares. China (mainland) ranks second in maize seed production, yielding 265.6 million tons, yet it has the largest cultivated area at 42.2 million hectares. In contrast, Argentina and Ukraine exhibit significantly

lower production levels, with Argentina producing 55.6 million tons and Ukraine 34.0 million tons. Their respective planted areas are also smaller, at 7.8 million hectares and 4.9 million hectares.

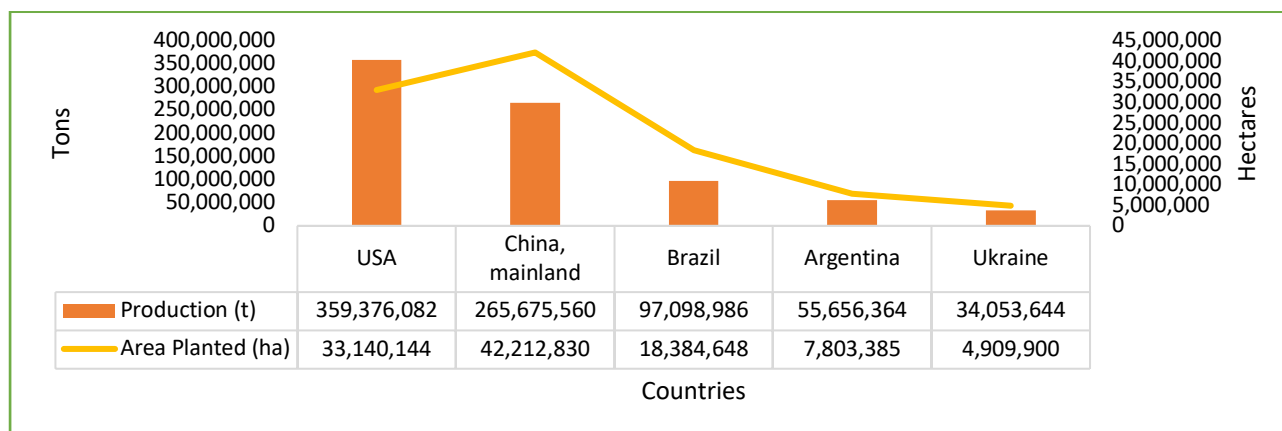


Figure 2: Top 5 global maize seed-producing countries (2018 -2022)

Source: FAOSTAT (2025)

The United States of America leads global maize seed production, contributing 50% of the total output, making North America the largest producing continent. Asia follows with 31%, highlighting its substantial role in global maize seed production. Europe contributes 11%, representing a moderate share, while Africa accounts for 8%, indicating a comparatively smaller portion. Oceania, on the other hand, has minimal maize seed production in the region (**Figure 3**).

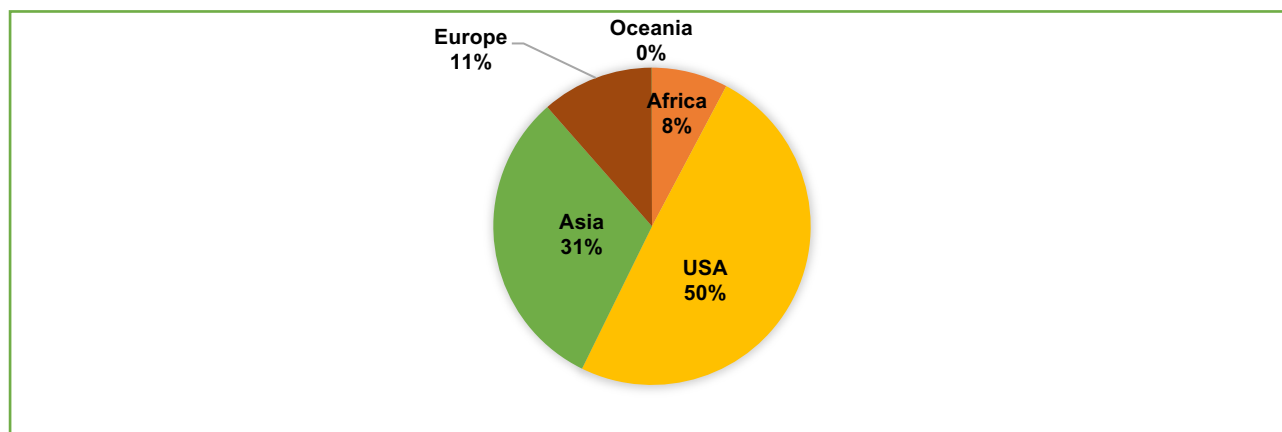


Figure 3: Global maize seed production share across the continent (2018 -2022)

Source: FAOSTAT (2025)

WHEAT SEEDS: Wheat (*Triticum aestivum*) has been vital to global food security for about 10,000 years and remains the most widely cultivated crop. It is the second most grown cereal after maize and dominates international trade, covering an average of 217 million hectares annually (Erenstein et al., 2022). In 2022, global wheat seed production reached 808 million tons, with China, India, and

Russia contributing 41%. Wheat seed production grew steadily from 732.4 to 808.4 million tons, driven by a slight expansion in cultivated land and yield improvements (**Figure 4**). These trends highlight the role of sustainable farming and technology in food security.

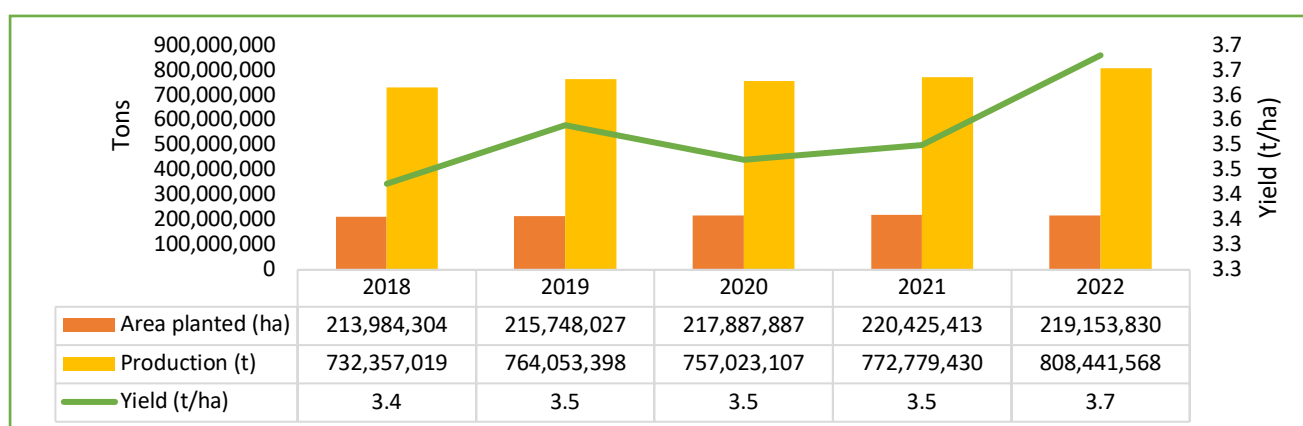


Figure 4: Global wheat seed production trends (2018 to 2022)

Source: FAOSTAT (2025)

As depicted in **Figure 5**, China (mainland) is the largest wheat seed producer, yielding 134.7 million tons and planting 23.7 million hectares. India follows closely, producing 105.7 million tons and having the largest planted area at 30.4 million hectares. Russia ranks third, producing 82.5 million tons with 280 million hectares planted. America and France have significantly lower wheat seed production levels at 48.6 million tons and 35.4 million tons, respectively, with 15 million hectares and 5 million hectares planted.

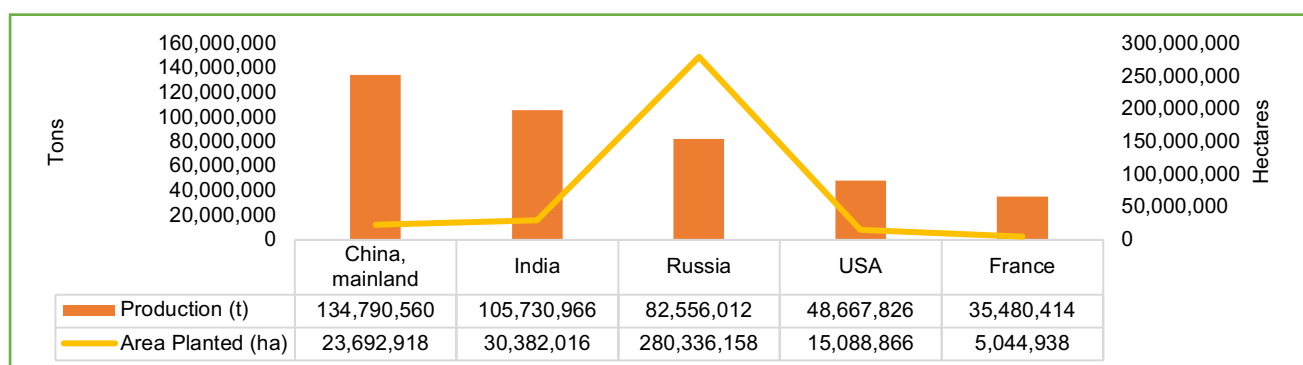


Figure 5: Top 5 global wheat seed-producing countries (2018 -2022)

Source: FAOSTAT (2025)

According to **Figure 6**, Asia accounted for 44% of global wheat seed production between 2018 and 2022, making it the leading producer. Europe followed with 34%, while the Americas contributed 15%. Africa and Oceania had the smallest shares, producing 4% and 3%, respectively.

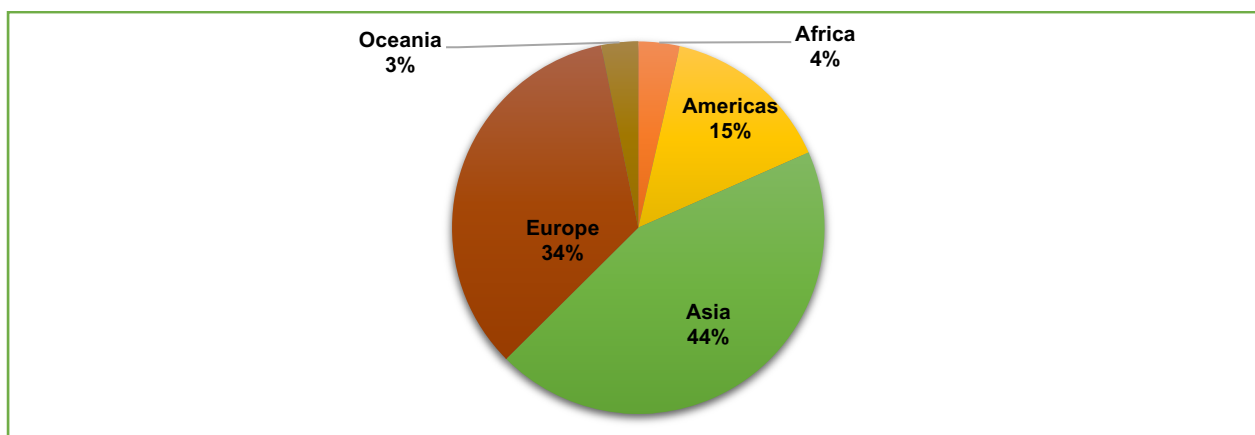


Figure 6: Global wheat seed production share across the continents (2018 -2022)

Source: FAOSTAT (2025)

MILLET SEEDS: Millet (*Pennisetum glaucum*) is a key staple in arid and semi-arid regions of Asia and Africa, covering 30 million hectares and contributing 41% of global millet seed production. It thrives in drought-prone, low-productivity lands and is valued for both grain and fodder production (Satyavathi et al., 2022). Global production fluctuated with changes in harvested area, dropping from 32.4 million hectares in 2018 to 29.8 million in 2022. Production peaked at 32.3 million tons in 2020, then declined slightly to 30.8 million tons in 2022. Yields remained stable, averaging 1.0 t/ha annually, underscoring millet’s resilience to climate variability (**Figure 7**).

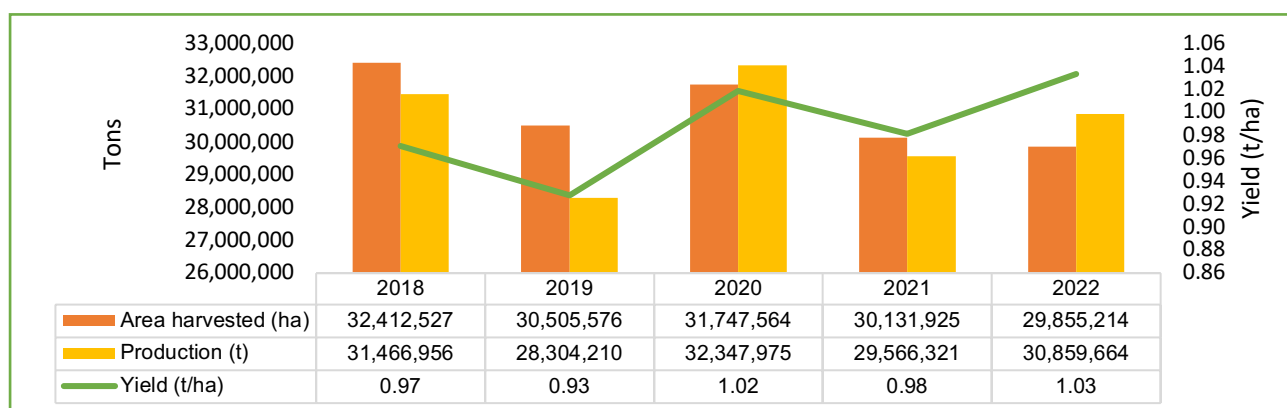


Figure 7: Global millet seed production trends (2018 to 2022)

Source: FAOSTAT (2025)

Figure 8 shows that India is the top producer, yielding 11.8 million tons, with the largest planted area at 8.8 million hectares. Niger follows with 3.2 million tons, utilising 6.7 million hectares. China (mainland) produces 2.5 million tons, with a significantly smaller planted area of 870,494 hectares, indicating high yield efficiency. Nigeria and Mali contribute 1.9 million tons and 1.7 million tons, with 1.8 million hectares and 2.1 million hectares planted, respectively (**Figure 8**).

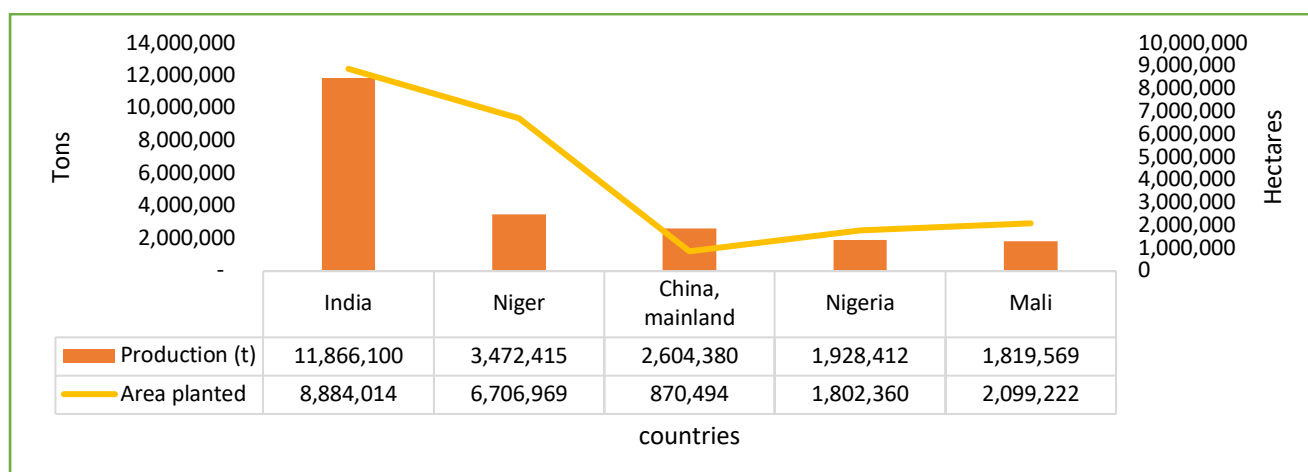


Figure 8: Top 5 global millet seed-producing countries (2018 -2022)

Source: FAOSTAT (2025)

Figure 9 presents the global distribution of millet seed production by continent from 2018 to 2022 (FAOSTAT, 2022). Asia dominates with 51%, followed by Africa (46%), reflecting its growing role in millet cultivation. Europe (2%) and the Americas (1%) contribute minimally, while Oceania has negligible production.

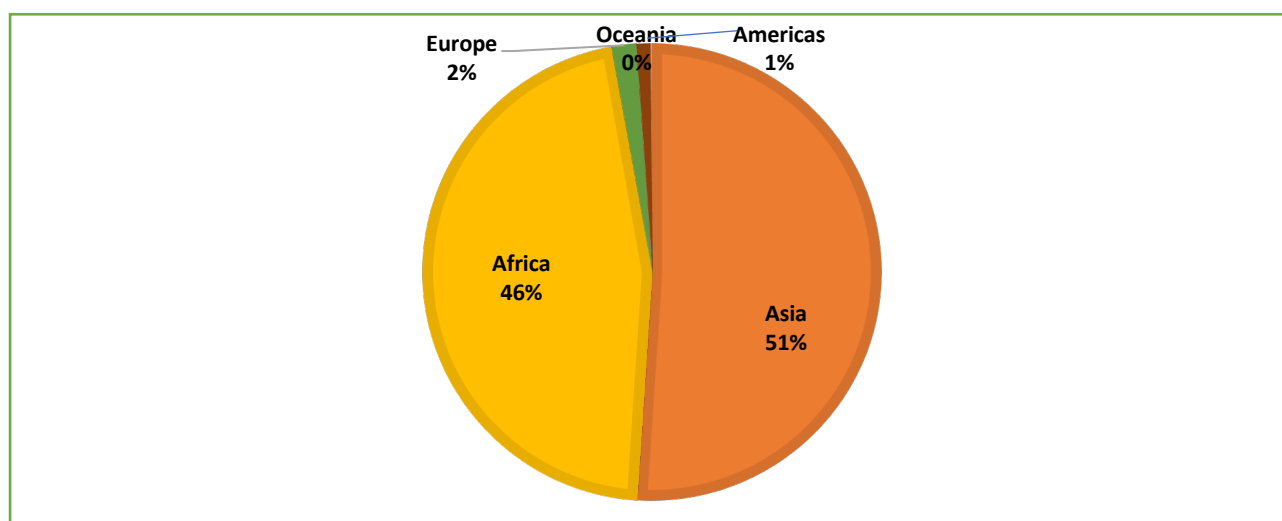


Figure 9: Global millet seed production share across the continents (2018 -2022)

Source: FAOSTAT (2025)

2.2 TRADE (IMPORTS AND EXPORTS)

Maize, wheat, and millet seeds play a crucial role in global trade, with substantial quantities being exchanged between countries. Major seed exporters, including Japan, Mexico, and China, dominate the international market, supplying seeds to regions that rely on imports for food security, such as sub-Saharan African countries. In recent years, the volumes and values of seeds have grown steadily (FAOSTAT, 2022).

IMPORTS

MAIZE SEEDS: Over the five years, maize seed import quantities ranged from approximately 2.9 million tons in 2018 to 3.3 million tons in 2022, with an overall average of 3.1 million tons, valued at US\$3.4 billion (N\$63.5 billion) (**Figure 10**).

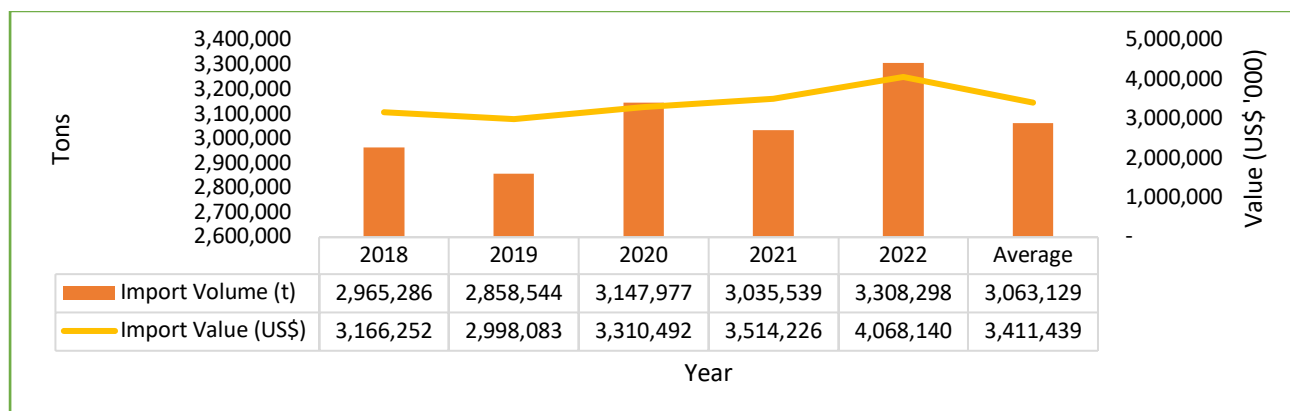


Figure 10: Global maize seed import volumes and values from 2018 to 2022

Source: ITC (2025) (Conversion date: 12.02.2025)

As illustrated in **Figure 1**, Malaysia is the leading maize seed supplier, contributing the highest volume (1.5 million tons) and value (US\$403 million or N\$7.5 billion). Germany follows with a high import value (US\$273 million/N\$5 billion) despite a smaller quantity, indicating premium pricing. France, the USA, and Canada are also key importers, each importing 33,000 - 43,000 tons valued between US\$150 and 176 million (N\$2.8 - 3.2 billion). Eastern European countries, Russia, Poland, Romania, Hungary, and Ukraine, contribute moderately, with imports ranging from 25,000 to 42,000 tons and values between US\$107 and 130 million (N\$1.9 - 2.4 billion).

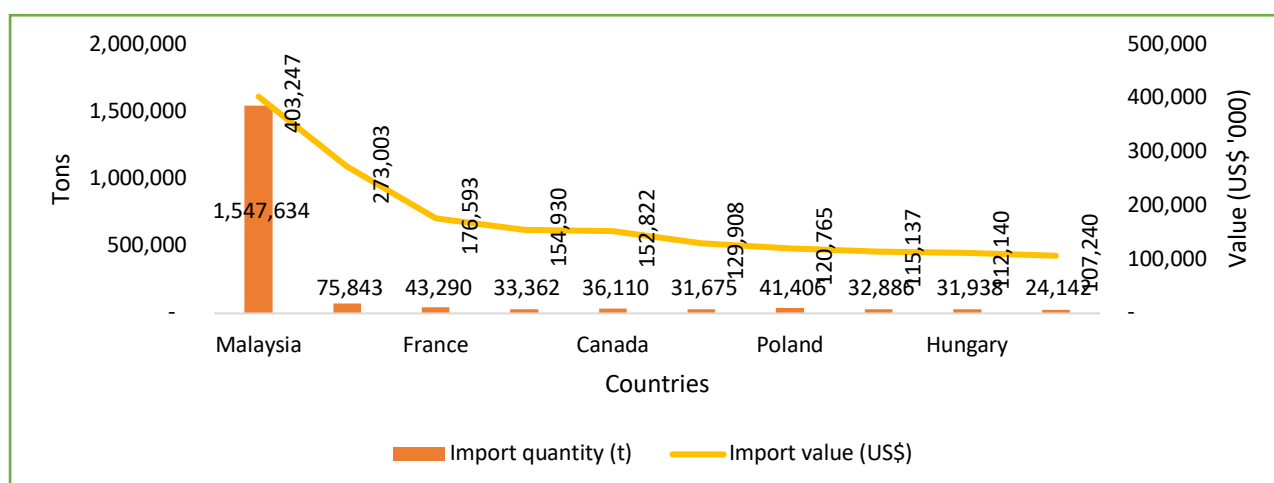


Figure 11: Top 10 global importers of maize seeds by value

Source: ITC (2025) (Conversion date: 12.02.2025)

WHEAT SEEDS: The import volume reached its peak in 2019 at 3.6 million tonnes, valued at US\$857 million (approximately N\$15.9 billion), followed by a steady decline in subsequent years. By 2022, the volume had decreased to 2.6 million tonnes, valued at US\$1 billion (around N\$18.9 billion), representing a 22.9% drop in volume from 2019. The average import volume over the five-year period was roughly 3.1 million tonnes, with an average value of US\$850 million (**Figure 12**).

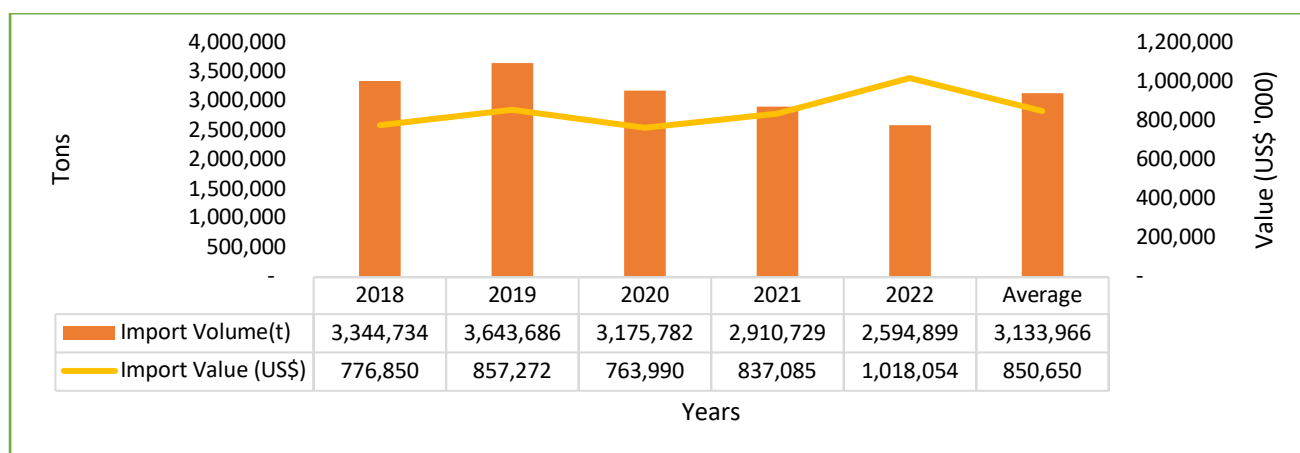


Figure 12: Global wheat seed import volumes and values 2018 to 2022)

Source: ITC (2025) (Conversion date: 12.02.2025)

As illustrated in **Figure 13**, Belgium is the largest global importer, accounting for US\$298.9 million in wheat seed imports. It is followed by Italy, with imports valued at US\$114.7 million (equivalent to N\$2.1 billion), and New Zealand at US\$61.9 million (equivalent to N\$1.2 billion). Greece recorded the lowest import value, at US\$22.9 million, equivalent to N\$430.9 million.

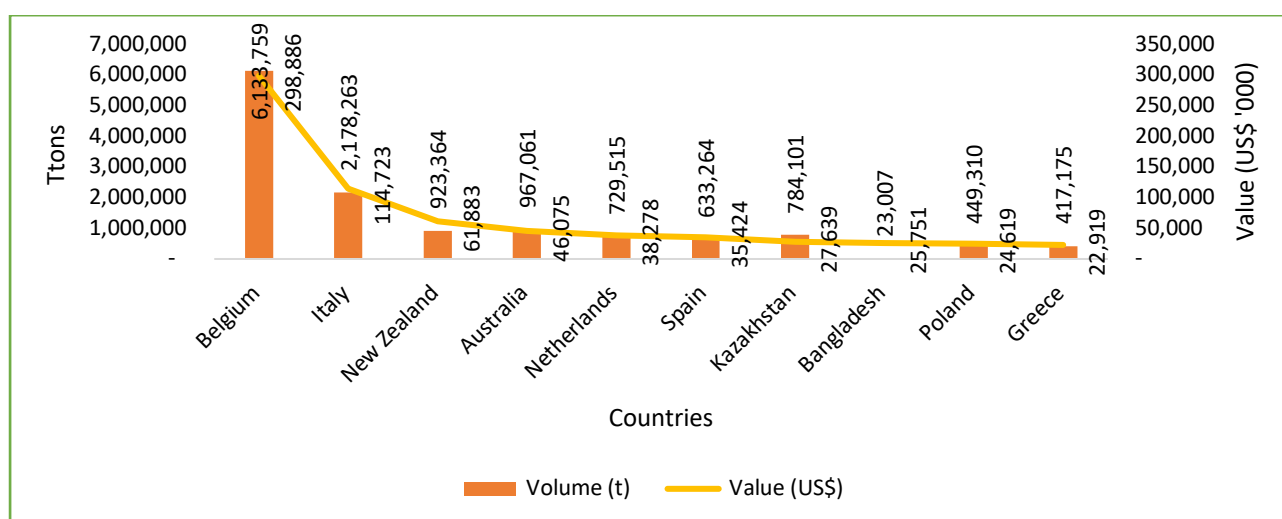


Figure 13: Top 10 global importers of wheat seeds by volume and value

Source: ITC (2025) (Conversion date: 12.02.2025)

MILLET SEEDS: Figure 14 shows global millet seed imports from 2018 to 2022. While the import volume fluctuated, peaking in 2019, the value consistently increased. In 2018, imports totalled 2.3 million tons, valued at US\$946,250 (N\$16.7 million), rising to US\$1.5 million (N\$28.1 million) by 2022. Despite the volume slope in 2020 and 2022, the value of imports grew. This ranking is based on available data and may not include countries with missing records.

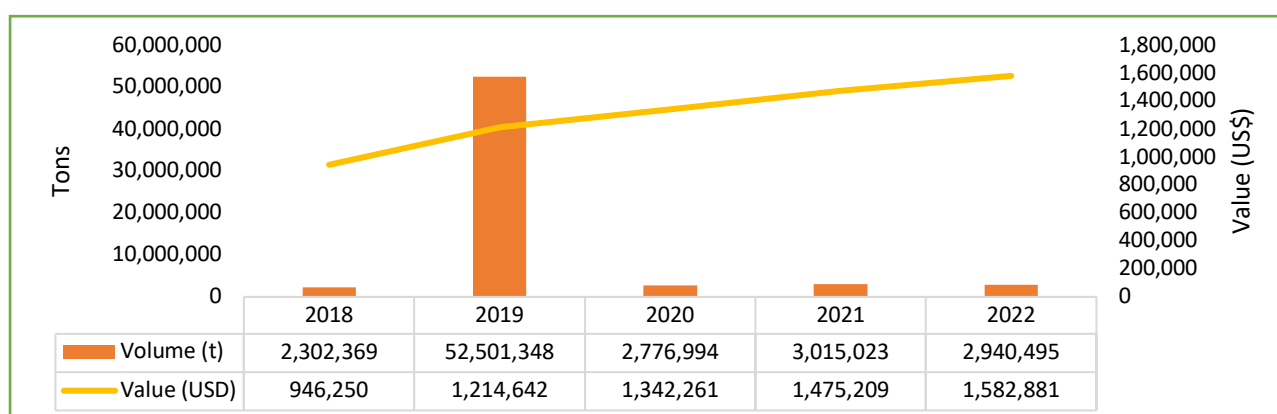


Figure 14: Global millet seed import volumes and values from 2018 to 2022

Source: FAOSTAT (2025) (Conversion date: 08.08.2025)

Figure 15 presents the top 10 global importers of millet seeds by value from 2018 to 2022, with Indonesia leading at US\$330 million (N\$5.8 billion), followed by Germany (US\$152 million/N\$2.7 billion) and Belgium (US\$134 million/N\$2.4 billion). Other notable importers include the Republic of Korea, Canada, and Great Britain, with values ranging from US\$54.6 million (N\$967 million) to US\$9.26 million (N\$164.3 million). The data highlights the significant demand for millet seeds across various countries, underscoring their key role in the global agricultural market.

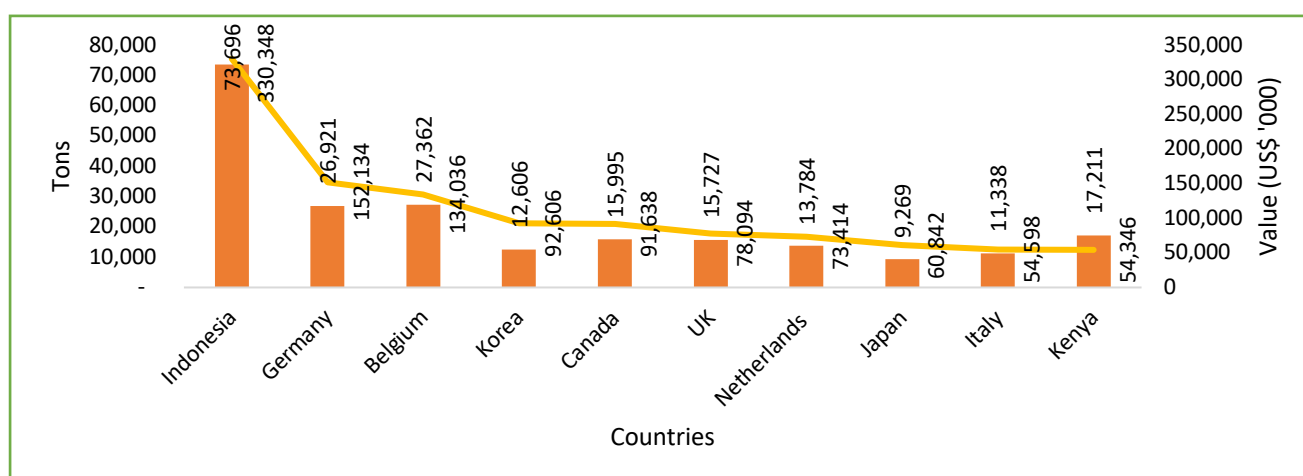


Figure 15: Top 10 global importers of millet seeds by value

Source: FAOSTAT (2025) (Conversion date: 12.05.2025)

EXPORT

MAIZE SEEDS: As depicted in **Figure 16**, over the past five years (2018-2022), global maize seed exports have grown consistently in both volume and value, averaging 183 million tons valued at US\$44.2 billion (N\$824.5 billion). In 2018, 166.3 million tons of maize seed, valued at US\$33.8 billion (N\$631.4 billion), were exported. By 2022, exports had reached 204.1 million tons, with a total value of US\$62.8 billion (equivalent to N\$1.17 trillion). The increase in volume suggests higher demand, technological advancements, or external market pressures such as inflation or trade barriers.

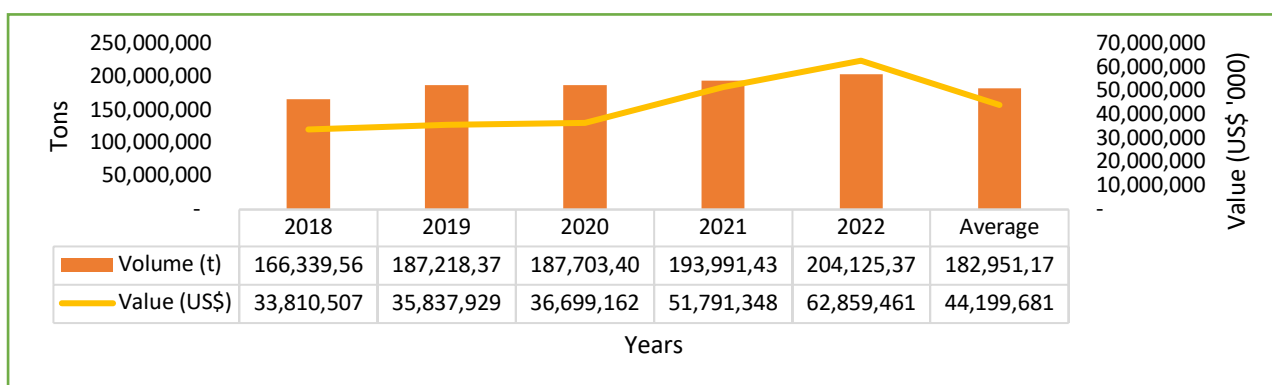


Figure 16: Global maize seed export volumes and values from 2018 to 2022
Source: ITC (2025) (Conversion date: 12.02.2025)

Figure 17 shows that the USA leads global maize seed exports, contributing US\$13.7 billion (N\$256.3 billion) in value and 58 million tons in volume. Argentina and Brazil follow closely, with Argentina exporting US\$6.8 billion (N\$126.6 billion), while Brazil recorded an almost similar export value. Ukraine follows, with US\$5.1 billion (N\$95 billion); France is at US\$1.8 billion (N\$33.9 billion); and Romania is at US\$1.5 billion (N\$2.9 billion). Among the lowest exporters are Russia, South Africa, India, and Poland, indicating smaller contributions to the global maize seed trade but significant ones.

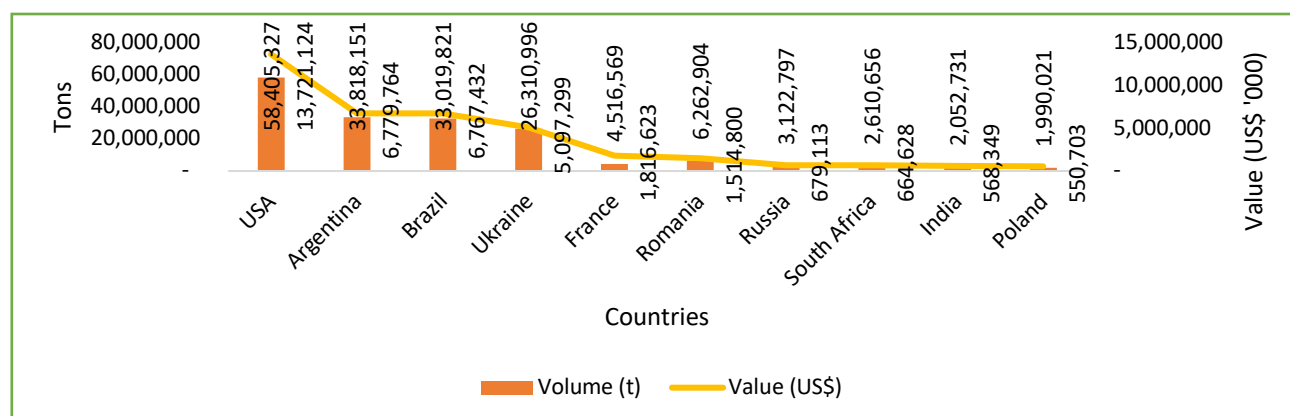


Figure 17: Top 10 global exporters of maize seeds by value
Source: ITC (2025) (Conversion date: 12.02.2025)

WHEAT SEEDS: Between 2018 and 2022, the export value of wheat seeds increased significantly, rising from 1.6 million tons valued at US\$418.6 million (N\$7.8 billion) to 1.9 million tons valued at US\$716.9 million (N\$13.4 billion), despite fluctuations in export volumes. This upward trend underscores the growing economic significance of wheat seeds in global trade (**Figure 18**).

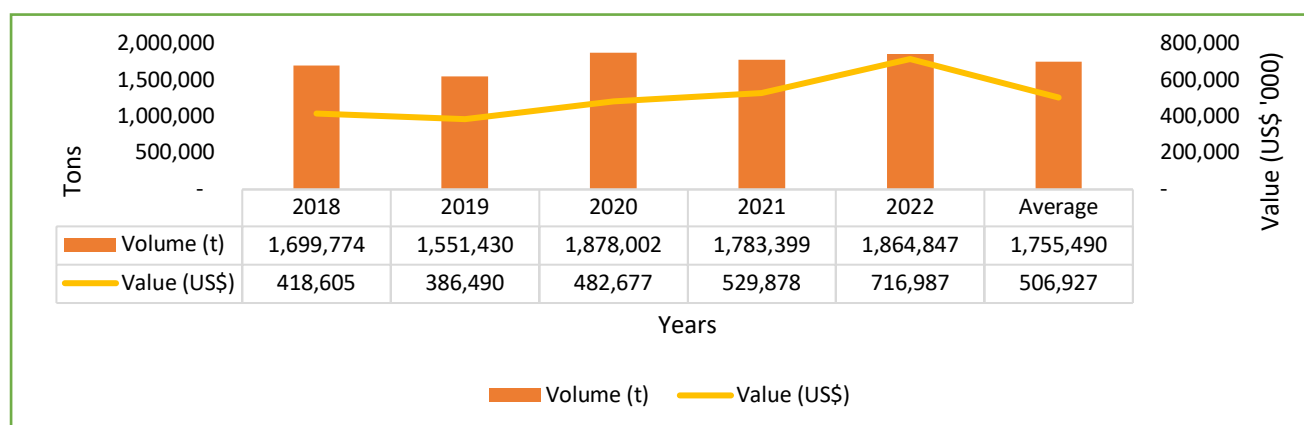


Figure 18: Global wheat seed export volumes and values (2018 to 2022)

Source: ITC (2025) (Conversion date: 12.02.2025)

As illustrated in **Figure 19**, France dominates global wheat seed exports, with an impressive 413,122 tons valued at US\$122.8 million (N\$2.3 billion), underscoring its significant market influence. France is the leading wheat seed producer in the European Union, benefiting from a combination of diverse climatic conditions, fertile soils, and advanced agricultural techniques. These factors have positioned the country as a global leader in wheat production and trade (Le Gouis et al., 2020).

Slovakia ranks second, exporting 190,379 tons worth US\$50.8 million (N\$948.8 million), followed closely by Russia with 186,705 tons valued at US\$45.4 million (N\$845 million). Other wheat seed exporters such as Belgium, the Czech Republic, Hungary, Poland, Germany, Romania, and Australia have contributed significantly to the wheat seed market. Among the top exporters, Australia recorded the lowest export value, amounting to US\$11.9 million (N\$221.5 million), corresponding to a volume of 10,234 tons.

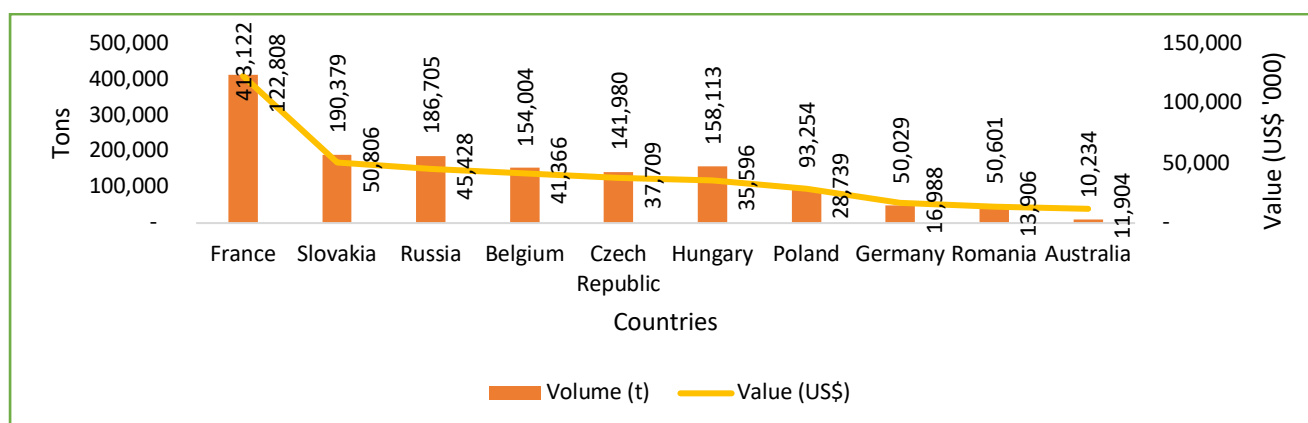


Figure 19: Top 10 global exporters of wheat seeds by value
Source: ITC (2025) (Conversion date: 12.02.2025)

MILLET SEEDS: Figure 20 illustrates trends in global millet seed exports from 2018 to 2022, showing both volumes (in tons) and value (in US\$). Export volumes steadily increased from 2018 (3 million tons, valued at US\$1.1 million or N\$21.4 million) to 2021 (4.2 million tons, valued at US\$1.7 million or N\$31.4 million), indicating growing demand or improved production efficiency.

However, a decline was observed in 2022, with exports dropping to 3.5 million tons, valued at US\$1.7 million (N\$32 million), suggesting market saturation or supply chain disruptions.

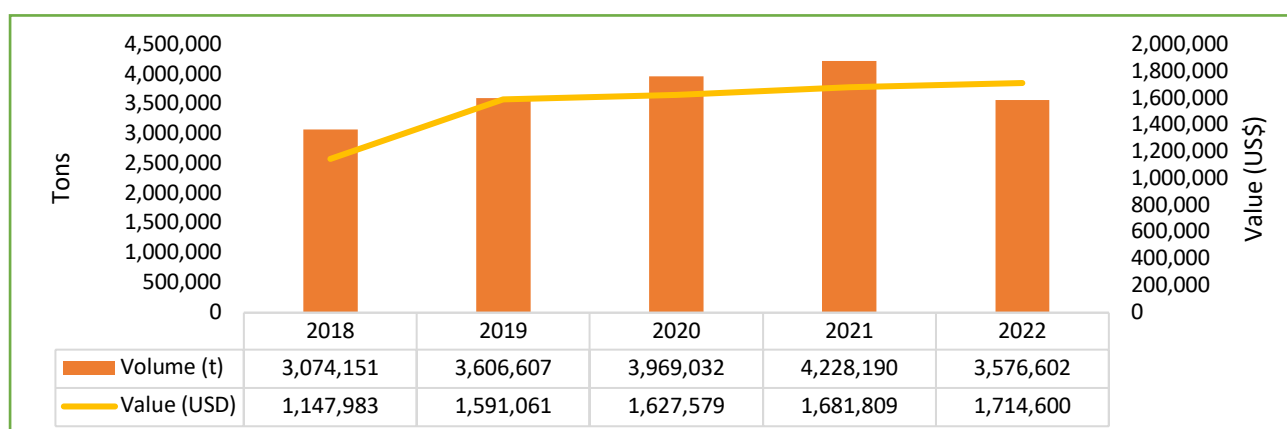


Figure 20: Global millet seed export volumes and values from 2018 to 2022
Source: FAOSTAT (2025) (Conversion date: 12.02.2025)

Figure 21 presents the top 10 global exporters of millet seeds by value from 2018 to 2022, with the USA leading at US\$41 million (N\$711 million), followed by India (US\$28 million/N\$489 million), Ukraine (US\$23.8 million/ N\$411 million), Russia (US\$14.6 million/ N\$253 million) and France (US\$13.6 million/N\$236 million). Other notable importers include China, the Netherlands, Austria, Uzbekistan, and Canada, with values ranging from US\$3.8 million (N\$47 million) to US\$5.6 million

(N\$97 million). The data highlights the growing international trade in millet seeds and the crop's increasing economic importance in global seed markets.

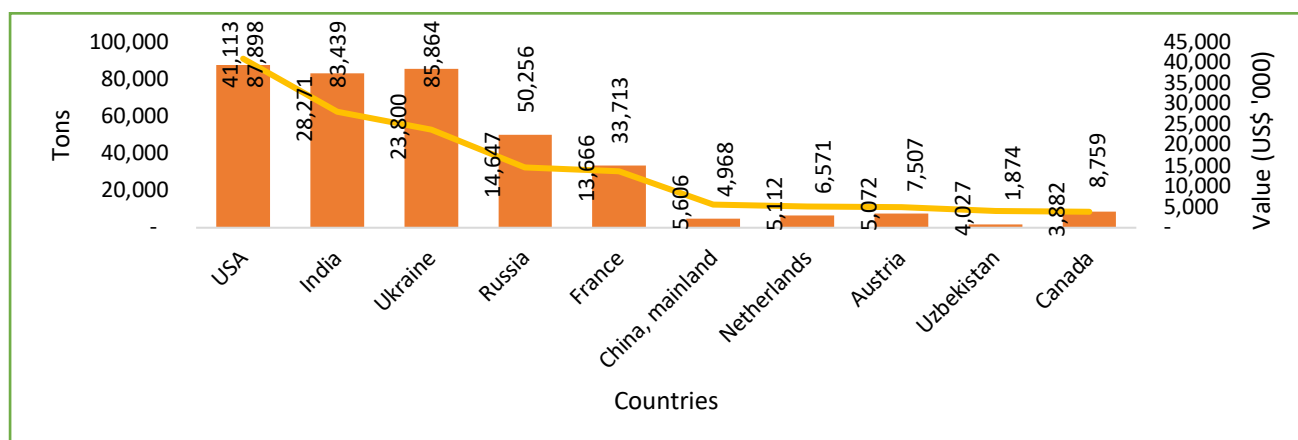


Figure 21: Global top 10 exporters of millet seed by value
Source: FAOSTAT (2025) (Conversion date: 13.10.2025)

2.3 PRICES

Maize seed prices fluctuated slightly from 2018 to 2020, then rose sharply in 2021–2022. Wheat seed prices remained stable until 2020 but surged in 2021–2022. While millet seed prices decreased in 2019, they rebounded, showing steady growth through 2022, thus indicating increased demand or limited supply (Figure 22).

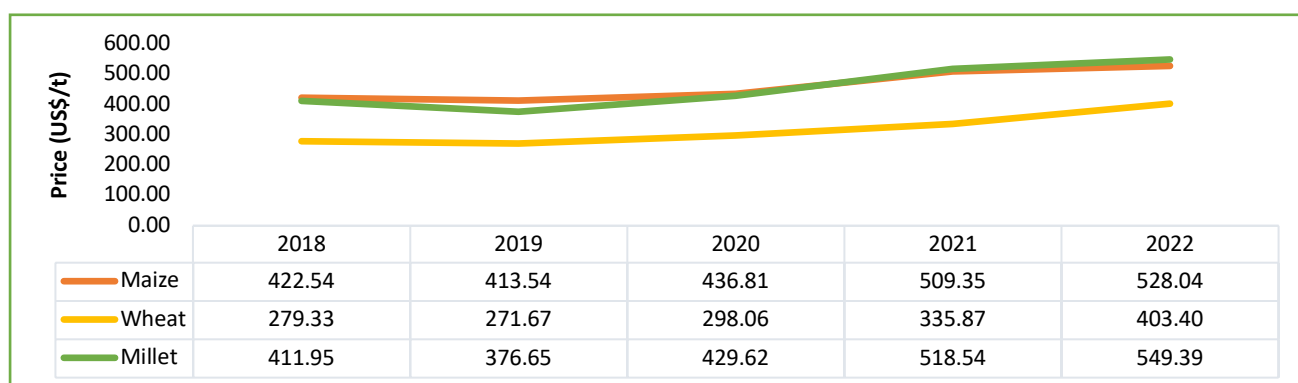


Figure 22: Global maize, wheat, and millet seed prices (US\$/t)
Source: FAOSTAT (2025)

3. AFRICA PERSPECTIVE

This section explores seed production of white maize, wheat, and millet, as well as market dynamics, including imports and exports across African countries.

3.1 PRODUCTION

MAIZE SEEDS: Maize is a staple food consumed by nearly half of the population in Sub-Saharan Africa (SSA). Although the continent contributes only about 8% to global maize seed production (see **Figure 3**), output across Africa has steadily increased from 83.2 million tons in 2018 to 97.1 million tons in 2021. However, there was a slight decline to 94.8 million tons in 2022, largely due to a reduction in cultivated area, despite yields remaining constant at approximately 2 tons per hectare (t/ha) over the past five years (**Figure 23**). This trend highlights the need for African governments to support farmers with the tools, technologies, and resources they need to enhance productivity and improve yields.

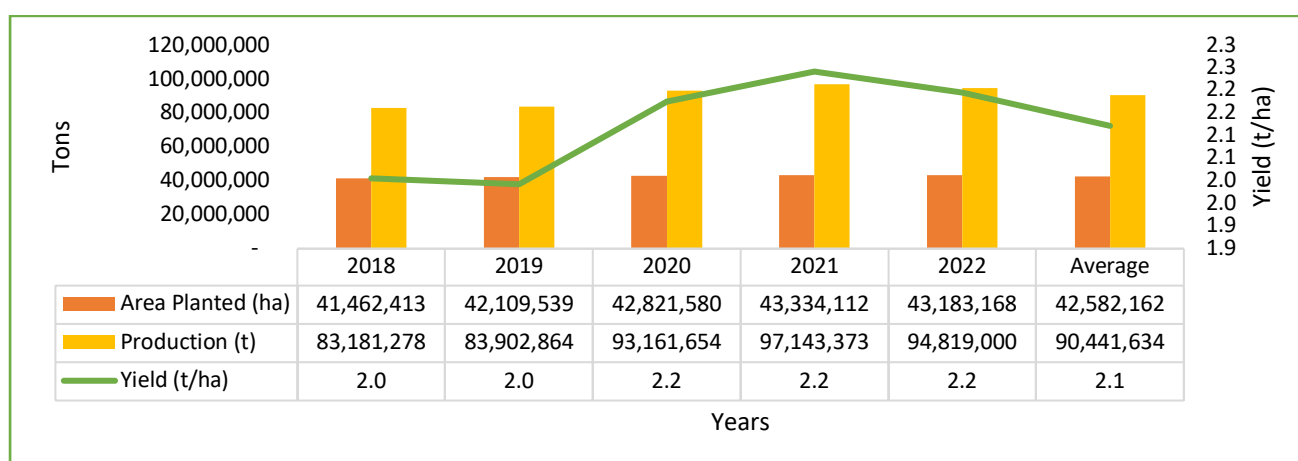


Figure 23: Maize seed production trends in Africa (2018 - 2022)

Source: FAOSTAT (2025)

Maize seed production differs substantially across Africa. As illustrated in **Figure 24**, South Africa leads with a production volume of 14.5 million tons from 2.7 million hectares, followed by Nigeria, which produced 12.3 million tons, the second-highest output despite cultivating the largest area at 6.2 million hectares. Tanzania also performs well, producing 6.4 million tons, reflecting a steady but significant contribution.

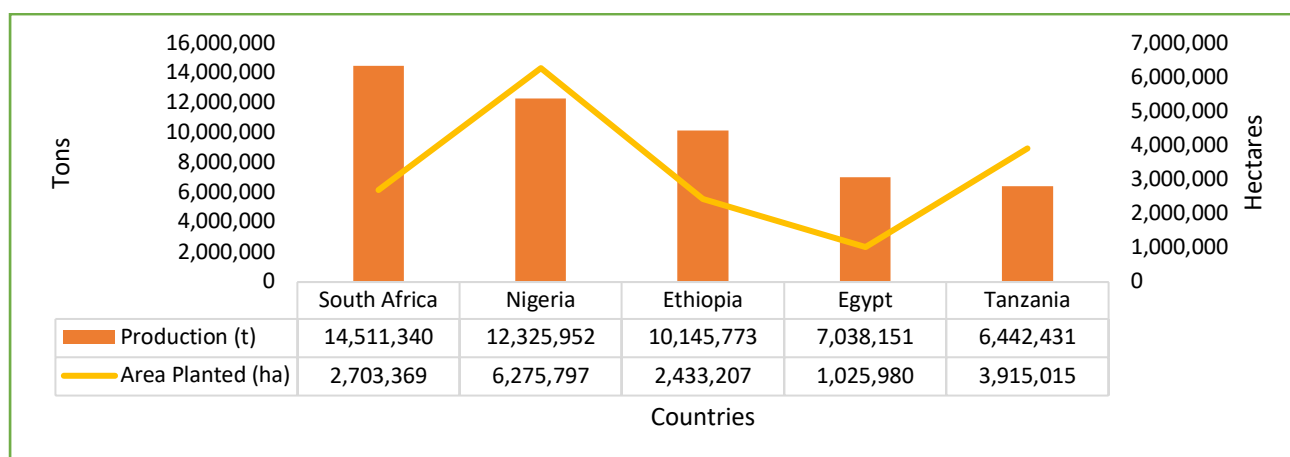


Figure 24: Top 5 maize seed producers in Africa (2018 - 2022)

Source: FAOSTAT (2025)

WHEAT SEEDS: As shown in **Figure 25**, over the five years, wheat seed production averaged 27.6 million tons. In 2020, production was recorded at 29.2 million tons and increased further in 2021 to 30.7 million tons, reflecting improved farming practices or favourable growing conditions. However, it declined to 26.1 million tons in 2022. This suggests challenges in maintaining productivity.

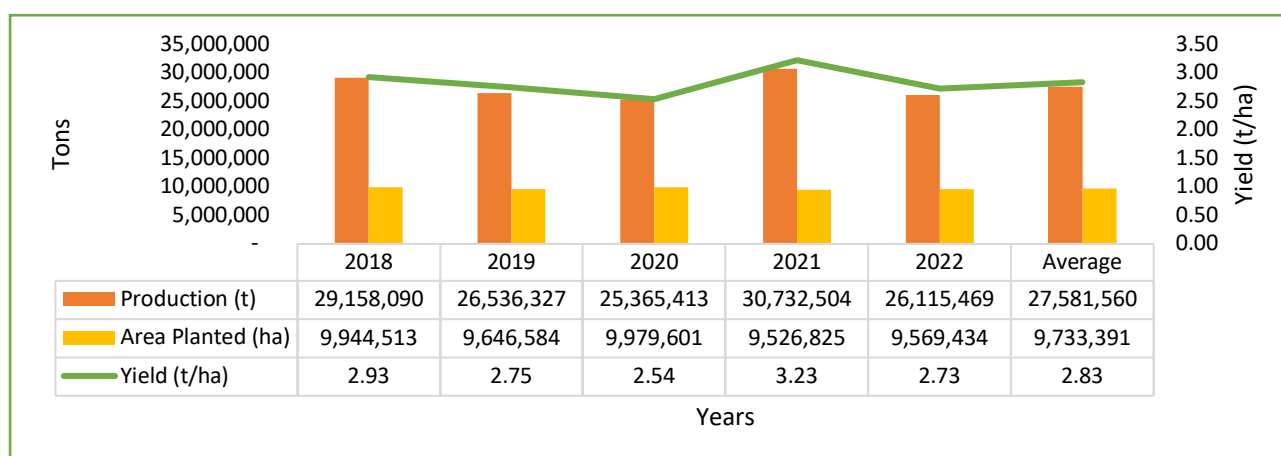


Figure 25: Wheat seed production trends in Africa (2018 - 2022)

Source: FAOSTAT (2025)

Figure 26 indicates that Egypt is the leading wheat seed producer in Africa, with a production volume of 9.1 million tons cultivated on 1.4 million hectares. This shows well-developed farming practices, possibly better access to irrigation, improved seed varieties, or more intensive use of inputs (e.g., fertilisers, mechanisation). Ethiopia ranks as the second-largest producer, recording 5.4 million tons on 1.8 million hectares. Although South Africa ranks lowest among the five in terms of total output, it still demonstrates notable production levels.

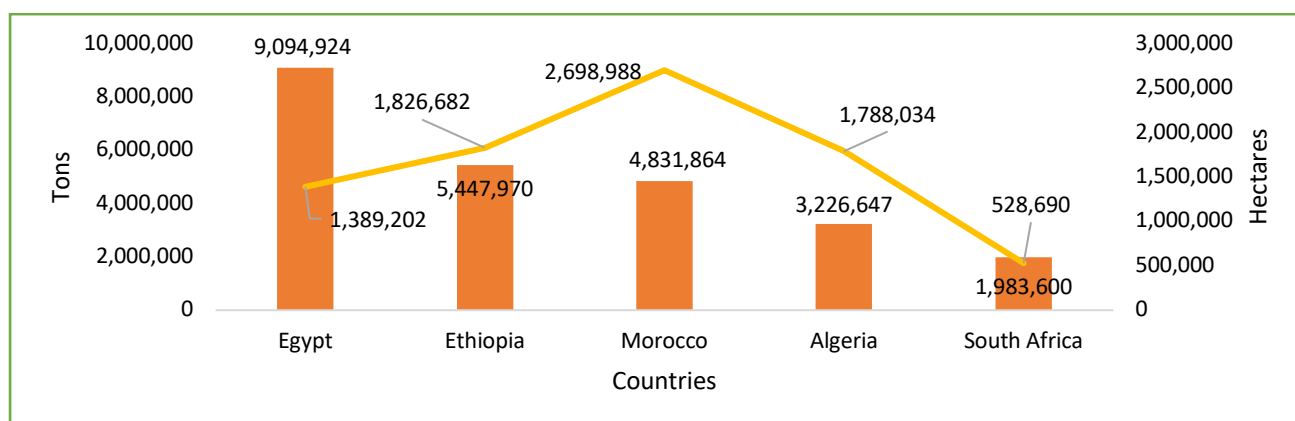


Figure 26: Top 5 wheat seed producers in Africa (2018 - 2022)
Source: FAOSTAT (2025)

MILLET SEEDS: Millet, indigenous to the Sahel region, has gradually spread across the African continent from West to East and subsequently into Southern Africa (Kangama, 2021). As depicted in **Figure 27**, the average millet seed production between 2018 and 2022 stood at approximately 14.1 million tons, cultivated over an average of 19.7 million hectares, with an average yield of 0.71 t/ha. In 2018, production peaked at 15.8 million tons across 20.8 million hectares, yielding 0.76 t/ha. However, output declined in 2019 to 13.5 million tons. By 2022, production had rebounded to 14.7 million tons, with 20.4 million hectares planted and an average yield of 0.72 t/ha.

Despite these fluctuations in production, the cultivated area remained relatively stable, varying only modestly between 19.7 and 20.8 million hectares. This stability suggests a sustained commitment by farmers to millet cultivation, with total output being largely influenced by yield variability rather than changes in planting area.

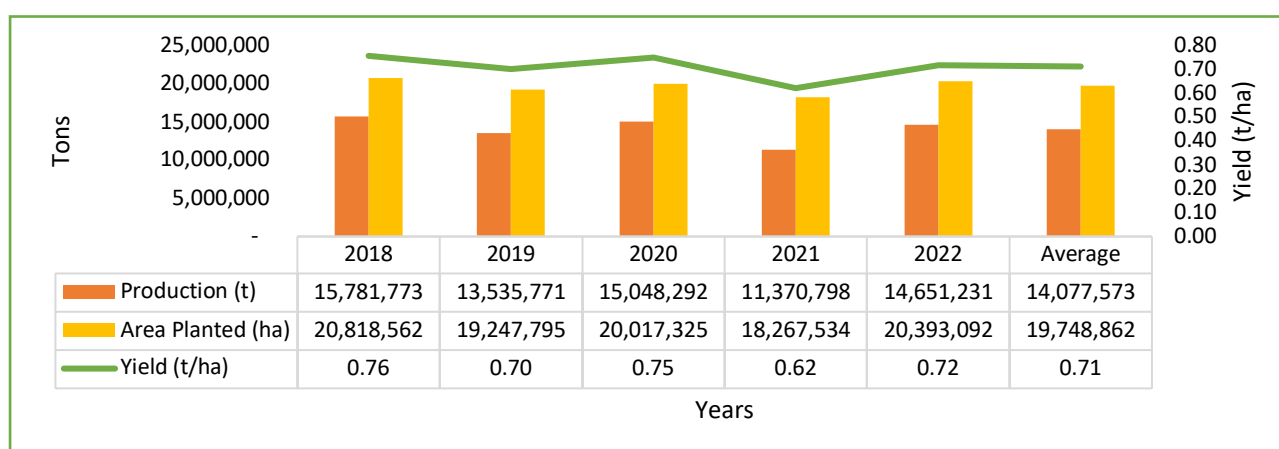


Figure 27: Millet seed production trends in Africa (2018 - 2022)
Source: FAOSTAT (2025)

Niger ranks as the leading producer of millet seeds in Africa, with an annual output of approximately 3.3 million tons. The country also has the largest area under cultivation (6.7 million hectares), demonstrating a strong reliance on millet farming. As a staple crop, millet plays a critical role in food security and in enhancing resilience to drought in Niger’s arid climate (Kangama, 2021). Nigeria ranks as the second-largest producer, with an output of 1.9 million tons, cultivated over 3.4 million hectares, further underscoring the crop’s importance in the region's agricultural systems (**Figure 28**).

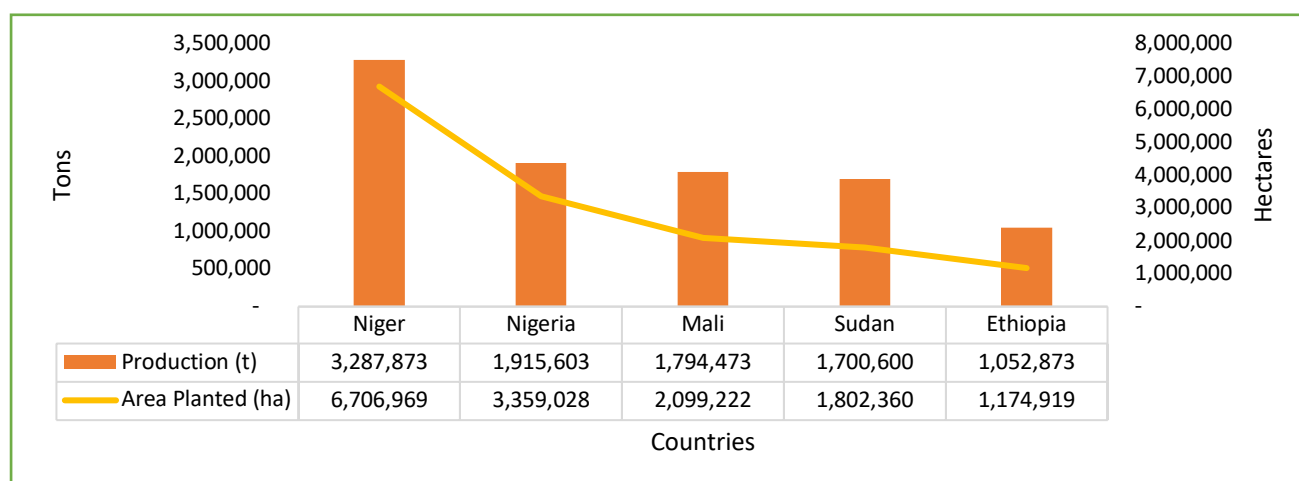


Figure 28: Top 5 Millet seed producers in Africa (2018 - 2022)

Source: FAOSTAT (2025)

3.2 TRADE (IMPORTS AND EXPORTS)

IMPORTS

MAIZE SEEDS: The total maize seed imports varied significantly over the five years, reflecting shifts in domestic production capacity and climate conditions. In 2018, imports peaked at 502,400 tons, valued at approximately US\$261.8 million (N\$4.8 billion). However, in 2019, import volumes dropped sharply by 67%, indicating a significant shift in supply or demand dynamics. By 2021, import levels had begun to recover, reaching 191,035 tons (**Figure 29**).

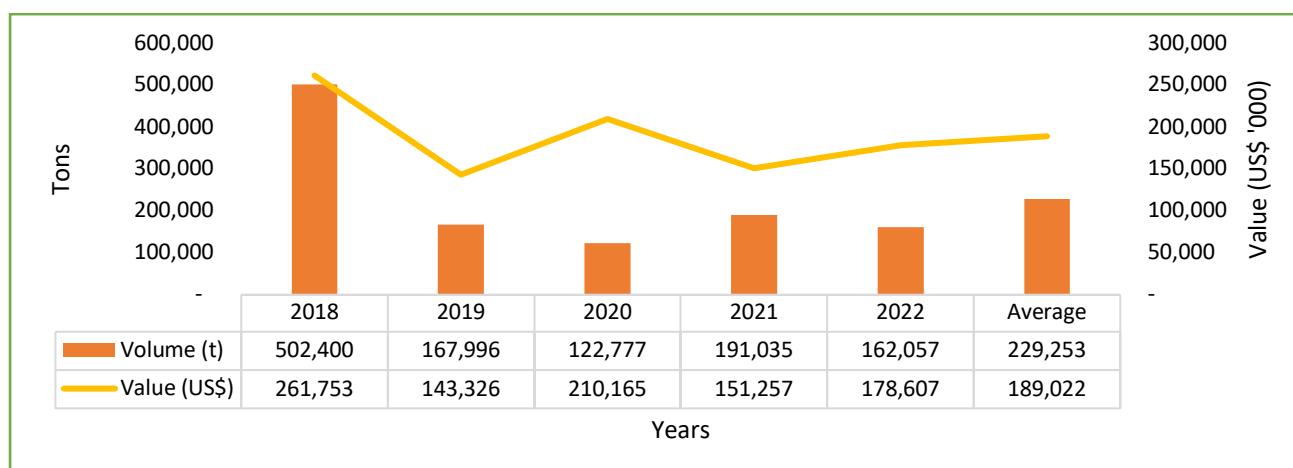


Figure 29: Maize seed import volumes and values in Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 13.03.2025)

As illustrated in **Figure 30** below, South Africa emerged as the largest maize seed importer by value in Africa, with imports totalling approximately US\$30.3 million (N\$554 million). However, when measured by volume, Kenya ranked highest, importing 86,514 tons of maize seeds valued at US\$28.5 million (N\$521 million).

This distinction highlights Kenya's significant demand for maize seed despite slightly lower expenditure. On the other end of the spectrum, Mozambique recorded the lowest import levels among the top ten importing countries, accounting for just 3% of Africa's total maize seed trade.

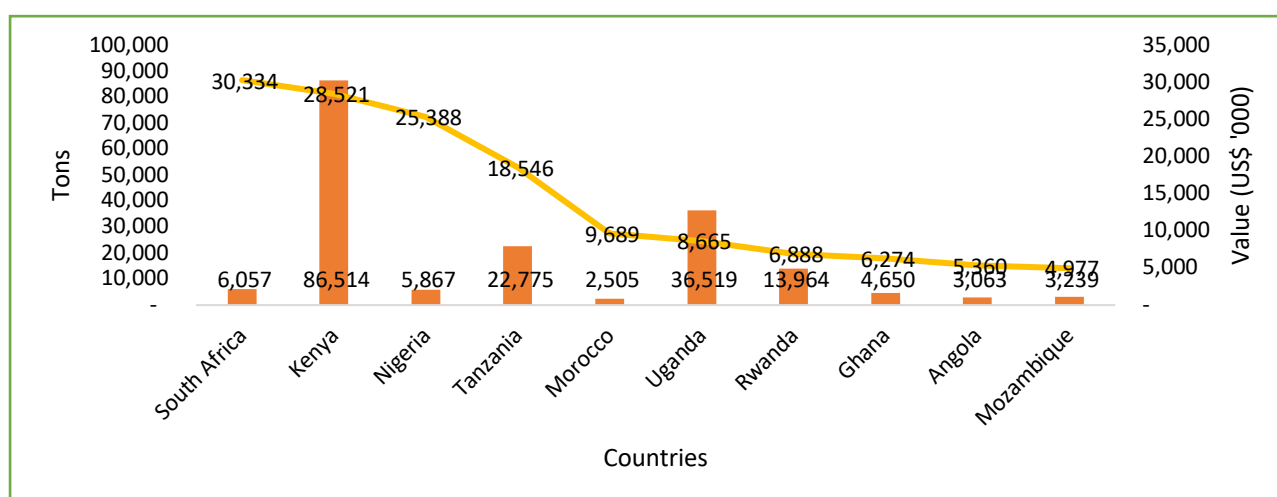


Figure 30: Africa's Top 10 maize seed importers by value (2018 - 2022)

Source: ITC (2025) (Conversion date: 13.03.2025)

WHEAT SEEDS: Climate change continues to undermine local seed production across many African countries, compelling governments to rely increasingly on wheat imports to safeguard food security (Gourdji, 2025). This trend is further reinforced by rapid population growth, shifting dietary

preferences, the expansion of milling industries, and supportive government policies to enhance wheat cultivation (Kruseman et al., 2020; Tadesse et al., 2019).

Over the past five years (2018 – 2022), wheat seed imports averaged 13,027 tons annually, with an average value of US\$5.6 million (N\$101.7 million). A notable spike was recorded in 2021, when import volumes surged to 33,496 tons, valued at US\$9.8 million (N\$177 million), reflecting both growing domestic demand and efforts to boost local wheat production (**Figure 31**).

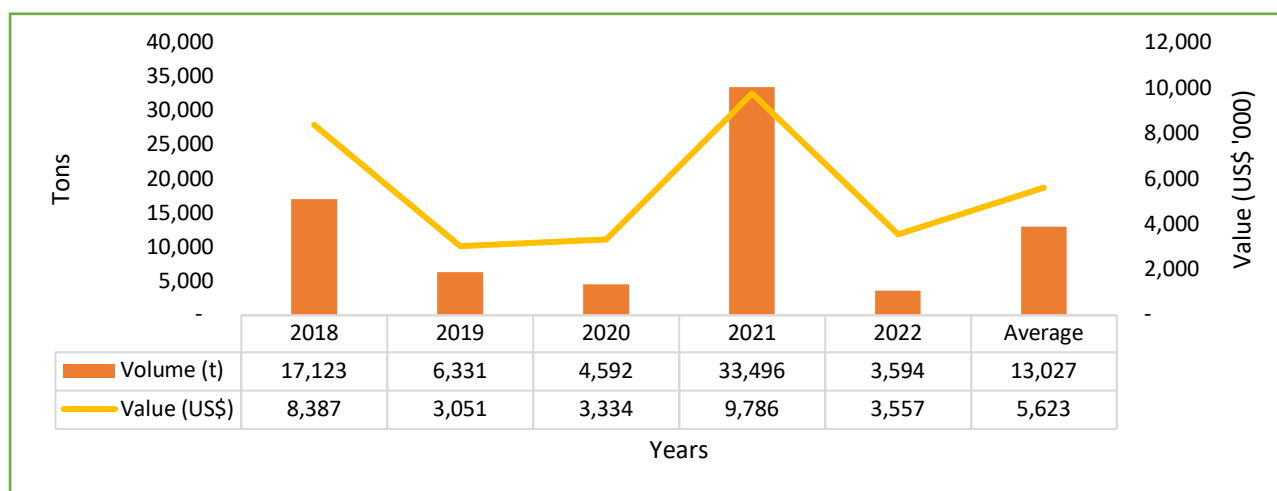


Figure 31: Wheat seed import volumes and values in Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 13.03.2025)

Algeria leads wheat seed imports in Africa, recording the highest import value of over US\$2 million (N\$37.8 million) for a volume of 6,159 tons (**Figure 32**). This underscores the country’s heavy dependence on wheat to ensure food security, driven by its large and growing population. Morocco follows closely, with imports exceeding US\$1.5 million (N\$26.7 million), reflecting strong domestic demand and an established milling industry. Sudan ranks third, importing wheat seeds worth approximately US\$1.4 million (N\$25.5 million), while Namibia also features prominently, with an import value of around US\$1.37 million (N\$24.8 million) for approximately 4,382 tons, as illustrated in **Figure 32**.

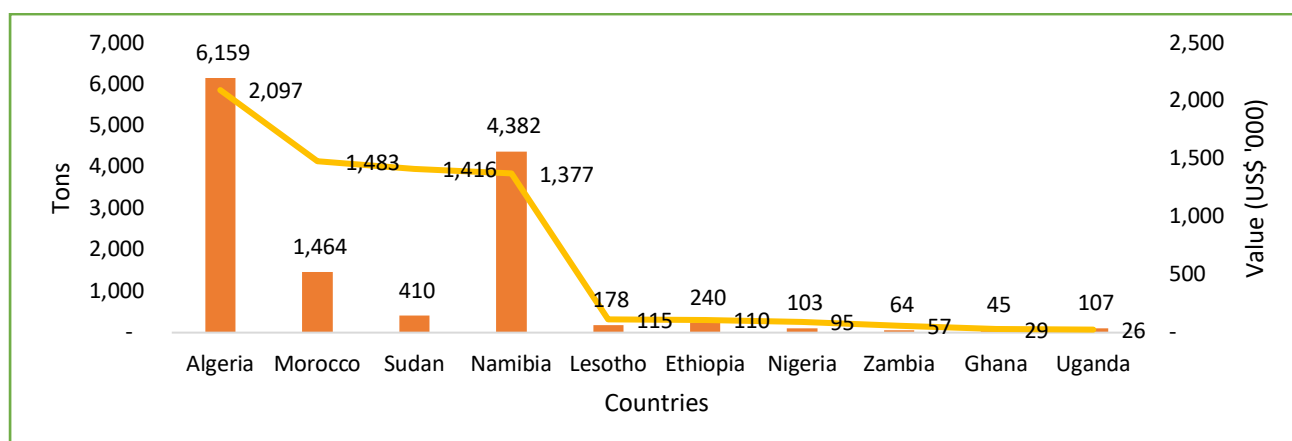


Figure 32: Africa's Top 10 wheat seed importers by value (2018 - 2022)
Source: ITC (2025) (Conversion date: 13.03.2025)

MILLET SEEDS: As illustrated in **Figure 33**, millet seed import volumes in Africa have shown significant fluctuations over the past five years. In 2018, imports stood at 17,200 tons, valued at US\$17.4 million (N\$312 million). This was followed by a sharp increase in 2019, with volumes reaching 49,981 tons, although the value declined slightly to US\$14.7 million (N\$264 million), possibly reflecting lower unit prices. In 2020, imports rose modestly to 53,168 tons, valued at US\$15.6 million (N\$281 million). The highest volume was recorded in 2021, with imports peaking at 87,050 tons and a corresponding value of US\$21.2 million (N\$382 million), suggesting a significant rise in demand.

However, import volumes slightly declined in 2022 to 74,628 tons, while the value continued to increase, reaching US\$23.9 million (N\$432 million), indicating higher import costs or premium seed varieties. Over the five years, the average annual millet seed import volume was approximately 67,205 tons, with an average value of US\$18.6 million (N\$334 million).

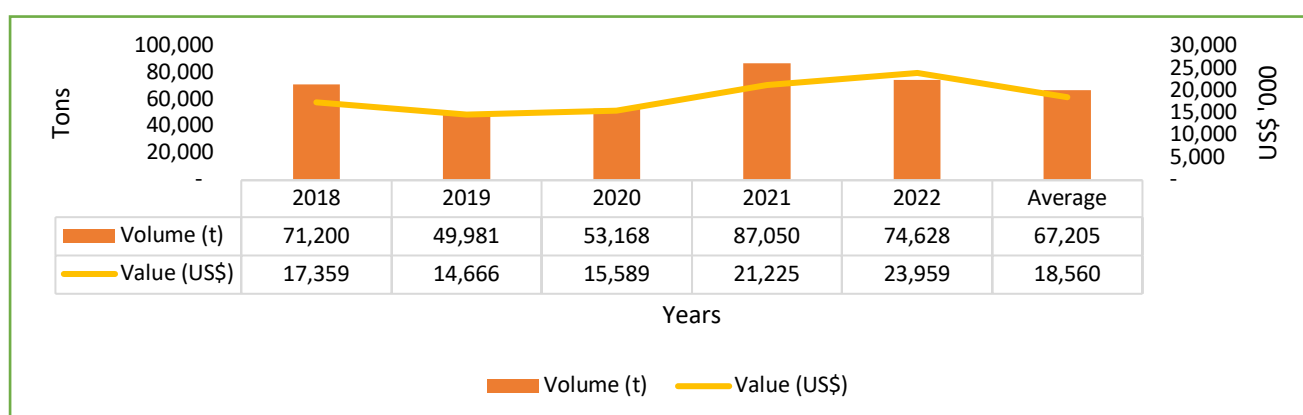


Figure 33: Millet seed import volumes and values in Africa (2018 - 2022)
Source: FAOSTAT (2025) (Conversion date: 13.03.2025)

Figure 34 ranks Kenya as the leading millet seed importer in Africa by value, with imports totalling US\$5.4 million (N\$97.8 million), underscoring the country’s substantial reliance on millet to meet domestic demand. South Africa follows with imports valued at US\$3.2 million (N\$57.5 million), reflecting its established millet production and processing sector. Morocco and Libya also recorded significant import values, at US\$2.4 million (N\$42.7 million) and US\$2.3 million (N\$42.3 million), respectively. Algeria rounds out the top five, with millet seed imports valued at US\$1.5 million (N\$26.9 million).

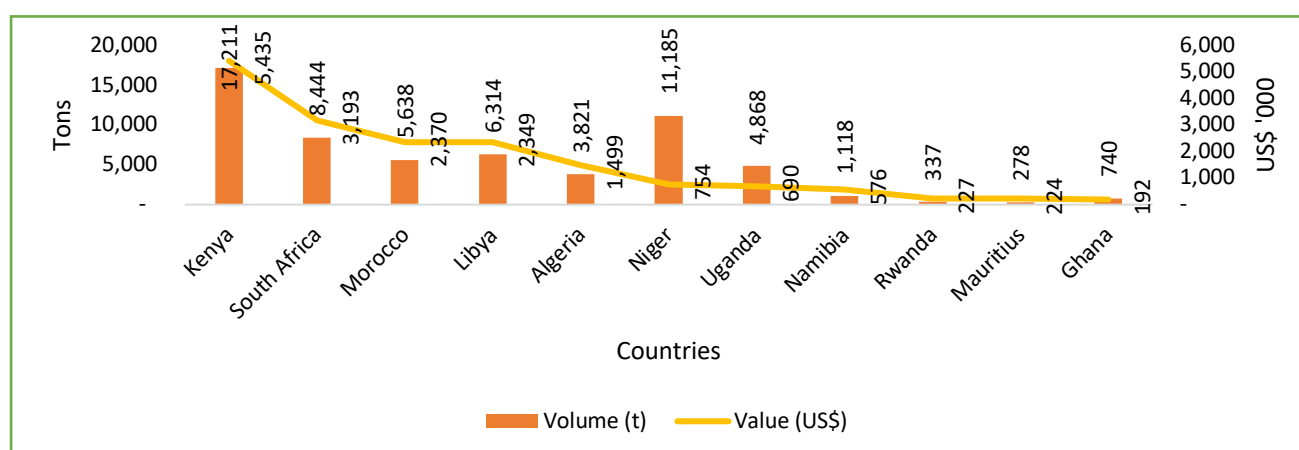


Figure 34: Africa’s top 10 millet importers by value (2018 - 2022)

Source: FAOSTAT (2025) (Conversion date: 13.03.2025)

EXPORTS

MAIZE SEEDS: **Figure 35** depicts that Africa exported an average of approximately 3.3 million tons of maize, valued at US\$871.5 million (N\$15.7 billion) for the past five years (2018-2022). Export volumes showed initial fluctuations, with a notable 46% decline in 2019 to 1.6 million tons valued at US\$428 million (N\$7.7 billion), compared to 3.1 million tons in 2018 valued at US\$660 million (N\$11.9 billion). However, exports rebounded significantly, peaking in 2022 at 4.2 million tons valued at US\$1.5 billion (N\$27 billion), reflecting a growing international demand for African maize seeds.

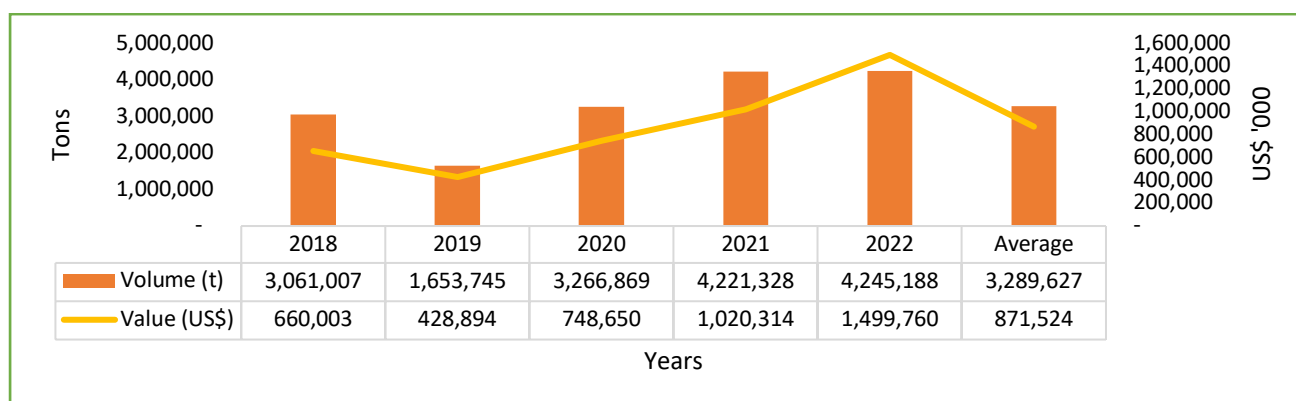


Figure 35: Maize seed export volumes and values in Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 13.03.2025)

South Africa remains the continent’s leading maize exporter, with exports valued at US\$664.6 million (N\$11.9 billion). A significant portion of this maize is exported to neighbouring countries, including Botswana, Eswatini, Mozambique, Namibia, and Zimbabwe. Other notable maize seed exporters in Africa include Zambia, Tanzania, and Uganda, all of which contribute to the continent's growing presence in regional and international markets (**Figure 36**).

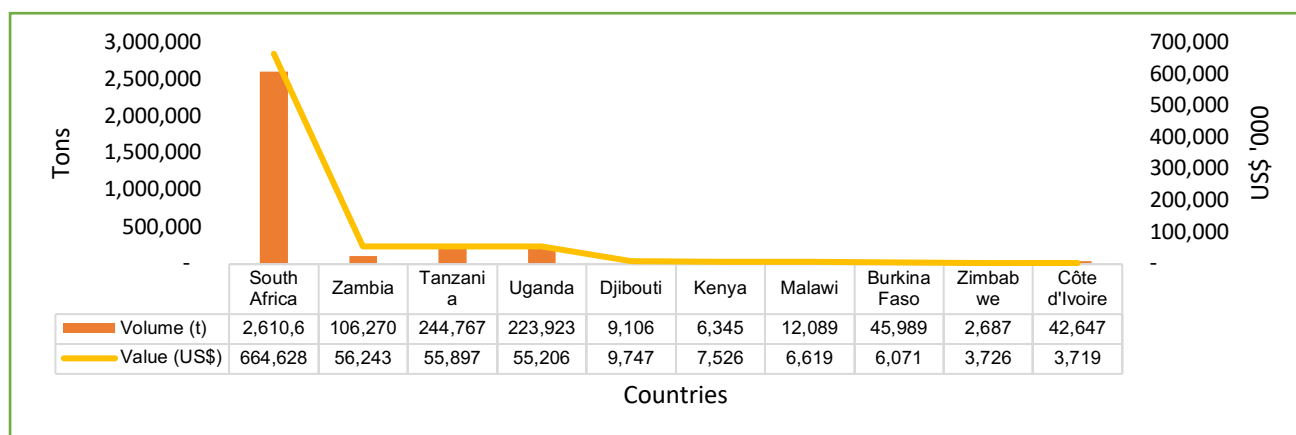


Figure 36: Africa’s top 10 maize seed exporters by value (2018 - 2022)

Source: ITC (2025)

WHEAT SEEDS: On average, Africa exported approximately 1,595 tons of maize annually over the five years, generating an average revenue of US\$1 million (N\$18.9 million). The export trend reflects an unstable market, influenced by various factors including fluctuating global demand and climate conditions that impact production (**Figure 37**).

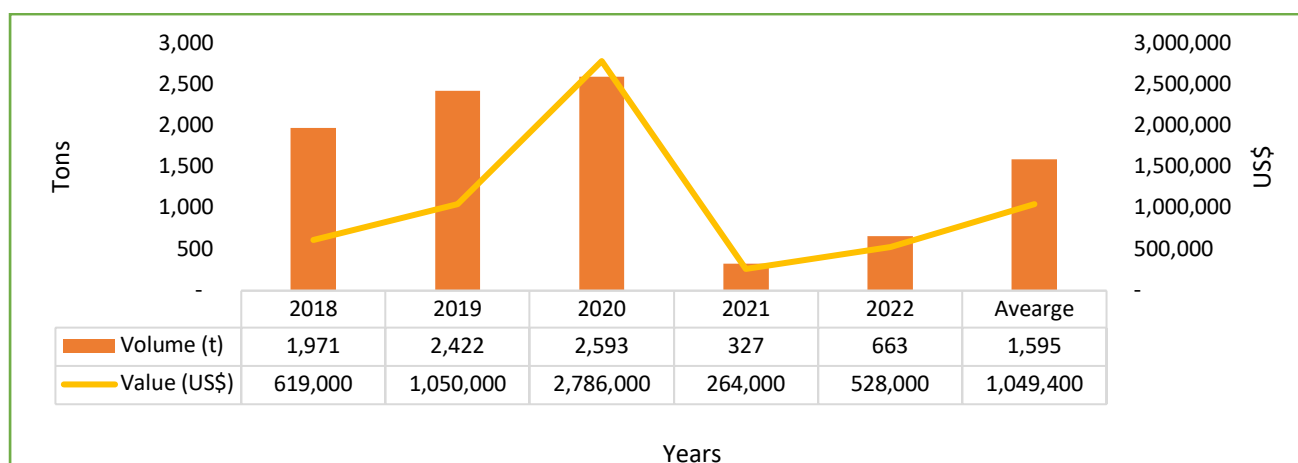


Figure 37: Wheat seed export volumes and values in Africa (2018 - 2022)

Source: ITC (2025)

Figure 38 shows that Zimbabwe leads in wheat seed exports by value, with earnings of US\$529,800 (N\$9.5 million). South Africa ranks second in value, despite recording the highest export volume at 882 tons. Tunisia follows with exports worth US\$36,000 (N\$643,107.60), while Ghana and Algeria spent US\$20,250 (N\$361,748.03) and US\$13,000 (N\$232,233.30), respectively.

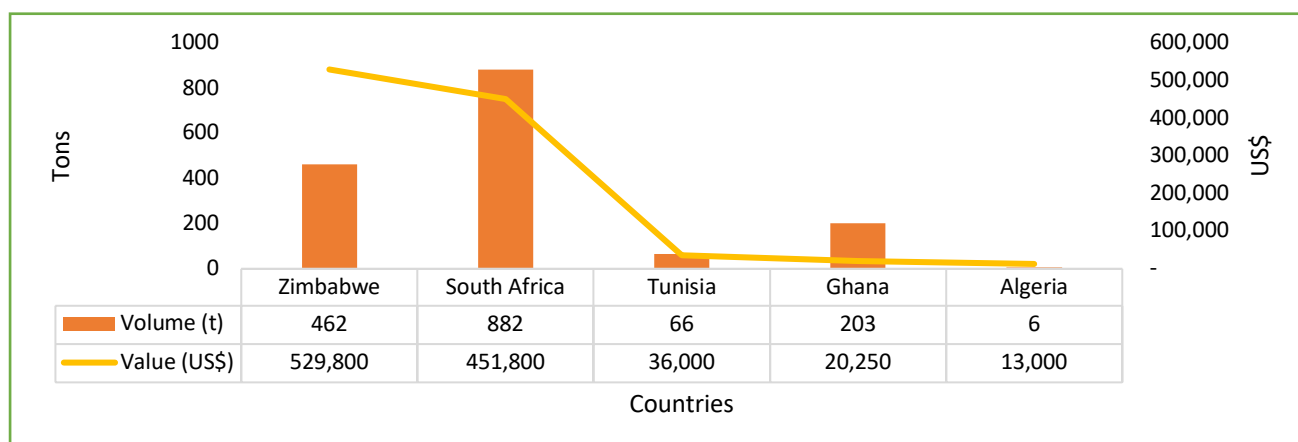


Figure 38: Africa's top 5 wheat seed exporters by value (2018 - 2022)

Source: ITC (2025) (Conversion date: 26.05.2025)

MILLET SEEDS: **Figure 39** illustrates that export volumes peaked in 2018 at 1,231,375 tons, showcasing strong demand for millet seeds. A sharp decline occurred in 2019 (790,995 tons) and continued into 2020 (664,066 tons), reflecting reduced production. A slight recovery in 2021 (947,654 tons) suggests improved conditions, but volumes dropped again in 2022 to 411,408 tons, indicating persistent challenges.

Export values followed a similar pattern, starting at US\$308,424 (N\$5.5 million) in 2018 and declining to US\$151,000 in 2019 and US\$99,606 in 2020. A modest increase in 2021 (US\$147,181/N\$2.6

million) and 2022 (US\$150,061/N\$2.6 million) suggests stabilisation in market prices despite lower export volume (**Figure 39**).

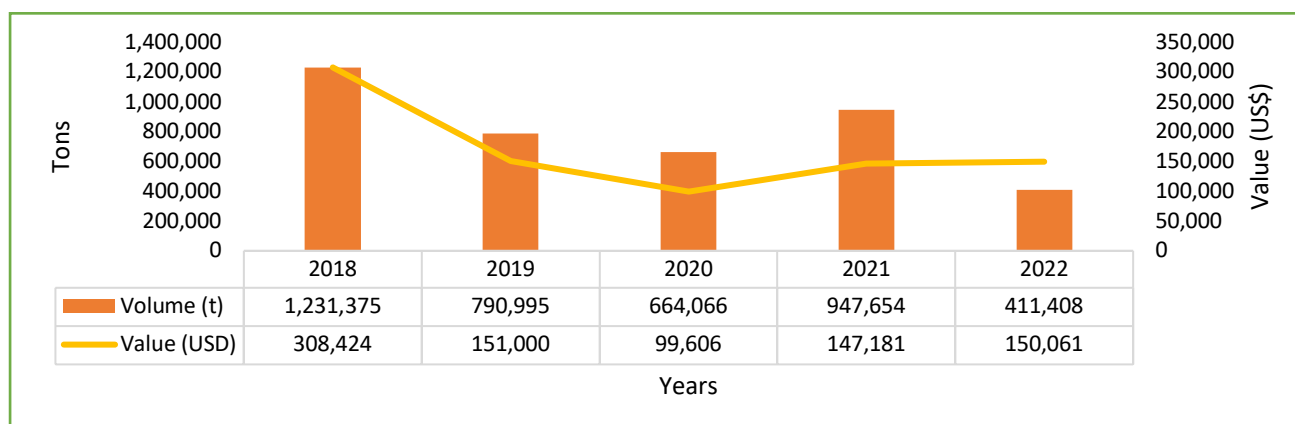


Figure 39: Millet seed export volumes and values in Africa (2018 - 2022)

Source: FAOSTAT (2025) (Conversion date: 26.05.2025)

Figure 40 shows Africa's top 10 millet seed exporters from 2018 to 2022. Uganda exported 6,748 tons of millet seed, valued at US\$1.9 million (N\$34.3 million), making it the largest exporter by value. However, Nigeria ranks the highest by volume (7,764 tons). In contrast, Zimbabwe recorded the lowest exports in both quantity and value.

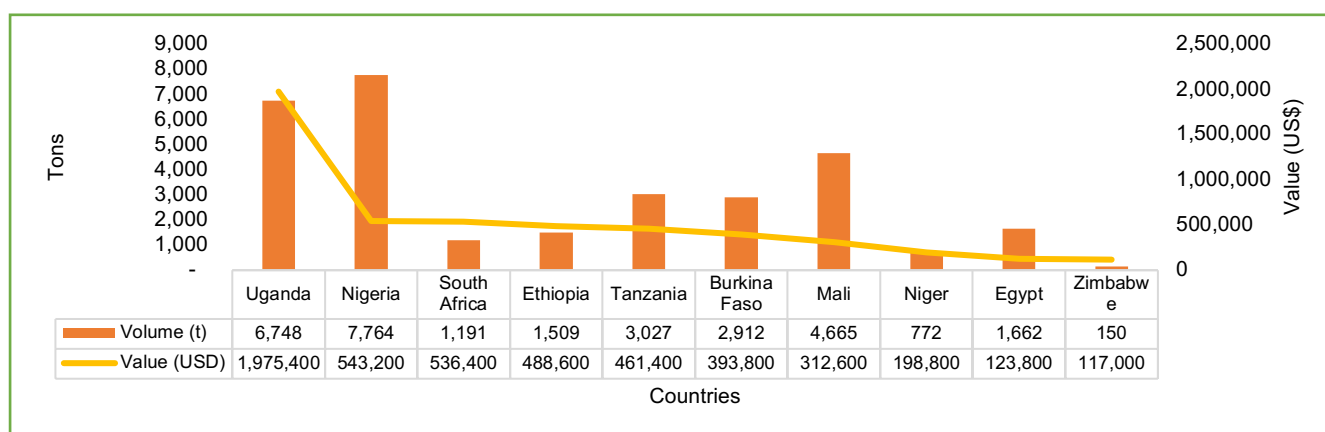


Figure 40: Top 10 millet seed exporting countries in Africa by value (2018 - 2022)

Source: FAOSTAT (2025) (Conversion date: 26.05.2025)

3.3 PRICES

Figure 41 suggests that wheat experienced the most instability, possibly due to global market influences, while maize and millet remained relatively stable. Factors such as climate conditions, trade policies, and shifts in demand likely contributed to these price movements.

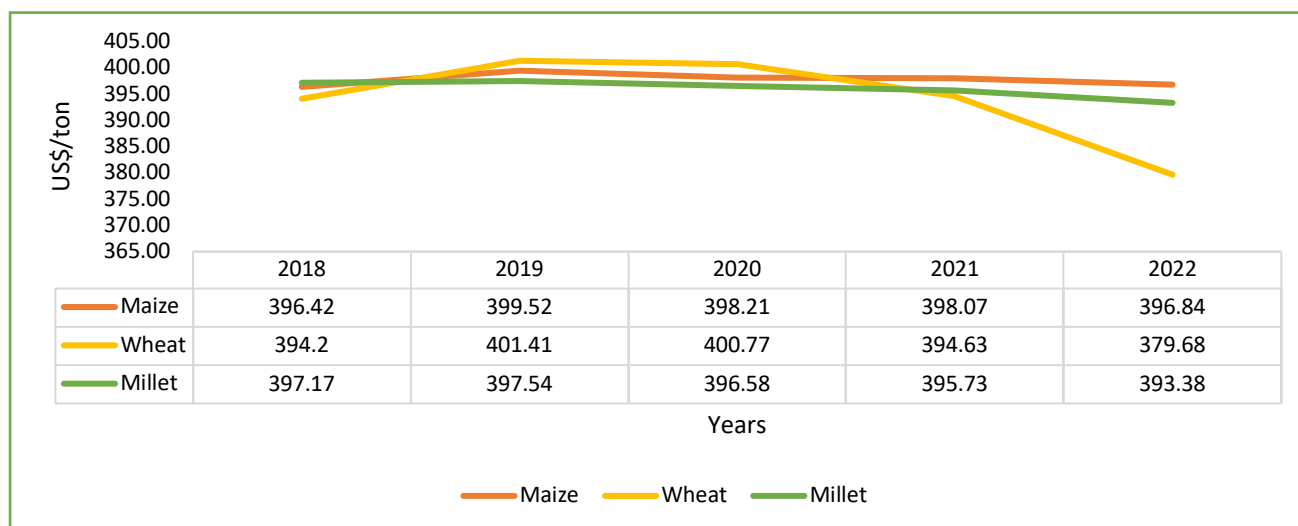


Figure 41: Global maize, wheat, and millet seed prices (US\$/t)

Source: FAOSTAT (2025)

4. SOUTHERN AFRICA PERSPECTIVE

4.1 PRODUCTION

MAIZE SEEDS: Maize remains a cornerstone of food security in Southern Africa, serving as the primary staple for millions and accounting for a significant portion of daily caloric intake across the region (Grant et al., 2012). As illustrated in **Figure 42**, over a recent five-year period (2018-2022), maize seed production in Southern Africa has averaged approximately 36.1 million tons annually, underscoring its critical role in both agricultural systems and diets.

The crop's predominance means that improvements in maize yields can substantially affect nutrition and food availability. However, maize production is highly sensitive to climatic conditions, which can vary significantly from one season to another (Grant et al., 2012). For instance, in 2019, the region produced about 30.4 million tons of maize seeds, a figure that drastically increased to approximately 42.3 million tons in 2021, reflecting the influence of favourable weather patterns and agricultural practices (**Figure 42**). These fluctuations highlight the importance of investing in climate-resilient farming techniques and infrastructure to stabilise maize production and enhance food security across Southern Africa.

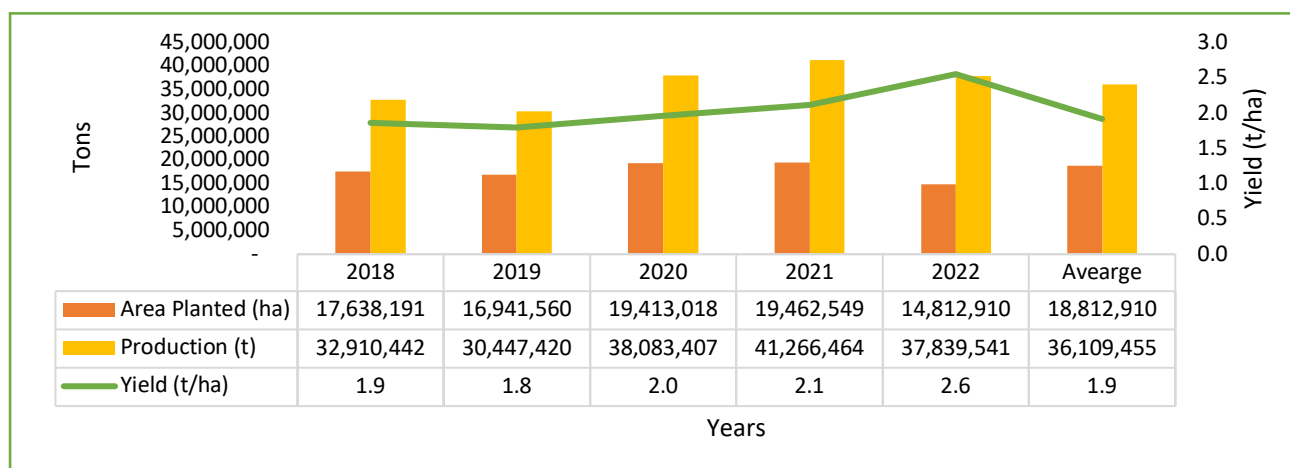


Figure 42: Maize seed production trends in Southern Africa (2018 - 2022)

Source: FAOSTAT (2025)

South Africa remains the largest maize seed producer in Southern Africa, averaging approximately 14.9 million tons annually between 2018 and 2022, cultivated over an average area of 2.9 million hectares (**Figure 43**). This substantial output underscores the country's pivotal role in regional food security and its capacity to meet both domestic and export demands (ADAMA, 2023). Following South Africa, Tanzania stands as the second-largest maize producer in the region. Between 2018 and 2022, Malawi's maize production averaged around 3.7 million tons annually. Notably, in 2021, the country

achieved a record harvest of 4.6 million tons. However, production levels have fluctuated due to challenges such as climate variability, pest infestations, and soil fertility issues. These figures highlight the significant role of maize in the agricultural economies of Southern African countries and the importance of sustainable farming practices to ensure consistent production levels.

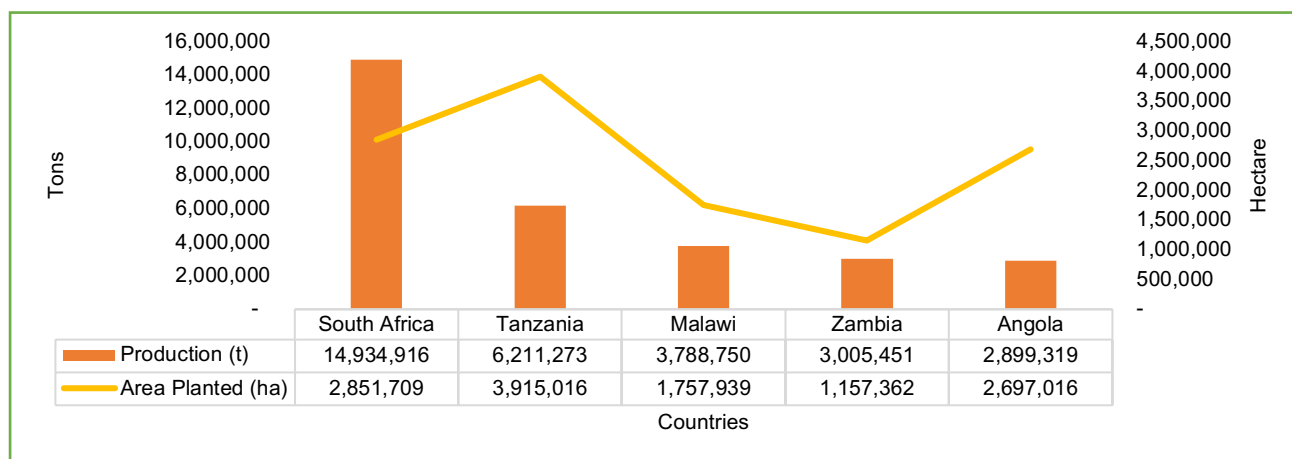


Figure 43: Top 5 maize seed producers in Southern Africa (2018 -2022)

Source: FAOSTAT (2025)

WHEAT SEEDS: Wheat seed production in Southern Africa has been increasing significantly. In 2022, wheat production reached 2.7 million tons on 757,474 hectares, with a five-year average yield of 2.5 million tons from 2018 to 2022, as illustrated in **Figure 44**.

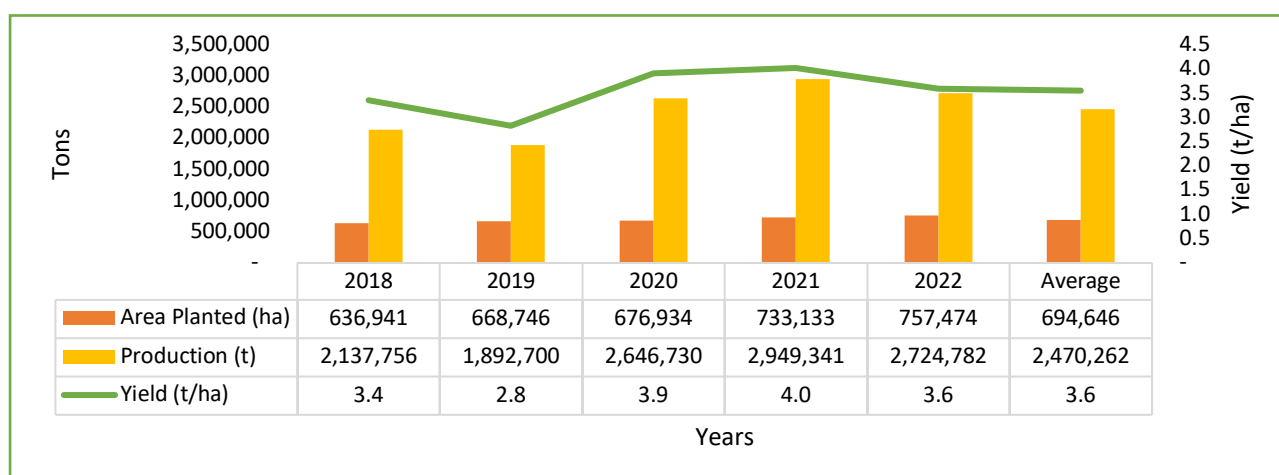


Figure 44: Wheat seed production trends in Southern Africa (2018 - 2022)

Source: FAOSTAT (2025)

Figure 45 illustrates that South Africa has been the leading wheat seed producer in Southern Africa over the past five years (2018-2022), with an average annual output of 1.9 million tonnes from

approximately 528,690 hectares. Zimbabwe ranks second, producing an average of 187,885 tonnes from 40,030 hectares.

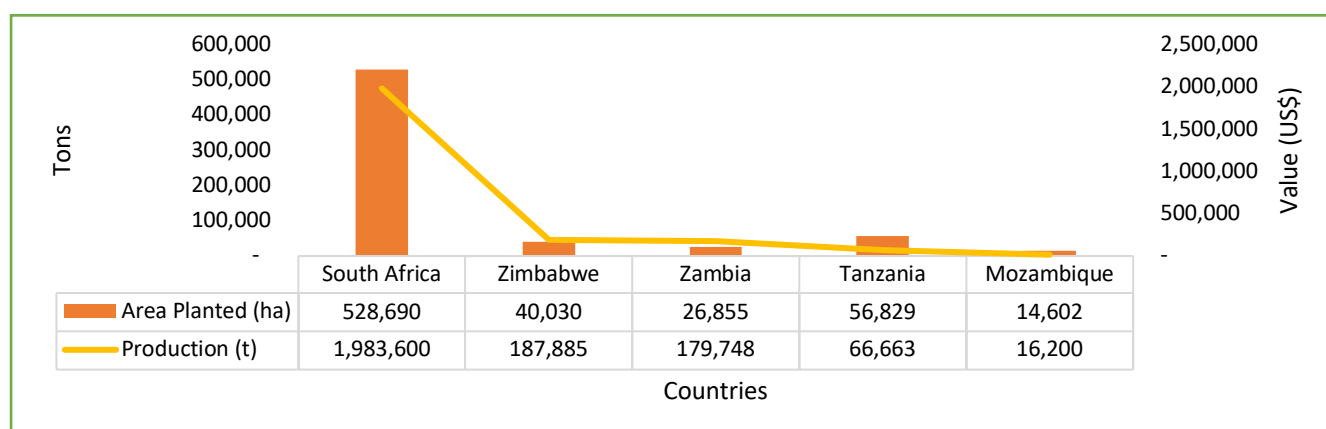


Figure 45: Top 5 wheat seed producers in Southern Africa (2018 -2022)

Source: FAOSTAT (2025)

MILLET SEEDS: The stability in pearl millet seed production, illustrated in **Figure 46**, highlights its role as a reliable and resilient crop in Southern Africa, despite external challenges. The peak production in 2020, with 683,922 tons harvested from 897,411 hectares, likely reflects a combination of favourable climatic conditions and improved agronomic practices. An average annual output of 635,358 tons over the 2018 – 2022 period underscores its consistent cultivation. Minor year-to-year fluctuations may be attributed to climate variability, shifts in farmer participation, or changes in agricultural policy and support mechanisms.

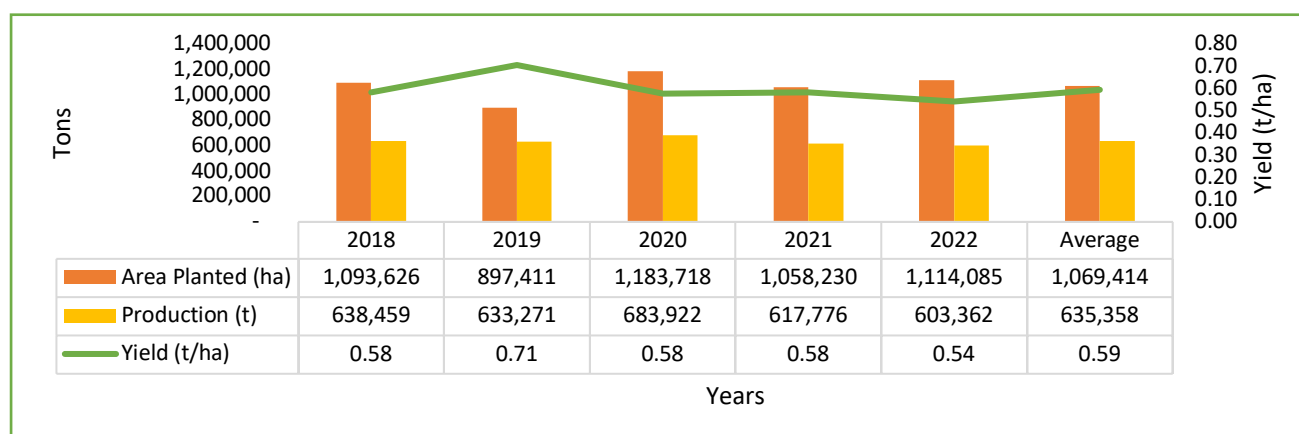


Figure 46: Millet seed production trends in Southern Africa (2018 - 2022)

Source: FAOSTAT (2025)

Figure 47 picks Tanzania as the leading producer of the Top 5 millet seed producers in Southern Africa, with an average annual output of 339,431 tons cultivated across 280,101 hectares. Namibia

follows, although with a substantially lower volume, highlighting Tanzania’s dominant contribution to the regional millet seed supply.

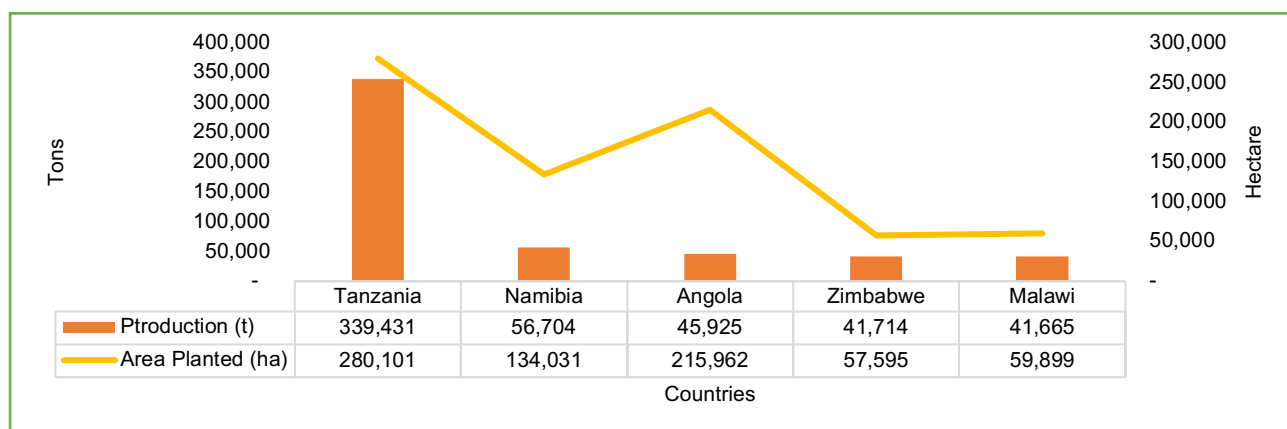


Figure 47: Top 5 Millet seed producers in Southern Africa (2018 -2022)

Source: FAOSTAT (2025)

4.2 TRADE (IMPORTS AND EXPORTS)

IMPORTS

MAIZE SEEDS: Figure 48 shows that in 2018, Southern Africa imported 52,387 tons of maize seed valued at US\$101 million (N\$1.8 billion). However, in 2019, the import value decreased to US\$78.1 million (N\$1.4 billion). This trend indicates annual fluctuations in maize seed imports, suggesting a gradual increase in domestic production capacity across the region.

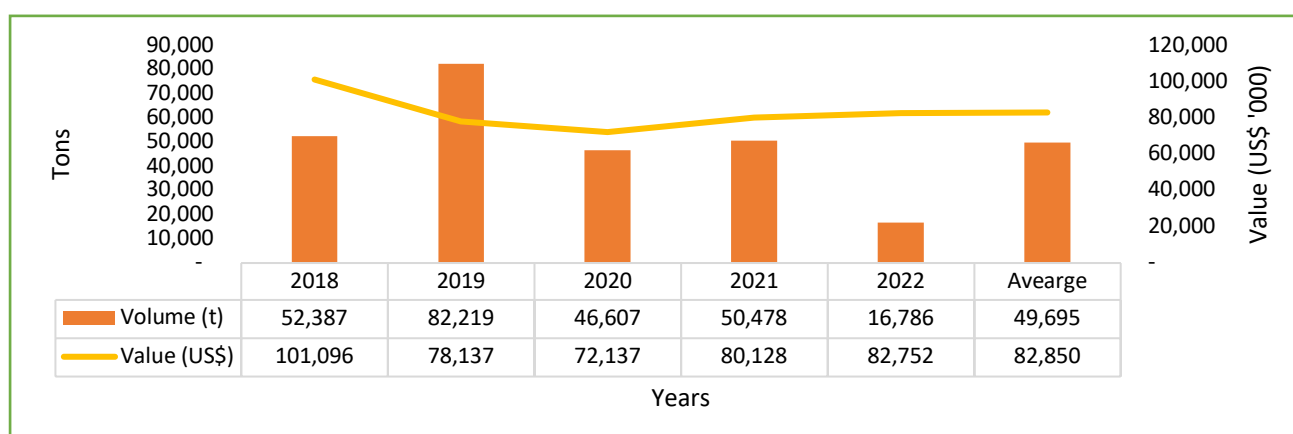


Figure 48: Maize seed import volumes and values in Southern Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 03.06.2025)

South Africa is the leading importer of maize seed by import value, primarily due to the strength of its currency (**Figure 49**). However, when considering import volumes, Tanzania emerges as the largest importer, accounting for 18,220 tons valued at US\$18.5 million (N\$332 million). In contrast, countries such as Zimbabwe, Zambia, Malawi, the Democratic Republic of Congo (DRC), and Eswatini contribute the least to the region’s maize seed production.

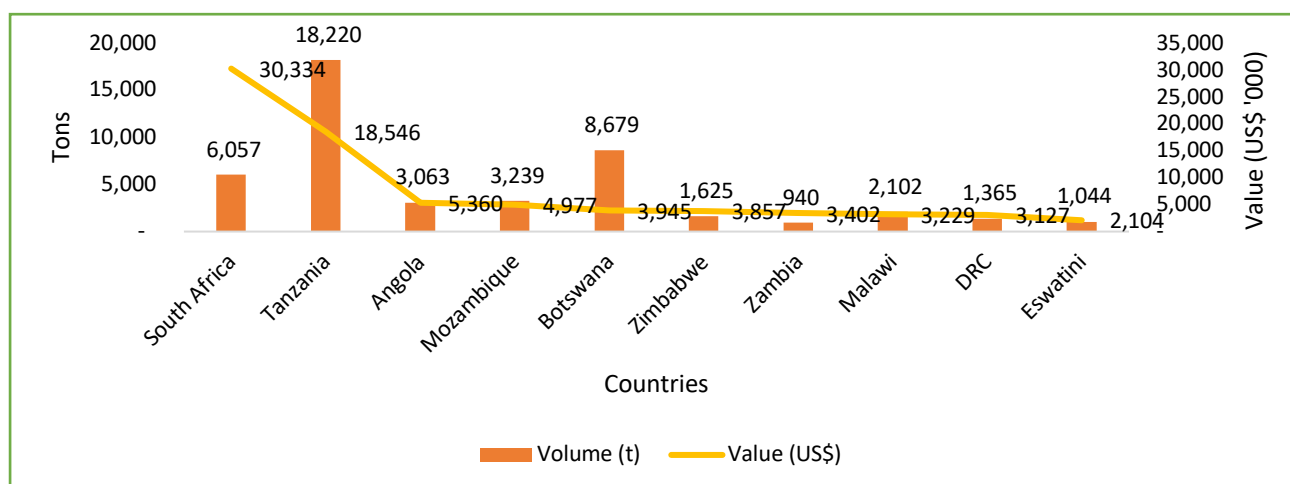


Figure 49: Top 10 maize seed importers in Southern Africa by import value (2018 - 2022)

Source: FAOSTAT (2025) (Conversion date: 03.06.2025)

WHEAT SEEDS: As depicted in **Figure 50**, Southern Africa is a net importer of wheat seeds, with average imports of 4,693 tons valued at US\$1.6 million (N\$28.5 million). In 2018, wheat seed imports peaked at 14,450 tons, valued at US\$3.5 million (N\$61.4 million). However, from 2019 to 2022, import volumes declined, indicating improved domestic wheat production across the region.

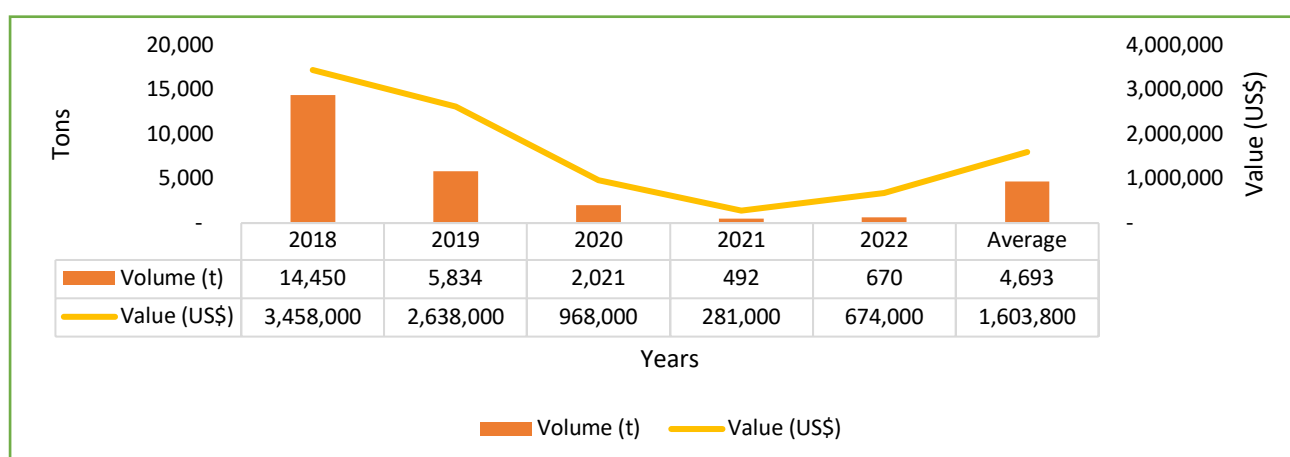


Figure 50: Wheat seed import volumes and values in Southern Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 03.06.2025)

Figure 51 identifies Namibia as the leading wheat seed importer within Southern Africa, accounting for 4,382 tons valued at approximately US\$1.4 million (N\$24.5 million). This indicates a continued reliance on external sources to meet domestic demand. Meanwhile, countries such as Lesotho, Zambia, Mauritius, and Seychelles contribute modest but meaningful volumes to the region’s wheat seed production, underscoring localised efforts to strengthen wheat seed supply systems and support for regional production capacity.

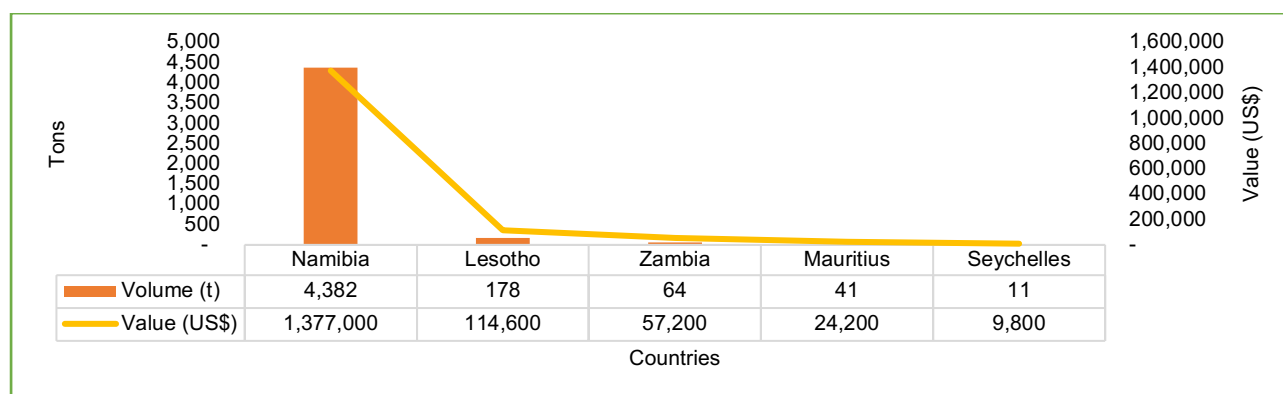


Figure 51: Top 5 wheat seed importers in Southern Africa by import value (2018 - 2022)
Source: ITC (2025)

MILLET SEEDS: **Figure 52** illustrates the import volumes (in tons) and values (in US dollars) of millet seed into Southern Africa from 2018 to 2022. Over these five years, the region imported an average of 10,076 tons of millet seed annually, valued at approximately US\$3.8 million (equivalent to N\$68 million). The highest volume of seed imports was recorded in 2019, of 11,502 tons valued at US\$4.8 million (equivalent to N\$69 million).

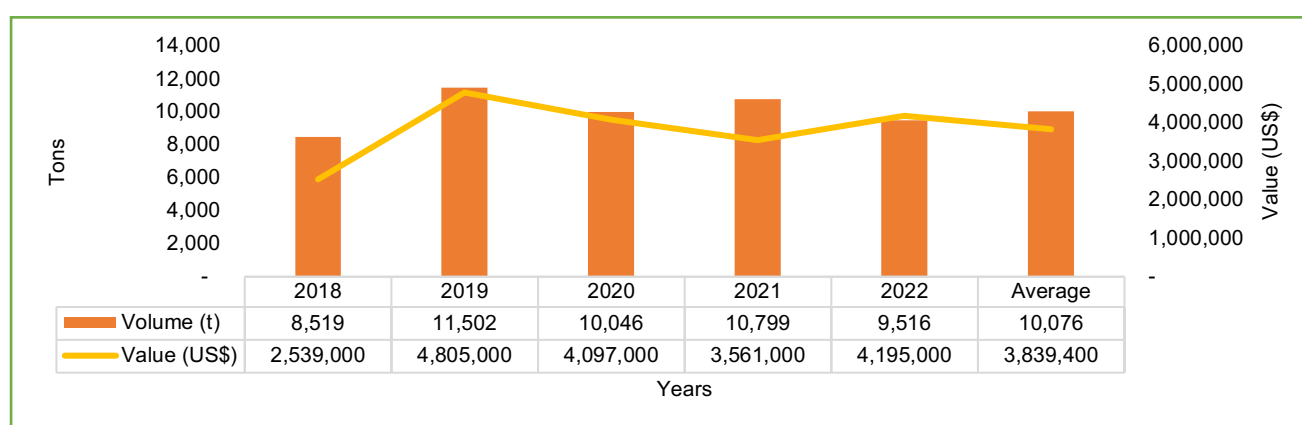


Figure 52: Millet seed import volumes and values in Southern Africa (2018-2022)
Source: FAOSTAT (2025) (**Conversion date:** 05.06.2025)

Figure 53 shows the Top 5 millet seed importers in Southern Africa by import volume (tons) and value (US\$) from 2018 to 2022. South Africa emerged as the largest importer of millet seed, accounting for

an import value of US\$3.2 million (equivalent to N\$56.6 million), followed by Namibia with imports valued at US\$576,400 (N\$10.2 million).

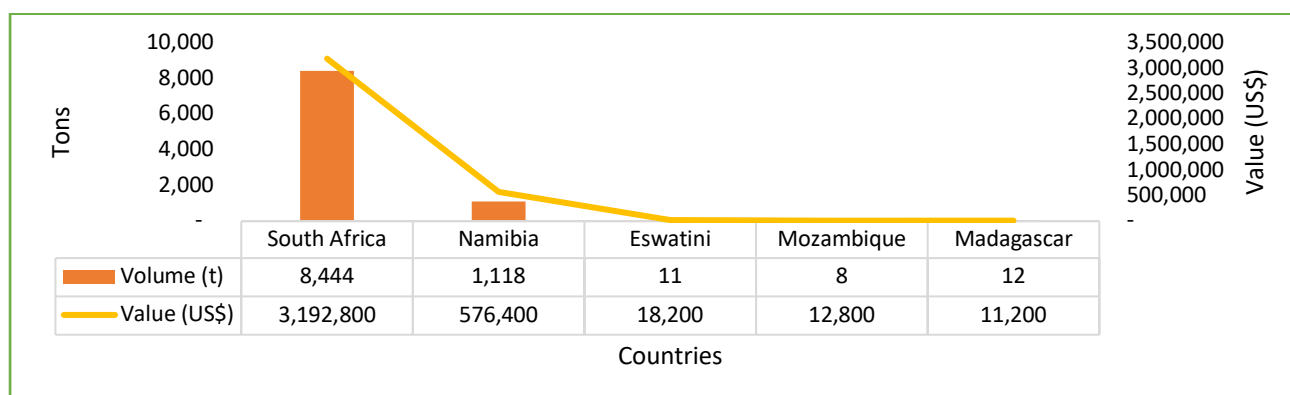


Figure 53: Top 5 millet seed importers in Southern Africa by volume and value (2018 - 2022)

Source: FAOSTAT (2025)

EXPORT

MAIZE SEEDS: Figure 54 shows that demand for maize seeds in Southern Africa is gradually increasing. Over five years (2018-2022), an average of 2.9 million tons of maize seed was exported, with a total export value of approximately US\$790.1 million (equivalent to N\$14 billion). In 2019, Southern Africa experienced a decline in export volumes, which could be attributed to reduced production due to adverse climatic conditions, such as droughts, or to increased domestic demand that limited export availability.

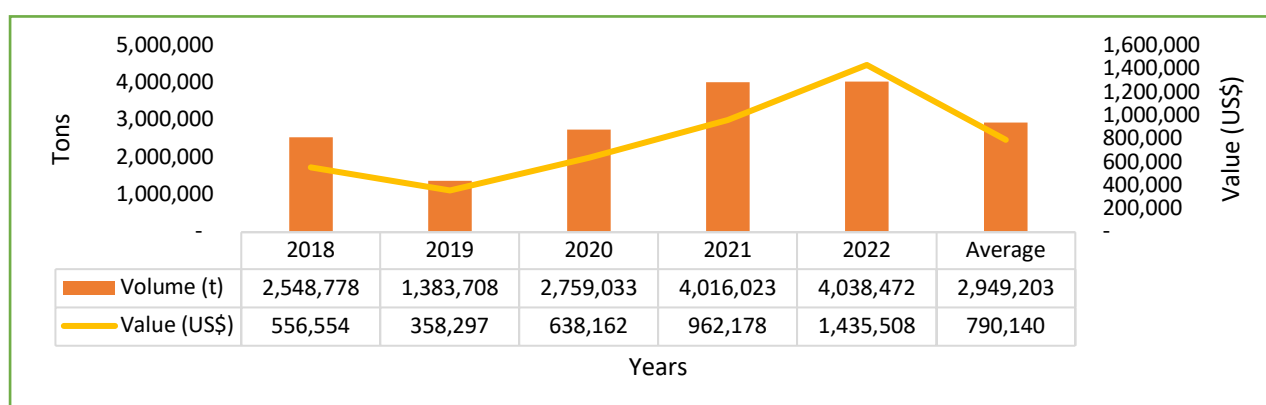


Figure 54: Maize seed export volumes and values in Southern Africa (2018 - 2022)

Source: ITC (2025) (Conversion date: 06.06.2025)

As illustrated in Figure 55, South Africa remains a net exporter of maize seeds, with exports from 2018 to 2022 totalling 2.6 million tons, valued at US\$664.6 million (N\$11 billion). The country primarily exports maize seed to Mozambique and other neighbouring countries (ADAMA, 2023). Zambia ranks

second, exporting 106,270 tons valued at US\$56.2 million (N\$999.4 million), with the Democratic Republic of the Congo (DRC) a key export destination (Kuhlmann et al., 2019).

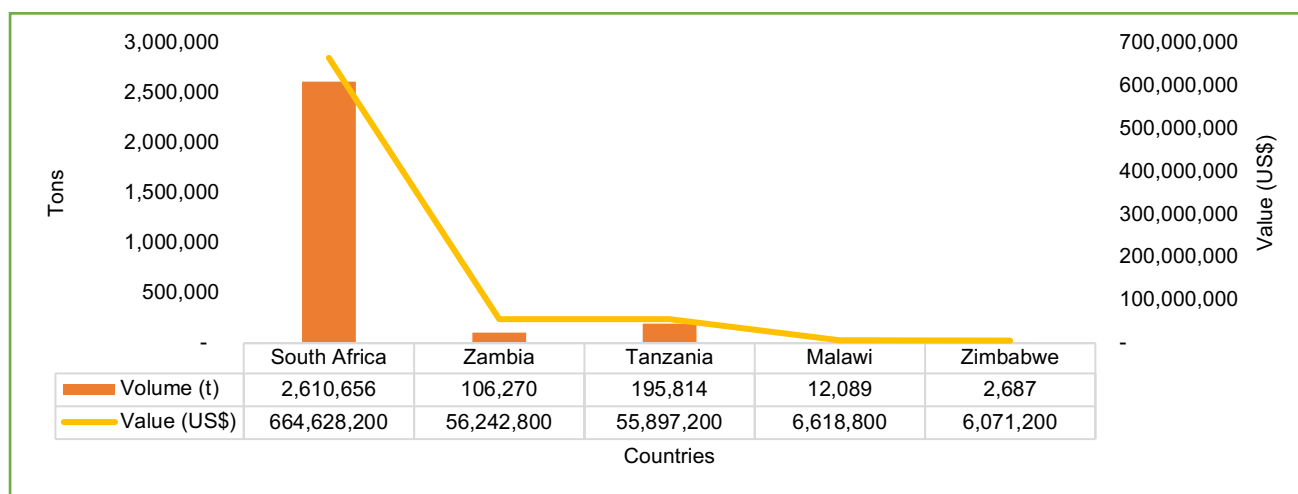


Figure 55: Top 5 maize seed exporters in Southern Africa by Export Value. (2018 -2022)
Source: ITC (2025) (Conversion date: 06.06.2025)

WHEAT SEEDS: In 2019, wheat seed exports in Southern Africa grew by 63% to 2,421 tons, marking a strong rebound in trade (**Figure 56**). The highest growth was experienced in 2020, but volumes remained relatively flat since 2021. That year, export value dropped sharply to US\$203 (N\$3,652.38), likely due to supply disruptions or reduced demand. A recovery followed in 2022, signalling renewed trade interest and potential for growth, provided production and regulatory support improve.

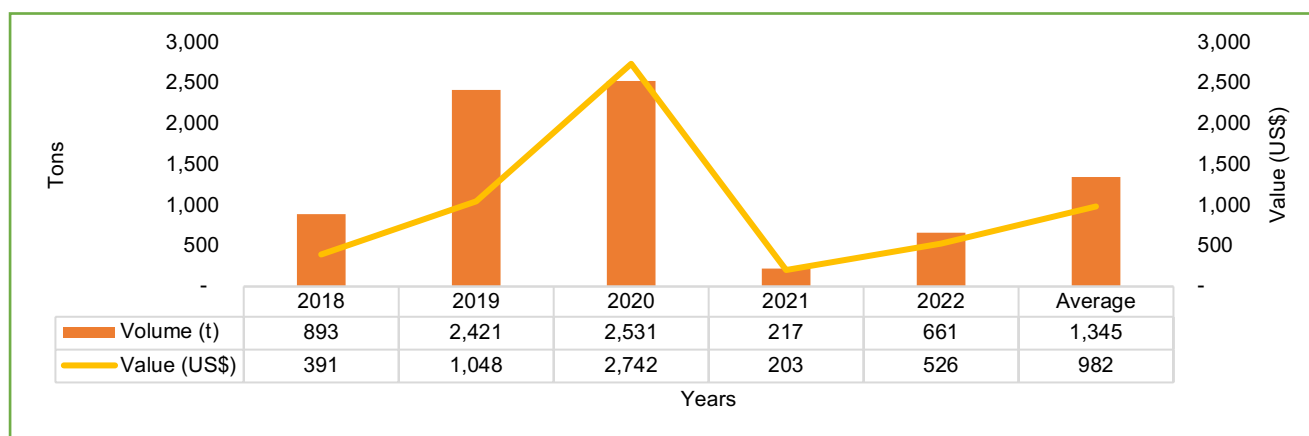


Figure 56: Wheat seed export volumes and values in Southern Africa (2018 - 2022)
Source: ITC (2025) (Conversion date: 18.06.2025)

As shown in **Figure 57**, Zimbabwe leads in wheat seed export value (US\$529,800/N\$9.5 million), while South Africa tops in export volume (882 tons). Zimbabwe's higher unit price may reflect better

seed quality, niche markets, or favourable trade terms. In contrast, South Africa’s larger volumes suggest scale advantages (economies of scale), though likely at lower prices due to market dynamics.

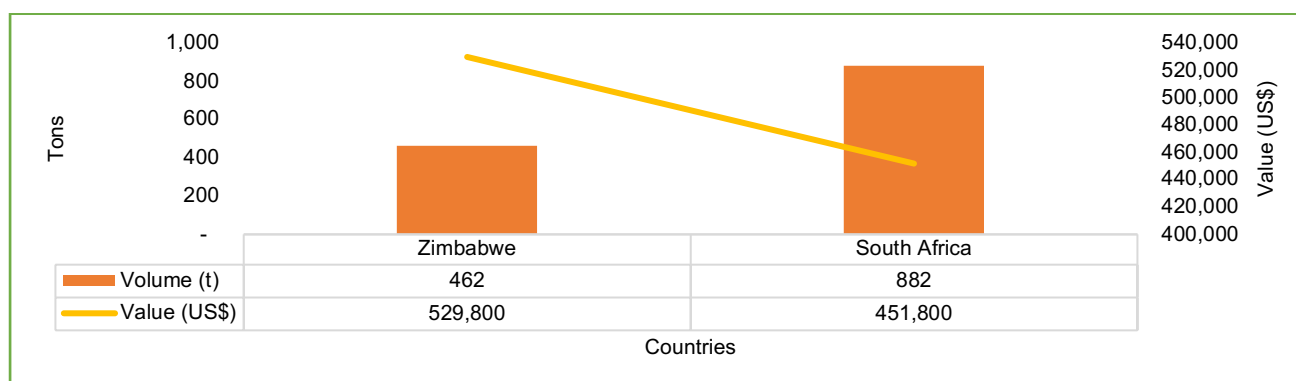


Figure 57: Top Wheat exporters in Southern Africa by export value (2018 -2022)
Source: ITC (2025) (Conversion date: 18.06.2025)

MILLET SEEDS: Millet seed exports in Southern Africa rose steadily over the past five years (2018 – 2022), with volumes peaking at 7,080 tons in 2021 before a slight dip in 2022 (**Figure 58**). Export values mirror this trend, averaging US\$1.26 million (N\$22.7 million) annually. This suggests market expansion or an increase in millet seed demand.

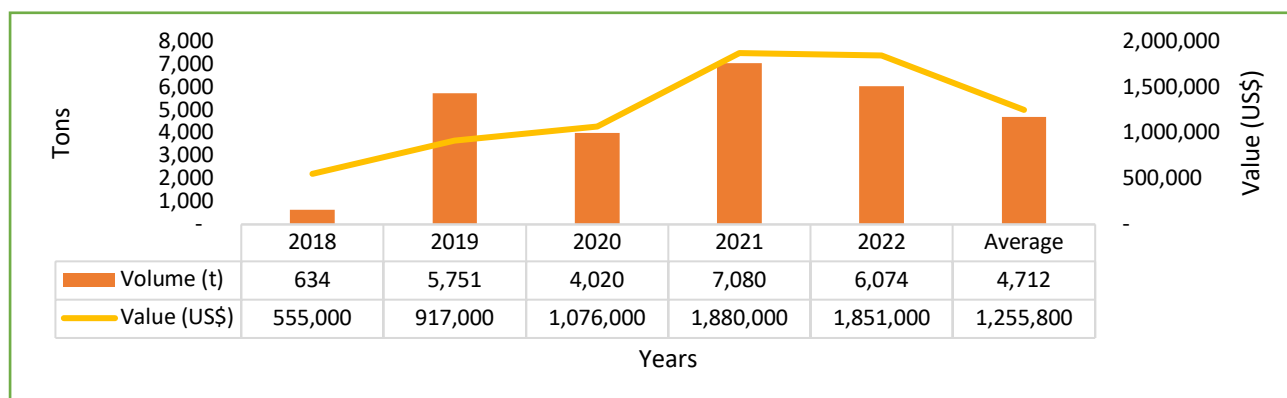


Figure 58: Millet seed export volumes and values in Southern Africa (2018 -2022)
Source: FAOSTAT (2025) (Conversion date: 19.06.2025)

In export value terms, South Africa leads with US\$536,400 (N\$9.7 million), followed by Tanzania at US\$75,000 (N\$1.4 million) less. While Zambia’s contribution is smaller, it remains a notable player in the SADC millet seed export market (**Figure 59**).

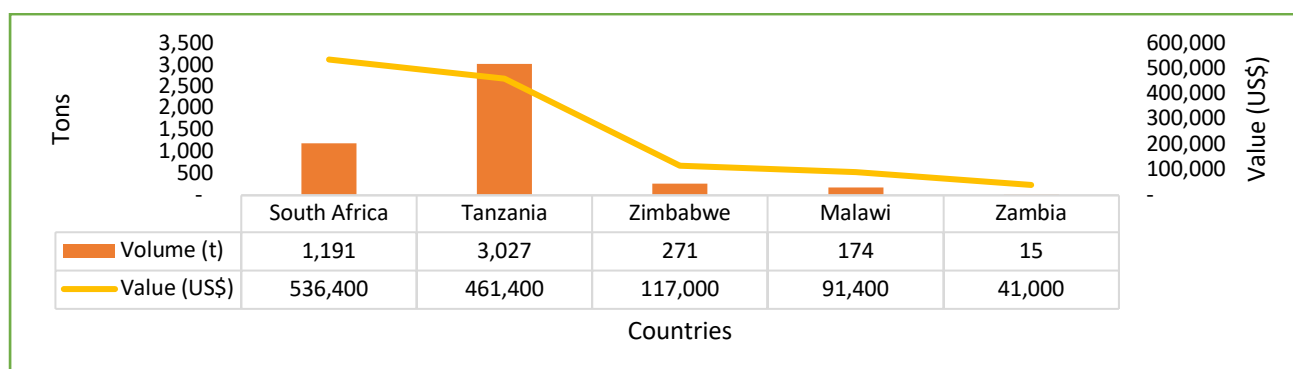


Figure 59: Top Millet exporters in Southern Africa by export value (2018 -2022)
Source: FAOSTAT (2025) (Conversion date: 19.06.2025)

4.3 PRICES

Figure 60 shows maize, wheat, and pearl millet seed prices (US\$/t) in Southern Africa from 2018 to 2022. From 2018 to 2022, wheat seed recorded the highest average price in Southern Africa at US\$1,572 (N\$28,384.03) per ton, peaking in 2021 at US\$2,406 (N\$43,442.74) per ton. Maize seed prices were more volatile, dropping sharply to US\$406 (N\$7,330.74) per ton in 2019 before recovering to an average of US\$1,134 (N\$20,475.50) per ton. Pearl millet prices showed the greatest stability, averaging US\$939 (N\$16,954.58) per ton, with a modest increase after 2020. The significant dip in 2019 across all three crops points to a region-wide market disruption, followed by a steady upward trend through 2022.

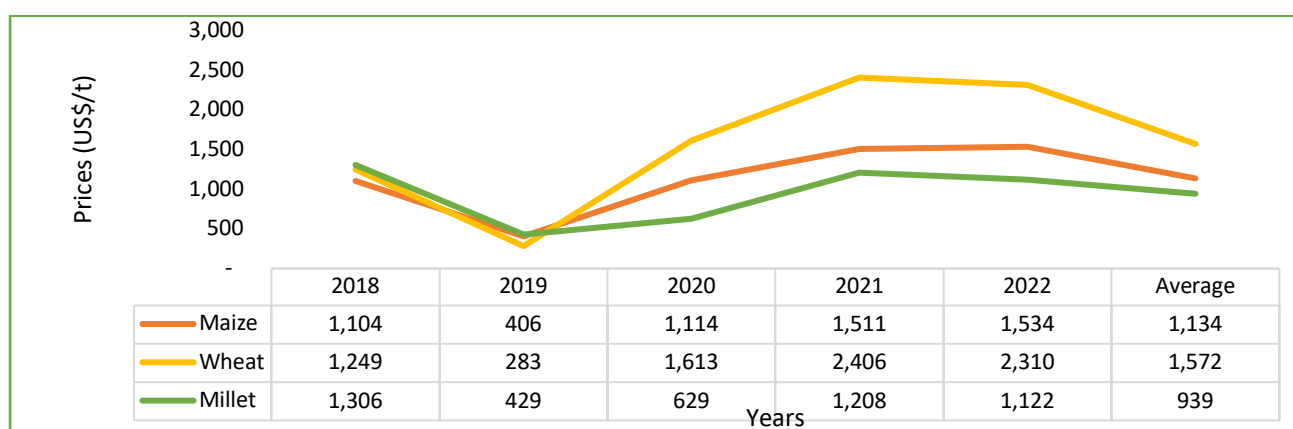


Figure 60: Maize, wheat, and millet seed prices (US\$/t) in Southern Africa
Source: FAOSTAT (2025) (Conversion date: 06.06.2025)

5. DOMESTIC PERSPECTIVE

5.1 PRODUCTION

The Subdivision of Crop Research within the Ministry of Agriculture, Fisheries, Water, and Land Reform (MAFWLR) plays a vital role in seed quality control and certification, overseeing seed production at research stations, green schemes, and seed growers' fields. Despite these efforts, seed cooperatives continue to face significant challenges in meeting national demand (MAFWLR, 2025).

Seed growers are engaged through the Namibia Agricultural Mechanisation and Seed System Improvement Project (NAMSIP), implemented by the MAFWLR, and the Northern Namibia Farmers Seed Growers' Cooperative (NNFSGC). These growers are situated across the Central, Karst, Kavango, North Central, and Zambezi production zones, with the North Central region leading seed production through over 200 growers. In addition to private growers, the MAFWLR also produces foundation and certified seed at several crop research stations, including Bagani, Kalimbeza/Liselo, Mannheim, Okashana, and Omahenene. These combined efforts have led to slight improvements in national seed production (MAFWLR, 2025).

However, challenges persist. As illustrated in **Figure 61**, maize seed production remains significantly low, averaging only 8.2 tons annually, with the 2021/22 financial year recording the highest output. In contrast, pearl millet seed production averages 671 tons. These disparities underscore the underdeveloped state of Namibia's seed industry and highlight the urgent need for strengthened seed production strategies to enhance national food security and promote sustainable agricultural development.

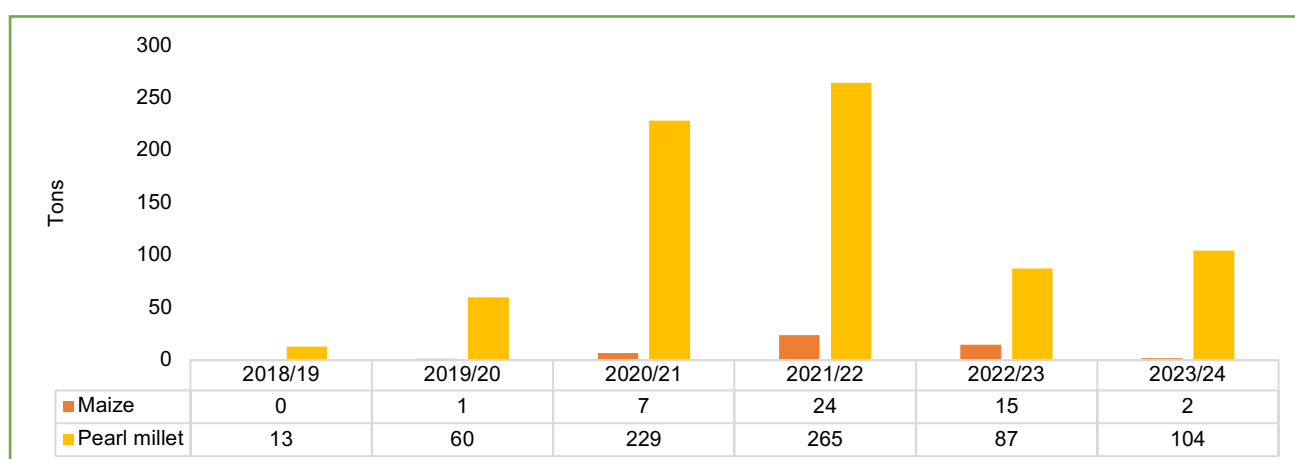


Figure 61: Maize and Pearl millet seed production in Namibia (2018 - 2022)

Source: MAFWLR (2025)

5.2 TRADE (IMPORTS AND EXPORTS)

IMPORTS:

MAIZE SEEDS: According to the International Trade Centre (ITC) (2025), as shown in **Figure 62**, Namibia imported an annual average of 446 tons of maize seed, valued at approximately US\$2 million (N\$35.7 million). The highest import volume was recorded in 2020, likely due to the severe drought in 2019, which significantly affected local seed production and availability.

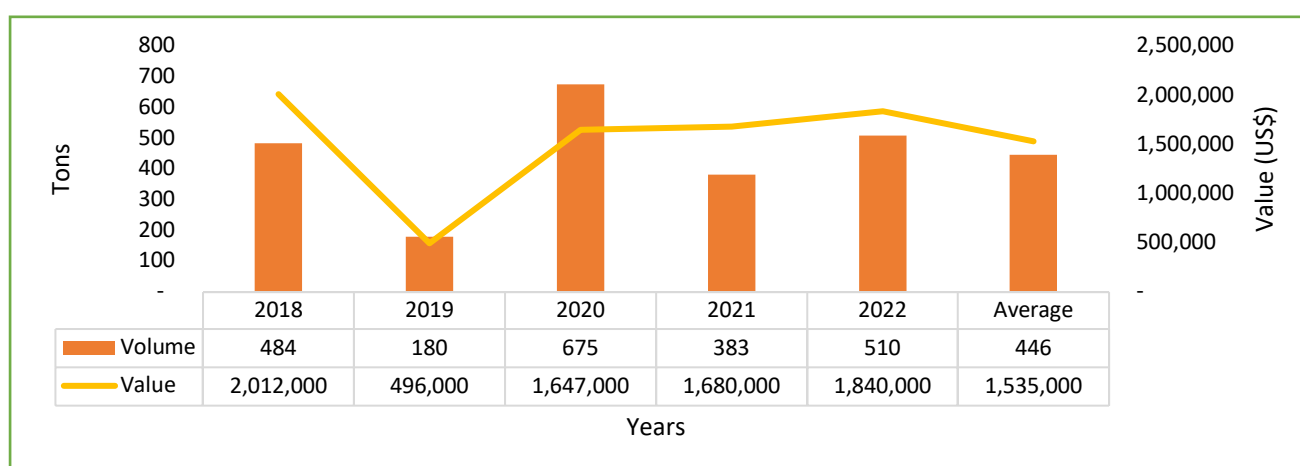


Figure 62: Maize seed import volumes and values in Namibia (2018 -2022)

Source: ITC (2025) (Conversion date: 25.06.2025)

WHEAT SEEDS: **Figure 63** depicts wheat seed import volumes and values in Namibia from 2020 to 2022. During that period, Namibia imported an annual average of 123 tons of wheat seeds, valued at approximately US\$3,299 (N\$58,484.67). In 2021, the import volume and value were 233 tons and US\$7,922, respectively, the highest recorded.

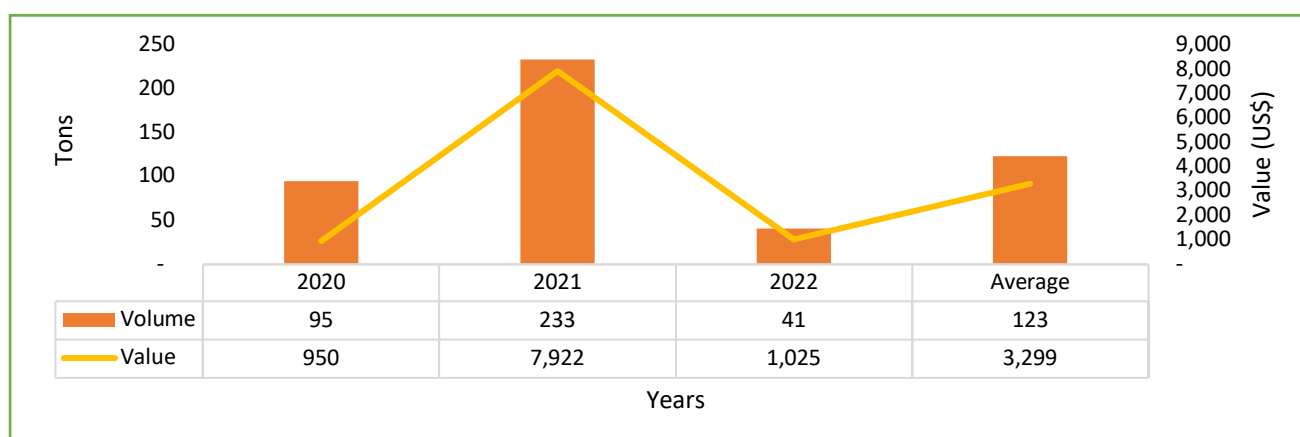


Figure 63: Wheat seed import volumes and values in Namibia (2020 -2022)

Source: ITC (2025) (Conversion date: 25.06.2025)

PEARL MILLET SEEDS: The highest import volume (2,273 tons) was recorded in 2019, likely due to the severe drought experienced that year, which reduced local production. However, import volumes have gradually declined, recording the lowest (30 tons) in 2022 (**Figure 64**).

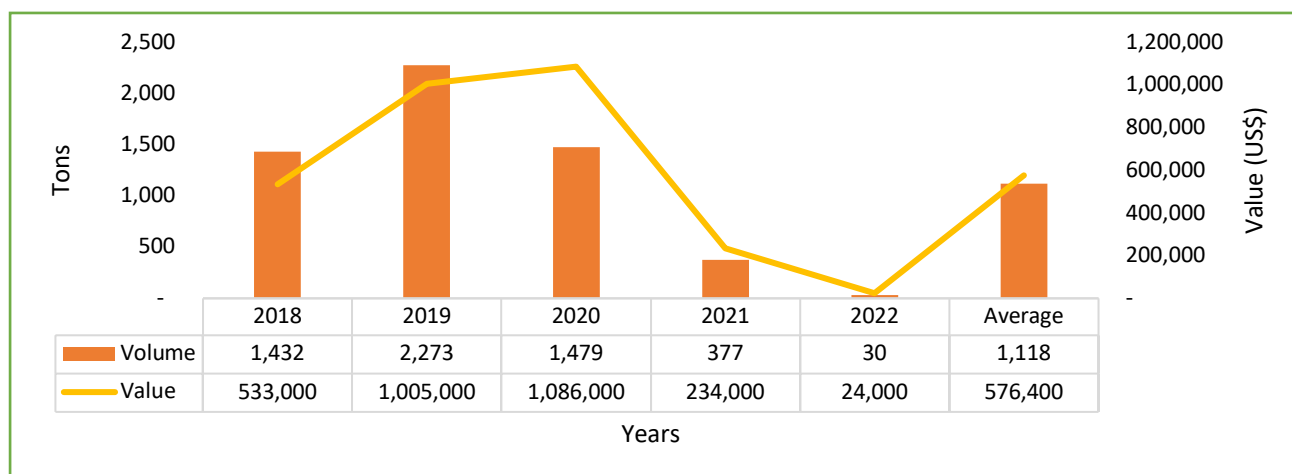


Figure 64: Pearl millet seed import volumes and values in Namibia (2018 -2022)

Source: FAOSTAT (2025)

EXPORT: Namibia’s grain seed export market is still in its infancy; therefore, the data presented in **Figures 65 and 66** carry limited significance in evaluating overall export performance. The country currently lacks a well-established grain seed export system due to limited certified seed production capacity and low volumes. Most local seed producers focus on meeting domestic demand, which already exceeds local supply, resulting in a continued reliance on imports for certain crop varieties.

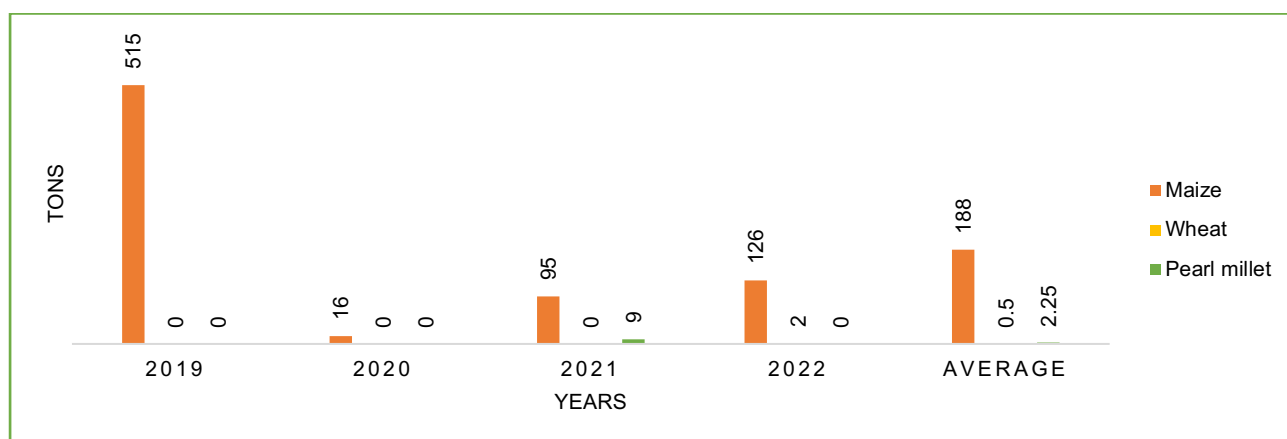


Figure 65: Grain seed export volumes

Source: ITC (2015)

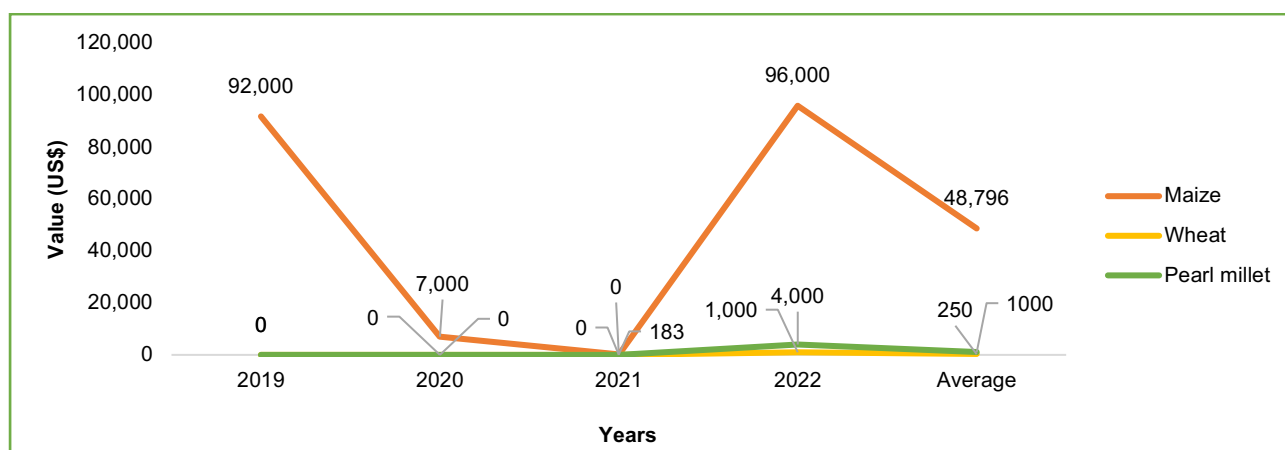


Figure 66: Grain seed export by value

Source: ITC (2025)

5.3 PRICES

The Ministry of Agriculture, Fisheries, Water, and Land Reform (MAFWLR) collaborates with strategic partners such as the Northern Namibia Farmers Seed Growers Cooperative (NNFSGC) to enhance seed availability and promote agricultural productivity. As part of this partnership, the MAFWLR supplies foundation seed at subsidised prices, which the cooperative then cleans, grades, and packages. These improved seeds are then made available to farmers for use in grain production, supporting efforts to improve crop quality, yields, and overall food security in Namibia. **Figure 67** presents the prices of white maize and pearl millet seeds per kilogram (N\$/kg) from 2018 to 2022. Seed prices remained constant at N\$10.20/kg (N\$0.0102/ton) from 2018 to 2021. However, in 2022, the MAFWLR significantly increased the prices to N\$13.40/kg (N\$0.0134/ton), possibly due to rising production costs and demand.

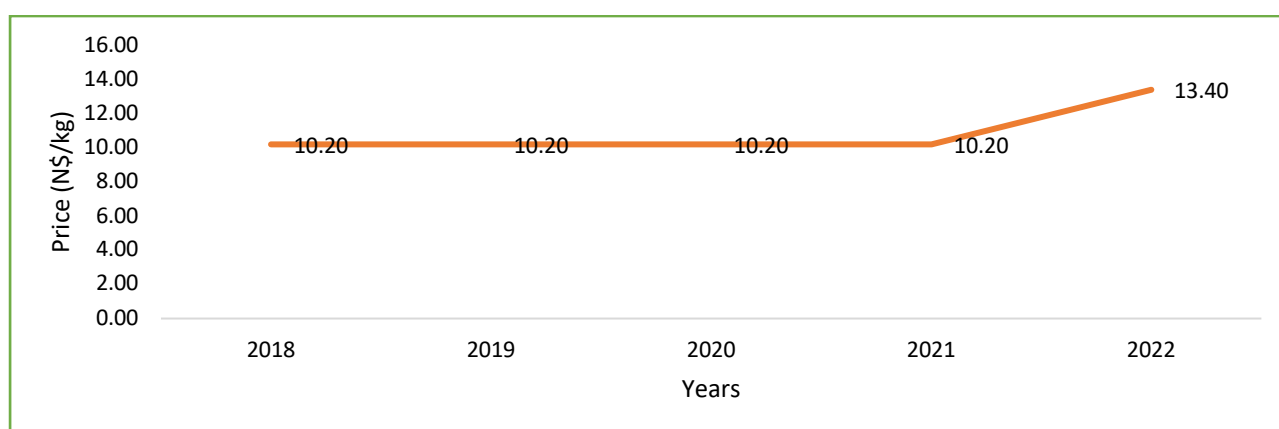


Figure 67: Maize and pearl millet seed prices (N\$/kg) in Namibia

Source: NNFSGC (2025)

6. KEY POTENTIALS TO UNLOCK GROWTH IN GRAIN SEED PRODUCTION AND MARKET

Namibia holds immense untapped potential to expand its grain seed production and market, paving the way for greater food security, improved rural livelihoods, and sustainable economic growth. To realise this potential, the Ministry of Agriculture, Fisheries, Water, and Land Reform (MAFWLR) should focus on its regulatory functions, seed policy development, quality assurance, certification, and oversight of the national seed sector.

Meanwhile, the private sector should drive seed breeding, genetic improvement, commercialisation, and distribution, fostering innovation, efficiency, and market competitiveness. Transitioning the Ministry away from direct seed multiplication and distribution will create space for a more dynamic, business-driven seed industry. Additionally, more individual farmers and entities should be encouraged to participate in seed multiplication initiatives under the Namibia Agricultural Mechanisation and Seed Improvement Project (NAMSIP).

Green schemes across the country should be strategically utilised for off-season seed multiplication, ensuring a continuous seed supply and reducing risks associated with seasonal production gaps. To support this shift, it is critical to establish a fully accredited seed testing laboratory and ensure that comprehensive seed laws and regulations are effectively enforced.

Coordinated implementation of these measures will significantly strengthen Namibia's national seed system, thereby improving seed quality, availability, and accessibility for all farmers, while unlocking the full potential of the grain production and marketing sector.

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