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NAMIBIAN AGRONOMIC BOARD

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AGRONOMY AND HORTICULTURE DEVELOPMENT DIVISION

RESEARCH AND DEVELOPMENT SUBDIVISION

RESEARCH REPORT

GROUNDNUTS VALUE CHAIN ANALYSIS: THE CASE OF NAMIBIA

AUGUST 2025

NAMIBIAN AGRONOMIC BOARD

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LIST OF ACRONYMS

AfCFTA	African Continental Free Trade Area
GAP	Good Agricultural Practices
GMO	Genetically Modified Organism
NAB	Namibian Agronomic Board
NSA	Namibia Statistics Agency
MAFWLR	Ministry of Agriculture, Fisheries, Water, and Land Reform

EXECUTIVE SUMMARY

This study analyses the groundnut value chain in Namibia, with a focus on its structure, key actors, challenges, and opportunities for upgrading. It assesses the area under cultivation, production volumes, and groundnut productivity, and assesses the degree of value addition at each stage of the value chain.

Primary data were collected through structured questionnaires, key informant interviews, and stakeholder consultations with producers, input suppliers, traders, processors, extension officers, and research institutions in the Central, Karst, Kavango, North-Central, and Zambezi production zones. Secondary information was sourced from research reports, published studies, and statistical databases. The data were analysed to assess the relationships among value chain actors, the flow of goods and services, and the enabling environment influencing groundnut production and trade in Namibia.

The findings show that groundnut production is dominated by small-scale producers, the majority of whom are women, mainly conducted under rainfed conditions with limited mechanisation and irrigation. Farm sizes range from very small plots to large commercial farms, with most producers supplying local markets and, in some cases, exporting to South Africa under contractual arrangements. Groundnut production is generally profitable due to relatively low input requirements compared with crops such as maize, but yields are highly viable and the national average output among the surveyed producers is estimated at around **340 tons** annually.

Producers remain constrained by limited access to certified seed, mechanisation, and irrigation; high input and labour costs; erratic rainfall; and inadequate extension support. Domestic processing capacity is underdeveloped, resulting in most groundnuts being sold in raw form at farm gates or local markets and limiting opportunities for value addition and product diversification.

Despite these challenges, the analysis identifies substantial opportunities to strengthen the groundnut subsector through the promotion of certified and locally adapted seed systems, stronger farmer organisations, improved post-harvest handling and processing, and enhanced research and development. Coordinated action by the government, the private sector, and research institutions could unlock this potential, contributing to food and nutrition security, income generation, rural employment, and broader economic development in Namibia.

1. INTRODUCTION

Groundnut (*Arachis hypogaea L.*) is the fifth most widely cultivated edible oil crop globally, following soybean, seed cotton, rapeseed, and sunflower (Prasad et al., 2010). It is a versatile, highly adaptable leguminous crop with significant potential for production across Namibia's diverse agroecological zones, contributing to food and nutrition security through its protein- and oil-rich kernels and serving as a valuable feed source for livestock and aquaculture. Globally, groundnut is cultivated on approximately 30 million hectares, with an estimated annual grain production of 49 million tonnes (Prasad et al., 2010).

Legumes play a critical role in sustainable agricultural development, enhancing human diets and improving soil fertility through biological nitrogen fixation (Stagnari et al., 2017). Namibia's agricultural sector is gradually transitioning from traditional subsistence farming to a more market-oriented, agribusiness approach. This shift seeks to empower farmers to produce surplus food for both household consumption and national food security, while also generating income. In this context, expanding the production of grain legumes, such as groundnuts, can help meet consumer demand for high-protein, health-conscious food products and support national strategies to achieve food self-sufficiency (Stagnari et al., 2017; Saikia et al., 2025).

In Namibia, groundnuts are cultivated on approximately 983 hectares, producing around 375 tons annually (Reinhold-Hurek et al., 2023; Valombola et al., 2019). The crop is mainly grown under rainfed conditions across several regions, including Zambezi, Kavango East and West, Otjozondjupa, Oshikoto, Oshana, Ohangwena, Omusati, and Kunene. However, national average yields remain low at about 400 kg/ha (0.4 t/ha), which is significantly below the continental average of 1,000 kg/ha (1.0 t/ha) and the global average of 1,650 kg/ha (1.65 t/ha) (Reinhold-Hurek et al., 2023; Valombola et al., 2019).

Enhancing groundnut production in Namibia offers a viable opportunity for agricultural diversification and the creation of sustainable livelihoods by introducing climate-resilient, market-oriented varieties. Groundnut is well-suited to Namibia's harsh environmental conditions, demonstrating resilience to climate change and variability. Its integration into the formal crop market could support food security, income generation, and improved soil health.

This study aimed to identify and analyse the key actors, functions, supporters, and influencers within Namibia's groundnut value chain. It also examined the development interventions needed to strengthen and support the value chain. The study focused on all major groundnut-producing agroecological zones and employed a participatory approach through stakeholder engagement. Data collection was conducted through structured survey questionnaires and focus group discussions. Participants included producers, processors, marketers, traders, socio-economists, agronomists, and plant breeders, each

playing a critical role in mapping the value chain and informing strategies for building a more efficient, inclusive, and sustainable groundnut market in Namibia.

1.1. Problem statement

Climate change, erratic rainfall, low soil fertility, and poor nutrient content in major food items are among the most significant challenges to food security and sustainable food production in Namibia. Currently, the country imports approximately 950 tons of prepared groundnuts and 19 tons of shelled groundnuts (FAOSTAT, 2021), along with other groundnut products under HS code 1202, totalling an annual average of 94.5 tons, valued at N$2,353,529 (NSA, 2022). This trend indicates strong, growing domestic demand for groundnuts. Despite Namibia's potential for groundnut production, the subsector is constrained by several challenges, including low production volumes, limited area under cultivation, limited access to improved varieties, the absence of a formalised market, and limited value addition. Therefore, there is an urgent need to enhance production capacity, expand cultivation areas, and introduce drought-tolerant, high-yielding, market-preferred groundnut varieties. A comprehensive analysis of the groundnut value chain, combined with targeted development interventions, can strengthen local production systems, enhance value addition, and improve income generation for farmers, ultimately contributing to food security among Namibian producers.

1.2. Objectives of the study

The overall aim of the study is to determine the area under cultivation (ha), production tonnage, and groundnut productivity in Namibia, and to analyse the degree of value addition at each stage of the groundnut value chain. The specific objectives are to:

- ✓ Assess the current status of groundnuts' value chain in Namibia, including production, storage, value addition, and marketing.
- ✓ Identify the constraints and opportunities in groundnut production and marketing.
- ✓ Propose recommendations for interventions to stimulate the growth and competitiveness of the groundnut industry in Namibia.

1.3. Significance of the study

Establishing a comprehensive and sustainable groundnut value chain requires a detailed understanding of production, storage, processing, and marketing activities. This study provides such and understaning through consultations with key value chain actors, including producers, processors, and traders, to estimate production volumes and values, and to identify major challenges and opportunities from stakeholders.

The analysis focuses on both domestic and international markets and aims to promote agripreneurship, enhance local production, and encourage formal market participation by producers, processors, and traders. The findings are expected to support efforts to reduce import dependence, improve livelihoods, encourage the development of drought-adaptive varieties, and strengthen national food security.

Furthermore, the study underscores the contribution of cereal-legume cropping systems to soil fertility and competitiveness of groundnuts in domestic, regional, and international markets, thereby informing policy and investment decisions in Namibia's groundnut subsector.

2. METHODOLOGY

A mixed-method approach, combining qualitative techniques, was used to analyse the groundnut value chain in Namibia. A participatory research design was adopted to ensure that the perspectives of key stakeholders were captured and that findings reflect the realities of value chain actors.

Structured questionnaires, featuring both closed and open-ended questions, were administered to groundnut producers, traders, and input suppliers, generating qualitative data on production, marketing, and value addition, as well as qualitative insights into constraints and opportunities. In addition, in-depth group and individual interviews were conducted with stakeholders and key informants, including extension officers and researchers, and telephone interviews were used to clarify and supplement information where necessary.

2.1 Sample size

The target sample comprised 70 respondents, including 50 producers, 10 traders, and 10 input suppliers, with seven respondents drawn from each of the selected crop-growing regions **(Table 1)**. This sampling strategy ensures representation across major production zones and actor categories, facilitating comparative analysis.

Table 1: *Sample population size in each production zone*

Production Zones	Regions	Sampled respondents			Total
		Producers	Traders	Inputs suppliers	
Karst	Otjozondjupa	5	1	1	7
	Oshikoto	5	1	1	7
Kavango	Kavango East	5	1	1	7
	Kavango West	5	1	1	7
North Central	Ohangwena	5	1	1	7
	Oshana	5	1	1	7
	Omusati	5	1	1	7
	Kunene	5	1	1	7
Zambezi	Zambezi	5	1	1	7
Central	Omaheke	5	1	1	7
Total number of respondents		**50**	**10**	**10**	**70**

2.2 Study area

The study covered five (5) production zones in Namibia, namely Karst, Kavango, North Central, Zambezi, and Central zones, which together encompass ten (10) key crop-producing regions: Omusati, Oshana, Ohangwena, Kavango West, Kavango East, Zambezi, Oshikoto, Kunene, Omaheke, and Otjozondjupa **(Figure 1)**.

These regions represent a diverse range of agroecological conditions and rainfall regimes, from approximately 650 mm in the Zambezi to less than 200 mm in the arid Kunene Region (Awala et al., 2019), highlighting the varying climatic opportunities and challenges for crop production.

Figure 1 presents a map of Namibia, highlighting the study production zones.

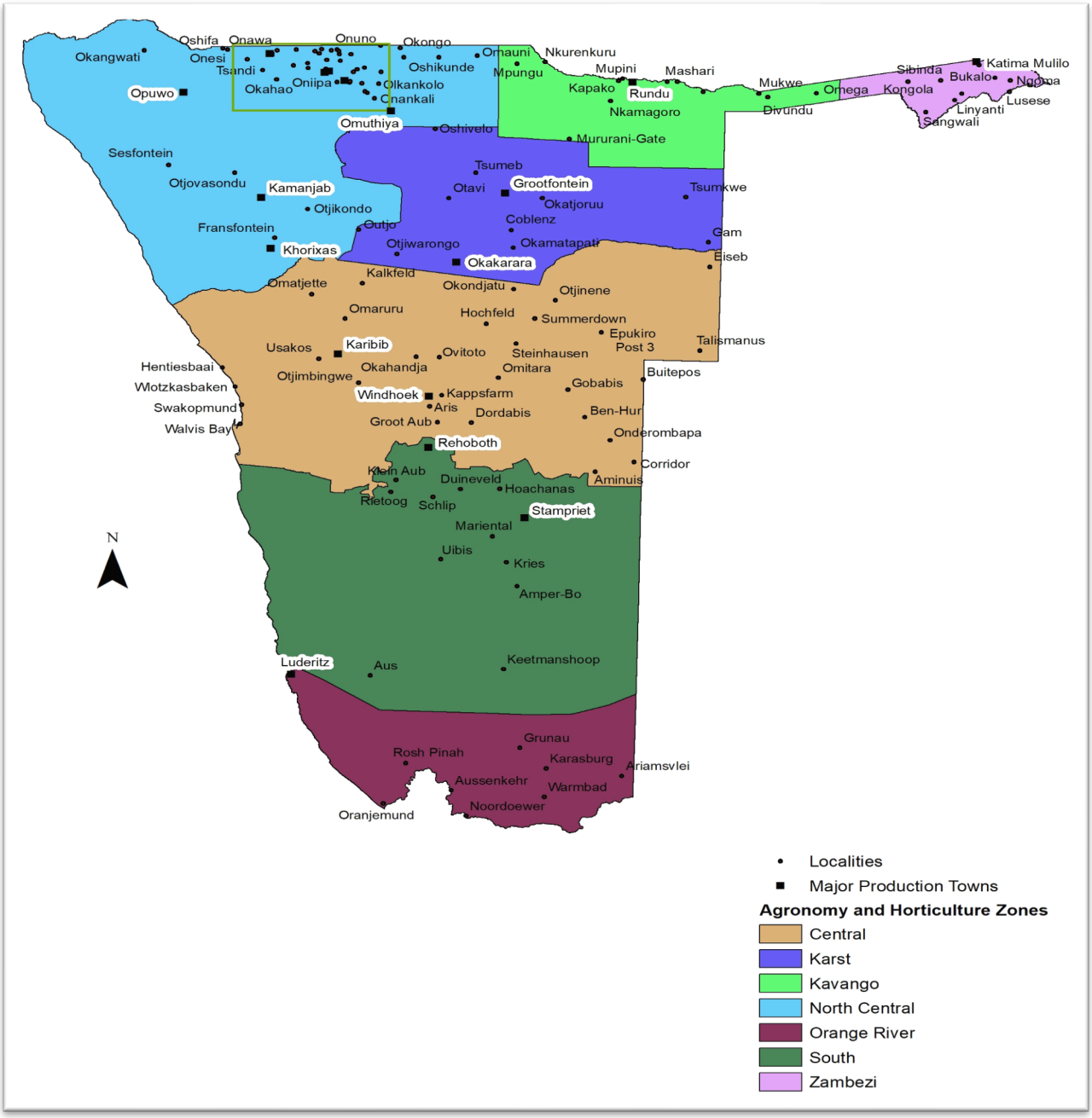

Figure 1: *Namibian map (Source: NAB, 2023)*

2.3 Data collection and analysis

Data were collected through structured interviews with groundnut value chain actors, including producers, input suppliers, processors, and traders, as well as consultations with other local stakeholders and extension officers. A literature review drew on research reports, published studies, and statistical databases to contextualise and triangulate survey findings.

A descriptive analysis in Microsoft Excel was used to identify trends and key characteristics of the value chain, including producer demographics, production practices, yields, market channels, and financing. Results are presented through tables, figures, and a value chain map, which highlight key challenges and inform potential solutions.

3 RESULTS AND DISCUSSIONS

This section presents the main findings of the groundnut value chain in Namibia, beginning with producer characteristics and moving through production practices and regulatory compliance. Market dynamics, financing, and capacity development.

3.1 Demographic characteristics of groundnut producers

The study reveals that women play a central role in groundnut production: approximately 59 percent of respondents are female and 41 percent male **(Table 2),** confirming that groundnut remains a female-dominated crop in many smallholder systems. Women are actively involved in all stages of the value chain, from land preparation and planting to harvesting, processing, and marketing, underscoring the importance of gender-responsive interventions that improve women's access to inputs, credit, land tenure, and extension services (Ngoma-Kasanda & Sichilima, 2016). The prominence of women in the sector highlights the importance of designing gender-responsive interventions. Such measures should include improved access to agricultural inputs, credit facilities, land tenure, and extension services. Strengthening women's participation and capacity in these areas is key to enhancing productivity and unlocking the full potential of the groundnut value chain (Tyroler, 2018).

Most producers are older adults, with the majority falling within 40 - 59 years and 60 years and above **(Table 2)**. This age structure is consistent with patterns observed in other sub-Saharan African countries. For instance, in Togo, over 60 percent of groundnut producers are aged between 41 and 60 years (Banla et al., 2018); in Burkina Faso, 65 percent are between 35 and 60 years (Sinare et al., 2021); and in Kenya, the average age of groundnut household heads is 46 years, with most aged between 36 and 55 (Onyuka et al., 2016). While this older demographic brings a wealth of experience and traditional knowledge, it also raises concerns about the sector's long-term sustainability. The ageing producer base highlights the need for age-sensitive strategies to attract and retain younger farmers. These may include capacity-building programmes, access to finance and inputs, agricultural mechanisation, and the development of youth-friendly market linkages (AGRA, 2015).

Table 2: *Socio-demographic information of the respondents*

Variable	Categories	N = 51	%
Gender	Female	30	59
	Male	21	41
Age-group	< 30	2	3.9
	30 - 39	7	13.9
	40 - 49	14	27.4
	50 - 59	15	29.4
	> 60	13	25.4

3.2 Groundnut production and output Information

This subsection presents findings on groundnut production and output, focusing on farming systems, seasonal patterns, land area, under production, yields, and production costs. The results provide insight into prevailing practices and highlight areas where improvements can significantly raise productivity and profitability.

3.2.1 Production practices and groundnut seasonal calendar

Groundnut production in Namibia follows a distinct seasonal cycle aligned with rainfall patterns. In open-field systems, planting usually begins with the onset of rains, between mid-October and mid-January, when soil moisture is sufficient for germination. Most producers (77.2 percent) rely entirely on rainfall, while 11.3 percent use centre-pivot irrigation in the Central and Karst zones, and another 11.3 percent use sprinkler irrigation, particularly in the North Central zone **(Figure 2).**

Farming systems vary: approximately 42 percent of producers use organic systems, 13 percent adopt mixed systems, and 33 percent did not clearly identify with any of these categories. Groundnut production peaks between January and March, when timely weeding and pest management are critical; weed control is achieved using manual, mechanical, and herbicide-based methods. Harvesting generally takes place in May, followed by threshing and marketing between May and June, as groundnuts are rarely stored for extended periods.

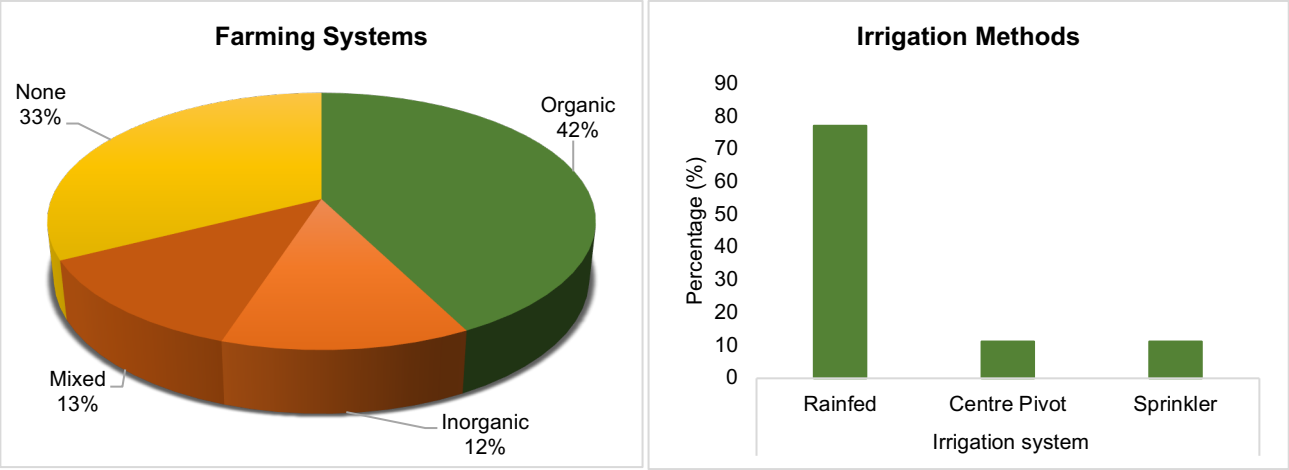

Figure 2: *Farming systems and irrigation methods among surveyed producers*

Table 3 below presents the groundnut production calendar, highlighting key activities across the different stages of the production cycle.

Table 3: *Groundnut seasonal calendar*

Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Land preparation									
Planting									
Weeding									
Fertilization									
Pest and disease management									
Harvesting									
Threshing									
Storage									
Marketing									

3.2.2 Land area under groundnut production

The land area allocated to groundnut production varies considerably across production zones, influenced by agroecological conditions, rainfall distribution, and farm size. Most smallholder producers cultivate between 0.3 and 3 hectares per household, while some commercial farms grow groundnuts up to 100 hectares. Overall, groundnuts occupy a relatively small share of total arable land, reflecting their role as a supplementary crop within mixed farming systems **(Figure 3)**.

The Central Production Zone accounts for the largest share of groundnut area, with 255 hectares under cultivation (53 percent of the national area), mainly driven by large-scale commercial producers benefiting from mechanisation, infrastructure, and market access. The Karst production zone follows

with 180.3 hectares (38 percent), where both smallholder and commercial producers exploit fertile soils and comparatively reliable rainfall **(Figure 3)**.

In contrast, the Kavango, North Central, and Zambezi Zones are dominated by smallholders with an average of 1 hectare per household, reflecting constraints such as limited access, inadequate inputs, and low mechanisation. Nevertheless, these zones present significant potential for expansion through interventions such as improved seed systems, access to finance, and extension support.

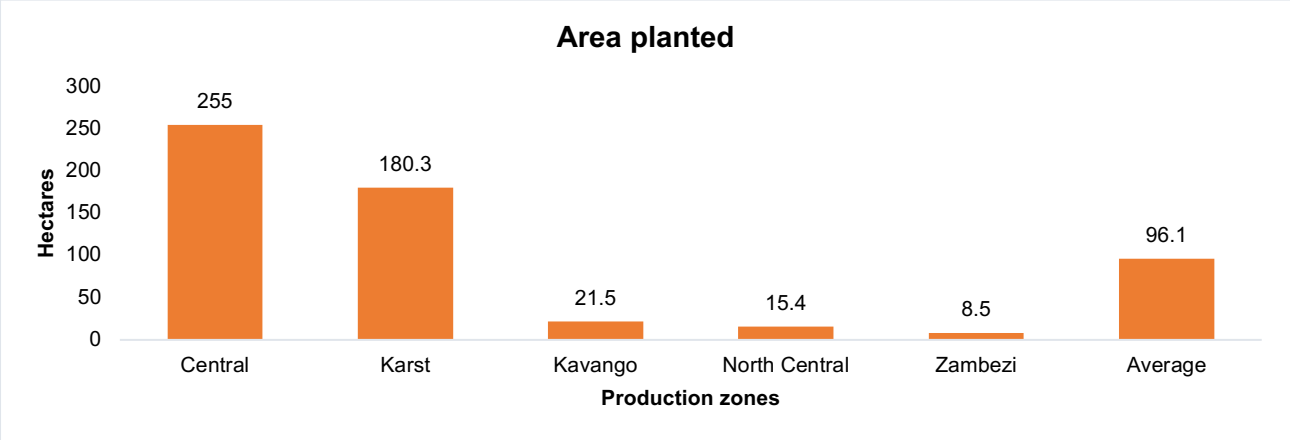

Figure 3: *Area cultivated for groundnut (ha) per production zone*

3.2.3 Production quantity and yield performance

Groundnut productivity in Namibia is heavily influenced by access to irrigation, adoption of good agronomic practices, and use of certified seed (Mani & Jari, 2021; Martinson, 2009). **Figure 4** below illustrates the average groundnut quantities produced per production zone, revealing distinct variations in output. These differences are primarily attributed to differences in seed quality and access to irrigation.

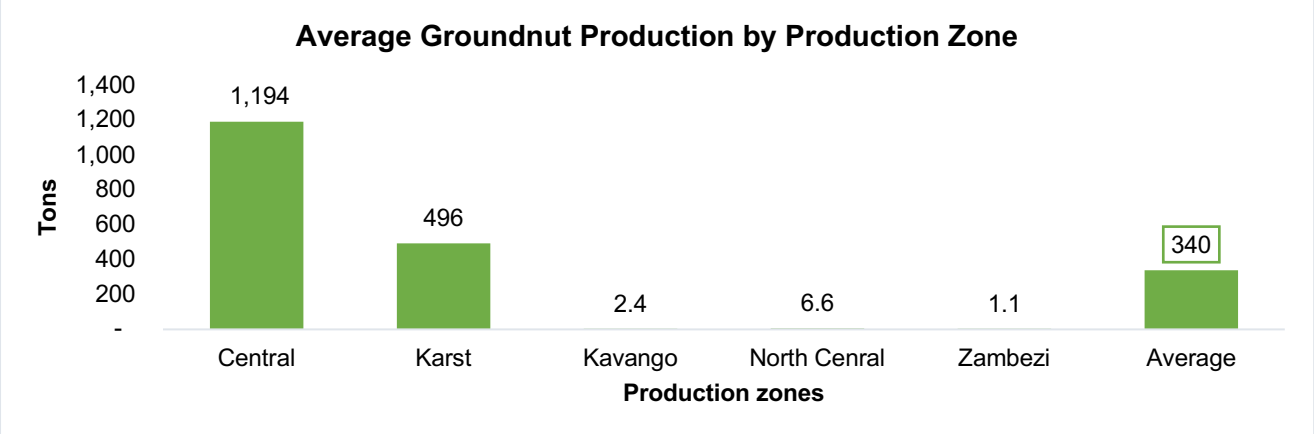

Figure 4: *Average groundnut production (in tons) across different production zones in Namibia*

Table 4 shows yield differences between certified and unimproved groundnut varieties cultivated in Namibia. Certified varieties imported from South Africa, Akwa, Sellie, Kwartz, and Anel, demonstrate significantly higher yield potential compared to local unimproved varieties. Under irrigation, certified varieties yield 2.0 to 6.0 tons per hectare, while unimproved local varieties yield only 0.8 to 0.1 tons per hectare.

Among the certified varieties, Akwa records the highest potential yield range (2.0 - 6.0 t/ha under irrigation and 0.7 - 1.0 t/ha under dryland conditions), indicating strong adaptability under different production environments. Sellie and Anel also show consistent performance with yields between 2.0 and 4.0 t/ha, while Kwartz exhibits slightly lower yields (1.0 - 3.0 t/ha). In contrast, local unimproved varieties perform poorly, particularly under dryland conditions, where yields range between 0.1 and 0.6 t/ha, highlighting the importance of adopting improved varieties, supported by appropriate agronomic management and irrigation.

Overall, the data in **Table 4** indicate that Namibia's groundnut yield potential remains underexploited, mainly due to limited access to certified seed, insufficient irrigation infrastructure, and reliance on rainfed production systems. Consequently, Namibia's average groundnut output among surveyed producers is estimated at 340 tons annually **(Figure 4)**, reflecting significant production potential constrained by existing farming practices.

Recent studies confirm that reliance on unimproved crop varieties results in lower yields. Liang et al. (2024) found that adopting early-maturing and improved crop varieties significantly enhances agricultural productivity and climate resilience, especially in rainfed systems. This emphasises the importance of certified seed systems and agronomic support to bridge Namibia's groundnut yield gap. Strengthening seed systems, promoting improved varieties, and enhancing agronomic support services are crucial to closing this productivity gap and increasing national output.

Table 4: *Estimated yield and status of groundnut varieties cultivated in Namibia*

Variety	Origin	Status	Expected Yield per Hectare (t/ha)
Akwa	South Africa	Certified	Irrigation 2.0 – 6.0 Dry land 0.7 – 1.0
Sellie	South Africa	Certified	Irrigation 2.0 - 3.0
Kwartz	South Africa	Certified	Irrigation 1.0 – 3.0
Anel	South Africa	Certified	Irrigation 2.0 – 4.0
Local (Unimproved)	Namibia	Not Certified	Irrigation 0.8 – 1.0 Dry land 0.1 – 0.6

Source: Survey Data, 2025

3.2.4 Production and input costs

Groundnut production and input costs vary with area planted, access to irrigation, input prices, and farming practices (Ramoliya & Prajapati, 2022). Approximately 63.2 percent of respondents rated production costs as high, while 36.8 percent considered them affordable. On average, production costs are about N$9,550 per hectare, driven mainly by labour and diesel for mechanisation, where available.

Seed is a major cost component: at around N$1,050 per 25 kg and seeding rates of 80 - 100 kg/ha, the seed cost per hectare ranges between roughly N$3,360 and N$4,200. These cost levels constitute a substantial investment, particularly for smallholders lacking access to credit, mechanisation, or certified seed, and can erode profitability and competitiveness in the absence of strong market linkages.

3.3 Regulatory compliance and protection

3.3.1 Seed source and certification

Certified seed plays a vital role in enhancing agricultural productivity and promoting sustainable cultivation practices (Kerned, 2024). Findings from this study indicate that groundnut seed sourcing in Namibia remains informal, with 77 percent of the farmers relying on saved seed, local markets, and farmer-to-farmer exchanges. In contrast, only 23 percent of respondents reported using certified groundnut seed **(Figure 8)**.

The Akwa variety, imported from Triotrade Gauteng (Pty) Ltd in South Africa, is predominantly used by large-scale producers of commercial groundnuts. This variety is distributed through a sale-and-repurchase model, which provides producers with access to improved seed, guaranteed market uptake at a minimum price, and complementary extension services (Claassen, 2024). In addition to Akwa, other certified seeds, such as Sellie, Kwartz, and Anel, are imported and utilised by some producers.

Despite these developments, Namibia currently lacks officially released improved groundnut varieties. The continued reliance on informal seed systems often results in genetically impure or disease-prone seed, undermining yield potential and overall crop performance (Valombola et al., 2021). Furthermore, 75 percent of surveyed input suppliers reported limited awareness of the Seed and Seed Varieties Act No. 23 of 2018 **(Figure 4)**, highlighting the need for enhanced regulatory outreach and institutional support within the groundnut sector.

These findings align with Tripp and Louwaars (1997), who emphasised the importance of robust regulatory frameworks in establishing functional seed systems across sub-Saharan Africa. Strengthening Namibia's seed sector through formal variety release, certification infrastructure, and

farmer education is therefore essential to improving groundnut productivity, enhancing market competitiveness, and safeguarding food safety along the value chain.

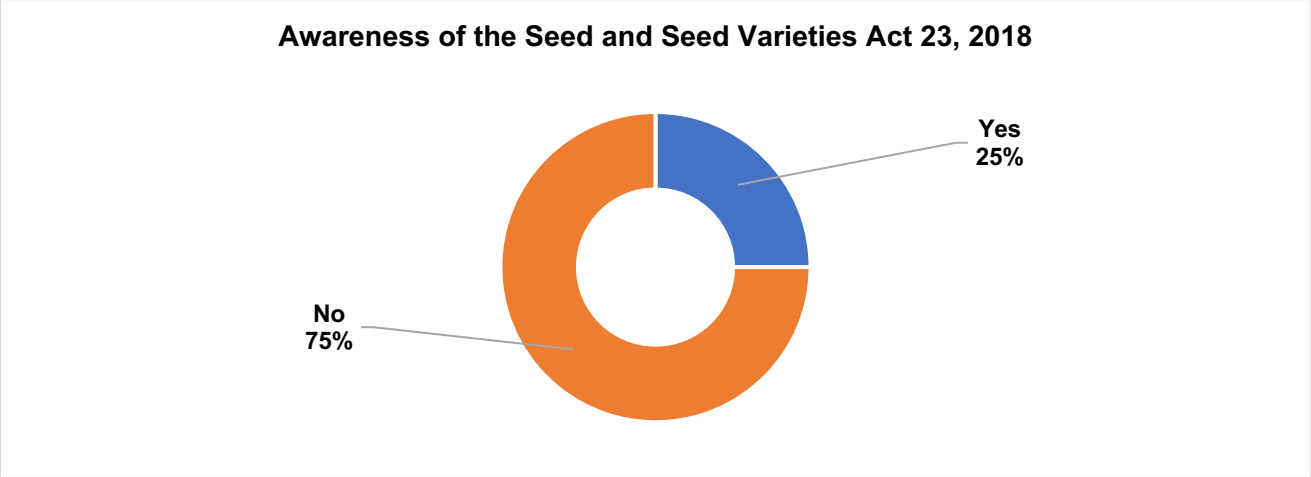

Figure 5: *Level of input suppliers' awareness of the Seed and Seed Varieties Act, 2018 in Namibia*

3.3.2 Efforts to strengthen the seed system

The Ministry of Agriculture, Fisheries, Water, and Land Reform (MAFWLR), which is actively involved in the research and development of groundnut varieties. Based on the findings of this study, the MAFWLR is currently working on a limited number of promising cultivars, such as NAM888/2, NAM4433, ICGV15266, ICGV02266, and NAM1747/1, with a focus on developing improved, climate-resilient, and high-yielding varieties suitable for Namibia's diverse agro-ecological zones.

These research efforts seek to address the current limitations in seed quality and variety performance and form an important foundation for establishing a more robust and inclusive seed system for groundnuts.

3.3.3 Food safety certification and regulatory protection

Food safety certification among groundnut producers in Namibia is very limited. As shown in **Figure 5**, the majority of producers (74 percent) operate without any formal certification, suggesting a significant gap in compliance with recognised food safety standards. Only a small proportion of producers reported having certifications such as grading procedures, GMO-free, phytosanitary, traceability, quality system, and Good Agricultural Practices (GAP), each at 4 percent, while 2 percent possessed organic certification.

The absence of Hazard Analysis and Critical Control Point (HACCP) certification underscores the need to strengthen awareness, capacity-building, and support mechanisms to help producers adopt and maintain food safety standards that enhance market access and product competitiveness.

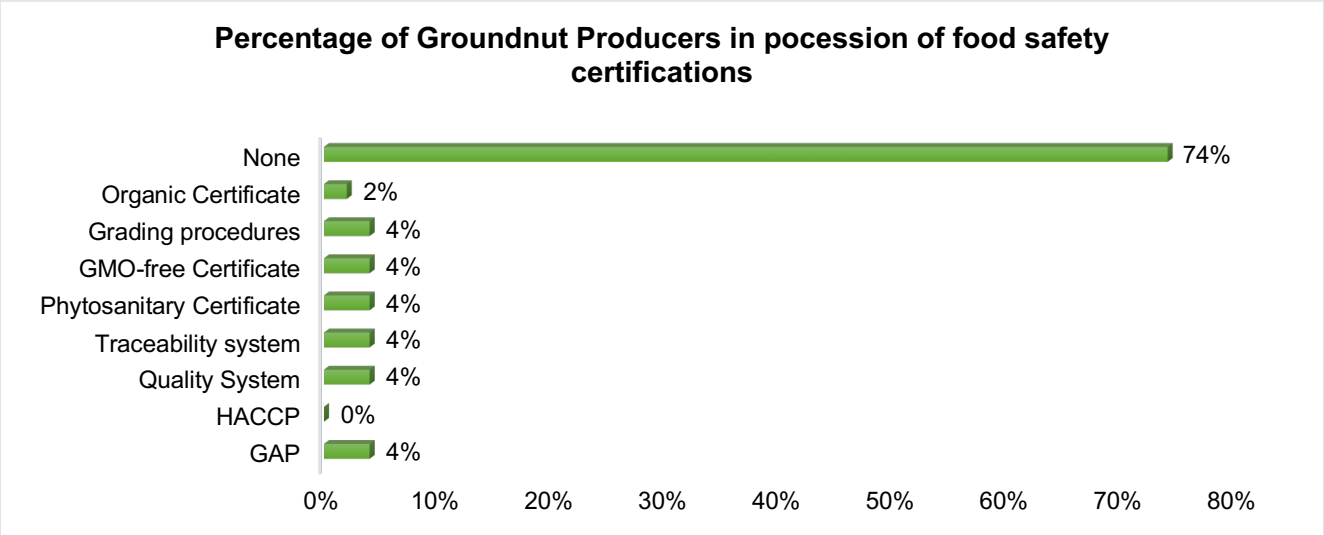

Figure 6: *Percentage of producers in possession of food safety certifications within the groundnut value chain*

As shown in **Figure 6**, the majority of traders and processors (62.5 percent) do not possess any food safety certifications, while only 12.5 percent hold HACCP, Organic, or Phytosanitary certificates. No respondents reported compliance with grading procedures, traceability systems, Good Agricultural Practices (GAP), GMO-free standards, or quality systems.

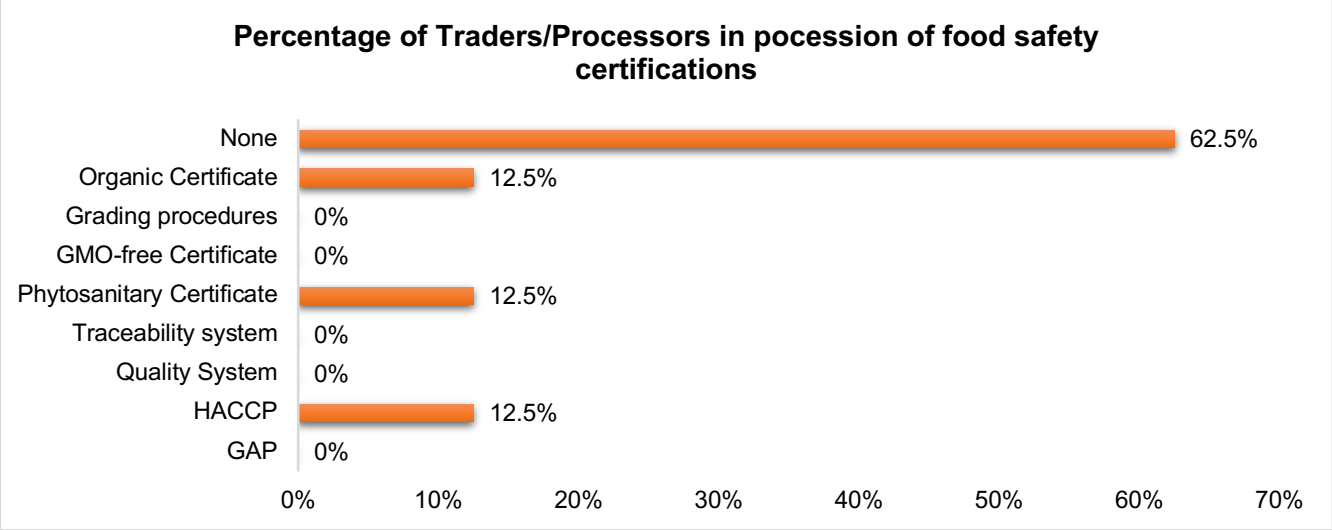

Figure 7: *Percentage of traders and processors in possession of food safety certifications within the groundnut value chain*

As illustrated in **Figure 7**, there is a complete absence of certification among respondents (100 percent), with no uptake reported across any of the listed categories, including HACCP, GAP, traceability systems, and phytosanitary certification.

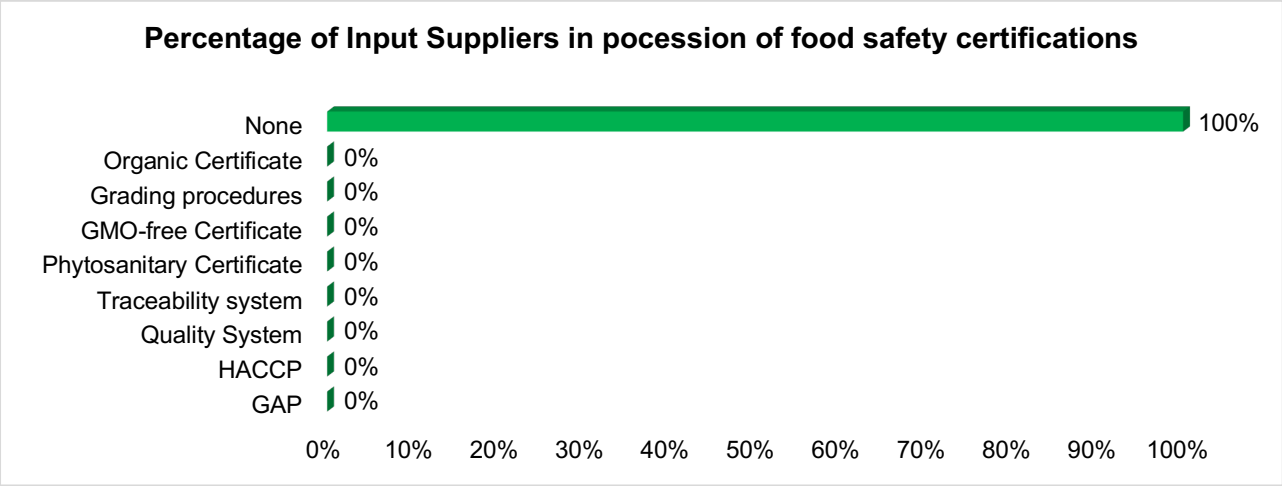

Figure 8: *Percentage of input suppliers in possession of food safety certifications within the groundnut value chain*

The findings in **Figures 6, 7, and 8** are consistent with studies such as Henson and Humphrey (2010), who emphasised that smallholder farmers in developing countries often face challenges in meeting food safety and quality standards due to high certification costs, limited technical knowledge, and weak institutional support. Similarly, Breen et al. (2024) found that low levels of food safety certification among legume producers in sub-Saharan Africa result in reduced competitiveness and limited export potential. Hence, a significant percentage of respondents (68 percent) expressed support for government protection within the groundnut value chain, emphasising the need for policies that safeguard local producers and enhance market competitiveness **(Figure 9).**

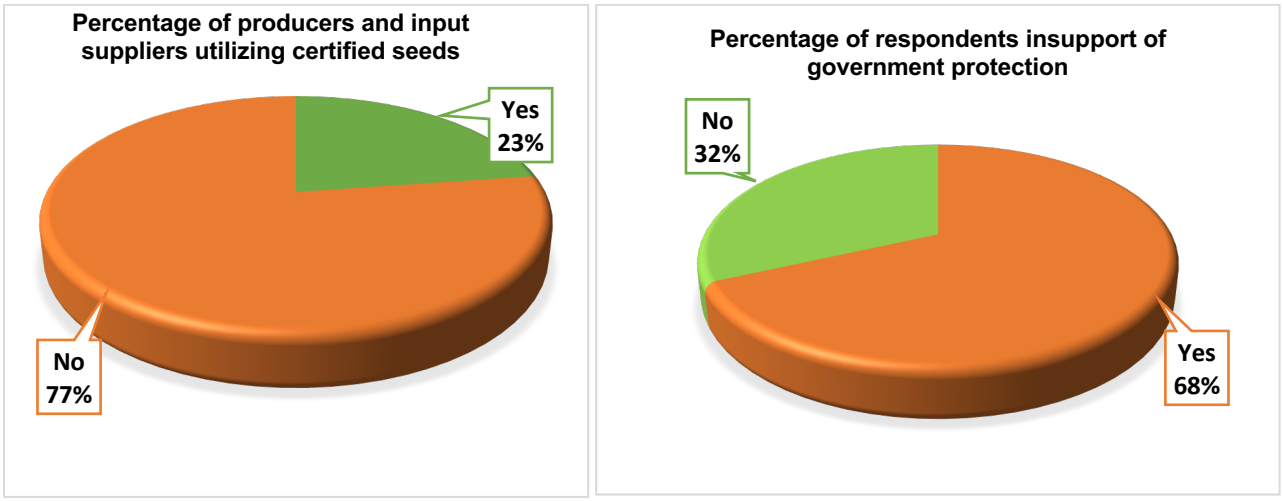

Figure 9: *Regulatory compliance and protection measures among surveyed participants*

3.4 Market information

3.4.1 Market structure, share, and prices

Understanding the market structure, share, and pricing dynamics within the groundnut value chain provides insights into the distribution channels, competitiveness, and income generation among key actors. **Figure 10** presents the distribution of groundnut market channels, highlighting the participation of producers, traders, and input suppliers in Namibia's groundnut market.

3.4.1.1 Market Channels and Distribution Patterns

The study revealed the absence of a well-structured formal market, with approximately 22 percent of producers channelling their harvests to export markets in South Africa. In comparison, the majority (77 percent) rely on informal outlets such as open markets and street vendors. Traders, including OK Foods and AGRA, predominantly source groundnuts locally rather than through imports, indicating a positive linkage and growing interdependence among stakeholders. Additionally, some producers sell directly to fellow farmers, with an estimated 66 percent of groundnut seed traded through open markets, 17 percent supplied through individual orders, and another 17 percent sold on streets **(Figure 10)**.

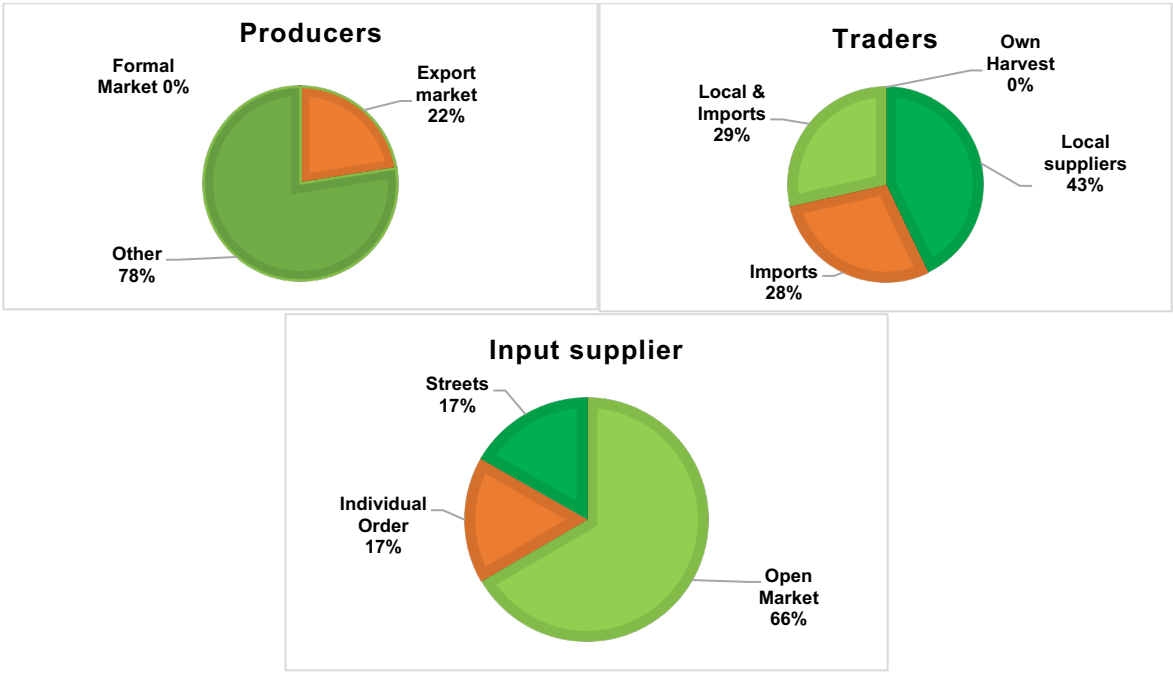

Figure 10: *Distribution of groundnut market channels among producers, traders, and input suppliers*

3.4.1.2 Exports

Figure 11 presents the annual trends in Namibia's groundnut exports from 2021 to 2024, illustrating both export quantity (in tons) and export value (in Namibian dollars). The data indicate that export

volumes remained relatively low, below 1,200 tons, between 2021 and 2023, reflecting limited market participation and production constraints during this period. However, a significant surge was observed in 2024, reaching 3,933 tons.

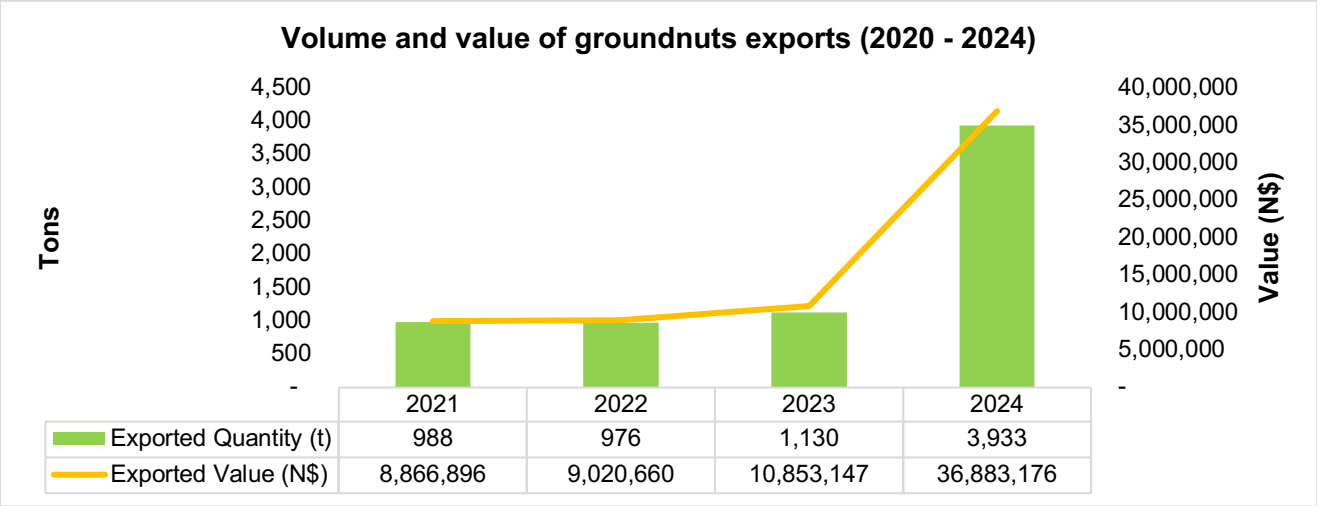

Figure 11: *Exported groundnut volume and value from 2021 to 2024*
Source: *NAB (2026)*

3.4.1.3 Price Trends

Figure 12 illustrates the variation in groundnut prices across different market channels in Namibia. Export markets typically offer higher prices, particularly for premium grades, but are less accessible to most producers due to quality, grading, and logistical requirements. Informal markets, such as open markets and street vendors, offer lower prices but greater flexibility and immediate cash income, with lower entry barriers.

Export prices range from about N$4,500 per ton for split groundnuts to approximately N$19,750 per ton for Grade 1 and 2 products, highlighting the importance of quality differentiation and grading in determining value. Local markets can yield an equivalent of around N$30,000 per ton through small-scale packaging and direct sales to consumers, although traded volumes are lower **(Figure 12)**. These price differentials underscore the fragmented nature of Namibia's groundnut market and the need for structured marketing systems to improve producer access to profitable, sustainable markets.

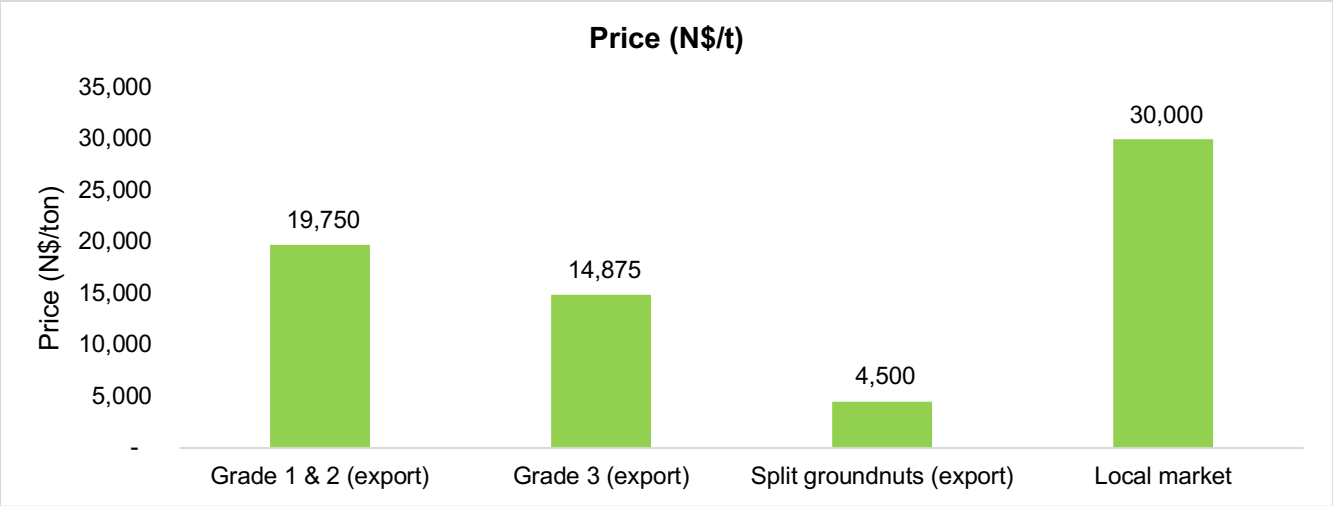

Figure 12: *Groundnut prices at export and local marketing channels in Namibia*

3.4.1.4 Groundnut value addition

Value addition enables producers to increase income by transforming raw agricultural products into processed products (Dos-Santos, 2020) through activities such as shelling, roasting, oil extraction, peanut butter production, and packaging, farmers can tap into higher-value markets, extend product shelf life, and reduce post-harvest losses (Kwanza, 2025). Beyond income generation, value addition strengthens rural enterprises, creates employment opportunities, and supports the development of resilient agri-food systems (De Brauw & Bulte, 2021).

Figure 13 indicates that only 27 percent of respondents engage in value-added activities, mostly roasting, frying, and peanut butter processing, while 73 percent do not participate in value addition due to a lack of processing equipment, technical knowledge, and organised market linkages.

The study identified one recently established peanut butter processor as a noteworthy development, representing one of the few formal processing initiatives in the country. This enterprise produces locally branded peanut butter in 400 g containers retailing at about N$40.00 **(Annex A)** and sources groundnuts from the Etunda Green Scheme Irrigation Project, providing a stable market for producers and contributing to product diversification. However, the processor's limited capacity and the absence of other processing plants highlight a broader gap in value addition infrastructure.

Although value addition remains low, the survey identified the recent launch of a peanut butter processor, one of the very few formal processing initiatives currently operating in Namibia. While still small-scale, this processor represents a positive development, demonstrating growing interest in commercial groundnut processing and the potential for developing locally branded products. The peanut butter shown in **Annex A** is packaged in a 400g container and retails at N$40.00, providing a locally

produced alternative to imported products. The processor sources its groundnuts locally from the Etunda Green Scheme Irrigation Project, offering a reliable market outlet for shelled groundnuts, helping reduce post-harvest losses, and contributing to local food product diversification. However, its limited capacity and the fact that it is currently the only identified processor highlight the broader absence of diversified value-addition enterprises within the country.

Strengthening value addition through investment in processing facilities, farmer training in product development, and improved access to finance and organised markets would enhance farmer profitability, improve Namibia's competitiveness in regional markets, and contribute to food safety and nutrition security.

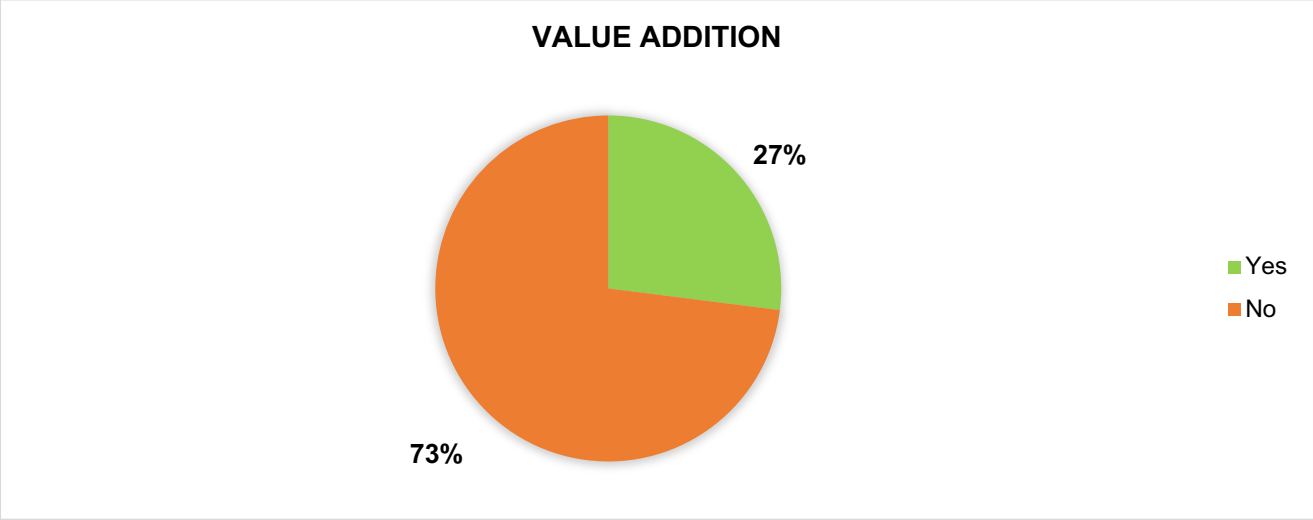

Figure 13: *Value addition engagement across the groundnut value chain actors*

3.4.2 Supply and planting agreements

The study reveals a substantial gap between current participation in formal contracts and producers'stated willingness to engage in a structured supply or planting agreements. Only about 10.4 percent of respondents currently have formal contracts with local traders, whereas 77.8 percent expressed willingness to participate in such agreements **(Figure 14)**. This finding suggests significant untapped potential for inclusive market coordination. Evidence from comparable contexts supports this approach.

In Zambia, outgrower schemes under the Enterprise Zambia Challenge Fund improved smallholder access to inputs, training, and markets (Fisher & Roberts, 2017), while in South Africa, structured planting agreements enabled producers to meet retail and export standards through coordinated production and quality assurance protocols (BFAP, 2019). These results imply that Namibia's groundnut

sector could benefit from piloting contracting models supported by cooperatives, agribusinesses, or public–private partnerships.

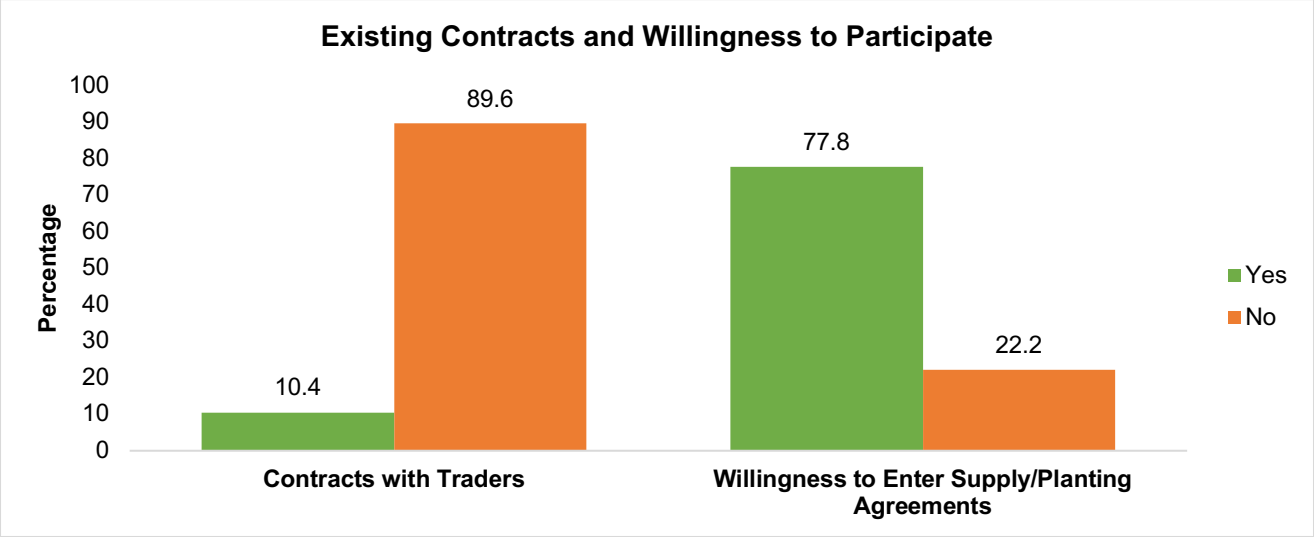

Figure 14: *Existing contracts and willingness to participate in supply and planting agreements in the groundnut value chain*

3.4.3 Groundnut post-harvest storage and infrastructure

According to Ansari et al. (2015), smallholder farmers in many countries traditionally store groundnuts in-shell in earthen pots, mud bins, bamboo baskets, or wicker containers, often reinforced with mud and cow dung, with minimal pesticide use. For extended storage, these containers are sealed with mud and supplemented with ashes, pepper, neem leaves, or other herbs to control pests. Groundnuts can be stored for up to 8–10 months for consumption or seed; however, most farmers lack adequate facilities and instead store them in bags at home (Attah, 2013).

Figure 16 shows that fewer than 20 percent of stakeholders reported access to cold storage, packhouses, or packline infrastructure. Producers indicated that cold storage is rarely prioritised, as groundnuts are typically marketed soon after harvest to avoid pod damage; however, the absence of packhouses and packlines limits grading, cleaning, sorting, and packaging, especially for high-value export markets.

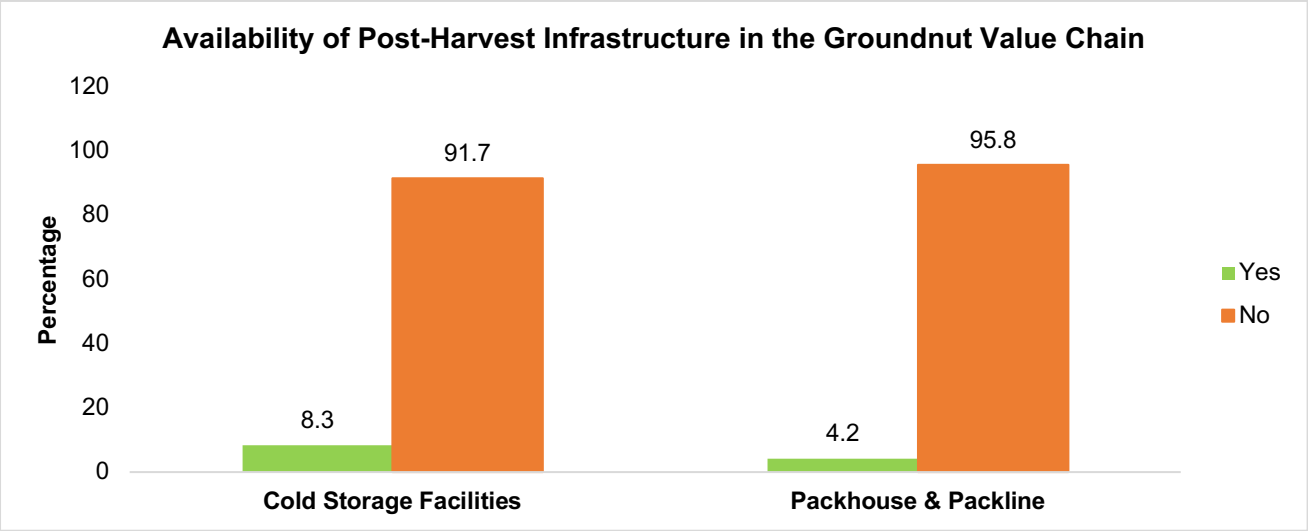

Figure 15: *Reported Accessibility of cold storage facilities, packhouse, and packline infrastructure among surveyed stakeholders in Namibia's groundnut sector*

3.4.4 Transport to the market

Transport costs are a significant factor in groundnut marketing and vary according to distance and destination (local or export). About 50 percent of respondents use their own vehicles and bear the full transport costs, averaging around N$26.00 per kilometre. Approximately 13.8 percent indicated that buyers provide transport, although producers or input suppliers ultimately bear the cost, while 36.1 percent rely on hired transport and cover all associated expenses **(Table 5)**.

Transport for export markets is generally more expensive due to extended distances, border procedures, and compliance requirements, often involving collaboration with transport companies or exporters. These transport arrangements and cost burdens directly affect producer margins and the competitiveness of Namibian groundnuts.

Table 5: Transport arrangements and cost-bearing responsibilities between producers, buyers, and importers

Transport option	Description	Percentage (%)
Producer-owned transport	The producer/input supplier uses their own transport and bears all costs.	50
Buyer-provided transport	The buyer arranges and pays for transport	13.8
Buyer-provided transport, producer bears cost.	Buyer provides transport; producer/input supplier covers transport costs.	-
Importer/foreign-owned transport	Importer/foreigner uses their own transport and bears all costs.	-
For importer/foreigner-owned transport, the producer bears the cost	Importer/foreigner provides transport; producer/input supplier bears transport costs.	-
Hired transport	Producer/input supplier hires transport and bears all costs.	36.1

3.5 Financing information

Ruete (2015) emphasises that timely access to financing is essential for improving producers' living standards by enhancing the profitability of their operations. In the agricultural sector, financial resources are required for a wide range of purposes, including daily operational expenses, procurement of implements and machinery, acquisition of high-quality seeds, investment in storage infrastructure, and the implementation of effective marketing strategies. However, access to credit remains uneven, particularly for smallholders, due to collateral requirements and limited financial literacy. To bridge this gap, innovative financing models and inclusive credit schemes are needed.

Figure 16 illustrates the distribution of financing sources utilised by producers to establish groundnut enterprises. A substantial majority (92.8 percent) relied on personal funds or savings, while formal banking institutions accounted for only 2.4 percent. Notably, private sector support was absent (0 percent), and other sources contributed a modest 4.8 percent. These findings underscore a significant gap in institutional and private sector engagement in early-stage agricultural financing, highlighting the need for more inclusive and accessible financial mechanisms to support smallholder investment.

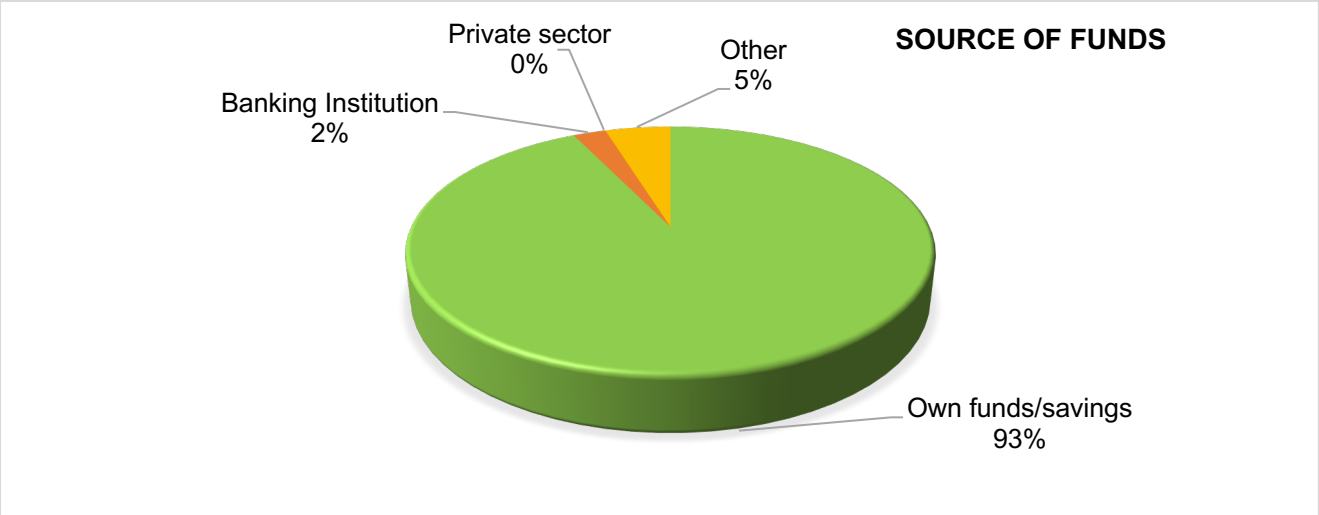

Figure 16: *Source of financing for the groundnut business setup*

3.6 Training and industry affiliation

Training and institutional affiliation are critical for knowledge transfer, innovation adoption, and collective market participation (Gorfad et al., 2022). However, engagement in capacity-building initiatives in Namibia's groundnut sector is low.

Only 17.5 percent of respondents reported having received training or mentorship related to groundnut production or marketing, and 26.1 percent indicated membership in a farmer union or association. These low participation rates reveal institutional gaps that limit farmers' ability to access information, negotiate better market terms, and organise around common interests.

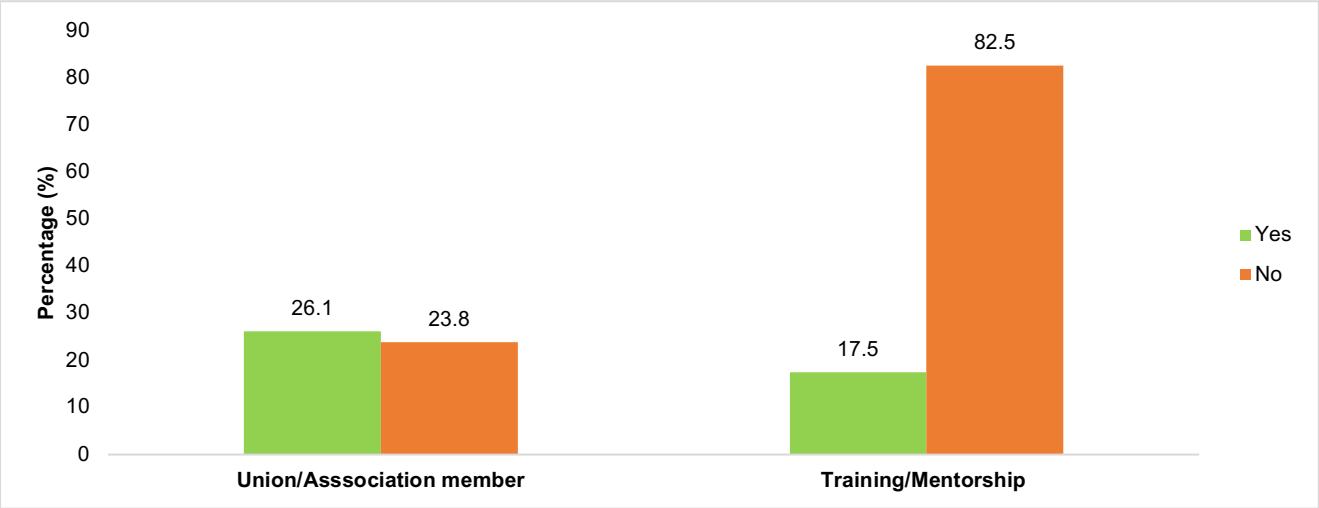

Figure 17: *Farmer's participation in training/mentorship and union/association membership within Namibia's groundnut value chain*

4 MAPPING OF KEY ACTORS ALONG THE GROUNDNUT VALUE CHAIN

4.1 Value chain actors and their functions

Figure 19 provides an overview of the main actors in Namibia's groundnut value chain and their functional roles, illustrating the flow of products and services from input supply to final consumption. The map highlights key actors, input suppliers, producers, aggregators, traders/processors, and consumers, as well as institutional linkages and coordination mechanisms.

The value chain begins with input suppliers, who provide seeds, fertilisers, pesticides, farm equipment, and tractor services. The main agro-input used is seed, predominantly landraces saved from previous harvests and sold in local markets, along streets, or via individual orders; survey data confirm that 77 percent of producers source seed from previous harvests, aligning with the findings of Owusu-Adjei, Baah-Mintah, and Salifu (2017).

Groundnut producers include both smallholders and commercial farmers, with smallholders (mostly women) forming the backbone of production. Their operations are characterised by limited mechanisation, heavy reliance on manual labour, and predominantly rainfed cultivation, with land under groundnuts ranging from 0.3 to 8 hectares for smallholders and up to 100 hectares for large-scale producers.

Traders and processors purchase groundnuts in shelled or unshelled form, often at the farm gate or in local markets. Local traders such as OK Foods and AGRA play an important role in linking producers to consumers, while processors contribute to value addition through roasting, peanut butter production, and animal feed manufacturing, although their capacity remains limited.

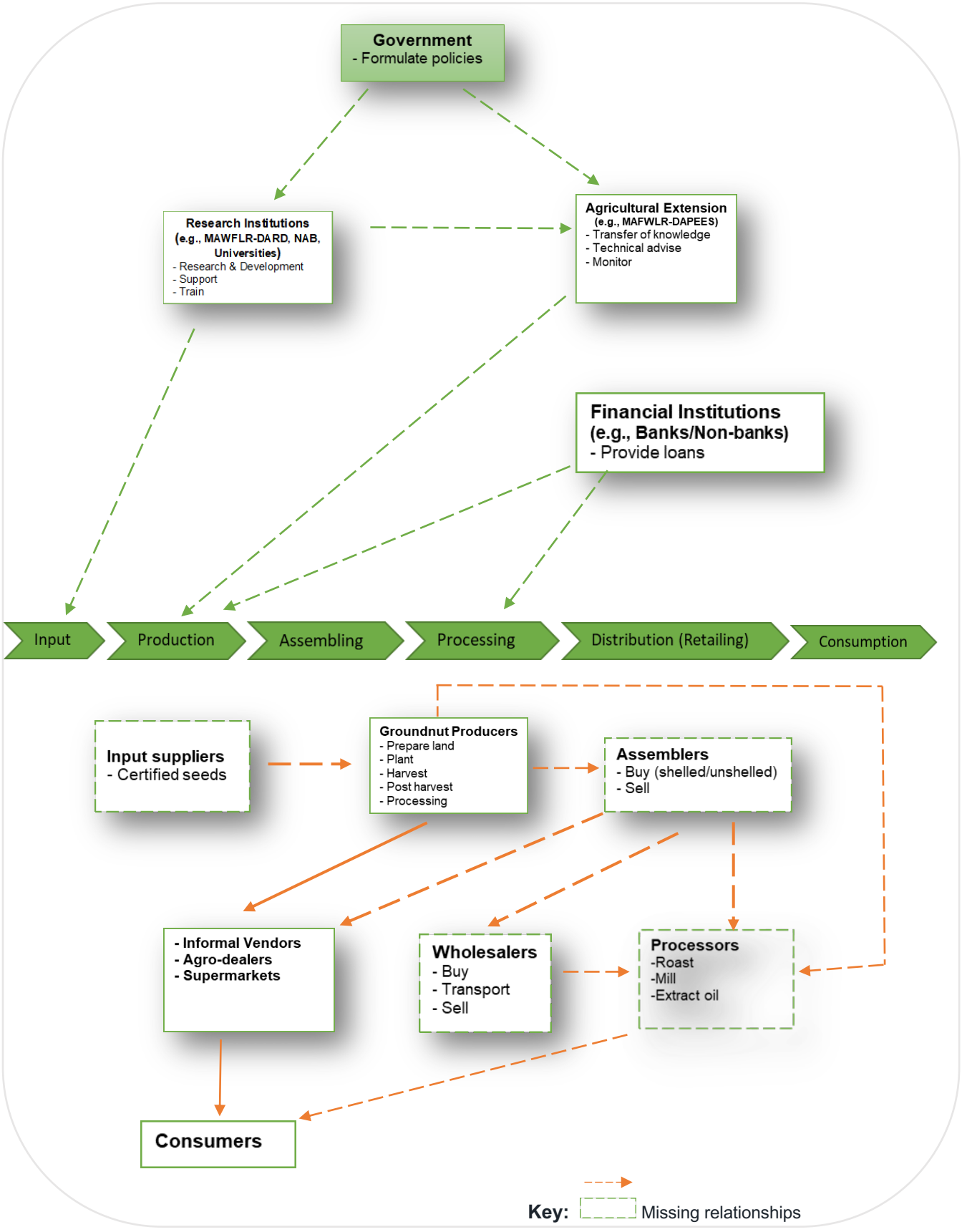

Figure 18: *Groundnut Value Chain Map for Namibia (Source: Survey Data, 2024)*

4.2 Key challenges and opportunities within the groundnut value chain

This subsection presents the key challenges and opportunities identified by various actors within Namibia's groundnut value chain. The insights highlight constraints across production, processing, and marketing, as well as potential areas for growth, investment, and value addition to strengthen the sector's competitiveness.

A. Producers

Table 6: *Key challenges and opportunities identified by producers*

Challenges	Opportunities
✓ Lack of access to quality, improved, and locally adapted seed varieties ✓ High input and labour costs, with heavy reliance on manual labour ✓ Limited access to ploughing services and mechanisation, delaying land preparation and planting ✓ Pests and soil-borne nematodes affecting crop health ✓ Poor access to irrigation and water sources ✓ Inadequate training and extension support on best agronomic practices ✓ Variation in soil types affecting productivity, without recommendations	✓ Adoption of improved seed varieties and climate-smart farming practices to boost productivity ✓ Intercropping and crop rotation for soil fertility improvement and sustainability ✓ Access to new markets through organised cooperatives or associations ✓ Possibility of accessing subsidies and grants to reduce production costs ✓ Contribution to household food security through high-protein nutrition

B. Input suppliers

***Table 7**: Key challenges and opportunities identified by input suppliers*

Challenges	Opportunities
✓ Lack of certified seed ✓ Limited collaboration between research institutions and the private sector for improved input development	✓ Expansion of seed production and distribution networks for improved varieties ✓ Potential collaboration with research institutions for variety development ✓ Market growth through the supply of affordable and locally relevant inputs ✓ Potential investment in local seed multiplication and agro-dealer systems

C. Traders/Processors

***Table 8:** Key challenges and opportunities identified by traders/processors*

Challenges	Opportunities
✓ Lack of capacity building ✓ Poor market infrastructure and transport systems, especially in rural areas ✓ Weak linkages between producers and buyers ✓ Lack of standardised pricing mechanisms and market information systems ✓ Low production volumes limit consistent supply ✓ Limited value addition and absence of local processing plants	✓ Increasing demand for groundnuts and derived products both locally and regionally ✓ Opportunity to develop standardised grading and pricing systems ✓ Value addition through processing, packaging, and branding ✓ Potential for export to regional markets with improved quality control ✓ Job creation along the marketing and processing chain

5 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Groundnut production in Namibia has significant potential to enhance food security, improve rural livelihoods, and promote agricultural diversification. The findings of this study indicate that production is predominantly undertaken by smallholder producers, particularly women, who constitute the majority. Cultivation remains heavily reliant on rain-fed systems, with limited access to irrigation and minimal use of certified seed and fertilisers. While Namibia produces groundnuts both for local consumption and export, overall productivity remains low, and national demand continues to be supplemented by imports from neighbouring countries.

The value chain analysis further reveals several structural challenges, including inadequate access to quality inputs, limited value addition and processing infrastructure, weak market linkages, and poor storage and transportation facilities. Despite these challenges, the sector demonstrates profitability due to its relatively low input requirements compared to other crops. With targeted interventions, the Namibian groundnut subsector holds strong potential to evolve into a competitive and sustainable industry, contributing meaningfully to national self-sufficiency and regional trade.

5.2 Recommendations

To strengthen the groundnut subsector and unlock its full potential, the following recommendations are proposed:

- ✓ **Improve access to high-quality seeds:** The Ministry of Agriculture, Fisheries, Water, and Land Reform (MAFWLR) and the Namibian Agronomic Board (NAB) should strengthen seed systems by promoting certified groundnut varieties adapted to Namibian agroecological zones, as well as enhance farmer awareness of the Seed and Seed Varieties Act 23 of 2018 to encourage the adoption of quality seed.
- ✓ **Expand market opportunities:** The NAB and partners should conduct comprehensive assessments of local and export markets to identify demand-driven opportunities, as well as facilitate support structured supply contracts with regional buyers, such as South African processors, to provide producers with more secure and predictable market access.
- ✓ **Promote value addition and processing:** The MAFWLR and the private sector should invest in agro-processing infrastructure to increase value addition through products such as peanut butter, groundnut oil, flour, and animal feed, as well as encourage cooperatives and small and medium-sized enterprises (SMEs) to engage in processing, thereby increasing farm-level incomes and generating rural employment.

- ✓ **Support farmer and processor capacity building:** The MAFWLR and the NAB should provide targeted training on good agricultural practices, integrated pest management, and opportunities in organic certification, as well as promote inclusive participation of women and youth in groundnut production and agribusiness through tailored extension services and empowerment programmes.
- ✓ **Leverage policy and regional trade frameworks:** The NAB should align national groundnut development strategies with broader regional initiatives such as the African Continental Free Trade Area (AfCFTA) to expand market access, as well as introduce fiscal and financial incentives to attract private-sector investment in groundnut production, processing, and marketing.

ANNEXES

Annexe A: Locally processed peanut butter packaged in 400g containers

Adapted from Langa's Agribusiness Investment cc. (2025)

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