



**The Smallholder Market Access Tracker
(SMAT)[®]**

BASELINE REPORT

**A CASE OF SMALLHOLDER CITRUS PRODUCERS
IN SOUTH AFRICA
AUGUST 2019**

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Acronyms

ARC	Agricultural Research Council
BATAT	Broadening Access to Agriculture Thrust
CASP	Comprehensive Agricultural Support Programme
CGA	Citrus Growers Association
CGAGDC	Citrus Growers Association Grower Development Company
DAFF	Department of Agriculture, Forestry and Fisheries
DARDLR	Department of Agriculture, Rural Development and Land Reform
DFDC	Deciduous Fruit Development Company
DRDLR	Department of Rural Development and Land Reform
HACCP	Hazard Analysis Critical Control Point
NAMC	National Agricultural Marketing Council
NFPM	National Fresh Produce Market
NRMDP	National Red Meat Development Programme
PIDT	Potato Industry Development Trust
RDP	Reconstruction and Development Programme
SIZA	Sustainability Initiative of South Africa
SMAT	Smallholder Market Access Tracker

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Executive Summary

The NAMC is leading a project to develop a dashboard tool as a measure of progress towards achievement of “market access for all participants” and in particular, market access for smallholder farmers in South Africa. The construction of the Smallholder Market Access Tracker (SMAT) tool commenced in April 2016 where the first pilot was conducted in potatoes. A second pilot was then conducted on beef (beginning April 2017). These pilots culminated in a citrus baseline in April 2018. The process was overseen by a group of representatives selected from various agricultural stakeholders in South Africa (referred to as reference group).

The SMAT tool is made of indicators sourced primarily through a survey that is specifically designed to collect primary data on smallholder market access. The indicators were identified using some key market access variables gathered from empirical research and are the heart of the SMAT tool, and could have either positive, negative or neutral effect on the smallholder farmers’ likelihood to access the market. They are categorized into two groups, where the first group tracks the progress from the supply perspective (farmers’ perspective) and the second group tracks the progress from the demand side (market’s perspective). These indicators are meant to inform the policymakers of the situation per industry tracked thereby enabling the formation and continuation of more effective programmes or interventions towards the achievement of market access. The information is presented in the form of dashboard analysis and will be updated in a two-year interval.

This report presents citrus baseline results that are based on the primary data collected from a sample of 68 smallholder citrus producers from the Limpopo, Eastern Cape, KwaZulu-Natal, Mpumalanga and North West Provinces. The sample was drawn from the database of the Citrus Growers Association Grower Development Company (CGAGDC), which contained 121 smallholder citrus producers.

The results reveal that a typical smallholder citrus farmer is a male aged 42 years with a tertiary qualification. He uses 181 hectares of land but does not have ownership. He sells his produce to various marketing channels including the informal market, institutional market, fresh produce market, supermarket and the export market. But he sells a largest quantity of his produce (average 45 425 cartons) to the export market, compared to 31 421 cartons that go into the institutional market. Notably, he is beaten by his female counterpart in the supermarket and the fresh produce market where she sells 21 000 and 17 028 cartons respectively. However, he still receives more income in all the markets except the institutional market, where his female counterpart receives a relatively higher income. He has a contract with his markets and occasionally sells in the spot markets. In the markets where he has contracts he gets paid after seven days or more, while he gets paid immediately in the spot market. Although he mainly sells under contract, he remains a price-taker.

His access to the export market is through private packhouses which source the smallholders’ produce through contract arrangements. Hence, it seems he does not participate in the whole citrus value chain. As a result, a concern was raised by smallholder citrus producers that there may be perceived unfairness in terms of the price that they receive through the packhouses that they supply. This is due to the fact that they do not have knowledge of what happens to their produce after it is delivered to the packhouse. It is therefore recommended that farmers are trained on how the citrus value chain works. Additionally, it is recommended that finance be made accessible to them to enable them to invest in expanding their businesses and also integrating vertically into the citrus value chain.

Section 1: Introduction

1.1 Background

One of the founding objectives of the NAMC, as stipulated in the Marketing of Agricultural Products Act (Act 47 of 1996), is to increase market access for all participants. The NAMC in the past three years (2016/17, 2017/18 and 2018/19) has been leading a project to develop a tool to measure progress towards achievement of “market access for all participants” and in particular, market access for smallholder farmers in South Africa. The rationale for the creation of such an index stems from the general perception and, in some cases, study findings, pertaining to, or indicating lack of progress in addressing integration of smallholder farmers in South Africa’s mainstream economy, a majority of them black. This is on the back of very well-articulated policies from as far back 1994 when the Reconstruction and Development Programme (RDP) was published by the ruling African National Congress (ANC) in order to create a restructured agricultural sector that “spreads the ownership base, encourages small-scale agriculture, further develops the commercial sector and increases production and employment” (African National Congress, 1994). Following on the sentiments of the RDP, the White Paper on Agriculture that was published in 1995, advocated for provision of support services to enable farmers to move into commercial farming if so desired (Makhura, et al., 1996).

The then national Department of Agriculture developed the Broadening Access to Agriculture Thrust (BATAT) in 1995 as its RDP project aimed at improving the access of small-scale farmers to agricultural services in five areas namely, financing, technology development,

transfer systems, human resource development, and marketing. A component of this initiative known as the “BATAT Marketing Drive” sought to “improve small scale farmers’ ability to seize marketing opportunities” (Van Renen, 1997). Over the course of the past two decades, similar policies and programmes have been developed to support development of smallholder farmers. The most prominent and largest of these is the Comprehensive Agricultural Support Programme (CASP), which was introduced in 2004 with the aim of providing support to smallholder farmers and land reform beneficiaries (Department of Agriculture, 2004).

Recent findings suggest that CASP and other farmer support programs have not been effective in achieving their intended goals. There is a need to measure and track the situation with regards to market access for smallholders in order to assist with policy debate and the formulation of more effective programs towards achievement of market access. It is against this background that the NAMC proposed that the Smallholder Market Access Tracker (SMAT) be developed as a measure of progress in the achievement of the market access goal for smallholders in South Africa. SMAT indicators were identified and were used as a basis for instrument design. Pilot surveys were undertaken to test the SMAT instrument on the following commodities, Potatoes (2016/17) and Beef (2017/18). The pilots culminated in a baseline on citrus smallholder producers which was conducted in 2018/19. The purpose of this report is to present baseline results of the SMAT tool with reference to smallholder citrus producers in South Africa.

¹A smallholder farmer in the context of this study is derived from the DAFF definition and refers to a new entrant who aspires to produce for the market and make profit

1.2 What is Smallholder Market Access Tracker (SMAT)?

The SMAT is a tool that acts as a measure of progress in the achievement of the market access goal for smallholders in South Africa. The aim of the tool is to generate information in order to address the strategic objective of increasing market access for smallholder farmers in South Africa. The SMAT is useful for the following targeted stakeholders among others, for advisory services:

- Government
- Farmers and farmer organizations
- Fresh produce markets
- Market institutions

The SMAT is composed of indicators identified using some key market access variables gathered from empirical research. The indicators are the heart of the SMAT tool. Following a process of rigorous discussion under the oversight of the SMAT Reference Group, it was decided that the SMAT indicators would be sourced primarily through a survey that is specifically designed to collect primary data on smallholder market access. Additional data, when required, would be obtained from secondary sources as well as expert or key informant opinions. The indicators were selected based on the economic theoretical premise that they are hypothesized to either positively or negatively or neutrally affect the smallholder's likelihood to access the market. The indicators are further categorized into two groups, the A Indicators (indicators from the farmer's perspective) and the B Indicators (indicators from the market's perspective). Table 1 below presents the selected indicators for the SMAT with their definitions and the nature of their effect on smallholder market access.

²The NAMC defines the Reference Group as a group of experts in certain field but with a degree of diversity among them (experience, demographics, regional spread, areas of specialisation, academic inclination, sector, affiliation, etc.).

Table 1: The SMAT indicators

Farmer (Supply or “Push”) indicators	
Name	Definition and expected nature of relationship with market access (in parentheses)
A1. Farmer profile:	
A1.1 Gender	The gender of the farmer (NA)
A1.2 Age	Age of the farmer (NA)
A1.3 Education	Highest education level attained by the farmer (+)
A1.4 Location	Town and province where farmer is located (NA)
A1.5 Legal entity	Type of entity that the farmer belongs to (if any) (NA)
A2. Supply:	
A2.1 Selling of produce	Whether the farmer sells any of his produce (+)
A2.2 Type of market supplied	Type of market supplied by the farmer (NA)
A2.3 Volumes supplied	Volumes (quantities) supplied by the farmer (+)
A2.4 Value supplied	Value (in Rands) supplied by the farmer (+)
A2.5 Selling arrangements	Whether farmer sells through spot selling, contract, etc. (NA)
A2.6 Selling price arrangements	Whether farmer negotiates selling price or whether he/she is a price taker (NA)
A2.7 Payment arrangements	The length of time it takes for payment to be effected (NA)
A2.8 Distance to market	Distance to the market supplied by the farmer (-)
A3. Market services	
A3.1 Access to market information	Whether the farmer has access to any source of market information (+)
A3.2 Access to storage	Whether the farmer has access to any form of storage (+)
A3.3 Access to packaging facilities	Whether the farmer has access to any packaging facilities (+)
A3.4 Access to credit	Whether the farmer has access to credit facility (+)
A3.5 Access to training/extension	Whether the farmer has access to any training or extension service (+)
A3.6 Access to transport	Whether the farmer has access to any transport service (+)
A3.7 Rating of quality of market information	Farmer’s rating of the quality of market information (1 = poor; 5 = excellent) (+)
A3.8 Rating of quality of storage	Farmer’s rating of the quality of storage (1 = poor; 5 = excellent) (+)
A3.9 Rating of quality of packaging facilities	Farmer’s rating of the quality of packaging facilities (1 = poor; 5 = excellent) (+)
A3.10 Rating of quality of credit	Farmer’s rating of the quality of credit service (1 = poor; 5 = excellent) (+)
A3.11 Rating of quality of training/extension	Farmer’s rating of the quality of training/extension (1 = poor; 5 = excellent) (+)
A3.12 Rating of quality of transport	Farmer’s rating of the quality of transport (1 = poor; 5 = excellent) (+)
A4. Market requirements	
A4.1 Awareness of market requirement	Where applicable, whether farmer is aware of market requirements (+)
A4.2 Compliance to market requirements	Where applicable, the extent to which farmer complies with market requirement (1 = no compliance; 5 = excellent compliance) (+)

³The farmer (supply or “push”) indicators denote the perspective of the farmer (the supplier)

B. Market (Demand or “Pull”) perspective	
B1. Market Profile	
B1.1 Type of market	Type of market supplied by the smallholder (NA)
B1.2 Market location	Town and province where the market is located (NA)
B1.3 Total market turnover	Where applicable, the total turnover of the market supplied by smallholder farmers (NA)
B1.4 Market turnover by commodity	Where applicable, the market’s turnover on the specified commodity supplied by smallholder farmers (NA)
B1.5 Market tonnage by commodity	Total market tonnage of the specified commodity sourced from smallholder farmers (NA)
B2. Supply by smallholder farmers	
B2.1 No of smallholders supplying the market	Number of smallholders supplying the market with the specified commodity (+)
B2.2 Volumes supplied by smallholders (t)	Total tonnage of the specified commodity supplied by smallholder farmers (+)
B2.3 Value supplied by smallholders	Total value of the specified commodity supplied by the smallholder farmers (+)
B2.4 Smallholders’ market share	The total smallholder farmers’ market share for all commodities supplied (+)
B2.5 Smallholders’ market share/ commodity	The smallholder farmers’ market share of a specified commodity (+)
B3. Services Provided to Smallholders	
B3.1 Market information	Whether the market provides market information services to smallholders (+)
B3.2 Storage	Whether the market provides storage services to smallholders (+)
B3.3 Packaging facilities	Whether the market provides packaging facilities to smallholders (+)
B3.4 Credit	Whether the market provides credit facilities to smallholders (+)
B3.5 Training/extension	Whether the market provides training or extension services to smallholders (+)
B3.6 Transport	Whether the market provides transport services to smallholders (+)
B4. Minimum Market Requirements	
B4.1 Business registration	Whether business registration is a minimum requirement for smallholders (NA)
B4.2 Packaging	Whether business registration is a minimum requirement for smallholders (NA)
B4.3 Product standards	Whether business registration is a minimum requirement for smallholders (NA)
B4.4 Payments arrangements	The length of time that the market takes to pay smallholders for their produce (NA)
B3.5 Training/extension	Whether the market provides training or extension services to smallholders (+)
B3.6 Transport	Whether the market provides transport services to smallholders (+)
B5. Market Performance of Smallholders	
B5.1 Rating of quality	The market’s rating of the quality of produce supplied by smallholders (1=poor; 5=excellent) (+)
B5.2 Rating of quantities	The market’s rating of the quantities of produce supplied by smallholders (1=poor; 5=excellent) (+)
B5.3 Rating of consistency of supply	The market’s rating of the consistency of supply of produce supplied by smallholders (1=poor; 5=excellent) (+)
B5.4 Rating of farmer logistics	The market’s rating of the logistics for the produce supplied by smallholders (1=poor; 5=excellent) (+)
B3.6 Transport	Whether the market provides transport services to smallholders (+)

Note: It is expected that the sourcing of data from both the supplier and the buyer perspectives will assist towards the counter-checking of results such that the data from the one side is checked against data from the other side in order to improve overall quality and usability.

⁴The market (demand or “pull”) indicators denote the perspective of the market (the buyer)

1.3 Methodological approach to the development of SMAT

The development of the SMAT commenced in April 2016. The NAMC put together an internal research team to lead in the process of fulfilling the afore-mentioned two objectives. In addition, a group of experts representing a wide range of agricultural stakeholders (academia, government, private sector and non-governmental organizations) – the “Reference Group” - was appointed to oversee and advise on the process, Figure 1 depicts the process of the development of the SMAT).

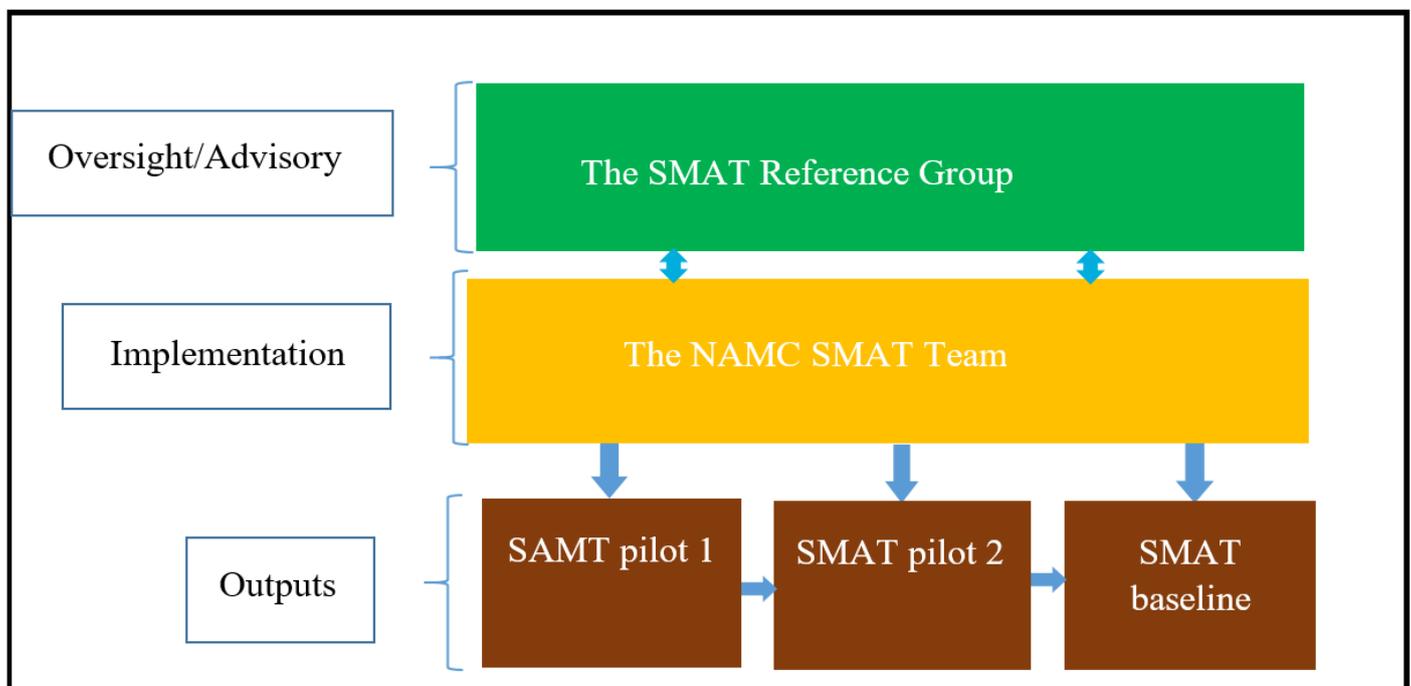


Figure 1: The development of the SMAT

1.4 Citrus Baseline: Sampling Procedure

A non-probability (convenience) sampling technique was used by selecting only a group of farmers that are conveniently available and willing to participate in the study. The sample was drawn from the CGAGDC smallholder producers' database, which contained 121 farmers. A sample of 68 (56% of the population) was drawn from five provinces as presented in Table 2 below.

Table 2: Responses to the rest of the variables under the marketing arrangement

Province	Total Population (CGADC database)	Surveyed	Percentage representation
Limpopo	45	38	84 %
Eastern Cape	44	15	34%
KwaZulu-Natal	16	2	13%
Mpumalanga	10	9	90%
North West	4	4	100%
Gauteng	2	0	0%
Total	121	68	56%



Section 2: Overview of the citrus industry

The citrus industry is an important foreign exchange earner. Citrus is one of the high-value products in South Africa that is mainly destined for the export market. It comprises of five broad categories; namely oranges, easy peelers (soft citrus), grapefruit, lemons and limes. The main association responsible for the development of the citrus industry in South Africa is the Citrus Growers Association of Southern Africa (CGA). The CGA was established by citrus growers following deregulation. Growers were concerned that certain functions previously carried out by the Citrus Board would be discontinued or downsized. Growers’ interests are addressed through representation to citrus industry stakeholders – including government, exporters, research institutions and suppliers to the citrus industry. According to CGA, there are currently 1400 producers of export citrus within their membership in Southern Africa, including Zimbabwe and Swaziland. Of those producers, there are 141 black farmers under the CGA Grower Development

Company database (CGAGDC), a non-profit organization that carries out the transformation mandate of the citrus industry. The CGAGDC has taken great strides in developing black farmers within the citrus industry. The company does this through technical support, accreditation, business plans, proposals submissions for funding, to name a few, which have resulted in the farmers that have participated in this study, who export their products and have access to different markets.

Figure 2 shows that the total area under production for citrus in 2017/18 was 77 708 hectares, while 7321 hectares was registered under black citrus growers (CGA, 2018). The largest production areas of citrus in South Africa are Limpopo (42%), Eastern Cape (25%), Western Cape (18%), Mpumalanga (8%) and the rest is distributed between KwaZulu-Natal, North West, Zimbabwe, Swaziland and Northern Cape.

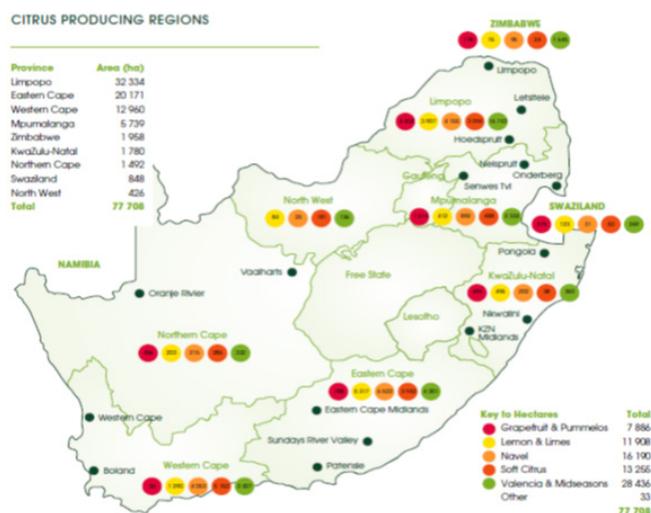


Figure 2: Map of citrus producing regions

Source: CGA, 2018

The main production areas of citrus differ based on various factors. Table 2 shows the difference between the production regions in South Africa. The Western Cape and Eastern tend to be cooler and produce navel oranges and lemons, while the other regions tend to be warmer, focusing on grapefruit and Valencia oranges.

Table 3: Differences between the producing regions

Province	Climate	Main production	Farm size	Packing facilities
Western Cape	45	38	84 %	
Eastern Cape	Cooler	Focus on navel oranges and lemons	Smaller	Privatized cooperatives in huge facilities (amongst the largest in the world)
Mpumalanga Limpopo KwaZulu-Natal Northern Cape	Warmer	Focus on grapefruit and Valencia oranges	Larger	Privately-owned facilities

As an important earner of foreign exchange, citrus in South Africa is mainly aimed at the export market, with local markets being the National Fresh Produce Markets (NFPMs), processors and the informal market (e.g. street hawkers and bakkie traders). The fruits are also sold directly to wholesalers and retailers through direct supply contracts.

The total distribution of citrus by market over the last ten years is indicated in Figure 3. The gross value for citrus has shown an upward trend over this period. The trajectory of citrus exports in South Africa is expected to continue to grow upwards in the coming years as new trees are coming into production and more trees are planted. Furthermore, export markets for South African fresh fruit are also increasing, as new markets such as China open up.



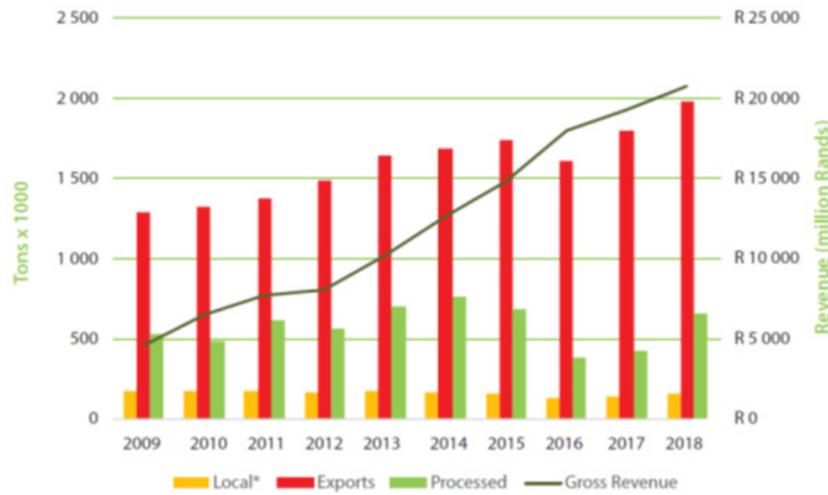


Figure 3: Total distribution of citrus

Source: CGA, 2018

South Africa exported 76% of its citrus in 2018 and the main markets were Europe, the United Kingdom, the Middle East, South East Asia, Russia and North America (CGA, 2018). In 2018, 1.64 million pallets of citrus were exported by South Africa. According to the Department of Agriculture, Forestry and Fisheries (DAFF) abstract of 2019, the value of citrus fruit in 2018 was about R19.3 billion, making it the third largest horticultural

industry after deciduous fruit. The highest produced and exported citrus in South Africa are oranges, having the largest area planted and being the largest contributors to the gross value in citrus. Oranges are followed by soft citrus, lemons and lime and lastly grapefruit in terms of area planted and gross revenue. The citrus industry also contributes to the creation of over 100 000 jobs within the agricultural industry (DAFF, 2018).

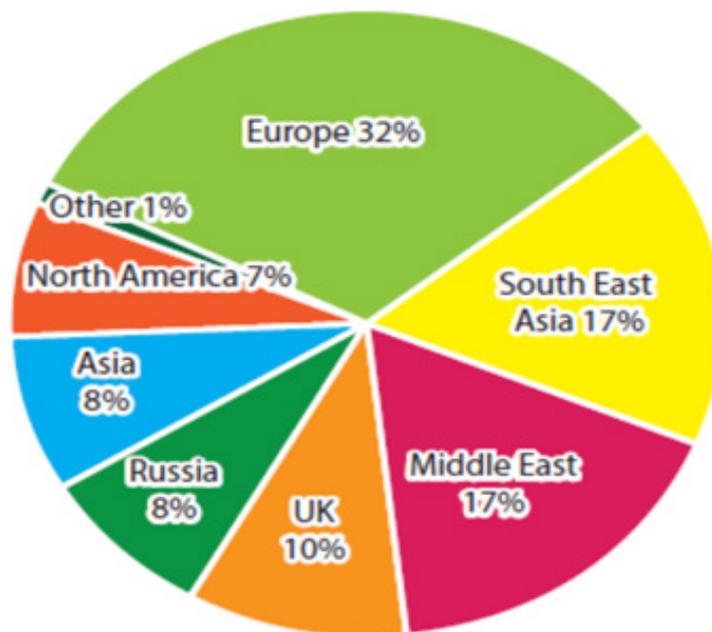


Figure 4: Export destinations of citrus

Source: CGA, 2018

Section 3: Citrus Baseline Survey Results

This section presents the results of a baseline survey of the smallholder citrus producers in South Africa. This baseline survey focused on supply indicators only, that is, farmers only. This is important to note since the SMAT indicators cover both the supply (farmers) and demand (markets) aspects. The reasons for excluding the demand indicators in this case include limited resources and time. The results are presented in four subsections. The first subsection describes the farmer profile in terms of demographic information. The second subsection describes the production system and marketing channels used. The third and fourth subsections analyse the marketing services available to farmers and whether

the farmers are aware and comply with specific market requirements for their produce.

3.1 Farmer profile

The farmer profile entails demographic information of the farmer. To some degree, this information informs the farming decisions taken by the household head, particularly in terms of the extent to which a household could undertake farming activities as well as the reasons for undertaking such activities. The analysis of the demographic information of the farmer will provide more clarity on this explanation.

Table 4: Mean values (N = 68)

	Mean	Standard Error	[95% Conf. Interval]	
Age (years)	45.07353	1.49675	42.086	48.06106
Household size	7.205882	0.3721888	6.46299	7.948774
Number of dependents	3.294118	0.3157129	2.663952	3.924283
Total household income (Rands)	19538.24	5710.807	8139.416	30937.05

A typical South African smallholder citrus producer is 45 years old, with household size of seven members of which three are dependents of the household head. The household income of a typical smallholder grower, including the income generated from farming, is R19 538, 24. All these results indicate that there are significant differences between the mean values for each farmer, compared to the rest.

In the rest of this document, the results will be presented by gender distribution. The purpose is to compare how women are performing compared to their male counterparts in each of the identified indicators. This arises from a general perspective that women are, somewhat, excluded from the agriculture mainstream value chains although they are the main producers of food in the subsistence sector.

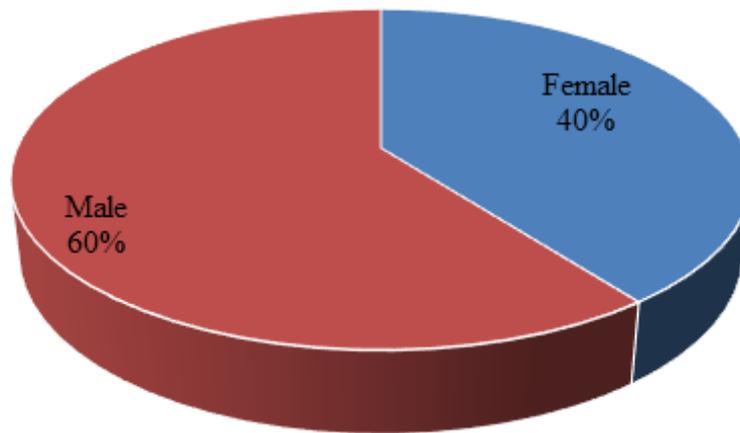


Figure 5: Gender distribution

According to the gender distribution of the sampled farmers, male farmers have a larger representation (60%) than the female farmers (40%). This gender distribution is almost balanced and, therefore, it will make it easier to see the disparities in terms of performance in each of the identified indicators.

Table 5: Level of education by gender

Gender	Primary or less	Secondary school	Completed high school	Tertiary education	Total
Male	2	7	8	24	41
Female	1	1	10	15	27
Total	3	8	18	39	68

Education is known to play a critical role on farmers as it enhances farmers' ability to obtain, process and use agricultural-related information that improves the production process and the marketing of the produce. In other words, education somewhat makes it easier for farmers to adopt new technologies, new innovations and strategies that directly lead to increased farm productivity and enhance their ability to cope with dynamics of the market. Table 5 shows that a larger proportion of the female farmers (93%) have either completed high school or have obtained tertiary education, compared to 78% of their male counterparts. This implies that these farmers can read and write and have more likelihood to apply improved agricultural practices for improved market access.

3.2 Market supply

This section focuses on markets and marketing arrangements for smallholder citrus farmers. It reveals whether the farmers supply their produce to the market, marketing channels used, volumes supplied to each marketing channel and the turnover, selling arrangement (whether the farmer has a contractual agreement with a particular marketing channel), payment arrangement (whether the farmer gets paid immediately or after a number of day or weeks following the issuing of the invoice). All these indicators are important in informing the farmers' decision-making regarding the markets. The section begins by presenting the proportion of the sampled farmers that supply their produce to the markets and those that do not. The majority of the farmers do supply the market. Subsequently, the section will focus on those farmers that do supply their produce to the market.

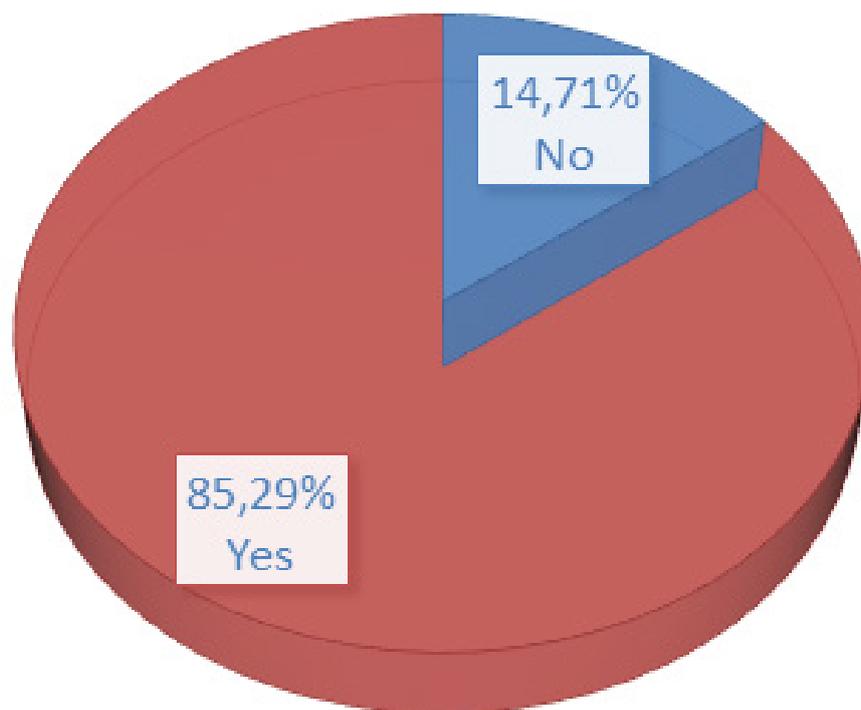


Figure 6: Farmers who supply to the markets

According to Figure 6, about 85% of the respondents supply the citrus market. Interestingly, it was observed that the farmers who do not sell yet are those that planted new trees, which were still young to bear fruits during the time of the survey. This implies that we would expect to have a 100% representation in this regard if we were to do a follow-up survey in a few years, which is a very good picture given that citrus is one of the leading foreign exchange earners for the country.

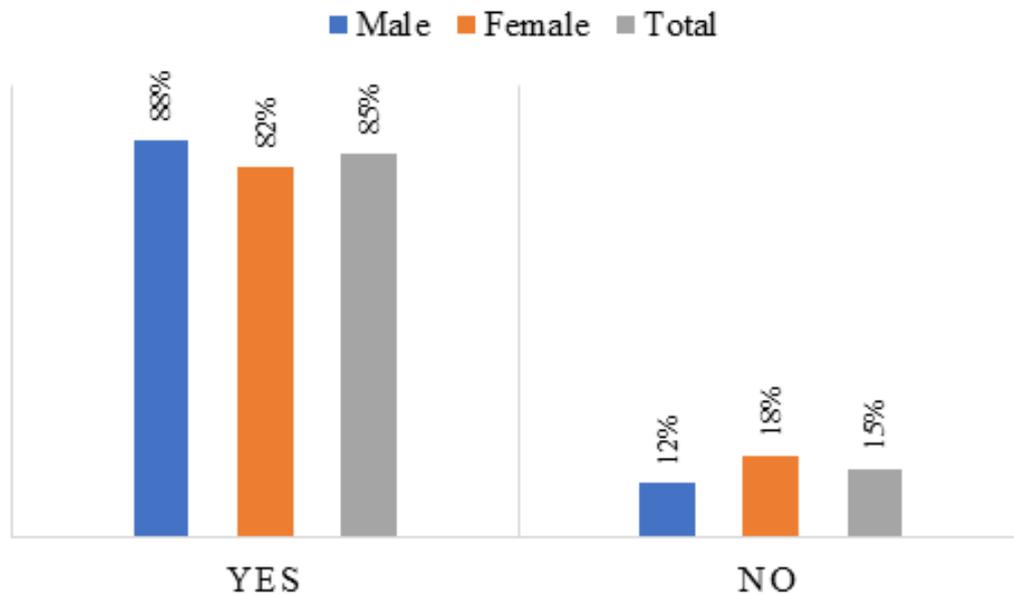


Figure 7: Gender distribution of farmers who supply to the markets

Figure 7 presents the distribution of farmers who supply to the markets by gender. Out of those supplying the market 88% were males and 82% were females. The interesting aspect would be to show which markets are these and how do they participate in these markets and to what extent.

⁵The institutional market refers to the government markets such as public schools, hospitals, prisons and so on. In the context of market access, where smallholder farmers find it difficult to participate in the dynamic mainstream market channels, government procurement is seen as an opportunity to create markets. This view is justified by, among other things, the fact that government spends over R8 billion in buying food without necessarily prioritizing procurement of smallholder farmers' produce.

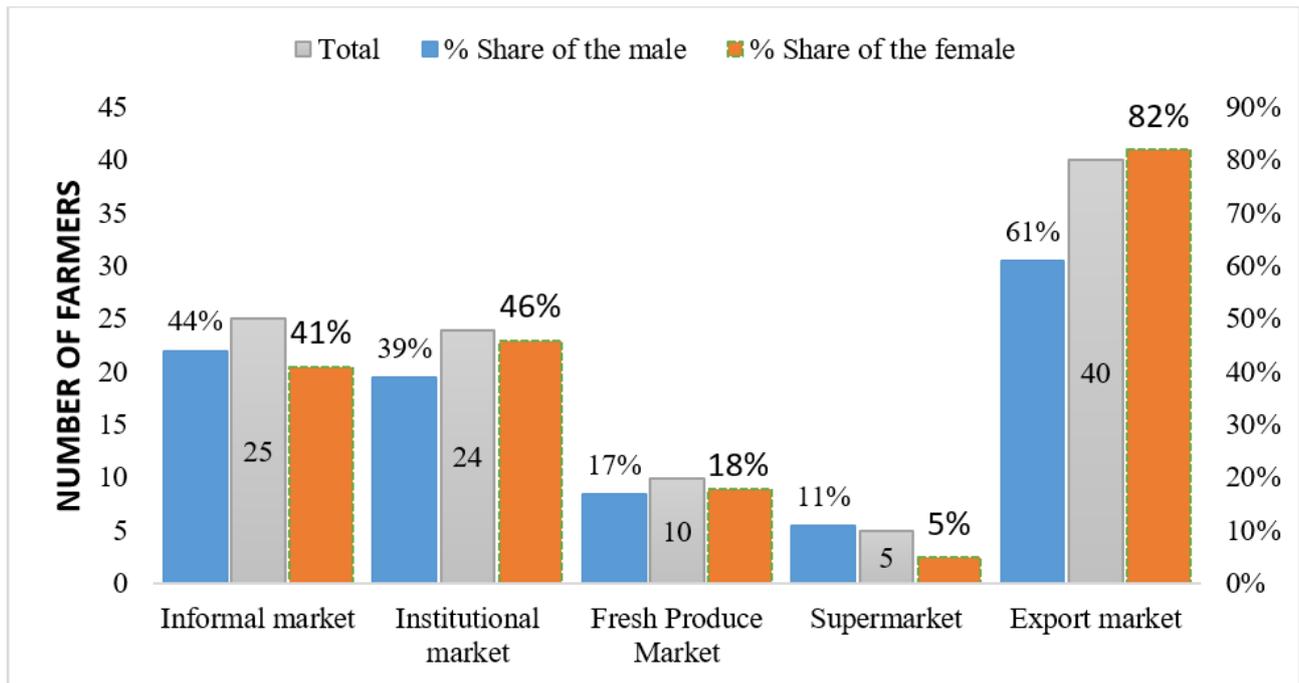


Figure 8: Marketing channels supplied by sampled farmers

Figure 8 shows the various marketing channels supplied by gender. The numbers indicate that farmers diversify their markets by supplying various marketing channels. The majority of the farmers supply the export market, followed by the informal market and the institutional market. Furthermore, the female farmers dominate the export market, institutional market and the fresh produce market; while their male counterparts dominate the rest. This is indicated by the percentage share of the number of males and females supplying a particular marketing channel. It should be noted that there was an option for other marketing channels that were not included on the list (e.g. processors). However, there are no farmers from the sample that sell their produce to other channels outside of those presented above.

³The informal market refers to a less formalized market such as households, communities, hawkers, pensioners and groups of individuals during certain public events. Although it is often viewed as a less lucrative market, an informal market is important for smallholder farmers in South Africa.

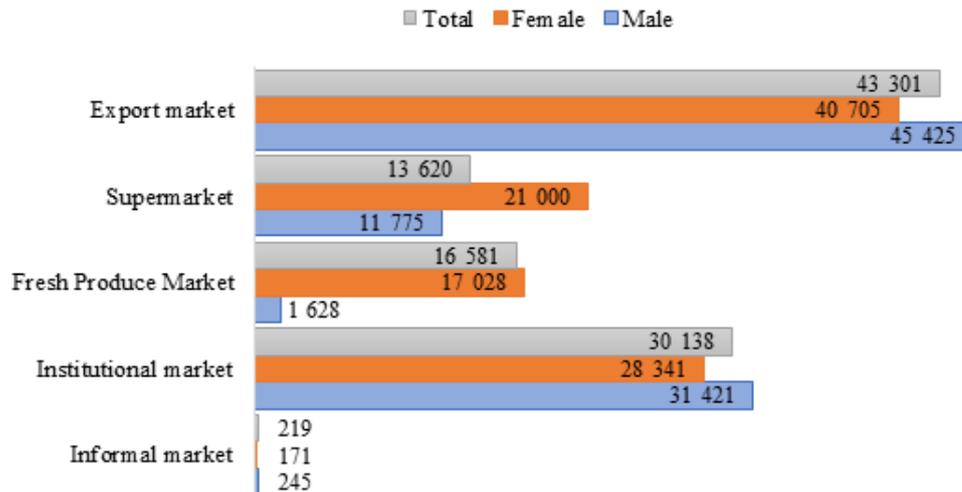


Figure 9: Average volume supplied in each marketing channel

Figure 9 presents results pertaining to the average volume supplied in each marketing channel (by gender distribution). The quantity is measured in 15 kg cartons. The largest proportion of the volume from both farmers goes to the export market, followed by the institutional and the fresh produce markets. The quantity supplied by male farmers in the export market, institutional market and the informal market is higher than the total average supplied by both female and male farmers in these markets. Likewise, the quantity supplied by female farmers is higher than the average in the fresh produce market and supermarket. The following analysis looks at the turnover from each marketing channel.

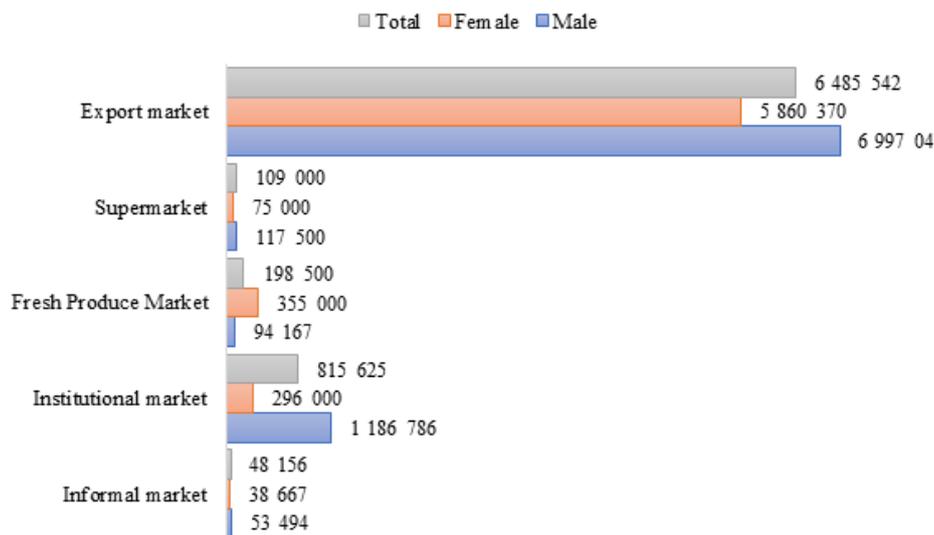


Figure 10: Turnover per marketing channel

Figure 10 shows average turnover from each market channel. Perhaps as expected, the export market earns the farmers the highest turnover (a combined average of R6, 5 million). The institutional market produces the second highest turnover. On one hand, male farmers receive a higher than average income in the export market, followed by the institutional market, supermarket and informal market. On the other hand, female farmers receive a higher than average income from the supermarket. The reasons behind this picture will be clear when it is known which produce is supplied where and why.

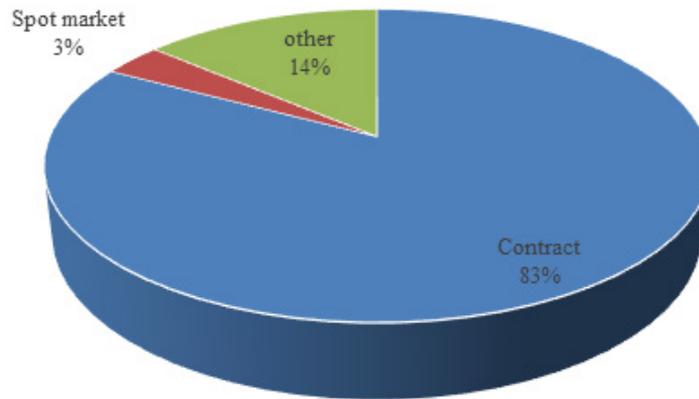


Figure 11: Selling arrangement

Figure 11 shows that the majority (83%) of the farmers who supply the market from the sampled respondents have contracts with the markets they supply. This could be explained, partially, by the fact that citrus is market-orientated and contract is required to supply this type of market. Hence, there is a high number of farmers who have secured contracts.

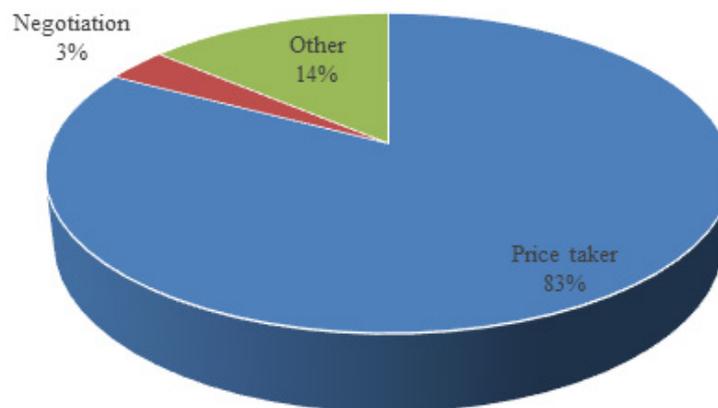


Figure 12: selling price arrangement

Figure 12 shows that although a majority of the farmers have contractual arrangements with the market, they are still largely price takers. Others are able to negotiate the price, while the rest do a bit of both. This may largely be attributed to the fact that larger volumes go into the export markets where prices are dominantly set by the global market dynamics.

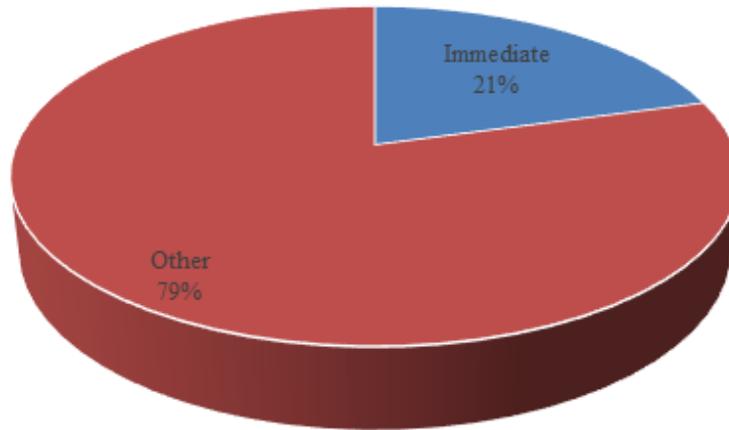


Figure 13: Payment arrangement

The results in Figure 13 show that the majority of farmers do not receive payment immediately, with the number of waiting days ranging from seven to 14. The reason is mainly the fact that in formal contractual agreements, payment is made after receiving invoice, which is normally produced after delivery. In addition, payments are normally done using electric or bank transfers, which normally take a little longer for the payments to be processed.



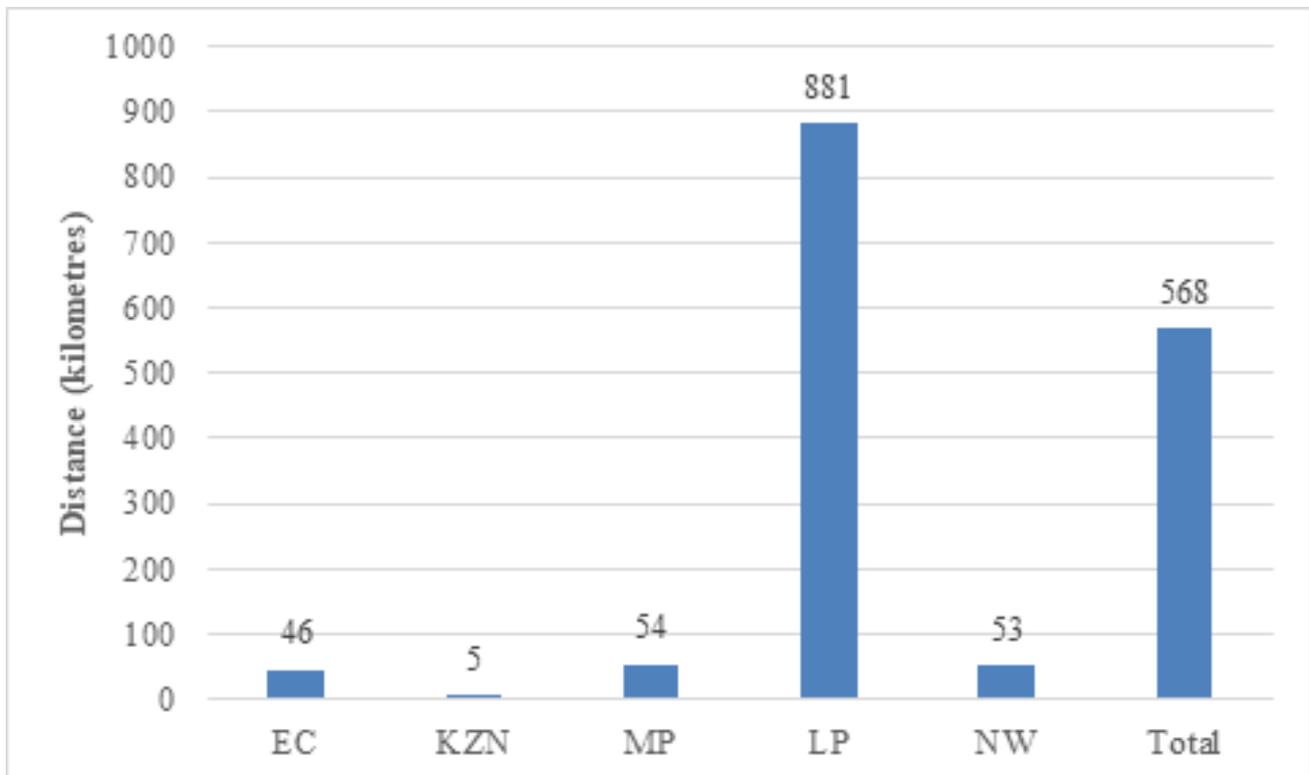


Figure 14: Average distance to the market

Figure 14 indicates that the distance to the market averaged 568 kilometers with Limpopo farmers experiencing longer than the average distance. KwaZulu-Natal fell on the other extreme end with an average of five kilometers, while Eastern Cape, Mpumalanga and North West farmers travel 46, 54 and 53 kilometers respectively.



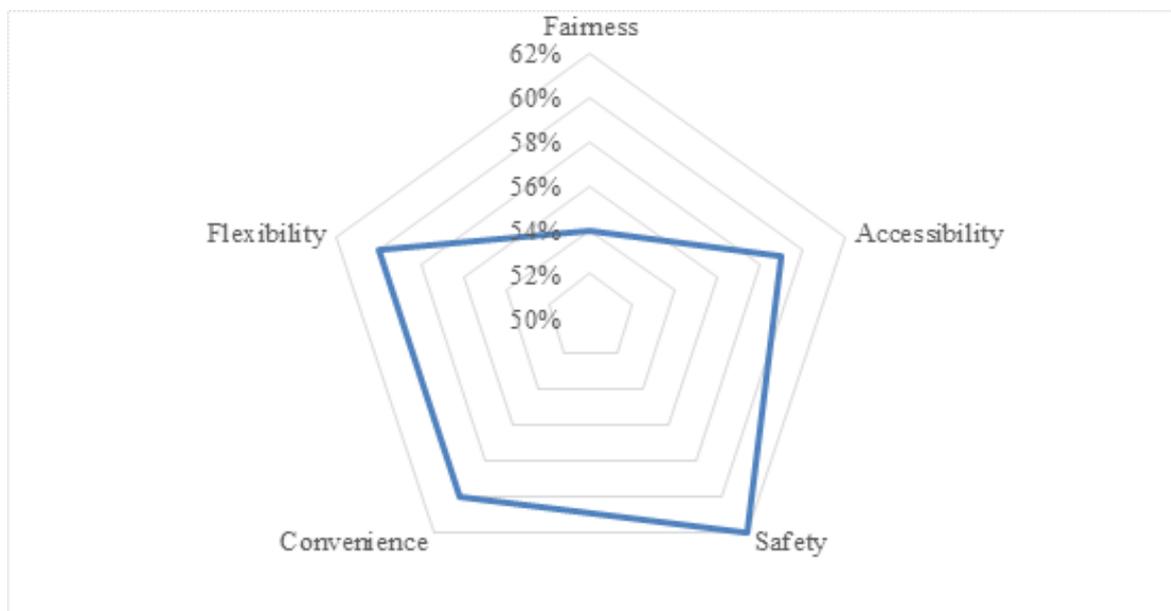


Figure 15: Rating of the main marketing channel used

Figure 15 presents the rating of the main marketing channel used – the export market in this case. The rating is based on convenience (whether the farmers are able to move their produce on time and in line with their harvesting season to avoid delays that may cause spoilage), safety (whether there are challenges such as losses due to theft or poor storage or packaging en route to the market), accessibility (whether the transaction costs do not outweigh the gains from supplying the market), fairness (whether the market offers a reasonable price according to the farmers' perception), flexibility (whether the market allows for discrepancies in terms of the timing which may be due to weather events that may affect the timing of planting

and quality, or political situations that may disrupt the normal transaction arrangements somehow). A Likert scale of 1 to 4 was used, where 1 = very poor, 2 = poor, 3 = good, 4 = excellent. The percentages shown in Figure 16 indicate the representation of farmers that selected a particular rating. Hence, the results show that a larger proportion of the farmers put a higher rating on safety (62%), followed by convenience and flexibility (both with 60%). The reason for poor representation in fairness is due to fact that farmers feel they have no control of their produce once it gets to the pack house. As a result of their lack of participation in grading of their produce, they perceive that they may be cheated on prices.

⁷Convenience means an extent to which farmers are able to get their produce into the market on time. This take into account issues such as transport, clearances at the border or harbor, the actual shipment and so on.

⁸Safety refers the conditions in which the produce is moved. It takes into account the suitability of the modes of transport and the extent of security of the produce as it moves from the producer to the buyer.

⁹Accessibility means ease of participation into the market and is based on barriers to entry that often hinder smallholder farmers to participate in high value markets. Some of the barriers considered in the context of this study include the stringent market requirements such as certification, good farm practices and so on.

¹⁰Fairness refers to the transparency of the market, particularly with regards to grading and standards followed which in many instances may have an influence on the price received by the producer

¹¹Flexibility means the extent to which the market is flexible to unforeseen circumstances such as extreme weather events, political discourse, logistics disruption and so on that may lead to deviations in terms of the expected timing and quality of the produce during the transaction

3.3 Marketing services

This section analyses the marketing services that farmers have access to. These include marketing information, storage facilities, packing facilities, credit, training and own transport. Table 5 shows that the majority of male farmers indicated that they have access to all the services identified, while female farmers feel they are disadvantaged in this regard. However, the common concern raised by the farmers is that they are using private packhouses and they would prefer to use their own packhouse. They indicated that this would also eliminate the fact that they are excluded in marketing of their produce by the private packhouses.

Table 6: Access to marketing services (N = 38)

Gender	Market information	Storage facility	Packing facility	Credit	Training	Own transport
Male	82%	66%	74%	71%	79%	56%
Female	18%	34%	26%	29%	21%	44%

3.4 Awareness and compliance with market requirements

This section focuses on the awareness of, and compliance with certain market requirements such as the SA-Gap, Global-Gap, SIZA, HACCP and Nature's Choice. Table 6 indicates their level of awareness with these requirements is low and, therefore, they are not compliant to the full extent.

Table 7: Market requirements

Market requirement	Awareness%		Compliance %	
	Yes	No	Yes	No
SA-Gap	33.82	66.18	22.06	77.94
Global-Gap	77.94	22.06	77.94	22.06
SIZA	73.53	26.47	54.41	45.59
HACCP	39.71	60.29	26.47	73.53
Nature's Choice	19.12	80.88	4.41	95.59

Section 4: Conclusion and Recommendations

4.1 Conclusions

The SMAT Citrus baseline is the first in a series of baselines to be produced by the NAMC as the first phase in measuring progress in market access by smallholder farmers in South Africa. It is envisaged that, following the production of the baselines, there will then be periodic surveys of each commodity that are meant to give an idea of the changes in each of the SMAT indicators. This information will be useful for those that make decisions to support smallholder farmers whether at public policy levels or private/farmer business levels. Researchers in the field of market access may also find the results useful, as well as the general members of the public that wish to follow developments in this area.

This baseline has revealed the following interesting information regarding smallholder farmers' access to the citrus market:

- In terms of demographics, males are dominating the market terrain and the average age of market participants is 45, with a majority having either completed high school or tertiary education. The latter implies that the farmers have the ability to acquire skills, knowledge and, possibly, the resources necessary to improve their farming activities and boost their competitiveness in the market (both locally and abroad).
- A majority of smallholder citrus producers have access to the market, with the most popular market channel (among about 69% of the respondents) being the export market, which also takes up the largest volume and turnover.
- Although the majority of the farmers have contractual arrangements with the markets that they supply, they are still largely price takers.
- The respondents highlighted the issue of "fairness" as of concern to them, which is a result of their perception that they have no control of their produce once it gets to the packhouse. As a result of their lack of participation in grading of their produce, there is a perception that they are being cheated on prices.

- The farmers, particularly in the Limpopo province travel longest distances to the market. This is concerning given that there are about 102 registered packhouses for citrus in the Limpopo province.

4.2 Recommendations

Following on from the above conclusions, the following main recommendations are hereby made:

Recommendations to CGA, CGAGDC and Citrus Industry Trust

- There is a need for farmers to be trained or made aware of how the citrus value chain works, including the grading of the produce. For example, the produce in the packhouse is usually sorted according to size, shape, colour and so on. Some may even have technologies that detect produce affected by the internal freeze damage. All these factors may have influence on turnover received by farmers. In addition, the packhouses must have some level of transparency or sharing of records regarding the different grades of the produce and the turnover by each grade. This will empower the farmers and enable them to have better confidence on what happens to their produce after it leaves the packhouse. Furthermore, such contribution could enable farmers to farm better by striving to improve the quality of their produce for better earnings thereby enabling them to subsequently re-invest in their farming businesses, particularly in terms of technology and infrastructure. This is mainly an addition to the current technical support which aims to improve farmers production skills and technical know-how
- Better access to price information would also assist the farmers to make better decisions on the options available to them in terms the various market channels that they could access

Recommendations to CGA, CGAGDC, Citrus Industry Trust and government

- Access to finance should be enhanced to enable the farmers to invest in orchards in order to grow their businesses and also to enable them to put up infrastructure that will enable them to vertically integrate into the citrus value chain. This requires partnerships with government in order to leverage funding, particularly for infrastructure support. There was an observation that farmers do not have own packhouses. As a result, they are using privately-owned facilities. Therefore, partnerships may assist farmers to put up their own infrastructure when necessary. In part, this will reduce the effects of the concern raised above whereby farmers will have access to own packhouses that are strategically located for the ease of access to the market. Moreover, the long distance travelled to deliver the produce to the market, which potentially reduces the profit margins of the farmers, will also be reduced.

4.3 Further study

- There will be periodic surveys of the citrus smallholder farmers that are meant to give an idea of the changes in each of the SMAT indicators
- The demand side (market perspective) will also be tracked. This will help to answer some of the questions or respond to some of the concerns that could not be uncovered by the farmers' perspective. Such details include the reasons for farmers to feel cheated by the packhouses; the reason for farmers (particularly) in Limpopo to travel extremely long distance to the market; an indication of the extent of the export market given that some farmers in Limpopo and Mpumalanga could have access to cross-border market; an indication of the price per volume sold to a specific market channel; and perhaps some aspects of farming which farmers could improve to better the quality of their produce for higher earnings and better access to high-value markets

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Appendix A: CGA market access case study

The CGA serves as the voice of the citrus producers in South Africa and it also plays a significant role in the competitiveness of the industry through levy administration. In addition to the contribution in the whole citrus industry, CGA also zooms down to the transformation of the industry by empowering new entrants (most of them black) through transformation initiatives under the guidance of the NAMC. The transformation initiatives led to the establishment of the Citrus Academy which focuses on training as well as the CGAGDC which focuses on the transformation of the industry. Mainly, the CGAGDC is intended to create a conducive environment for the emerging producers to actively participate in the industry value chain. Here are some of the market-related challenges that the farmers are currently facing.

The Mabunda citrus farm is situated in the Xitlakati village near Tzaneen town, Limpopo. The farm was established in 1998 with 300 hectares of communal land. Out of that 300 hectares, 203 hectares is under full production of Valencia and grapefruit and 21 hectares planted with lemons. An additional 422 hectares, acquired through the lease agreement, has been developed. This takes the amount of land under production to a total of 722 hectares. In December 2017, the Mabunda farm exported 600 000 Cartons of citrus. Recently, the farm secured a contractual agreement with Lorna Citrus (Pty) Ltd. The farm intends to export over 1 million cartons in the future and expand its production of lemons and grapefruits.

The Ngonzama farm is located in the Raymond Mhlaba local municipality, Eastern Cape. The farm size is 52 hectares of which 30 hectares is under citrus production (8 hectares with soft citrus and 22 hectares hard ones).

The farm produced approximately 1 300 bales (400 kg per unit bag) of citrus fruit in 2017/18 season, equivalent to 520 tons. About 900 bales were exported.

Both farms face similar challenges which include (in addition to poor road infrastructure) lack of ownership to land, insufficient water for irrigation, lack of support for expansion and lack of own packhouses.

However, there are success stories in the midst of challenges facing new entrants. The story, or rather reality, of the successful performance of the farming operations of, among others, Mrs Noluthando Mbilase is one that deserves to be celebrated.

Mrs Noluthando Mbilase is one of the successful black farmers (and more encouraging is the fact that she is a woman) in agriculture. She is a citrus producer, specializing in citrus production for the export market. She farms in the Greenwood Citrus Farm in the Eastern Cape province, a farm which is approximately 62 hectares in extent, of which 26 hectares are under citrus production. The farm has different varieties of citrus cultivars, which include Cambria Navel Late Maturity, Lemon Eureka, Satsuma MiyoWase, Satsuma Owari, Nadorcott Mandarin, Lane late Navel and Nova Mandarin.

The farm exports approximately 75% of its quality fruits to Russia, Japan, the Middle East, and Europe and sells 25% to the local market. The farm has received assistance from the then DAFF to ensure compliance with the export market requirements; the Product Export Control Board (PPECB) also assisted the farm workers with training on tractor driving and maintenance; and, the CGA also facilitates skills transfer to workers through a leadership course at the Mpofu Training Centre.

The farm is Climate Smart Agriculture orientated and it emphasizes natural resources management, adaptation to and mitigation of climate change challenges and is also advancing in adopting technology.

Mrs Mbilase encourages women in South Africa to become citrus exporters. In 2018, she received an award from DAFF for being the best woman exporter of the year. This is a reflection of the true definition of women empowerment and transformation of gender in agricultural exports markets. Noluthando is a role model for all South African women in agriculture, and not only in the citrus industry.



Mrs. Noluthando Mbilase, Female Farmer of the Year 2018 (Citrus)

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