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NAMIBIAN AGRONOMIC BOARD

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AGRONOMY AND HORTICULTURE MARKET DEVELOPMENT DIVISION

RESEARCH AND POLICY DEVELOPMENT SUBDIVISION

AN ANALYSIS OF MARKET ACCESS BY SMALL-SCALE HORTICULTURE PRODUCERS IN NAMIBIA

December 2021

NAMIBIAN AGRONOMIC BOARD

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EXECUTIVE SUMMARY

Namibia recorded a total consumption of 89,083 tons of horticulture fresh produce worth N$658 million during the 2018/2019 financial period (NAB, 2018/2019). During the aforementioned period, more than half of the fresh fruits and vegetables consumed in Namibia were imported, and only about 35% were locally produced. The Namibian Agronomic Board (NAB) implements various schemes aimed at encouraging local production. However, despite these interventions, small-scale horticulture farmers constantly complain that they do not have a market for their produce. The NAB investigated this and engaged various small-scale producers from the North Central, Kavango, and Zambezi production zones as well as the formal and informal traders from the Central, Karst, North Central, Kavango, and Zambezi trading zones.

A survey approach was used, whereby a sample of 30 key and active small-scale producers, 17 formal traders, and 25 informal traders was selected. The collected data were analysed using Microsoft Excel, Microsoft Word, and an online survey tool called QuestionPro. The results indicated that the majority of small-scale horticulture producers grow a variety of horticulture products that fall under the Special Controlled Products (SCP) and as such, the Market Share Promotion (MSP) rules are applied. However, only 48% of the small-scale producers sell their products through formal markets, with the remaining 51% selling their products through informal markets, whilst 1% sell to export markets. All (100%) of the interviewed traders buy fresh produce from small-scale producers.

Overall, small-scale producers sell fresh produce at a slightly higher price in informal markets compared to the price in formal markets. However, they still sell a few products through formal markets compared to what they sell through informal markets. Factors such as compromised quality, inconsistent supply, lack of cold storage and transport facilities, strict packaging requirements, and lack of production agreements limit small-scale producers' participation in the formal markets.

The study made recommendations such as: providing training on Good Agricultural Practices (GAP) to small-scale producers for them to improve production and meet formal traders' requirements; Government (GRN) offices/agencies like the NAB should create platforms for both small-scale producers and traders to meet and discuss matters pertaining to the concerned industry; regulate or formalise informal markets or informal traders for better statistics and data collection; investigate options for export markets for horticulture produce for market expansion; invest in value addition as well as regulate the aspect of production agreements.

Keywords: market access, horticulture fresh produce, small-scale producers, traders, formal markets, and informal markets

1. INTRODUCTION

Namibia recorded a total consumption of 89,083 tons of horticulture fresh produce worth N$658 million during the 2018/2019 financial period (NAB, 2018/2019). This indicates an 8% increase from 81,452 tons of fresh produce consumed during the 2017/2018 financial period. During the aforementioned period, more than half of the fresh fruits and vegetables consumed in Namibia were imported, and only about 35% were locally produced. The Namibian Agronomic Board (NAB) implements the Market Share Promotion (MSP) scheme to ensure that Namibian registered traders purchase a certain minimum percentage of their quarterly turnover from local farmers before being granted an import permit (NAB, 2020). Close border periods for the top 19 Special Controlled Products (SCP) are implemented during the time of sufficient local supply, and most of the common horticultural products produced by smallholder farmers are part of the list of special controlled products (NAB, 2020).

The implementation of this scheme further aims to encourage local horticulture farmers to increase production and take advantage of this almost guaranteed market. Local farmers have since taken advantage of this and the NAB has seen an increase in the number of local horticulture farmers or producers over the past years. Despite the implementation of the MSP scheme by the NAB that is aimed at developing the horticulture industry in Namibia, small-scale horticulture farmers constantly complain that they do not have a market for their produce. Some of the complaints from small-scale horticulture producers dating as far back as 2019 indicate that local supermarkets or traders are only buying from established horticulture producers or that they are still sourcing fresh produce from outside Namibia. Furthermore, although the Agro-Marketing and Trade Agency (AMTA) has tried to buy from small-scale producers and tries to find markets for local fresh produce, it continues to face the same resistance from the traders (Shaanika, 2019; Nembwaya, 2020; Shigwedha, 2021).

It was on this basis that the NAB conducted this in-house study to establish whether indeed small-scale horticulture farmers find it difficult to access domestic markets, then analyse such enabling or limiting factors, and ultimately make recommendations. Using a survey research approach, this study identified and interviewed (face to face with a structured questionnaire) 69 key industry stakeholders comprising 25 small-scale horticulture producers, 19 formal horticulture traders, as well as 25 informal horticulture traders. The small-scale producers involved were from the North Central, Kavango, and Zambezi production zones, whereas the formal and informal traders involved, were situated in the Central, Karst, North Central, Kavango, and Zambezi trading zones.

Some of the respondents were not so comfortable and open to sharing their information, especially on the pricing and costs involved, citing confidentiality issues. However, the study managed to get an estimate on the number of products that the small-scale horticulture farmers managed to sell through

formal markets *vis a vis* what they sell through informal markets. Overall, it seems small scale producers mostly prefer to sell through informal markets as opposed to formal markets. Traders also seem to be uncomfortable buying stock from small-scale producers due to various challenges experienced such as logistics, quality, and quantity. The study also revealed some aspects where both stakeholders seem to have generally reached a compromise and both parties are comfortable with the cost price (for the trader) and selling price (for the producer).

Each category of respondents provided general opinions on what should be done to improve access to markets for small-scale horticulture producers in Namibia. Respondents made several suggestions including but not limited to an increased usage of growing/supply contracts, the provision of cold storage and transportation facilities, increased production, enhanced training in quality checking and grading, increased engagements amongst industry players, and increased access to credit/finance facilities and ties, etc. Based on the information and data gathered through this study, conclusions and recommendations are herein presented for possible consideration and for mapping the way forward.

2. PROBLEM STATEMENT

Despite the government's efforts to increase market access for locally produced fresh fruits and vegetables through the creation of the Agro Marketing and Trade Agency (AMTA), and also the introduction of the MSP and the Special Controlled Products (SCP) Scheme via the NAB, smallholder farmers still complain about not having access to markets for their fresh produce. This investigation, therefore, sought to provide answers and a better understanding that can assist policymakers to come up with solutions that can foster and improve the marketing of controlled fresh fruits and vegetables.

3. SPECIFIC OBJECTIVES

The specific objectives of the study were to:

a) Analyse the situation of the smallholder horticulture producers' accessibility to formal and informal markets.
b) Analyse the situation of the horticulture traders/buyers on accessing horticultural products from smallholder horticulture farmers.
c) Recommend ways to improve the marketing of controlled horticultural products from smallholder farmers situated in the communal areas of Namibia.

4. SIGNIFICANCE OF THE STUDY

It is expected that the findings of this study can determine the level of challenges encountered by smallholder horticulture farmers in terms of access to formal and informal markets, with the hope of recommending solutions to these challenges. The study sought to establish whether smallholder

farmers are indeed encountering challenges in marketing their produce, considering that several interventions were put in place to deal with the market challenges such as the creation of AMTA, as well as the MSP and the SCP Scheme that are implemented by the NAB. Furthermore, the study sought to assist in providing an understanding as to whether formal and informal horticulture traders face any challenges in accessing horticultural products from smallholder producers. Lastly, the study made some suggestions for policy interventions to the Namibian Agronomic Board and or any other concerned government institutions on how to best support and develop market access for smallholder farmers.

5. METHODOLOGY

6.1. STUDY DESIGN AND LOCATION

As an exploratory form of research/study, both qualitative and quantitative methods of collecting primary data were used. Primary data were collected through a survey (face-to-face interviews) using a structured questionnaire with both structured and unstructured questions. The questions covered both aspects of supply (production) and demand (market) related issues. Individual small-scale horticulture farmers situated in the North Central, Kavango, and Zambezi production zones, as well as formal and informal traders situated in the Central, Karst, North Central, Kavango, and Zambezi trading zones, were interviewed. Additional or secondary information was got from previous studies, reports, and online data from relevant institutions which were reviewed and utilised to support the primary data that were collected from the survey. The data collected were analysed using descriptive statistics and thematic analysis with Micro-Soft excel as well as an online data analysis tool (QuestionPro).

6.2. POPULATION AND SAMPLING PLAN

The study collected both quantitative and qualitative data through a survey approach, specifically from the specially targeted, registered, active, and key small-scale horticulture producers in the selected production zones. The same approach was employed for sampling formal traders whilst informal traders/buyers were interviewed at random. For the producers, the study targeted three (3) production zones (North Central Kavango, and the Zambezi), where most small-scale horticulture producers are situated and where market challenges are largely reported. With a total of 291 registered producers from these production zones, a sample of 30 small-scale producers was selected.

For the formal traders, the study targeted for interviews a sample of 17 key traders in five (5) trading/production zones (North Central, Kavango, Zambezi, Karst, and Central), out of a total population of 61 registered formal traders in these zones. Due to the unknown number of informal traders, the study randomly targeted and interviewed five informal traders from the same five (5) trading/production zones respectively.

Out of the targeted/sampled number of respondents, not all the targeted respondents under the small-scale producers' category were interviewed because they were unavailable for the interviews. However, the study managed to interview more than what was targeted in the formal traders' category. Overall, this research sampled 69 key stakeholders, consisting of 25 small-scale horticulture producers, 19 formal traders/buyers, and 25 informal traders/buyers.

Figure 1 below illustrates a comparison of the sampled number of respondents and the actual number of respondents that were interviewed for the study. The study was short of five (5) sampled producers and it interviewed two (2) additional formal traders.

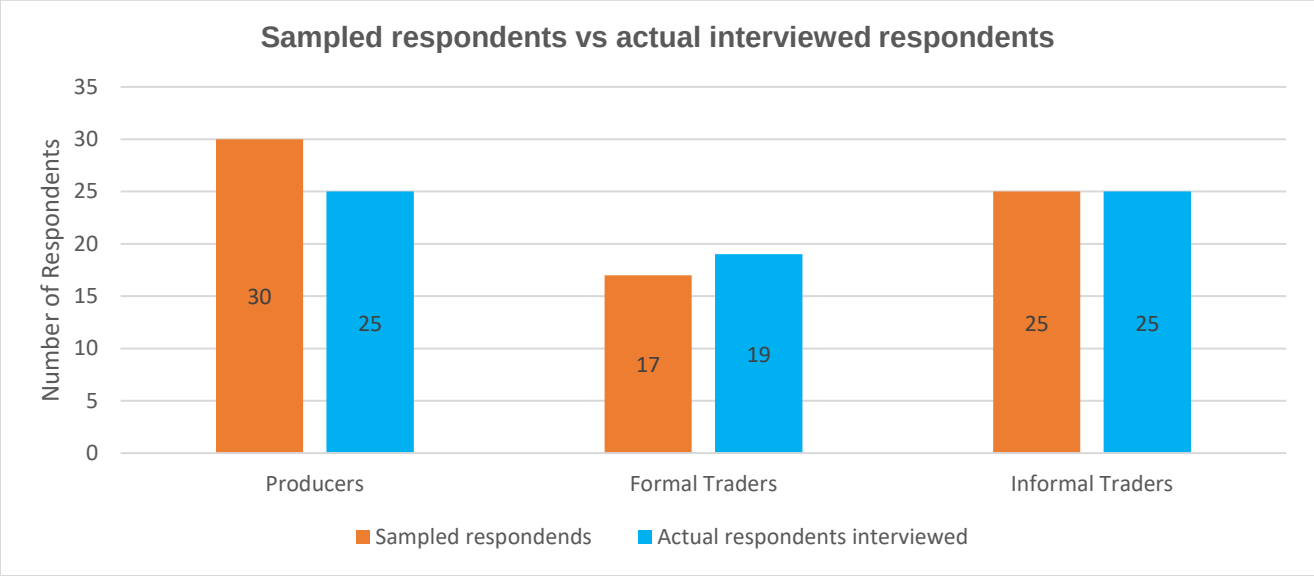


Figure 1: Composition of the sampled/targeted number of respondents vs the actual number of interviewed respondents (Survey data, 2021)

Figure 2 indicates the gender distribution of the three categories of respondents. Of the producers interviewed, 17 were male and 8 were female; for the formal traders, 15 were male and 4 were female; whilst informal traders were dominated by females with 22 respondents and there were only 3 males.

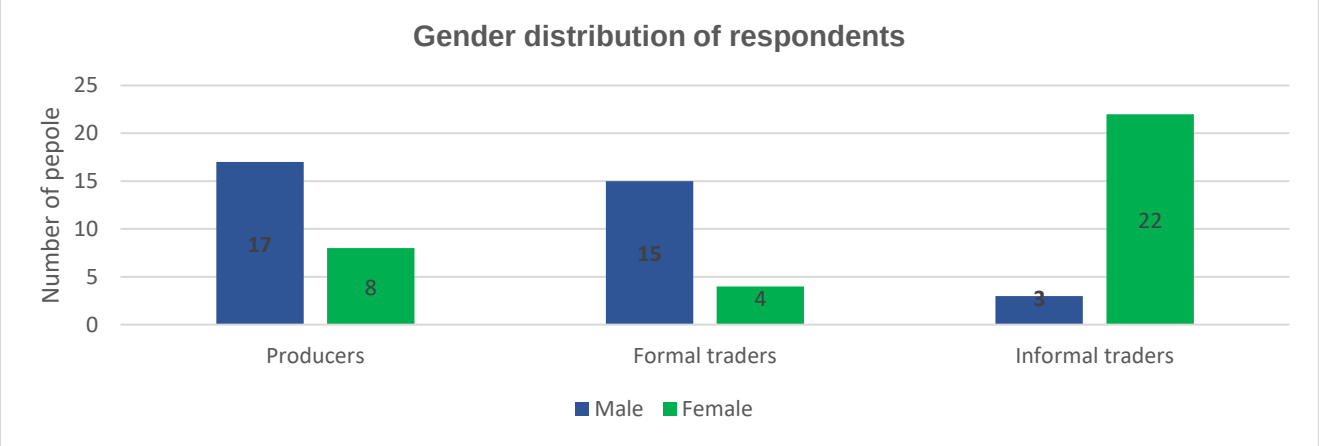
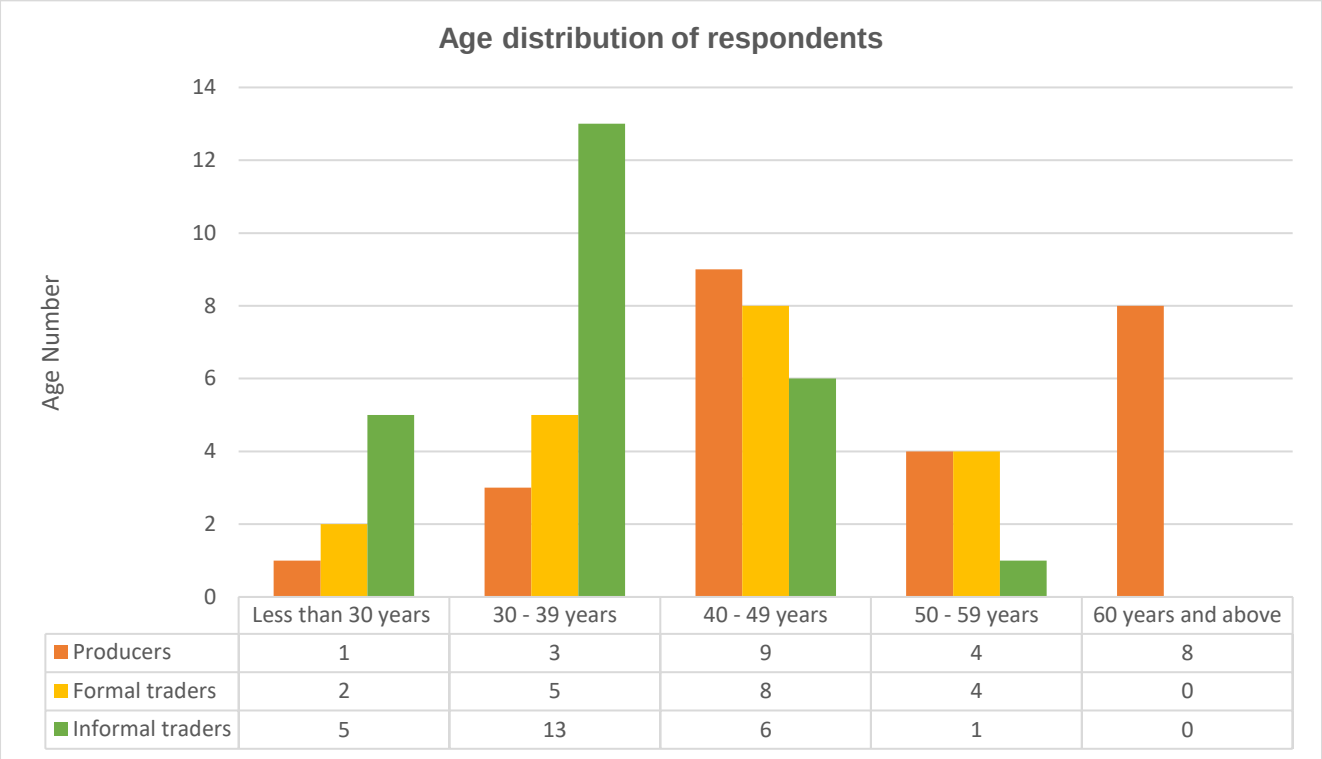


Figure 2: Gender distribution of the respondents (Survey data, 2021)

Figure 3 depicts the age distribution of the three categories of respondents. For the producers, the highest number of respondents was those between the ages of 40 and 49 (9), followed by those above 60 years (8). The majority of the formal traders interviewed fell under the age category of between 40 and 49 years (8), with the least being less than 30 years old (2). The highest number of informal traders interviewed was between the ages of 30 and 39 years (13) and the least was under the category of 50 and 59 years (1) old.



	Less than 30 years	30 - 39 years	40 - 49 years	50 - 59 years	60 years and above
Producers	1	3	9	4	8
Formal traders	2	5	8	4	0
Informal traders	5	13	6	1	0

Figure 3: Age distribution of the respondents (Survey data, 2021)

Figure 4 below shows the distribution of the survey respondents over the indicated five (5) horticultural production/trading zones in Namibia.

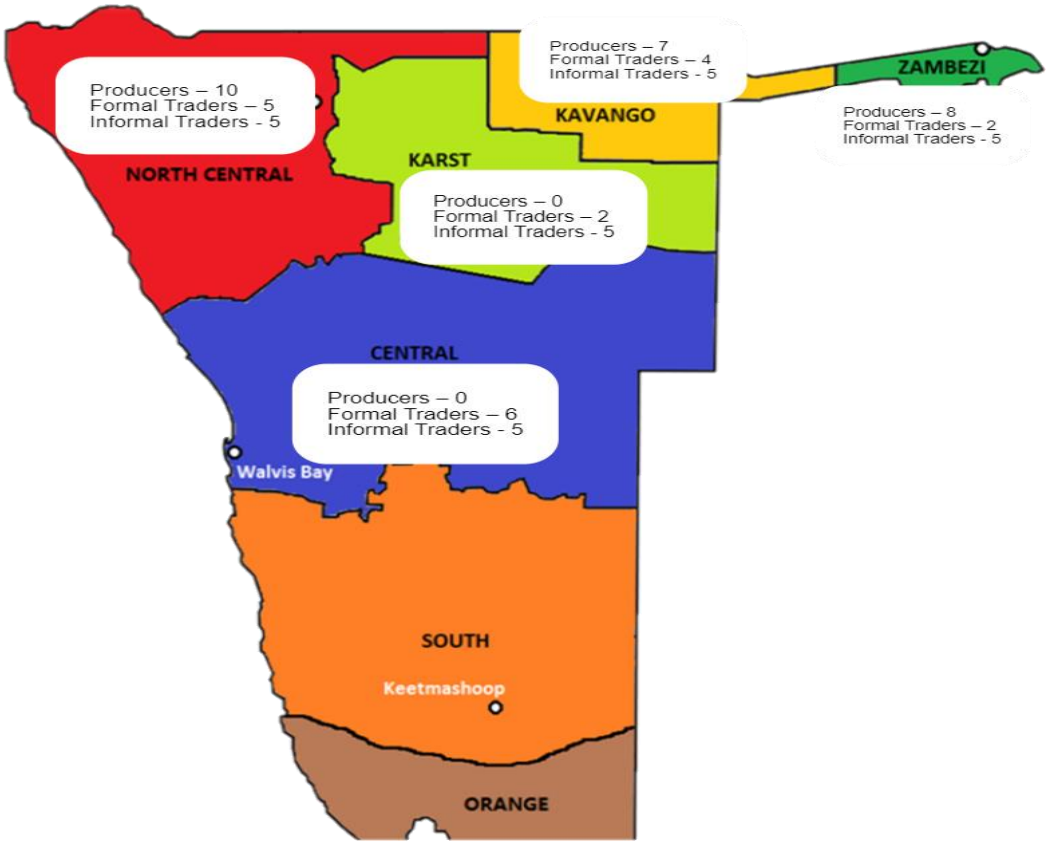


Figure 4: Distribution of the respondents over the five (5) production/trading zones (NAB, 2021)

6.3. DATA COLLECTION AND ANALYSIS

After the structured questionnaires were prepared, telephonic appointments were made with the small-scale producers and formal traders and oral interviews were conducted. Informal traders were interviewed using a random selection approach. The interview questions were based on several areas such as production and purchasing quantities, marketing channels, perceptions of quality aspects, pricing, challenges, and possible solutions to such challenges.

The data collected through the interviews was then captured into Microsoft Excel, and Microsoft Word as well as an online survey tool (QuestionPro) for data analysis and report writing. Descriptive statistics were used to present the results in tables and figures.

7. RESULTS AND DISCUSSIONS

This section summarises the results and findings of this study which are categorised into three sections namely: (1) Factors that may influence small-scale producers' access to formal markets; (2) Challenges observed as impacting market access for small-scale horticulture producers and; (3) Possible suggestions to boost market access for small-scale horticulture producers. The first section discusses the findings around the type and quantity of horticulture products produced by the small-scale producers

as well as the level of uptake by formal traders in the sampled production zones. It also presents the findings on market categories and prices; market access and transportation; production agreements; access to information; food safety, quality, and packaging and; cold storage and value addition. The second section of the results presents and discusses the challenges impacting market access by small-scale horticulture producers as provided by the sampled small-scale producers and traders within the sampled production zones. Lastly, the 3rd section presents various possible suggestions to improve small-scale horticulture producers' access to formal markets as also suggested by the sampled stakeholders.

7.1. FACTORS THAT MAY INFLUENCE SMALL-SCALE PRODUCERS' ACCESS TO FORMAL MARKETS

7.1.1. Production by small-scale producers and uptake by traders

The survey investigated the average production quantity of various horticulture products produced by small-scale producers in the three (3) production zones. The producers also indicated the type of horticulture crops they are producing, along with the estimated yields per year. The respondents listed the horticultural produce as presented in Table 1.

The horticultural produce listed in Table 1 indicates that the majority of small-scale horticulture producers grow a variety of horticulture products that fall under the SCP products and that the MSP rules are applied. The table further shows that producers have tried growing garlic and potatoes for the first time, however, no average yield was recorded as the products were yet to be harvested for the first time.

Table 1: Horticultural products grown by the sampled producers/farms (Survey data, 2021)

Horticultural Produce/Products	North Central Production Zone	Kavango Production Zone	Zambezi Production Zone
Tomatoes	✓	✓	✓
Cabbages	✓	✓	✓
Onions	✓	✓	✓
Sweet potatoes	✓	✓	✓
Green peppers	✓	✓	✓
Chilies	x	✓	x
Pumpkins	x	✓	✓
Butternuts	✓	✓	✓
Watermelons	✓	✓	✓
Spinach	✓	✓	✓
Beetroot	✓	✓	✓
Gem squash	✓	x	x
Carrots	✓	x	✓

Horticultural Produce/Products	North Central Production Zone	Kavango Production Zone	Zambezi Production Zone
Rape	✓	x	✓
Cauliflower	✓	x	x
Sweet melons	✓	x	x
Garlic	x	✓**	x
Potatoes	x	x	✓**

NB:
** = First-time production
X = Not listed

With regards to the sampled small-scale producers in the three (3) production zones, Figure 5 indicates that cabbages (22.6 tons) and watermelons (19.9 tons) are the horticulture crops that are produced the most by the small-scale producers in terms of tonnage, possibly due to their bigger sizes and weight.

The next most produced horticulture products are onions (18 tons), tomatoes (17.6 tons,) and beetroots (15.2 tons) respectively. The lowest-produced crop is chili with an average yield of 0.6 tons and rape with an average yield of 0.3 tons respectively (Figure 5).

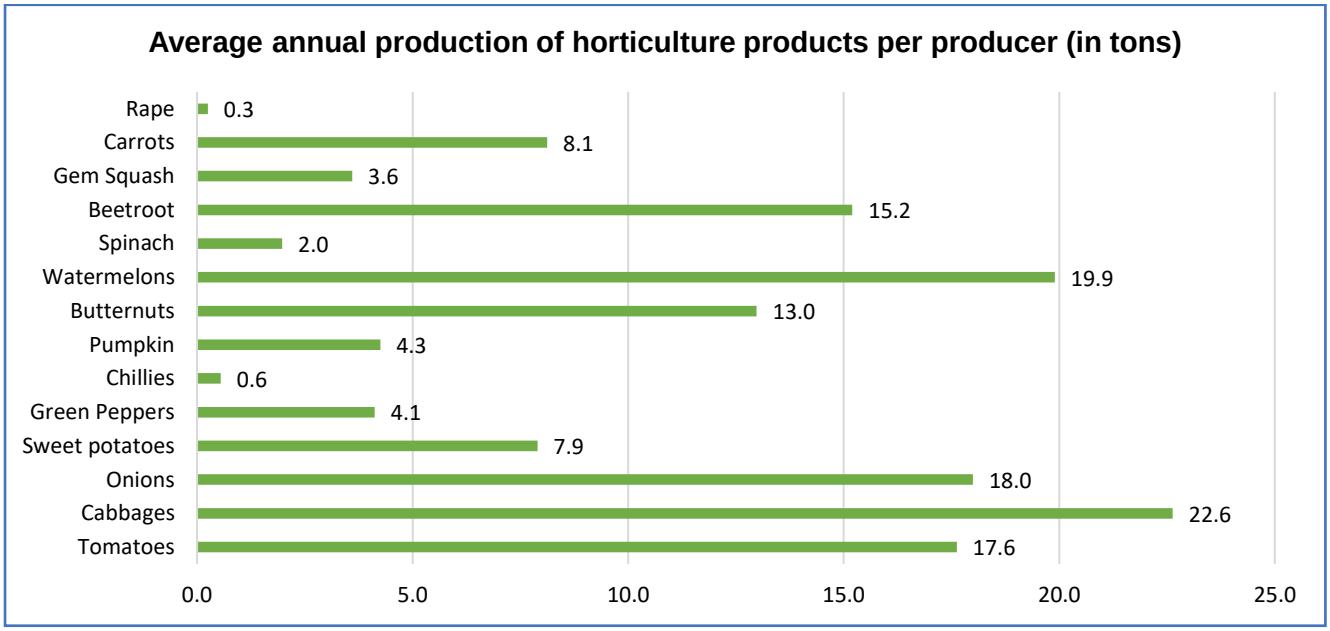


Figure 5: Average annual horticulture production per producer (in tons) (Survey data, 2021)

The NAB, however, forecasted the three sampled production zones to produce about 698 tonnes of cabbages, 491 tonnes of tomatoes (both round and jam), as well as 360 tonnes of onions during five months between 01 August and 31 December 2021 (Figure 6). These forecasts were achieved through the collection of production data from the producers to implement the import restrictions strategy whose objective is to increase the local production of fruits and vegetables and to reduce Namibia's dependence on imported horticulture fresh produce. The data presented in Figure 5 (survey data) is

closely correlated with the data presented in Figure 6, with cabbage being the highest-produced vegetable in the three production zones.

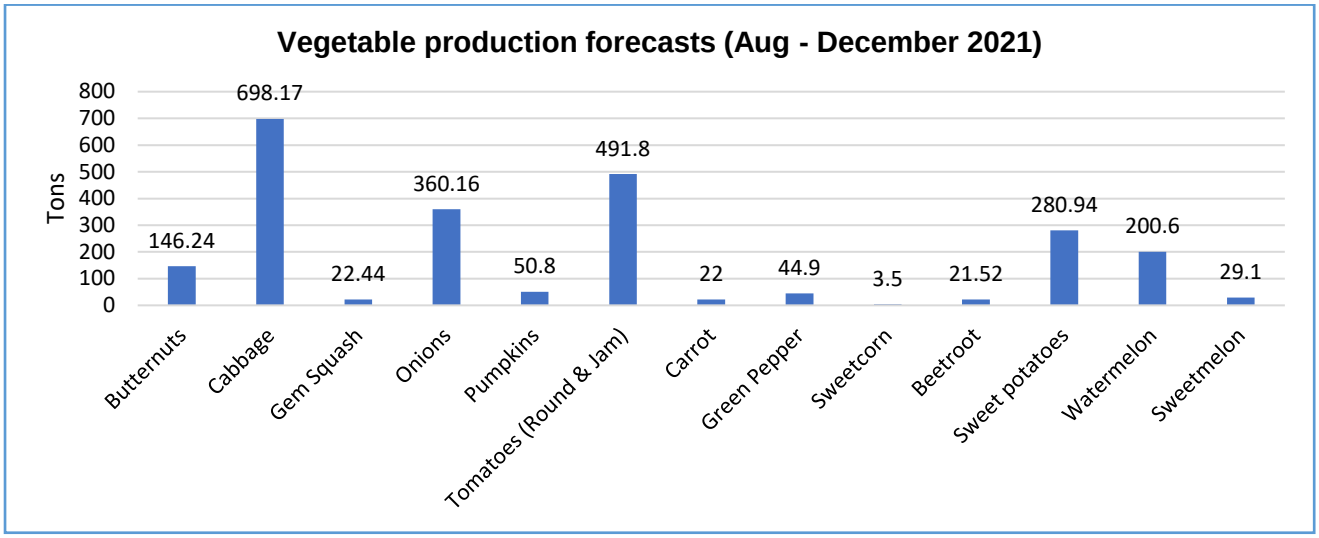


Figure 6: Vegetable production forecasts from the Zambezi, North Central, and Kavango Production zones (August – December 2021) (NAB, 2021)

Figure 7 below shows that formal traders within the sampled production zones purchased an annual average amount of 182 tons of potatoes from the small-scale horticulture producers in the sampled production zones, 135.7 tons of watermelons, and 134.5 tons of onions respectively. Chilli, ginger, cauliflower, and broccoli recorded the lowest purchased products with less than 0.5 tons each. The figures above are based on the sampled traders interviewed for this study, however, the purchased quantities referred to are not limited to the producers that were interviewed for this study.

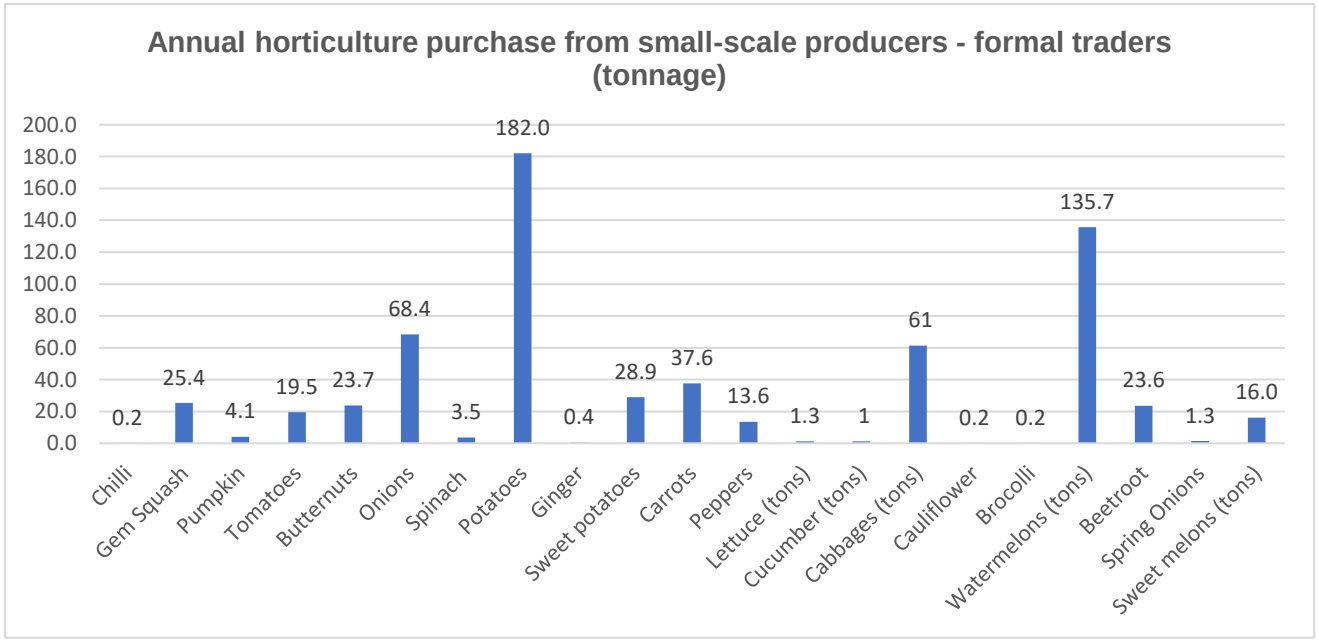


Figure 7: Average annual horticulture purchase from small-scale producers in North Central, Kavango, and the Zambezi - Formal Traders (Survey data, 2021)

Other horticultural products were also purchased from small-scale horticulture producers by the formal traders all within the three production zones and these are highlighted in Figure 8.

On average, formal traders in the North Central, Kavango, and Zambezi production zones purchased 14,350 heads of cabbages, 12,000 heads of lettuce, 3,600 cucumbers, 2,250 heads of watermelons, and 450 sweet melons from the small-scale horticulture producers in the same production zones annually. Due to the insufficient local supply of all horticultural produce, traders are also importing some produce to complement the local supply and meet the local consumption demand (Figure 8).

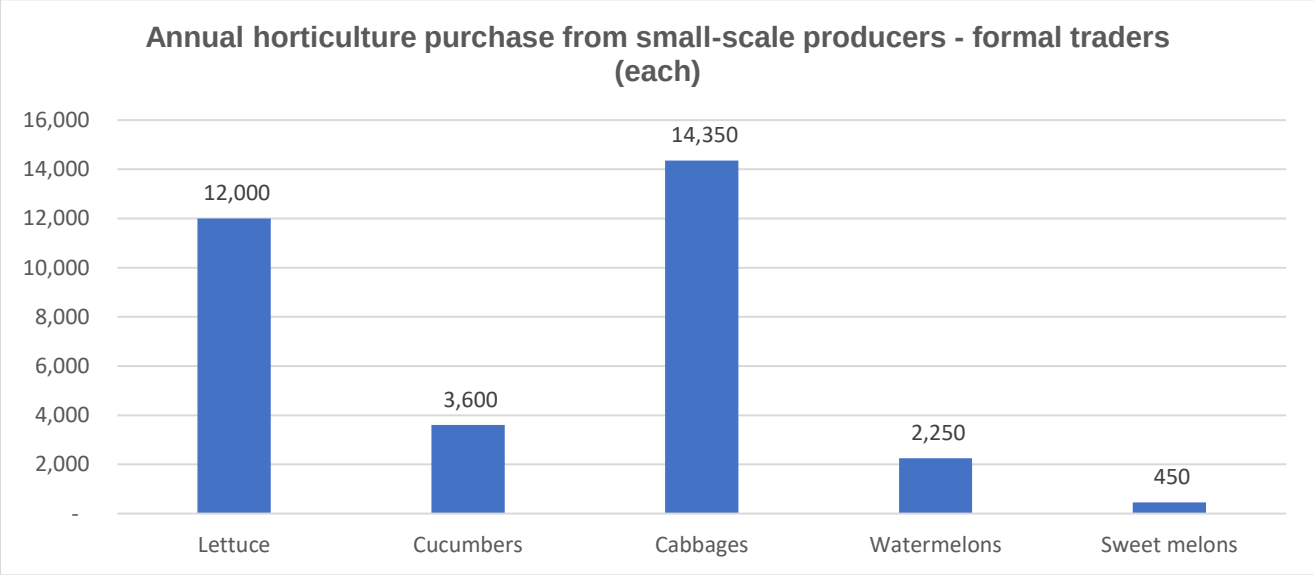


Figure 8: Average annual horticulture purchase from small-scale producers by formal traders in the three production zones (individual quantity) (Survey data, 2021)

Figure 9 indicates the total national horticulture imports (2021/2022 financial year) on selected products that are normally also produced by the sampled small-scale producers within the North Central, Kavango, and Zambezi production zones. It indicates that there are quite high amounts of potatoes and onions imported at a rate of over 2,600 tons annually. Although these products are mostly only imported when borders are open for imports as per the SCP and MSP rules, the high imports of potatoes indicate very low local production.

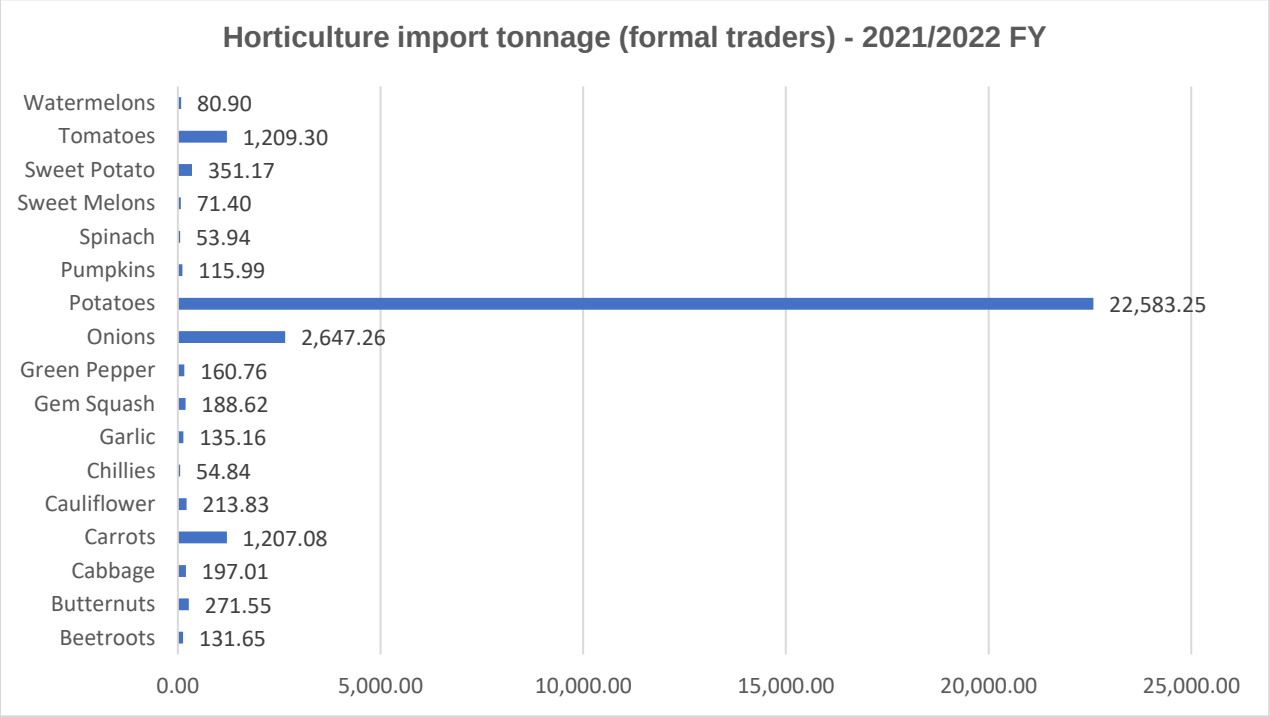


Figure 9: Namibia's annual horticulture imports by formal traders (tonnage) (NAB, 2022)

7.1.2. Market categories and prices

According to Figure 10 below, out of the interviewed producers, 51% indicated that they sell their products through the informal market (local village/community/street vendor/open market and or at farm/farm gate stall), whilst only 48% indicated that they sell the products through formal markets, i.e. dealers such as retailers, processors, agents, farmers' market or associations, through production contracts with distributors/retailers, government agencies such as AMTA, and/or catering companies. About 1% of the respondents indicated that they sell outside of Namibia, specifically to Zambia.

From the trader's perspective, 100% of the interviewed formal and informal traders indicated that they source or buy their horticulture products from small-scale farmers (Figure 10). The traders, however, also highlighted the challenges they experience when sourcing from small-scale producers (Figure 11).

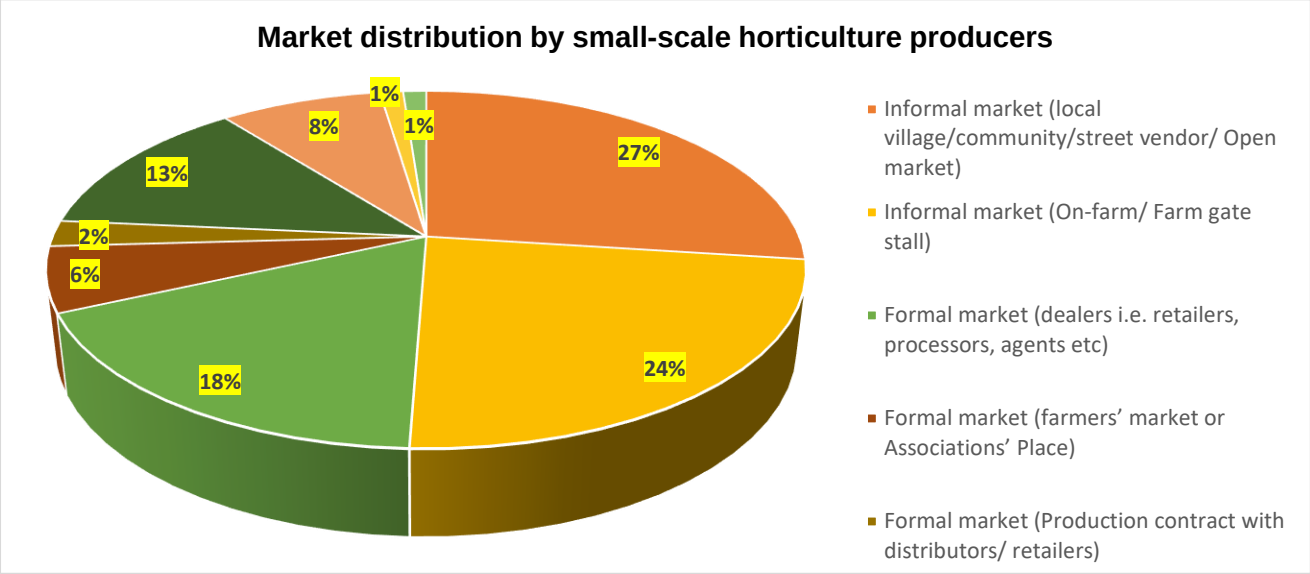


Figure 10: Market distribution for small-scale horticulture producers in North Central, Kavango, and Zambezi (Survey data, 2021)

Various traders indicated that they source fresh produce from small-scale farmers around Olushandja, Etunda, Salem, Sikondo, and many other individual small-scale producers within the three sampled production zones (Figure 11).

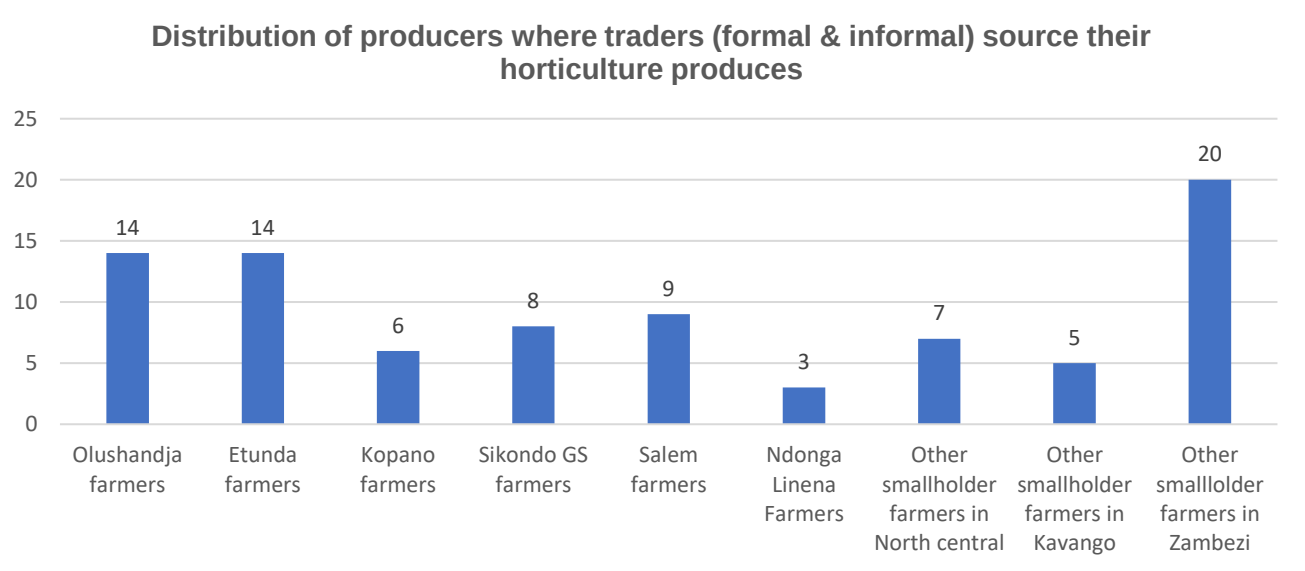


Figure 11: Distribution of where traders source their products (Survey data, 2021)

In terms of prices, as shown in Table 2, small-scale producers sell products at a slightly high price when selling to formal traders compared to when selling to informal traders. Tomatoes showed the biggest difference with an average price of N$10.45 per kg when sold to formal traders compared to the price of N$9.64 per kg when sold to informal traders.

Table 2: Horticulture prices charged/offered to formal traders, informal traders, and export buyers (Survey data, 2021)

Horticulture Products	Unit of price measurement	Price - Informal traders (N$)	Price - Formal traders (N$)	Price – Exports (N$)
Tomatoes	Price per kg	9.64	10.45	-
Cabbages	Price per head/for each	11.29	12.38	-
Onions	Price per kg	6.57	6.64	-
Sweet potatoes	Price per kg	9.39	9.66	-
Green peppers	Price per kg	13.19	14.89	-
Chillies	Price per 200g	10.00	-	-
Garlic	No price given	-	-	-
Pumpkins	No price given	-	-	-
Butternuts	Price per kg	7.53	7.36	-
Watermelons	Price per head/for each	38.71	41.93	-
Spinach	Price per 500g	8.33	11.00	-
Beetroot	Price per kg	6.00	6.00	-
Gem squash	No price given	-	-	-
Carrots	Price per kg	7.25	7.00	-
Rape	Price per 500g	5.00	-	5.00
Cauliflower	Price per head/for each	12.00	12.00	-
Sweet melons	Price per head/for each	10.00	10.00	-
Potatoes	No price given	-	-	-

Only butternuts and carrots are being sold at lower prices to formal traders compared to the price offered to informal traders. It is therefore worth investigating why the prices to formal markets are slightly high compared to prices offered to informal traders whilst producers still sell less of their products to formal traders.

Respondents from all categories were also asked to indicate who sets up the prices when selling or buying the products and their responses are summarised in Figures 12a & b.

For producers, the pricing category of “both buyer and seller negotiate” on the price scored the highest with over 50%. This was, however, contradicted by traders who scored over 51% on the pricing category “the producer as the seller” sets the price, whilst only 35% of the producers indicated that they set the price themselves as sellers. Nonetheless, there is room for negotiation as both traders and producers scored close to 50% (51% - producers, 47% - traders) on the category of “both buyer and seller negotiate” (Figure 12a & b).

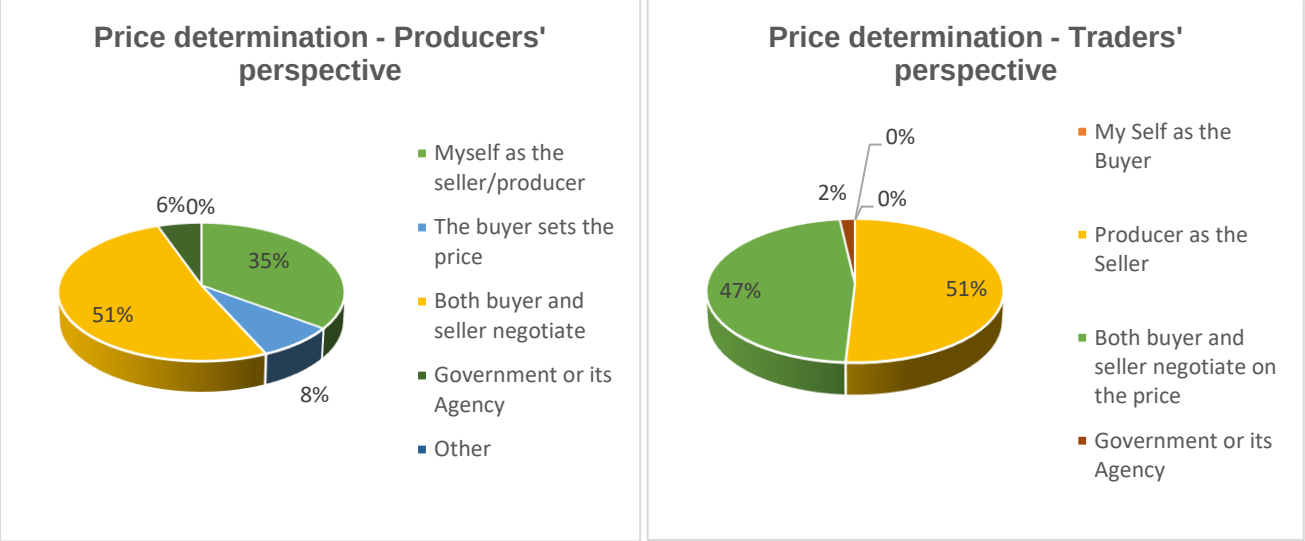


Figure 12a & b: Price determination; Producers’ and Traders’ perspectives (Survey data, 2021)

The majority of traders and producers indicated that they feel comfortable about the “negotiating” pricing method because more often than not, it leaves both parties satisfied with the final negotiated price. Some formal traders, however, feel that sometimes the producers price the products at a high price, even when the products are not of top quality. This then leads to formal traders not being able to competitively price and sell the products. The informal traders feel as if they do not have any control over the prices being charged by the producers and hence they are always left with no choice but to accept whatever price is being charged due to a lack of bargaining power.

The small-scale horticulture producers on the other hand also feel that they are being forced to under-price their produce especially when they have to negotiate the price with the traders. They indicated that the low prices offered to them hinder them from expanding their production and they are also, in most cases, unable to break even and cover their operational costs.

7.1.3. Market access and transportation

A total of 96% of the interviewed producers access their markets via tarred/gravel road, apart from the 4% that indicated that they use a sandy road. They indicated having to travel for a minimum of 4km and a maximum of 200km to reach the formal markets. Producers further indicated that they spend a minimum amount of N$6.60 per km on transport to the markets, and the rate can get as high as N$30.00 per km.

In terms of who provides transport to the market, as indicated in Figure 13, the majority of producers (46%) have their own transport and they usually deliver their produce to the market or traders. A small proportion of producers (10%) indicated that some traders collect the produce from the farm themselves, however, this is still at the producer's cost.

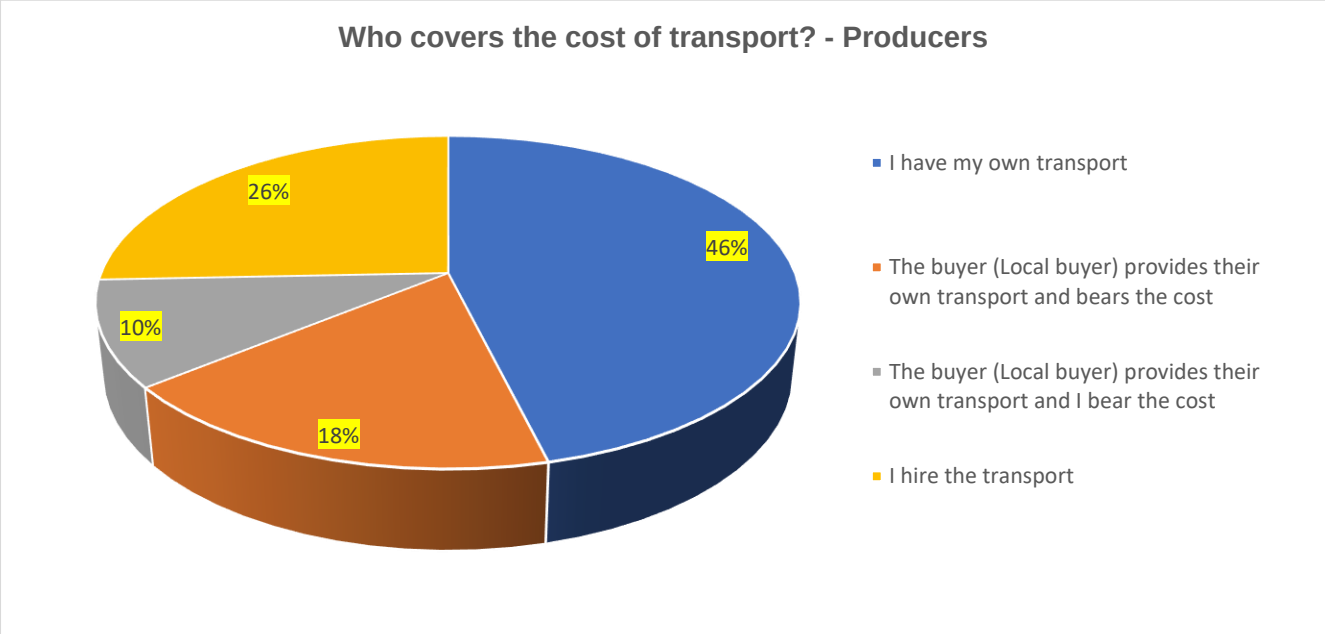


Figure 13: Transport cost coverage – Producers (Survey data, 2021)

From the trader's perspective, Figure 14 indicates that 57% of the producers provide their transport and they bear the costs. This corresponds to the figures indicated in Figure 13 above. Some of the traders also indicated that they have their transport (33%) and they collect their products directly from small-scale producers at their farms although this is most common with formal traders.

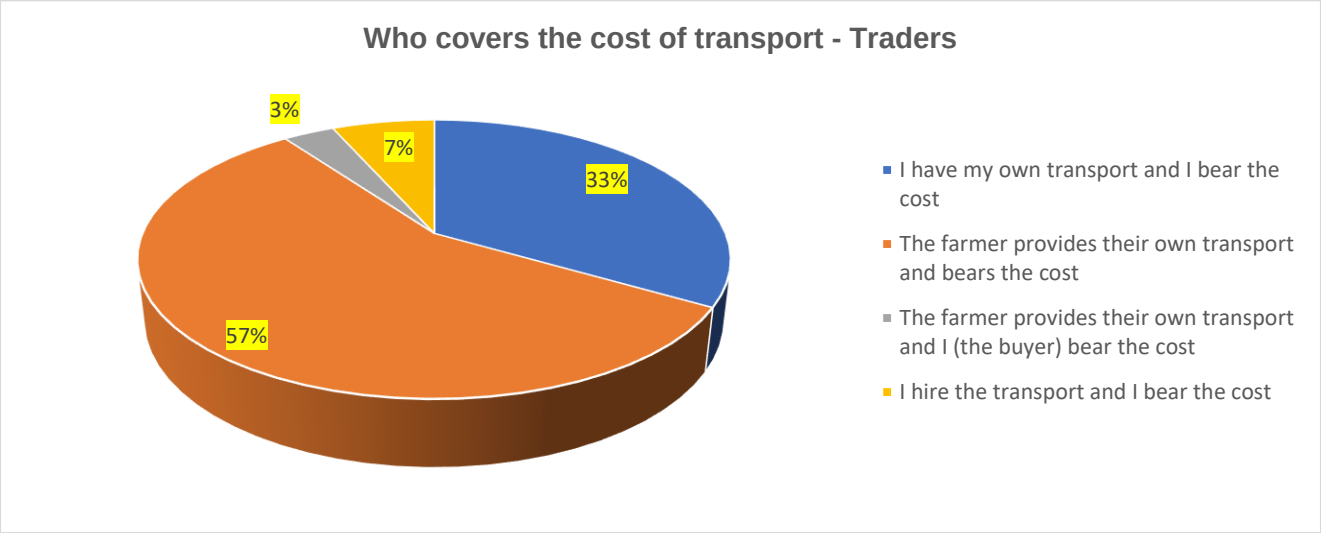


Figure 14: Transport cost coverage – Traders (Survey data, 2021)

7.1.4. Production agreements / supply contracts

The study also investigated the level of supply commitment between traders and small-scale horticulture producers. This was meant to determine whether there is any level of market agreement that guarantees supply and purchase between the two stakeholders. The study revealed that over 50% of small-scale producers have production agreements in place with formal traders, whilst only 2% have such agreements with informal traders. Although this is a good development, about 30% of those with production agreements stated that their contracted buyers don't always honour the contractual agreements. It was indicated that the buyers sometimes end up buying from other suppliers, especially when there is an oversupply in the market and other times understandably so due to poor-quality products.

At least 83% of the interviewed traders from the sampled production zones (Figure 15) indicated that they do not have any production agreements with the small-scale horticulture producers. These traders gave reasons such as lack of supply commitment from the producers' side, lack of producer registrations with the NAB, and an insufficient supply of produce as some of the reasons they do not have production contracts with the small-scale horticulture producers. From the producer's perspective, about 58% have production agreements with some traders, however, not all of these traders are based in the production zones sampled for this study.

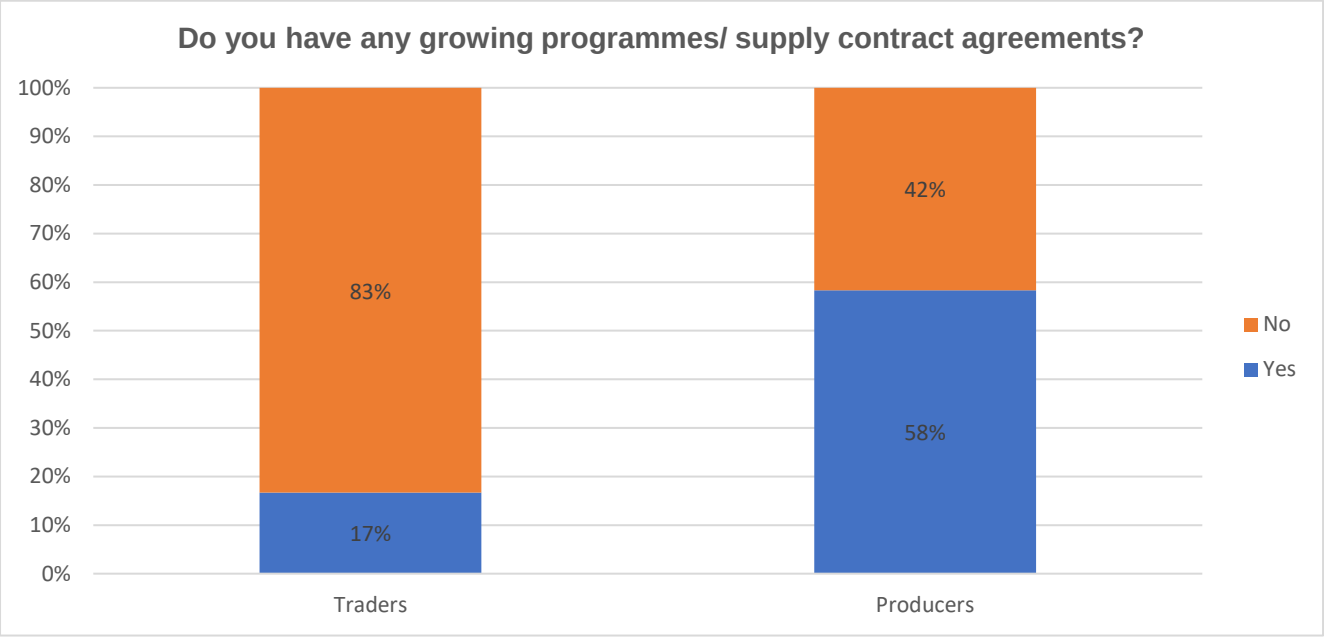


Figure 15: Status of production agreements or supply contracts (Survey data, 2021)

Notwithstanding the results in Figure 15 above, the study further revealed that there is a high interest in production agreements as about 95% of the small-scale producers who never had production contracts with buyers indicated that they were willing to enter into production agreements in the future (Figure 16).

This is the same with traders, of which 71% indicated interest to enter into agreements with the producers. Traders who are not willing to enter into agreements indicated reasons such as lack of regulations or laws preventing the producers from competing with them, insufficient storage space, inconsistent supply, and pricing as well as lack of market security, especially for informal traders, who most of the time do not have strategically located designated spaces to sell their products.

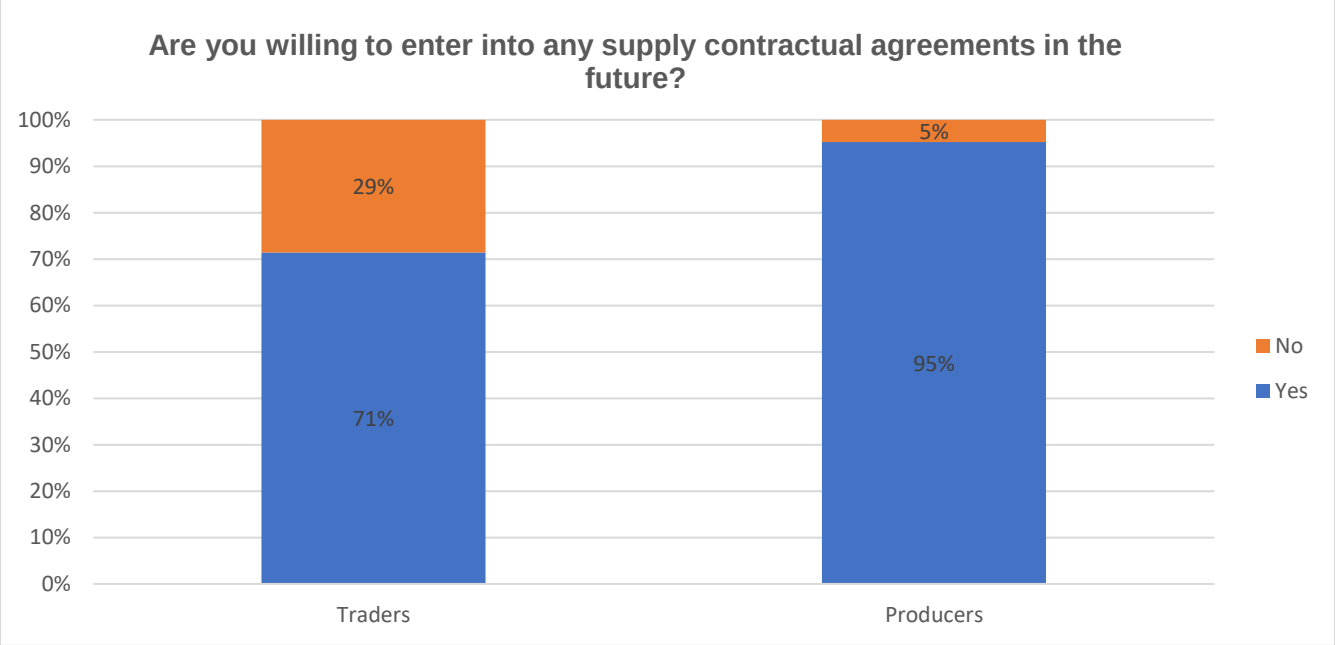


Figure 16: Willingness to enter into production agreements or supply contracts (Survey data, 2021)

7.1.5. Access to information and training

Access to information about the horticulture industry is another important aspect of a successful horticultural enterprise. Farmers must be well informed about the industry they operate in for them to make informed decisions especially when it comes to production.

Figure 17 indicates that over 90% of the small-scale horticulture producers indicated that they have access to information about the horticulture industry in terms of market prices, production and demand.

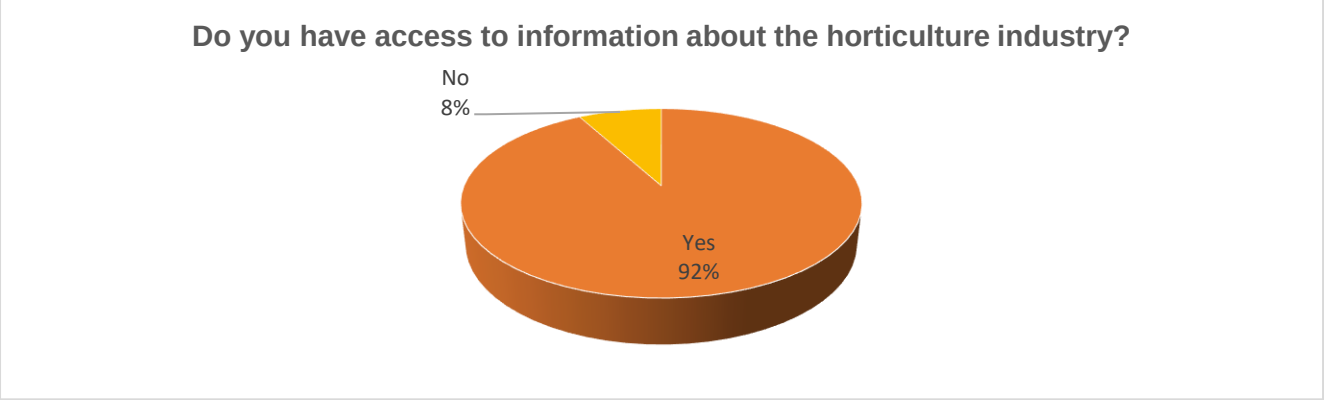


Figure 17: Small-scale horticulture producers' level of access to information about the industry (Survey data, 2021)

Figure 18 shows that small-scale horticulture producers mostly get their information about the horticulture industry through government agencies such as the NAB, AMTA, and the ministry of agriculture. They also largely get information through other means such as mobile phones (amongst themselves) and other stakeholders as well as through farmers' associations. However, they indicated that they wish to get more information through radio and television, local village/headman offices, as well as through more training workshops.

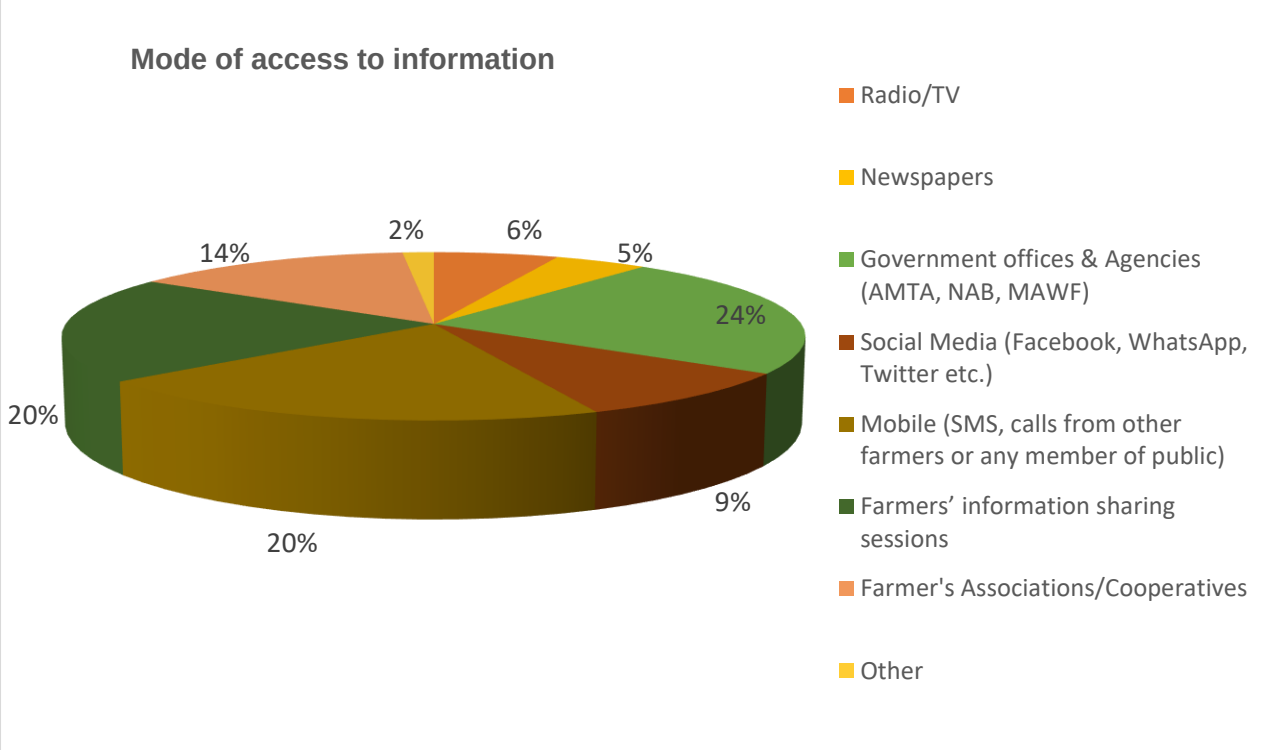


Figure 18: Small-scale horticulture producers' mode of access to information about the industry (Survey data, 2021)

Training also forms an integral part of a successful crop farming enterprise as it enhances knowledge to improve production and income generation. Formal traders are specifically strict on acquiring high-quality products for their shops, hence the reason some of them also indicated low quality as one of the reasons they do not have production agreements with small-scale horticulture producers.

Figure 19 illustrates the level of training extended to the small-scale horticulture producers on vegetable gradings in Namibia. According to Figure 19, only 71% of the producers have received training in vegetable grading, thus leaving 29% without any knowledge about vegetable grading. These

percentages leave room for improvement, especially from the regulator's side, to ensure a developed industry.

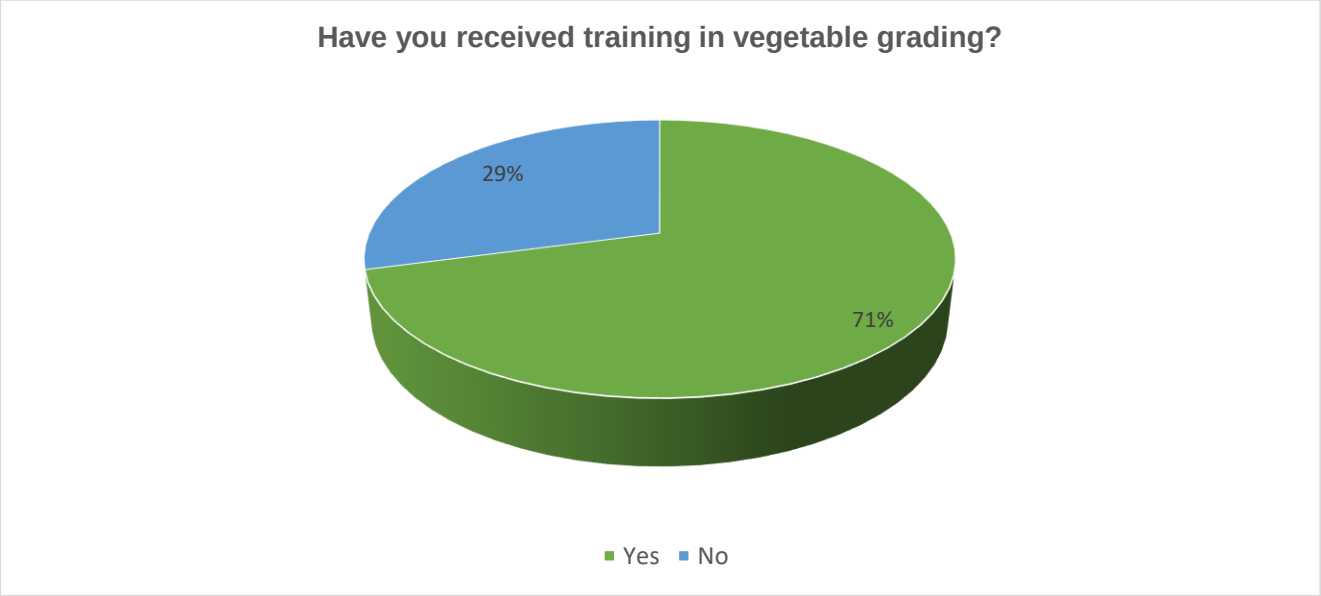


Figure 19: Small-scale horticulture producers' level of training in vegetable grading (Survey data, 2021)

7.1.6. Food safety, quality, and packaging

Over 80% of the producers buy their packaging materials from various local retail shops. However, those with contractual agreements with Freshmark purchase specific packaging materials from them for their products. Furthermore, about 73% of formal traders indicated that they have specific requirements regarding packaging, quality, and grading. This indicates a lot about the level of standards that the formal traders require for the small-scale horticulture producers to meet before being able to sell to them. Below are some of the specifications that are required by formal traders when it comes to packaging:

a) Products should be packed in specific volume sizes i.e. 10 kg, 3kg, 500g packs, etc.;
b) Products should be packed in specific and appropriate packaging, and if possible coded and branded;
c) They should be graded in terms of sizes/class;
d) Cleanliness;
e) Products should be delivered in an appropriate form of transport i.e. should not be on an open bakkie;
f) Those packaged in crates, especially for tomatoes, should not be packed too full; and
g) Other products such as cabbages, lettuce, and spinach should not be packed in such a way that the leaves are falling off.

All the interviewed stakeholders seemed to agree on the aspect of quality (including grading), appearance, and product presentation as it guarantees a quality horticulture industry in Namibia. Producers highlighted that quality and appearance allow their products to price themselves, to attract and satisfy their customers, as well as allow them a chance to do market segmentation to target the right customers accordingly. The traders shared the same sentiment, especially the formal traders, who mostly indicated that quality is what keeps them in business and up to standard according to their customer base.

In terms of food safety certifications, only a few traders (36%) (Figure 20) from the sampled production zones require their suppliers (small-scale horticulture producers) to have some food safety certifications. These are mostly general certifications such as Producer Registration with the NAB, basic Good Agricultural Practices (GAP), and Hazard Analysis and Critical Control Points (HACCP). According to the traders, apart from the NAB registration certificates, the two latter requirements are not compulsory.

Figure 20: Proportion of formal traders that require food safety certifications from horticulture producers (Survey data, 2021)

As shown in Figure 21, the majority of both producers and traders rated the quality of fresh produce from the small-scale producers as either of high or better quality. This gives an indication that the horticulture products produced by small-scale producers are of an acceptable standard. Less than 3% of the interviewed respondents indicated that the products are of low quality. Overall, based on what is represented in Figure 21 above, the industry perception in the North Central, Kavango, and Zambezi production zones is that there is a significant improvement in terms of quality from the small-scale producers compared to the past years when local vegetable production was very low in the country.

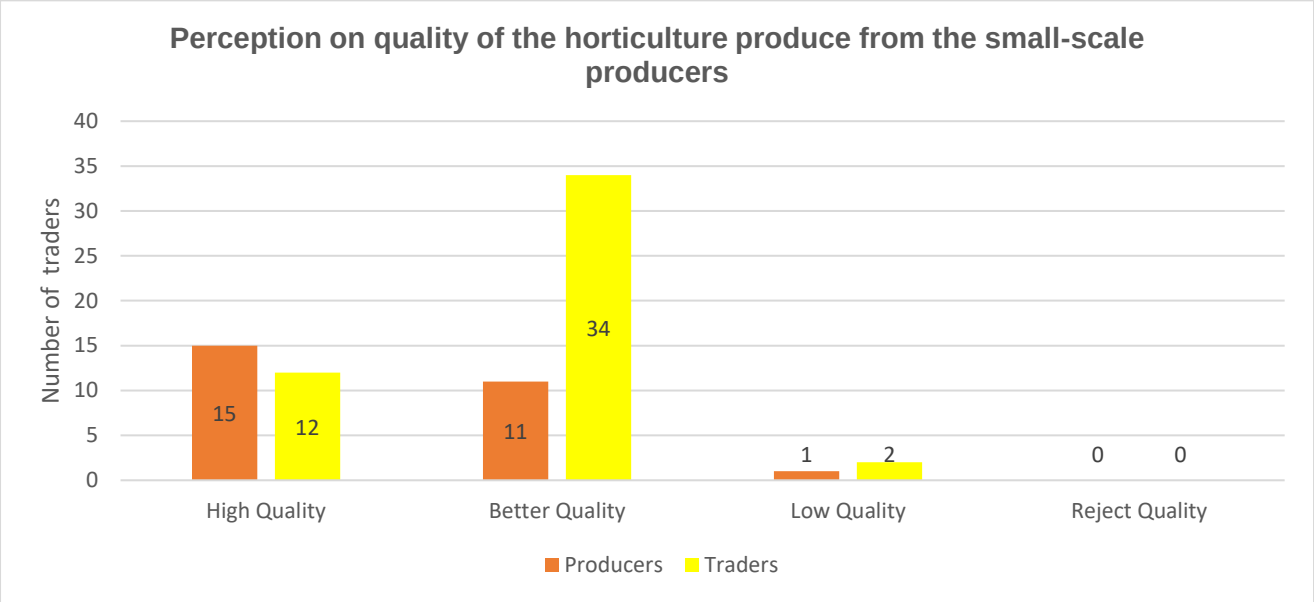


Figure 21: Quality of products from small-scale producers (Survey data, 2021)

7.1.7. Cold storage and value addition

Maintaining the cold chain in vegetable production is one of the main important parts of ensuring a standardised and quality-producing vegetable industry. On the other hand, value addition ensures maximum benefits from all the harvest and minimises post-harvest losses as much as possible. The study, therefore, investigated the level at which the traders and producers are involved in these two important aspects.

The study revealed that 95% of the formal traders interviewed have cold storage facilities for their products whilst none of the informal traders has cold storage facilities. About 47% of formal traders do minimal value addition of cutting, peeling, dicing, shredding, and mixing of some vegetables such as carrots, butternuts, and cabbages, whereas a few (20%) of informal traders do some drying of vegetables such as spinach and beetroot leaves.

7.2. CHALLENGES OBSERVED AS IMPACTING MARKET ACCESS BY SMALL-SCALE HORTICULTURE PRODUCERS

Small-scale horticulture producers complained a lot about the many challenges they face when attempting to access formal markets for their products. The study further investigated what the producers think are the main challenges they are experiencing and these are summarised in Figure 22.

The top three challenges highlighted in Figure 22 are low prices offered (15%), distance to the market (15%), and, lack of storage facilities or packhouses for the producers (14%) as the main challenges

experienced by the small-scale horticulture producers. Other factors such as transport and access roads seem to be less of a challenge to the producers.

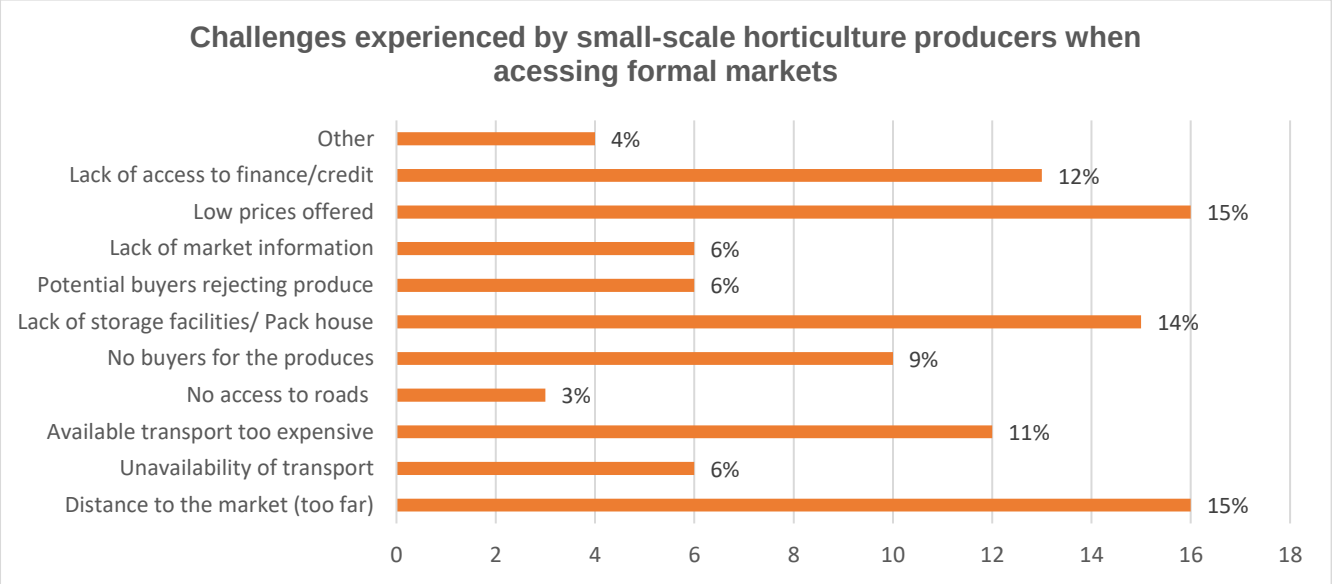


Figure 22: Challenges experienced by small-scale horticulture producers (Survey data, 2021)

The traders also listed the challenges they experience when sourcing their produce from small-scale producers and these are listed below:

a) High and unrealistic producer prices,
b) Poor quality produce and an inconsistent supply or product availability,
c) Poor transportation and lack of cold chain management,
d) Commitment issues, especially for those in production agreements,
e) Reluctance to register with regulating authorities such as the NAB,
f) Competition with the producers as they also sell individually to the customers, and sometimes in front of the traders who had just bought from them,
g) Informal traders face the challenge of competition from unregulated foreign informal traders who are also participating in trading while they are unregistered, and
h) Lack of coordination when it comes to open and close border periods. This is usually when borders are closed for a certain product that is only available in one specific part of the country that is not easily accessible to traders from far away towns/areas.

7.3. POSSIBLE SUGGESTIONS TO BOOST THE MARKET ACCESS FOR SMALL-SCALE HORTICULTURE PRODUCERS

As the most important stakeholders that were interviewed for this study, both traders and producers gave several suggestions that they feel are necessary to improve the situation of small-scale producers continuously facing challenges when accessing formal markets.

Table 3: Suggestions to enhance access to markets by small-scale horticulture producers (Survey data, 2021).

Producers	Traders
a) Assist farmers/producers with transport and cold storage facilities b) Encourage producers to get registered with the NAB c) Enhance extensive training for producers, especially in crop management, to ensure a sufficient supply of various products throughout the year and avoid an oversupply of similar products simultaneously d) Increased access to financial support/credit facilities, training on grading, and awareness of food safety aspects e) Prices, especially producer prices, should be regulated, taking into consideration the input costs to avoid producers' price exploitation f) Allow farmers to use production agreements or supply contracts to access credit facilities for production g) Encourage more investment in the agricultural input industry (fertilisers and seeds) to reduce costs and increase production	a) Provide financial support to small-scale horticulture producers so that they can collaborate with larger wholesalers b) Regulating authorities such as the NAB should provide platforms for traders and producers to engage as there seems to be no engagement at this level that is targeted at training and industry development, especially platforms that are aimed at assisting the smaller producers c) The government should create favourable economic activities that will increase customer spending for traders to continue supporting the small-scale horticulture producers d) Supply or production programmes could work; however, producers need to organise themselves in groups to meet the demand e) Find a way to formalise the informal traders of fruits and vegetables to avoid illegal foreign traders exploiting local traders f) Regulate the farmers/producers so that they do not sell directly to individual customers but only sell in bulk to traders as a way to avoid competition and encourage fair trade

8. CONCLUSIONS AND RECOMMENDATIONS

8.1. CONCLUSIONS

Using a survey approach, this study investigated and conducted a situational analysis of the horticulture smallholder producers regarding formal and informal market access. Using a questionnaire, about 69 key stakeholders consisting of small-scale horticulture producers, and formal and informal traders from three different targeted production or trading zones (North Central, Kavango, and the Zambezi) were interviewed. From the present study, a list consisting of the most common horticultural products grown by small-scale producers in the North Central, Kavango, and Zambezi production zones was compiled. The study further gave an estimated production quantity of each horticulture product of which cabbages, tomatoes, and onions are the three most produced products respectively. The study also found that the formal traders within the targeted production zones mostly purchased potatoes (which were planted for the first time by producers), watermelons, cabbages, and onions.

In terms of market types for the small-scale horticulture producers, the small-scale horticulture producers in the sampled production zones sell at least 50.59% of their produce through the informal market. This informal market mostly consists of selling through local villages, farm gates, street vendors, open markets, etc. The remaining 49.41% is sold through the formal market which mainly consists of retailers, processors, farmers' associations, government agencies such as AMTA, export markets, etc. In terms of prices, the producers seem to be selling their produce at a slightly high price to formal traders compared to informal traders.

It was further discovered that most challenges impacting small-scale horticulture access to the market include quality, logistics, and consistent supply. These reasons, amongst others, were listed as some of the reasons why formal traders do not have production or supply contracts with small-scale horticulture producers which could be considered as one of the strategies that can improve these producers' access to formal markets.

The main objective of the study was to investigate whether the small-scale producers from the North Central, Kavango, and Zambezi production zones indeed have challenges accessing formal markets. The study revealed that formal traders are doing their best to procure products from small-scale producers, however, factors such as low and inconsistent production, lack of transport, poor produce quality, etc. limit the process. One can, therefore, conclude that the market is indeed available, considering the high demand and consumption of horticulture products produced within these zones. The challenge is, however, with the enabling environments within the market to ensure that trade is taking place smoothly.

8.2. RECOMMENDATIONS

Small-scale horticulture producers are mostly encouraged to produce more when they have better access to markets that offer them higher prices. This means that producers will be able to produce more quality and diversified fresh produces, which in turn will increase the country's economy and the lives of various communities owing to the good prices being offered in the formal markets. Based on the findings presented in Section 6, the following recommendations are made:

a) ***Low production and poor quality*** are some of the challenges that the small-scale producers from the sampled production zones are having with regards to accessing formal markets. Technical support to producers in terms of ***training in Good Agricultural Practices (GAP)*** at the production level is therefore recommended so that the producers can improve their yields and quality to meet the requirements of the formal traders.

b) It is further recommended that ***training*** emphasises the importance of cooperatives and group marketing as some of the strategies to help deal with the challenges of low and inconsistent supplies. Organised cooperatives and associations will better facilitate the farmers' access to formal markets, financing institutions, market information in terms of demand and supply, value addition opportunities, and general best farming practices, hence boosting their farm sustainability.

c) The study revealed that there is a significant ***lack of a common understanding between the producers and traders***. It is, therefore, highly recommended that government agencies including the NAB, work together to create platforms for small-scale horticulture producers and formal traders to come together and engage on factors affecting them both and share ideas on how they can work together to tackle these challenges.

d) There is a need to ***regulate the informal sector*** that is involved in the horticulture trade as the present study revealed that these are the highest preferred traders by the producers. Strategies should be formulated on how this can be "formalised" for proper industry regulation and country trade data management.

e) Facilitate the process of ***contract or production agreements*** between small-scale producers and traders which will eventually encourage formal traders to enter into production agreements with small-scale producers. The majority of small-scale producers are willing to enter into production agreements with formal traders and vice versa. However, the fact that small-scale producers are also selling directly to individual consumers (sometimes at the premises of the

formal traders) and are unregulated, discourages formal traders to enter into production agreements. It is therefore recommended that regulating this process may be beneficial to both parties as it eliminates direct unfair competition and creates room for a fair producer price.

f) Another recommendation is that small-scale producers, with assistance from the government and their farmers' associations, should explore ***export opportunities*** for various products to avoid massive post-harvest losses, especially during times when there is an oversupply of similar products. This further increase market variations and reduces pressure on competition from small formal markets within the country.

g) ***The high costs and unavailability of input supplies*** such as seeds, fertilisers, pesticides, etc., limit small-scale producers from producing large quantities and high-quality horticultural produce. It is therefore recommended that the government creates an enabling environment that will encourage investment in the agricultural inputs supply business.

h) Lastly, it is recommended that the regulating authority or the Ministry of Agriculture, Water and Land Reform (MAWLR) revisits the ***definition of a small-scale horticulture*** producer as there was some confusion when it comes to who qualifies to be called a small-scale producer, whether it is in terms of the production scale or land size, despite the production.

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