

# **RAPID ASSESSMENT OF THE IMPACT OF COVID-19 ON AGRICULTURE AND THE FOOD SYSTEM IN SOUTH AFRICA**

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*FINAL REPORT*

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**Prepared by the Human Sciences Research Council (HSRC)**

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# TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS .....	6
EXECUTIVE SUMMARY .....	9
1. INTRODUCTION .....	13
1.1. Background .....	13
1.2. Project aims and objectives .....	13
1.3. Report outline .....	14
2. METHODOLOGY .....	14
2.1. Study design .....	14
2.2. Methodological techniques .....	14
2.2.1. Desktop reviews of relevant literature and documents .....	14
2.2.2. Secondary data analysis .....	15
2.2.3. Key informant interviews .....	18
2.2.4. Informal food trader survey .....	20
3. INSIGHTS FROM A COMPREHENSIVE REVIEW OF LITERATURE .....	23
3.1. Introduction .....	23
3.2. South African country context and the Covid-19 pandemic: An overview .....	23
3.2.1. Covid-19, the macro-economic situation and overall economic impact .....	23
3.2.2. Overall social impact .....	24
3.3. Key response policies and measures for the food sector .....	25
3.3.1. Social protection measures .....	28
3.3.2. Social inclusion .....	32
3.3.3. Farmer support measures .....	32
3.3.4. Trade measures .....	33
3.3.5. Food safety, food processing and supply chain .....	36
3.4. Covid-19 impact on agriculture and food production .....	37
3.4.1. Impacts on farming systems .....	38

3.4.2. Impact on input supply .....	40
3.4.3. Post-harvest losses .....	40
3.4.4. Potential exogenous hazards that may further jeopardize agricultural production	40
3.5. Covid-19 impact on food supply and demand .....	41
3.5.1. Impact on the supply and demand for main staples.....	43
3.5.2. Covid-19 impacts on the supply and demand for fruits, vegetables and meat .....	45
3.5.3. Covid-19 impacts on agri-food processing and distribution .....	47
3.5.4. Covid-19 impacts on domestic food trade.....	52
3.5.5. Covid-19 impacts on incomes and food demand.....	56
3.5.6. Covid-19 impacts on food prices.....	58
3.6. Covid-19 impact on food trade.....	59
3.6.1. Covid-19 and impacts on key food imports.....	59
3.6.2. Agrofood export-import logistics capacity .....	60
3.6.3. Trading routes and exchange-rate issues .....	64
3.7. Literature review summary .....	74
4. SECONDARY DATA ANALYSIS .....	75
4.1. Introduction .....	75
4.2. Maize .....	75
4.2.1. Maize production and deliveries.....	75
4.2.2. Maize processing .....	87
4.2.3. Exports and imports of maize and maize products .....	93
4.2.4. Prices of maize products.....	97
4.3. Wheat .....	98
4.3.1. Local wheat production and deliveries .....	98
4.3.2. Wheat processing.....	104
4.3.3. Imports and exports of wheat products .....	109
4.3.4. Prices of wheat products.....	110

4.4. Other cereals (e.g., oats, sorghum, rice, barley).....	113
4.5. Oilseeds .....	116
4.5.1. Oilseeds production .....	116
4.5.2. Oilseeds processing .....	119
4.5.3. Imports and exports of oilseeds products .....	124
4.5.4. Prices of oilseeds products .....	125
4.6. Impact of Covid-19 and lockdown measures on fruits and vegetable supply chains .	128
4.6.1. Fruits.....	128
4.6.2. Vegetables .....	136
4.7. Impact of Covid-19 and lockdown measures on meat and dairy supply chains .....	142
4.7.1. Livestock production .....	142
4.7.2 Beef products.....	144
4.7.3. Sheep products.....	146
4.7.4. Pig products .....	149
4.7.5. Poultry products.....	151
4.7.6 Dairy products .....	153
4.8. Overall levels of food manufacturing capacity utilisation .....	156
4.9. Income sales from food traders .....	162
4.10. Employment, incomes and access to food .....	164
4.11. Secondary data analysis summary.....	166
5. INSIGHTS FROM KEY INFORMANT INTERVIEWS .....	167
5.1. Introduction .....	167
5.2. Impacts on the agrofood system.....	167
5.2.1. Disruptions on farming operations .....	167
5.2.2. Disruptions on local markets .....	169
5.2.3. Disruptions on imports and exports.....	170
5.2.4. Temporary increased demand on certain food products.....	170

5.2.5. Exogenous challenges in the context of the pandemic .....	171
5.3. Response measures.....	172
5.3.1. State actor responses.....	172
5.3.2. Non-state actor responses .....	172
5.3.3. Gaps and challenges .....	173
5.4. Key informant interviews insights summary .....	176
6. INSIGHTS FROM INFORMAL FOOD TRADER SURVEY .....	177
6.1. Introduction – Characteristics of the sampled traders .....	177
6.2. Covid-19 and lockdown impacts.....	186
6.3. Covid-19 related assistance .....	196
6.4. Informal food trader survey data analysis summary .....	198
7. OVERALL SUMMARY AND RECOMMENDATIONS .....	198
7.1. Summary .....	198
7.2. Recommendations .....	200
REFERENCES .....	203

## **ACRONYMS AND ABBREVIATIONS**

AFASA	African Farmers Association of South Africa
ARC	Agricultural Research Council
AU	African Union
BFAP	Bureau for Food and Agricultural Policy
BIG	Basic Income Grant
CBO	Community Based Organisation
CC	Competition Commission
CGA	Citrus Growers' Association of South Africa
CGCSA	Consumer Goods Commission of South Africa
CGMP	Current Good Manufacturing Practices
COGTA	Department of Cooperative Governance and Traditional Affairs
DAFF	Department of Agriculture, Forestry and Fisheries
DALRRD	Department of Agriculture, Land Reform and Rural Development
DEFF	Department of Environment, Forestry and Fisheries
DFDC-SA	Deciduous Fruit Development Chamber of South Africa
DoL	Department of Employment and Labour
DSD	Department of Social Development
DTI	Department of Trade and Industry
FAO	Food and Agriculture Organisation of the United Nations
FAORAF	FAO Regional Office for Africa
FFO	Fast Food Outlets
FNS	Food and Nutrition Security
FSI	Food Safety Initiative

G20	Group of Twenty
GDP	Gross Domestic Product
HSRC	Human Sciences Research Council
NAMC	National Agricultural Marketing Council
NCC	National Consumer Commission
NERPO	National Emergent Red Meat Producers' Organisation
NGO	Non-governmental Organisation
NSNP	National School Nutrition Programme
OECD	Organisation for Economic Co-operation and Development
OHSA	Occupational Health and Safety Act
PLAAS	Institute for Poverty, Land and Agrarian Studies
PLAS	Proactive Land Acquisition Strategy
PPE	Personal Protective Equipment
PwC	PricewaterhouseCoopers
SADC	Southern Africa Development Community
SAGIS	South African Grain Information Service
SARS	South African Revenue Services
SASSA	South Africa Social Security Agency
SAWS	South African Weather Services
SRD	Social Relief of Distress
StatsSA	Statistics South Africa
TERS	Temporary Employee Relief Scheme
TNPA	Transnet National Ports Authority
TPT	Transnet Port Terminals

UIF	Unemployment Insurance Fund
UKZN	University of Kwazulu-Natal
UNICEF	United Nations Children's Fund
USDA	United States Department of Agriculture



## EXECUTIVE SUMMARY

This report is a consolidation of individual reports emanating from 4 different research activities which sought to understand the impacts of the Covid 19 pandemic on agriculture and the food system in South Africa, and to explore solutions to minimise the impacts of the pandemic and similar future shocks. Research activities undertaken included reviews of literature and relevant documents, secondary data analysis, key informant interviews at the national and subnational levels, and an informal food trader survey. Whilst several challenges were encountered during data and information collection across all the techniques used, the study was able to draw comprehensive insights on the impacts of the pandemic vis-à-vis different aspects of agriculture and the food system, and to come up with concrete recommendations towards addressing the impacts of the pandemic and future similar shocks.

Main conclusions following from this study are as follows:

1. The Covid-19 pandemic, and the nation-wide lockdown, which was the major tool used to mitigate the spread of the pandemic, have resulted in a huge strain on the economy and led to closures of many businesses, job losses, loss of earnings, and a drastic decline in household incomes.
2. Whilst agriculture was declared a critical industry at the onset of the pandemic and therefore exempt from the strictest lockdown regulations, its backward and forward linkages with other sectors of the economy and its strong international interface meant that there have been huge knock-on effects on the sector.
3. The pandemic had far-reaching impacts on various aspects of the agrofood system in South Africa, including disruptions on: farming operations, local markets especially for smallholder farmers, food import and export flows, and temporary increased demand in and shortage of certain food products, especially non-perishables, particularly in the period just before and during the first weeks of alert level 5 lockdown.
4. The pandemic significantly disrupted agri-food supply chains. While the data analysed does not allow us to engage in a comprehensive assessment of the food supply chain processes and actors, as the existing datasets largely exclude smallholder producers, processors and informal food traders, the partial picture painted indicates that the pandemic has led to negative impacts across the food supply chain. In particular, the negative impacts were more pronounced at the food processing/manufacturing, distribution, retailing and consumption/food security stages of the food supply chain.

5. Production activities of commercial agricultural producers were not significantly affected, as these are mainly mechanised, and the pandemic outbreak occurred when key production activities were at an advanced stage. As such, the agricultural sector is expected to grow this year (2020), with some projections indicating that the sector will grow by 13%, riding on the wave of a bumper maize crop.
6. Evidence engaged showed that food processing and manufacturing activities were significantly disrupted, with many of the food manufacturing players operating below capacity. However, the disruptions were largely temporary, as many food processing activities were on the rise in June, with some specific activities back to their pre-Covid-19 levels (February 2020).
7. Food retailers faced significantly decreased food sales and incomes, particularly those who mainly trade in hot foods and beverages, as well as fast foods outlets, as they were restricted from trading during levels of hard lockdown (i.e. mostly levels 5 and 4).
8. Prices of most basic food items increased during the early lockdown period (i.e. level 5) as a result of increased demand due to panic buying amidst uncertainty among consumers. While most of the prices of food items had declined in June however, prices of some basic food items such as rice, eggs, beef, etc., remained on the increased levels.
9. Informal food traders were unable to trade, despite being belatedly considered essential. Most traded after level 3, while others were still unable to trade even during the relaxed level 2. Challenges faced by informal food traders include high cost of supplies, transport restrictions, volatile price movements, and limited support from both state and non-state entities to enable them to go back to business.
10. The Covid-19 pandemic coincided with several exogenous challenges. These exogenous challenges further compromised and exerted additional pressure on the already strained South African agrofood system. Key among exogenous challenges include the outbreak of foot and mouth disease for livestock since November 2019, the general poor performance of the local currency (the rand) on the exchange rate market from March to around May 2020, industrial action by truck drivers in July and August 2020, and a marked increase in livestock theft in some provinces from March 2020.
11. Several measures involving state and non-state actors were implemented to cushion the citizenry from the effects of the pandemic. These included social protection measures, farmer support measures, food safety and food processing measures, food supply chain responses, and trade measure. However, major challenges hampered the smooth implementation, and, ultimately, the effectiveness of some of the measures. Challenges

included the bureaucracy involved in implementing the measures, exclusion of some social groups, lack of data on who needed support, and lack of coordination and communication among state and non-state actors.

Subsequent recommendations following from the above conclusions towards functionality of the agrofood system in the context of the Covid-19 pandemic are as follows:

1. There is need for a stronger coordinated approach between and among state and non-state players in deploying efforts and resources vis-à-vis responding to similar shocks in the future
2. The disruptions in the agrofood system should be used as an opportunity by policy makers to influence the food system so that it delivers food that is not only nutritious, but also affordable to most of the people. The focus of policy makers should not be in trying to restore the agrofood system to its previous levels, which largely excluded most people, but to intervene in ways that orient the food system towards nutritious and affordable foods.
3. There should be deliberate efforts by both state and non-state actors involved in implementing such response measures as distribution of food parcels in the context of shocks like Covid-19 to promote and involve local players in the agrofood system whose operations would have been compromised. This may include deliberately sourcing food products from smallholder farmers and promoting other local players such as bakkie traders in transporting the food thereby assisting them to make up for losses
4. The role of informal traders and smallholders in the agrofood system should be acknowledged and harnessed to produce inclusive food system outcomes. There is a need to increase the support targeted at smallholders and informal traders, both in terms of amounts per beneficiary and the number of beneficiaries. Particular focus should be on enterprises owned by women, who were the worst affected. There is a need for targeted support for informal food traders particularly: reviving those that are no longer operational, and increasing capacity for those operating below their normal levels
5. Similarly, interventions that are targeted at supporting agrofood processors and distributors who were significantly affected by the pandemic to increase production capacity and reduce further job losses in the food and beverage industry should be increased

6. Government should provide salary relief for smallholder farmers to pay their workers in the context of such unexpected shocks as Covid-19
7. Given the dire food insecurity situation in the country due to the pandemic, we encourage, like many food system players have done, that social protection measures be expanded to reach a huge proportion of population. This should include those who are still technically employed, but whose remuneration has drastically decreased. We encourage that the discussions, processes and modalities around the basic income grant (BIG) be accelerated, so that it be introduced as soon as possible.
8. Given that prices of some basic food items have increased, there is a case for subsidising certain food items to ensure that poor communities also eat diverse diets.
9. Government should ensure stability of prices with respect to input supplies and make sure that input supply support processes to smallholder farmers have fewer bureaucratic hurdles
10. There is an urgent need for a comprehensive information management system at every stage of the food supply chain, inclusive of small and/or informal as well as big formal players. The lack of reliable and accurate information curtails planners and decision-makers from making effective and well-informed interventions

# **1. INTRODUCTION**

## **1.1. Background**

This report is a consolidation of individual reports emanating from different research activities carried out by the Human Sciences Research Council (HSRC) as part of a rapid assessment of the impacts of the Covid-19 pandemic on agriculture and the food system in South Africa<sup>1</sup>. In anticipation of the impacts of Covid-19 on agriculture and the food system, and following up on the commitments made in the FAO/AU Agricultural Ministers Declaration signed on April 16 2020, the FAO Regional Office for Africa (FAORAF) developed guidelines for the assessment of the impacts of Covid-19 on food systems, agriculture and food security in African countries, and responses to those impacts. The guidelines were the result of adapting several existing global monitoring tools to the African context. In light of these guidelines, the FAO in South Africa in collaboration with the national Department of Agriculture, Land Reform and Rural Development (DALRRD) contracted the HSRC to undertake specific research activities towards the first phase of an assessment of the impact of Covid-19 on agriculture and the food system in South Africa. The purpose of this quick and rapid first phase assessment is to inform government responses to the pandemic and to put in place policies and actions to minimize disruptions on food supply chains, food trade, demand for food, incomes, and livelihoods, especially of the poor and vulnerable segments of the populations.

## **1.2. Project aims and objectives**

Following the scope and parameters outlined in the project Terms of Reference (TOR), the work broadly aimed at understanding the short- to medium- term impacts of the Covid-19 pandemic on agriculture and the food system in South Africa and to produce quick actionable proposals to mitigate and reduce the impacts.

Pursuant to these overarching aims, specific project objectives included:

- Providing a general overview of the Covid-19 situation in the country in terms of the spread of the disease, the macro-economic situation, and containment measures; and outlining aspects related to the overall economic impact and social impact;

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<sup>1</sup> The research activities undertaken by the HSRC towards the completion of this work included comprehensive literature and documentary reviews, secondary data analysis, key informant interviews, and an informal food trader survey (see Chapter 2 for a detailed discussion on the implementation of these activities).

- Investigating the impact of Covid-19 on agriculture and food production, particularly with respect to disruptions to labour, input supply, post-harvest loss and livestock wellbeing;
- Assessing how projected potential exogenous hazards (hurricanes, disease outbreaks, etc.) may further jeopardize agricultural production;
- Analysing impacts on overall food supply and demand in the country
- Analysing the impact on food trade
- Documenting agriculture and food sector response policies and measures from both state and non-state actors and analysing the effectiveness of these measures
- Generating clear and actionable proposals to mitigate the impact of the Covid-19 crisis on agriculture and the food system at the provincial and national levels

### **1.3. Report outline**

After this introduction section, this report is organised around 6 chapters. Chapter 2 discusses the methodology used in undertaking this rapid impact assessment. This is followed by insights from a comprehensive review of literature conducted, in Chapter 3. Chapter 4 presents the secondary data analysis done as part of the study. Chapter 5 discusses insights from key informant interviews conducted at the national and subnational levels, followed by insights from the informal food trader survey in Chapter 6. The report concludes with summary and recommendations in Chapter 7.

## **2. METHODOLOGY**

### **2.1. Study design**

As noted in the introduction chapter, this study was designed as a rapid assessment and all research activities were conducted within a period of 15 weeks. The study adopted a mixed methods approach and used a combination of a desktop review of relevant literature and documents, secondary data analysis as well as quantitative (survey) and qualitative (key informant interviews) primary data collection. The mixed methods approach enabled triangulation of data, and as such provided confirmatory evidence and cross-validation of the data collected.

### **2.2. Methodological techniques**

#### **2.2.1. Desktop reviews of relevant literature and documents**

The desktop review followed a two-pronged approach in order to adequately explore the multi-faceted impacts of Covid-19 on agriculture and the food system in South Africa. The first

approach involved a review of relevant documents and reports from websites of key state and non-state institutions usually involved in the analysis of the South African agrofood system, such as Statistics South Africa (StatsSA), the Bureau for Food and Agricultural Policy (BFAP), the Food and Agriculture Organisation of the United Nations (FAO), the National Agricultural Marketing Council (NAMC), the Agricultural Research Council (ARC), the Institute for Poverty, Land and Agrarian Studies (PLAAS) and government departments such as the Department of Agriculture, Land Reform and Rural Development (DALRRD) and the Competition Commission of South Africa.

Since the pandemic was evolving, traditional scientific sources such as journal articles and books on the impacts of Covid-19 on agriculture and the food system were severely limited. Therefore, in addition to the review of the available scientific literature, the second approach involved careful analysis of online newspaper and academic articles and opinion pieces.

### **2.2.2. Secondary data analysis**

Relevant datasets and statistics from various local and international sources were analysed. The analysis aimed at answering key questions on the impact of the pandemic and measures to curb its spread on the availability, affordability, and quality of food, where data are available.

The specific data sets analysed were as follows:

- South African Grain Information Services (SAGIS): Weekly and monthly deliveries – cereals, oilseeds and their products; exports and imports; supply and demand, etc.
- Statistics South Africa: Food and beverages, June 2020; Manufacturing: Utilisation of production capacity by large enterprises, May 2020; Manufacturing: Production and sales, June 2020; Wholesale trade sales, June 2020; Retail trade sales, June 2020; Producer Price Index (PPI), July 2020; Consumer Price Index (CPI), July 2020; etc.
- SARS: Food exports and imports
- Quantec

The analysis focused on selected variables where data were available at a frequency which allows for a comparison before and during the Covid-19 pandemic. Thus, most of the data were analysed per month, and in some instances per week. A simple comparison of months before and after the pandemic was considered inadequate, as it could lead to an erroneous conclusion, as commodities may fluctuate on a monthly (or seasonal) basis. As such it was important to

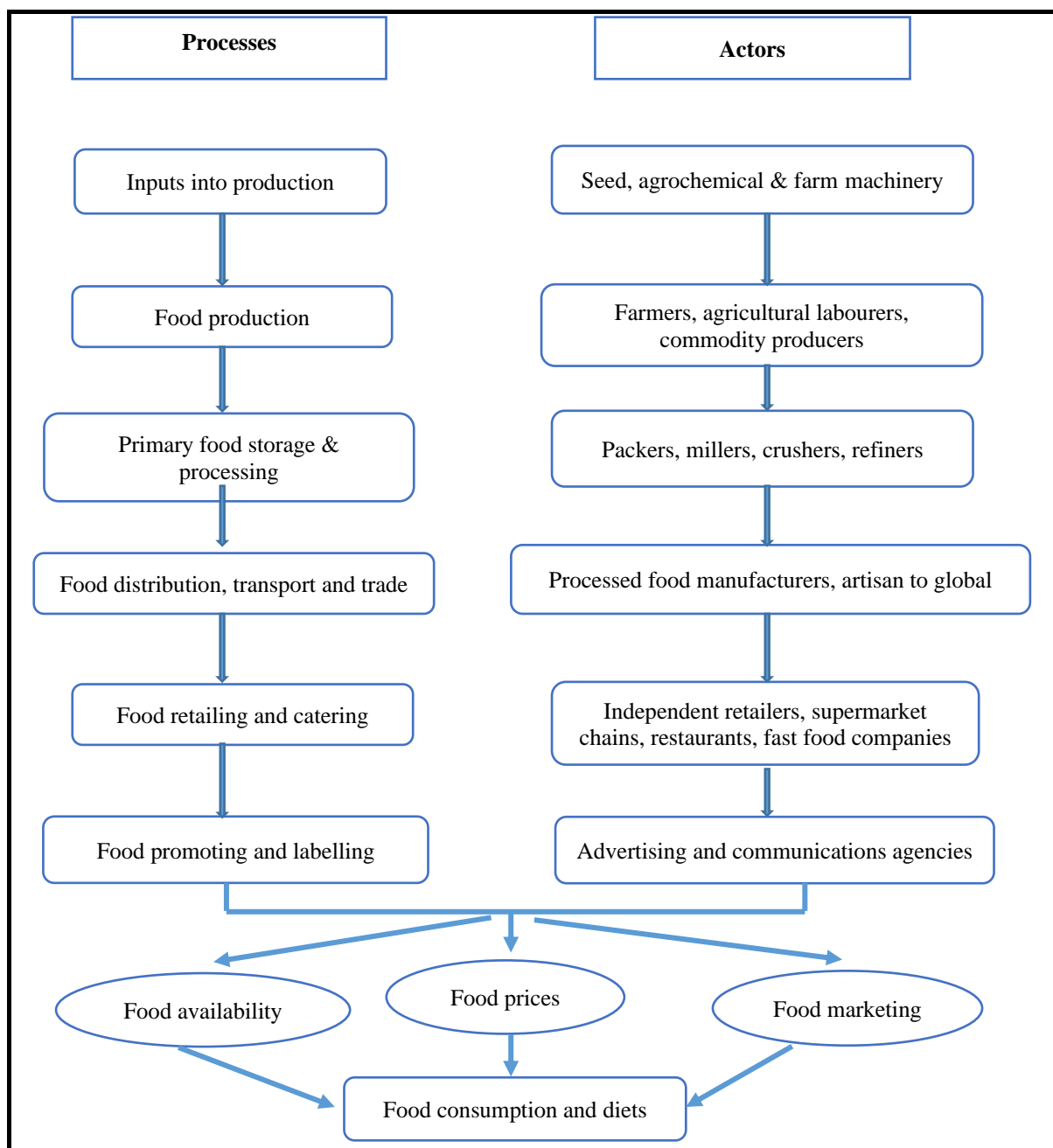
include yearly comparisons for the same time period. Therefore, the trends for the selected months in 2020 (January – June, for most variables) was compared to the previous years' trends. Significant movements that deviated from the norm were interpreted as evidence of the impact of an exogenous shock, which in this case is the Covid-19 pandemic and the measures introduced to reduce its spread.

In essence, the analysis of secondary data adopted a food supply chain approach, focusing on the extent to which the pandemic affected the processes and actors that take food from the farm to consumers. The major limitation of the data sources that were available and which were consulted was that they generally excluded small and informal players, as they focused on data mainly from formal sources. Given that the pandemic is more likely to have impacted the smaller informal players in the food system than it did the formal players, this means the analysis does not, therefore, provide a comprehensive picture of the impact of the pandemic across the agrofood system. The current report should thus be read with the understanding that it paints a partial and evolving picture on the impacts of the pandemic on food production, processing, distribution, marketing and consumption. presents a basic food supply chain, showing the processes and actors involved at every stage of the food supply chain. While it is understood that the food supply chain operates within a broader economic, biophysical, and socio-political context, which when considered ensures a comprehensive understanding of the food system (Nesheim et al., 2020; Parsons et al., 2019); this secondary data analysis was limited mainly to the food supply chain (i.e., the core of the food system). This was due to time and data challenges.

A food system is made up of “all the people, institutions, environments, infrastructure and activities that relate to the production, processing, distribution, marketing, sale, preparation and consumption of food” (Fanzo et al., 2020:243). The secondary data analysis in this report did not consider external drivers that pull or push the food supply chain, such as climate change, globalisation, urbanisation, income growth, politics, culture, etc. On individual dynamics or consumer behaviour, this analysis considered mainly incomes/purchasing power, as well as mobility challenges but did not deal with some of the cognitive (information, knowledge) and aspirational (desires, values, preferences) factors that influence consumer behaviour (see GAIN et al., 2019).



**Figure 1. A basic food supply chain showing the processes and actors**



Source: Hawkes, 2009

Food chains operate at various scales and levels, from the shortest (from garden to table), local or national supply chains, to long, highly complex globalised chains (Hawkes, 2009; Parsons et al., 2019). Food supply chains are typically shorter in rural and isolated communities, where food producers either eat the food directly or sell it to their neighbours in the local market. In urban settings, the chains are often longer and more complex, and the food typically produced farther away with the participation of many actors in its production, processing, packaging, and retail (GAIN et al., 2020; HLPE, 2017; Parsons et al., 2019). The secondary data analysis done,

primarily looked at dynamics at the national level, focusing on the complex chains, and did not deal with local supply chains, mainly because of the nature of the existing data.

The major limitation of the data sources that were available and which were consulted was that they generally excluded small and informal players, as they focused on data mainly from formal sources. Given that the pandemic is more likely to have impacted the smaller informal players in the food system than it did the formal players, this means the analysis does not, therefore, provide a comprehensive picture of the impact of the pandemic across the agrofood system. The current report should thus be read with the understanding that it paints a partial and evolving picture on the impacts of the pandemic on food production, processing, distribution, marketing and consumption.

### **2.2.3. Key informant interviews**

Key informant interviews were conducted at both the national and sub-national levels with stakeholders in the following categories:

- i. Relevant government departments, particularly the Departments of Agriculture, Land Reform and Rural Development; Trade and Industry; Cooperative Governance and Traditional Affairs; Health; and Social Development
- ii. Government entities and Academic/Research Institutions
- iii. International agencies
- iv. Agribusiness and vendor associations
- v. Non-governmental and community-based associations (NGOs and CBOs)
- vi. Fresh produce marketers

Interview guides relevant to each of the abovementioned stakeholder categories were developed. The interview guides mainly focused on 3 key issues: a) impacts of the pandemic on the agrofood system, b) response measures by both state and non-state actors – including gaps in and challenges encountered vis-à-vis these responses, and c) proposals to mitigate the impacts of the pandemic and future similar shocks.

Due to the Covid-19 pandemic movement restrictions, face to face interviews with key informants were not viable and as such all interviews were conducted telephonically or via virtual meetings. The duration of individual interviews ranged from 30 to 45mins on average and all interviews were audio recorded. Recordings were then transcribed prior to analysis. The

transcripts were analysed using content analysis during which common themes and topics were identified.

Overall, at the national level, 10 officials from the following state and non-state entities were interviewed: the Department of Agriculture, Land Reform and Rural Development (DALRRD), Statistics South Africa (StatsSA), United Nations Children's Fund (UNICEF), National Agricultural Marketing Council (NAMC), Agricultural Research Council (ARC), Association for Rural Advancement (AFRA), African Farmers Association of South Africa (AFASA), Citrus Growers' Association of South Africa (CGA), National Emergent Red Meat Producers' Organisation (NERPO), and academics from the University of Kwazulu-Natal (UKZN).

At the subnational level, a total of 60 interviews were completed. Table 1 provides an overview of the number of officials that were interviewed by province and sector.

**Table 1. Officials interviewed subnational level & sectors covered**

<b>Province</b>	<b>Number of officials interviewed</b>	<b>Sectors/Departments/Units covered</b>
Gauteng	11	Agriculture; DSD; COGTA
Limpopo	9	Agriculture; LED; Premier's Office
North West	7	Agriculture; LED; DSD
KwaZulu Natal	12	Agriculture, Premier's Office; COGTA; NGOs, LED; Department of Economic Development, Tourism and Environmental Affairs, Informal trader association
Eastern Cape	7	Agriculture, NGOs, LED, DSD, DEDTEA, Informal trader association
Western Cape	6	Agriculture, NGO, Informal trader association, Fresh produce marketer
Mpumalanga	4	Agriculture, DSD
Northern Cape	2	Agriculture
Free State	2	Agriculture, Fresh produce marketer
<b>Totals</b>	<b>60</b>	<b>9 different sectors/depts./units</b>

The research team experienced several challenges which ultimately slowed the pace of both national and subnational level consultations. Challenges faced mainly revolved around three aspects, namely:

- a) securing interview appointments,

- b) cancellation of interview appointments,
- c) a bias towards identification of stakeholders in the Department of Agriculture compared to stakeholders from other government departments from the lists provided especially at the subnational level

Securing interview appointments was challenging as some stakeholders did not reply to emails of interview requests, whilst calls to some telephone numbers went unanswered. It is also important to note that during lockdown, many stakeholders were not physically present in their offices and, as such, the research team was unable to reach them on their office telephone numbers, and in some cases, on their office email addresses as well. We therefore relied on utilising mobile telephone numbers and personal email addresses of stakeholders.

Furthermore, there were occasions where interview appointments were confirmed, however, when called on the day of the appointment, the stakeholder would be unreachable, and their appointment would then have to be cancelled.

The bias toward stakeholders in the Department of Agriculture at the subnational level mainly, meant that we had to resort to snowball sampling to identify stakeholders in other departments. While this was achieved to a limited degree, this bias also tended to skew the analysis of the data that was collected.

#### **2.2.4. Informal food trader survey**

A quantitative survey was conducted with informal food traders. These traders were defined as those who traded on markets or on the street. Three groups of informal food traders were specifically targeted: fresh fruit and vegetable traders, cooked/prepared food sellers and connecting (bakkie) traders (linking markets to roadside sellers).

A questionnaire comprising of 28 mostly closed-ended questions and covering 7 sections was designed for the survey. These sections included:

- a) general information
- b) trading activity prior to the Covid-19 pandemic
- c) the impact of the pandemic and its associated restrictions on their ability to trade
- d) market supply and sources
- e) market demand

- f) financial services and external assistance, and
- g) coping strategies.

It is important to note that the focus of the questionnaire revolved around informal food traders' experiences, perceptions and self-assessments of situations and that no quantitative information was collected with respect to purchases or sales for example. The questionnaire was translated into all official South African languages.

Similar to the key informant interviews, survey administration was done telephonically. Survey administrators were matched for language proficiency before allocation to specific provinces. Survey administrators contacted local municipalities (LMs) within each province in order to obtain databases of informal food traders. This was done successfully to varying degrees across provinces. Table 2 provides the number of databases that were received from local municipalities by province. In order to augment these databases (or lack thereof), administrators made use of snowball sampling and peer referrals to further recruit informal traders for the survey.

Administration of the survey questionnaire took an average of 10-20 minutes and was captured on an online platform. All participants were required to provide electronic informed consent and were informed that their participation was voluntary and were assured of their anonymity prior to the commencement of the survey.

Data analysis was performed with Stata version 15.0. Descriptive statistics with frequencies and percentages were presented. Differences in estimates across and within groups were compared using 95% Confidence Intervals and Chi-square tests. A statistically significant level of  $p < 0.05$  was considered.

Overall, 1455 calls were made, of which 804 interviews were successfully completed (see Table 2).

**Table 2. Overview of databases received, and calls made to informal traders by province**

<b>Province</b>	<b>No. of databases received</b>	<b>Number of total calls made</b>	<b>Successfully completed calls</b>
Limpopo	16 out of 22 LMs	397	269
Free State	12 out of 18 LMs	228	117
North West	10 out of 18 LMs	207	110
Eastern Cape	16 out of 34 LMs	185	94
Gauteng	5 out of 9 LMs	205	133
Western Cape	6 out of 24 LMs	69	27
Northern Cape	7 out of 26 LMs	123	43
KZN	19 out of 44 LMs	31	10
Mpumalanga	2 out of 17 LMs	10	1

The research team experienced several challenges which ultimately delayed the commencement of survey administration. These included a) minimal support from subnational officials in some provinces in providing informal food trader databases, b) poor quality of databases received in some provinces, and c) lack of respondent cooperation.

The lack of support in the provision of databases in some provinces/municipalities led to the inability to conduct the survey in these locations as there was no contact point for obtaining databases.

In many instances the quality of the databases received were poor. Some did not have telephone numbers - only containing names and physical addresses, whilst others had incomplete/non-existent numbers. In some instances, traders residing in some provinces had their names appearing in wrong provincial databases. There was also no identification of the type of informal traders listed in most databases, which then lengthened the process of categorizing the traders who were being contacted. Certain categories of traders were also difficult to find, particularly prepared/cooked food sellers & bakkie traders.

Lastly, as with the key informant interviews, some calls went unanswered, whilst in other cases, even when answered, traders would be busy during the day which made it difficult to conduct a proper conversation throughout the interview. As a result, in such cases, calls then tended to take longer than anticipated.

### **3. INSIGHTS FROM A COMPREHENSIVE REVIEW OF LITERATURE**

#### **3.1. Introduction**

This chapter starts with a brief overview of the South African country context vis-à-vis the pandemic, in terms of the macro-economic situation, and overall economic and social impacts. It then proceeds to highlight the various key response policies and measures put in place for the food sector involving both state and non-state actors, including those around social protection, trade, food safety, food processing, and the food supply chain. The chapter then explores the impacts of the pandemic on agriculture and food production, including discussions on how it has affected farming systems, input supply, and post-harvest processes. The chapter also looks at which and how other exogenous hazards may have further compromised agricultural production in the context of the pandemic. It also includes analyses of the impacts of the pandemic on food supply and demand and discusses the overall food supply situation in the country, the food balance sheet, and estimates around requirements for food imports and demand shifts. The chapter also discusses the impact of the pandemic on food trade, including implications on domestic food prices, imports of key food items, trading routes, as well as exchange rate issues. The chapter concludes with a summary of issues covered.

#### **3.2. South African country context and the Covid-19 pandemic: An overview**

With the onset of the pandemic in South Africa from March 2020 onward (when the first case was reported), the major tool that has been used to mitigate its demographic effects, as in many other countries around the world, has been the implementation of different forms of lockdown measures to reduce contagion by breaking usual social and physical forms of contact. The South African government announced 5 lockdown stages, or Coronavirus alert levels; a risk adjusted strategy consisting of level 5 – which was the drastic total shutdown stage (implemented between end of March and beginning of May 2020), then levels 4 to 2 consisting of different stages of the easing of restrictions and opening up of the economy, and level 1, where most normal economic and social activities could resume. These measures have imposed far-reaching shocks on all sectors of the economy, and the agrofood industry has not been spared.

##### **3.2.1. Covid-19, the macro-economic situation and overall economic impact**

The South African economy was already in a technical recession prior to the pandemic and the lockdown; with real Gross Domestic Product (GDP) growth estimated at 0.3% and 0.9% for 2019 and 2020 respectively (Arndt et al, 2020). There are four main channels by which Covid-

19 was expected to negatively influence macro-economic factors vis-à-vis agriculture and the food system going into the future (ibid):

- a) The forced reduction in production as a result of the lockdown and movement restrictions
- b) The effects of disrupted global production and supply chains on South African exports and imports
- c) The effect of uncertainty in the general business environment
- d) The impact of the lockdown on employment opportunities

These four channels have had and will continue to have “knock-on effects spreading through the entire economy, (with) reduced activity in one sector having consequences both for the suppliers of intermediate inputs of that sector due to lowered demand, and for the users of the outputs facing disruptions” (ibid:2).

The South African economy is projected to contract by between 7% and 10% and predictions are that it could take as long as 5 years for the economy to recover to pre-Covid-19 levels (Omarjee, 2020). Due to disruptions in the economy, PricewaterhouseCoopers (PwC) projects that South Africa’s unemployment rate, already one of the worst in the pre-Covid-19 period at 29%, could escalate to nearly 48% in a worst-case scenario, whilst a milder scenario could push it to 33% (Joffe, 2020). This would result in loss of earnings and/or a dramatic fall in household incomes, thereby compromising the ability of most people to purchase food, among other household essentials. Arndt et al (2020) projects that the different lockdown levels could see total wages and salaries shrinking by as much as 30%. From a macro-economic perspective therefore, Covid-19, and the lockdown in particular, are expected to result in a contraction of the South African economy, strain on and closure of businesses, and job losses.

### **3.2.2. Overall social impact**

The Covid-19 pandemic is a huge shock in the South African social context which was already beset by high levels of poverty and unemployment before the pandemic. 20% of households in the country were already considered food insecure in 2019 (StatsSA, 2019). The lockdown and the resultant economic impacts highlighted in the previous subsection (such as contraction of the economy, business closures and job losses) have increased the numbers of people in need of food aid. A survey of around 19 000 people by the Human Sciences Research Council (HSRC) two weeks into the level 5 lockdown stage found that more than half (55%) of residents of informal settlements had no money to buy food and were in need of food assistance, and the



same was true for two thirds of township residents (Omarjee, 2020). Whilst the government and non-governmental organisations rolled out various forms of support to alleviate the social impact of Covid-19, such as the release of disaster relief funds, wage support through the Unemployment Insurance Fund (UIF) and funding to small businesses, and the distribution of food parcels (see Section 3.3); a number of challenges and bottlenecks compromised the effectiveness of these measures. Major challenges have included lack of data on who needs support<sup>2</sup>, the bureaucracy involved in verifying disaster relief funds and food claims on the part of government, and a lack of coordination and communication among state and non-state actors in rolled out support measures e.g. around food distribution (Davis, 2020). A classic example is that of the special Covid-19 Social Relief of Distress Grant which was put in place to benefit 10 to 15 million unemployed people without other income, existing grants, or UIF payments, for an initial 6 months period. As the Institute for Economic Justice (2020: 2) notes, “it took around 6 weeks before any grants were paid, and as at 18 June 2020, only 1.2 million applicants, out of 6.2 million received, had been paid”.

### **3.3. Key response policies and measures for the food sector**

This subsection aims to describe in more detail, the measures, policies and institutional parameters that were implemented in various focal areas related to the food sector. These focal areas include 1) social protection 2) social inclusion, 3) farmer support 4) trade, and 5) food safety, food processing and supply chain. Furthermore, it also aims to describe institutional and individual compliance to measures in these areas as well as to provide some examples of community experiences of these measures.

On Sunday, 15th March 2020, the President of South Africa declared a national state of disaster due to the Covid-19 pandemic, stating that social distancing and self-isolation were necessary measures to slow the spread of the virus. In response to the pandemic, as of midnight on Thursday 26th of March 2020, the National Coronavirus Command Council enforced an initial 21-day nationwide lockdown (which was extended by a further 14 days). This was an attempt to “flatten the curve” and build the additional capacity required within the country’s health services to handle the inevitable rise in the number of Covid-19 cases.

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<sup>2</sup> The South African Social Security Agency (SASSA), for example, has a list of existing social grant beneficiaries, “but it is recognised that those most in need are people who do *not* currently qualify for a SASSA grant” (Davis, 2020: 1)

During this time, numerous restrictions, specifically targeted at personal movement, retail and service operations were implemented. This formed part of the Covid-19 risk adjusted strategy for South Africa in which restrictions were listed for each Alert Level from Level 5 to Level 1. Table 3 illustrates examples of how these restrictions were amended/lifted between Alert Level 5 and Alert Level 3 of the lockdown.

**Table 3. Lockdown levels in South Africa**

Sector	Alert Level	Measures implemented
Agriculture, hunting, forestry and fishing	Level 5	<ul style="list-style-type: none"> <li>Food-related agriculture, livestock, transport of live animals and auctions (subject to health directions) and related agricultural services</li> <li>All fishing, operation of fish hatcheries and fish farms; and</li> <li>Harvesting and storage activities essential to prevent the wastage of primary agricultural goods</li> </ul>
	Level 4	<ul style="list-style-type: none"> <li>All agriculture, hunting, forestry, fishing and related services, including the export of agricultural products permitted</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
Wholesale and retail trade, covering stores, spaza shops, eCommerce and informal traders:	Level 5	<ul style="list-style-type: none"> <li>Any food product, including non-alcoholic beverages and animal food, excluding the sale of cooked hot food; No sale of liquor permitted</li> </ul>
	Level 4	<ul style="list-style-type: none"> <li>The sale of hot cooked food, only for home delivery</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>Any food product, including non-alcoholic beverages and animal food and hot cooked food</li> <li>Off-premises consumption of alcohol, subject to limited hours (Mon-Wed 8 – 12pm) and subject to an approved industry plan on social distance and quantitative restrictions. No consumption on premises.</li> </ul>
Accommodation and food service activities permitted	Level 5	<ul style="list-style-type: none"> <li>Accommodation not permitted, except for quarantine, essential services</li> <li>Restaurant, take-away, bar and canteen services not permitted</li> </ul>
	Level 4	<ul style="list-style-type: none"> <li>Restaurants only for food delivery services (9am-8pm) and subject to curfew (no sit down or pick-up allowed)</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
Transport, storage and communication services permitted	Level 5	<ul style="list-style-type: none"> <li>Rail, ocean and air transport permitted only for the shipment of cargo</li> <li>Taxis, buses, e-hailing services subject to restrictions on capacity and times, and for permitted activities only; and</li> <li>Transport and logistics in respect of specific cargo, and permitted retail goods to neighbouring countries, which shall include all goods imported via SA ports of entry, for re-export to neighbouring countries</li> </ul>
	Level 4	<ul style="list-style-type: none"> <li>Public rail, minibuss taxi and bus services will resume at levels and on terms as will be set out in Directions,</li> </ul>

		<p>based on the progressive increase in commuter numbers during the various phases</p> <ul style="list-style-type: none"> <li>Essential imported goods will be prioritised through ports of entry and for transport and handling to final users. Directions will be issued in respect of other goods</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
Supply chains:	Level 5	<ul style="list-style-type: none"> <li>Production, manufacturing, supply, logistics, transport, delivery, critical maintenance and repair in relation to the rendering of permitted services including components and equipment</li> <li>All workplaces or premises must have care and maintenance that is essential to the prevention of the destruction or significant impairment of working areas, plant, machinery or inventory, or to permit orderly shutdown arrangements, on such conditions as may be issued by means of directions by the relevant cabinet members</li> </ul>
	Level 4	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
	Level 5	<ul style="list-style-type: none"> <li>Medical and veterinary services permitted</li> <li>Social work, counselling, care and relief activities permitted for Covid-19 care and relief for the sick, mentally ill, elderly, people with disabilities and children</li> <li>Wildlife Management, Antipoaching, Animal Care and Veterinary services</li> </ul>
Health, social and personal services:	Level 4	<ul style="list-style-type: none"> <li>All Social work, counselling, care and relief activities permitted</li> </ul>
	Level 3	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
	Level 5	<ul style="list-style-type: none"> <li>Interprovincial travel is not permitted except to return to work with proof of employment; or essential services</li> <li>Stay at home, other than essential travel for work and to purchase essential goods.</li> <li>Stores to ensure that there is temperature screening of patrons, hand sanitisers available and measures to facilitate social distancing. Where the number of customers cannot be accommodated at once then measures such a ticket system and defined limit of time in the store per customer should be implemented instead of the physical queuing of customers.</li> </ul>
Personal Movement	Level 4	<ul style="list-style-type: none"> <li>No additional changes with respect to food sector</li> </ul>
	Level 3	No additional changes with respect to food sector

As already noted earlier, while the pandemic brought with it challenges for South Africa's health sector, the country's response to the pandemic also had far-reaching economic implications at an individual, livelihood and business level. The following measures and parameters were instituted to mitigate the impacts.

### **3.3.1. Social protection measures**

An FAO report monitoring Covid-19 social relief responses in Latin America and the Caribbean shows that money transfers seem to be the most prevalent social security measure implemented since the beginning of this pandemic (FAO, 2020b). About 20 countries across Latin America and the Caribbean combined implemented some type of cash transfer either by introducing new cash transfer programmes, increasing existing ones or increasing their beneficiary base (ibid). Other social security measures implemented in that region include wage subsidies, benefits in electricity payments and unemployment insurance amongst others. This comparative analysis shows that social security measures adopted by South Africa in response to the Covid-19 pandemic are similar to those implemented by other developing countries. This occurred in the form of an economic and social relief package worth over R500 billion which aimed at protecting businesses, livelihoods, as well as the most vulnerable individuals in society (Masaubi, 2020). Amongst other measures it included:

- R50 billion increase to the value of existing social grants over an initial six-month period (between May and October 2020).
  - Beneficiaries of the Child Support grant would receive an extra R300 in the first month and an additional R500 per caregiver thereafter.
  - All other grants were augmented by R250.
  - A special Covid-19 social relief grant of R350 a month for unemployed South Africans who currently do not receive any other form of social assistance from government
- R20 billion aimed at providing emergency water supply and increased sanitisation of public transport and facilities, and providing food and shelter for the homeless
- R100 billion for the protection and creation of jobs
- R40 billion from the Unemployment Insurance Fund (UIF) to help employees who will be unable to work
- R2 billion to assist small and medium enterprises, spaza shop owners and other small businesses
- R200 billion loan guarantee scheme to assist larger businesses

- Tax subsidies for low-income private sector workers.
- Temporary Employee Relief Scheme (TERS) for employees of companies in distress
- Deferrals of tax payments for businesses as well as payment holidays for skills development levy contributions and PAYE payments

In the address by the President on the 23<sup>rd</sup> of July (The Presidency, 2020c), he stated that by the end of July 2020, an additional R15 billion would have been paid to social grant recipients and 4.4 million people would have received the special Covid-19 grant. He did however mention that while there were initially delays in processing these payments, future payments would be processed more easily as necessary systems had been put in place. Furthermore, he stated that the UIF had paid out R34 billion between April 2020 and June 2020, thereby securing employment of 7.5 million workers.

While the above interventions provided economic relief for many people, they are mainly aimed at those employed in the formal sector. Devereaux (2020) states that the most vulnerable working age adults are most often employed informally or on the basis of “no work, no pay”. It is estimated that 20% of total employment, which is equivalent to three million people, work in this informal sector. Included in this (informal sector) are domestic workers, farm workers, service sector workers who supplement their income with tips such as waitrons, cleaners and Uber drivers, and self-employed workers such as car guards and informal traders. It remains unclear as to whether or not these people were able to access these interventions.

Furthermore, although, the interventions are theoretically sound, they are still open to misuse or abuse. News reports have highlighted compliance issues in terms of allegations of fraud and faulty systems regarding TERS payments for example. These allegations are currently under investigation (Bhengu, 2020). In his address to the nation on the 23<sup>rd</sup> of July 2020, the President made mention of the allegations about fraudulent UIF claims and other forms of corruption and mismanagement of public funds (The Presidency, 2020c).

In terms of specific FNS interventions, the Department of Social Development (DSD) partnered with the Solidarity Fund, NGOs, civil society and community-based organisations to distribute food parcels in all provinces (Masaubi, 2020). While the total number of food parcels distributed by government during the lockdown remains unconfirmed, reports indicate that by the 11<sup>th</sup> of May 2020, the DSD had distributed around 323 000 food parcels (Mvumvu, 2020).

The Social Development Minister, however, reportedly stated that the distribution of food parcels by government has been uncoordinated and open to corruption and abuse (Mvumvu, 2020). This was also confirmed by the President in his speech on the 23<sup>rd</sup> July 2020. The DSD food parcel process ended on the 4<sup>th</sup> of May 2020 and was replaced by the Social Relief of Distress (SRD) grant from the South African Social Security Agency (SASSA) which would provide food assistance in the form of cash transfers and food vouchers (DSD-WC, 2020).

While both the food parcel initiative and the SRD grant were aimed at the most vulnerable; due to the lockdown restrictions, the number of people in need of assistance continued to rise (Seleka, 2020), and often, those in need did not meet the qualification criteria to receive food parcels or the SRD grant as they already receive some form of social assistance (Kiewit, 2020; Devereaux, 2020). Furthermore, when the lockdown was implemented and schools were closed, a vital food source for children, in the form of school feeding programs ceased. The National School Nutrition Programme (NSNP) feeds an average of 9 million learners per day, all of whom were now dependent on receiving meals at home. In the Western Cape, the Peninsula School Feeding Association attempted to fill this gap and raised enough funds to feed 4,200 children daily at community kitchens around Cape Town (Devereaux, 2020). This, however, only reached a fraction of those in need. Food insecurity therefore became a crucial issue, especially during the extended hard lockdown. Cases of violent conflict and looting associated with desperate measures to secure food were reported in provinces such as the Western Cape (PLAAS, 2020; Payne, 2020).

There were calls to reinstate the school feeding programmes even though schools remained closed during alert levels 5 and 4 (Qukula, 2020). This was despite the complicated logistics associated with such a move. When schools reopened on the 8<sup>th</sup> of June 2020, the school feeding programmes were once again reinstated fully. The school feeding programme has been identified as a crucial avenue for providing food relief to such an extent that when the President announced that schools would close again from the 27<sup>th</sup> of July 2020 to the 24<sup>th</sup> of August 2020, he emphasized that during this time, the national school nutrition programme would continue to operate (The Presidency, 2020c).

Various other government departments partnered with businesses and organisations to distribute food parcels. The Department of Environment, Forestry and Fisheries (DEFF) partnered with FishSA, major fishing corporations and the SA Fishing Development fund to distribute over 10 000 food parcels to distressed small-scale and interim relief fishers across

the country (SA Government, 2020a). Furthermore, individual business such as Premier Fishing reached out to provide assistance to their seasonal staff (Dlamini, 2020). The Western Cape Department of Agriculture and the Deciduous Fruit Development Chamber of South Africa (DFDC-SA) was said to have “contributed over 10 000 fruit parcels to the NGO, Gift of the Givers, for further distribution amongst vulnerable communities in the Western Cape” (SA Government, 2020b: 1). The Gift of the Givers itself supported more than 20 000 people per day and undertook to add the donated fruit packs to the food parcels which they delivered at feeding centres.

Further investigation of the various food parcel interventions conducted by various organisations revealed that there were no set criteria in terms of who could be a beneficiary of a food parcel nor what the contents of the food parcel would be, as these differed across organisations. For example, Gift of the Givers adapted different criteria to different situations or places. In one location, beneficiaries could be families of the disabled, while in others, they could be those who have had no income during the lockdown (Gift of the Givers, 2020). Food Forward SA (2020), a food redistribution organisation, operating on a food banking system, reported distributing 3,100 tons of food amounting to 12,4million meals to vulnerable communities during the hard lockdown period. As at the beginning of August 2020, they were supporting more than 1,000 beneficiary organisations, reaching nearly 500,000 vulnerable people directly (and an additional 1,5 million people indirectly) with food parcels to households.

While the distribution of food parcels no doubt addressed the issue of hunger and food security, the nutritional adequacy of the food parcels has been questioned. Researchers from the University of Pretoria, for example, evaluated the nutritional adequacy of the food parcels distributed by the Gauteng food parcel relief scheme and observed some deficiencies (Vermeulen, 2020). They concluded that the food parcel contained adequate amounts of macronutrients in the form of carbohydrates, proteins and fats, but was however lacking in dietary diversity, specifically with regard to dairy, eggs and fruit and vegetables. The latter provides critical micronutrients essential for building the immune system. They further concluded that the salt and sugar content of the food parcel could be reduced as well, stating that “striving to provide more nutritional food can ensure better health outcomes that will reach beyond the pandemic” (ibid: 2).

### **3.3.2. Social inclusion**

The human and economic impact of Covid-19 is dissected and analysed on a daily basis; however, it is worth remembering that it affected everyone, albeit at differing scales. There are many groups in society that are generally excluded from their fundamental rights, particularly the right to food (Surulivel and Rao, 2010). Women, the disabled, poor people, immigrants/refugees, asylum seekers and the homeless, face socio-economic marginalization on a day-to-day basis. The development of a pandemic would no doubt worsen their situations.

Policy responses that affected excluded groups such as women, children and the disabled have already been accounted for in the previous section which speaks to social security measures. In the case of homeless people, the government of South Africa organised relocation camps across the country for them to move into mainly for the duration of the hard lockdown period (i.e. levels 5 and 4). Civil society organisations however indicated their dislike for the high occupancy sites of these relocation camps. Most metropolitan municipalities therefore started opening smaller, less congested camps where the homeless could get consistent provision of food, as well as access to decent water and sanitation (van Cutsem, 2020). However, after careful evaluation of the shelters, issues like erratic distribution of food and insufficient access to water became major concerns (van Cutsem, 2020).

In KwaZulu Natal, churches in the region formed a coalition which distributed food vouchers to communities of foreign nationals who were not able to access formal government aid since the beginning of alert level 4 of the lockdown (Msimang, 2020). Moreover, when the R350 Social Relief of Distress grant was introduced, the Minister of Social Development mentioned that those refugees who have official refugee status as provided by the Department of Home Affairs did qualify for the grant and were encouraged to apply (PMG, 2020). However, undocumented refugees and asylum seekers did not qualify for the SRD grant and there was a call by Human Rights Watch for the government to ensure that the human rights of these groups are recognised (Human Rights Watch, 2020).

### **3.3.3. Farmer support measures**

Farm operations and food supply chains were exempted from lockdown restrictions, thereby permitting harvesting and storage in order to prevent wastage of crops and to tend to livestock. Furthermore, the Department of Agriculture, Land Reform and Rural Development (DALRRD) established a R1,2 billion Covid-19 Disaster Fund to assist smallholder and communal farmers. The targeted beneficiaries were producers with a “turnover between R20



000 and R1 million per annum”, with a goal of 50% women, 40% youth and 6% people with disability as beneficiaries (PMG, 2020). Van der Walt (2020: 1) notes that “while it remained unclear whether any support would be provided to commercial farmers as part of DALRRD’s Covid-19 relief efforts, black commercial farmers were eligible for assistance via the agriculture department’s Proactive Land Acquisition Strategy (PLAS), which had a R400 million share of the department’s relief funding package”. According to Masiwa in VBK News (2020), DALRRD also committed to supporting household food gardens with agricultural inputs, such as seeds and fertiliser, to ensure long-term relief, instead of food parcels (PMG, 2020). A critical task for the DALRRD is to make sure the agricultural sector is resilient and sustainable, without compromising livelihoods.

The DALRRD received a total of 55 000 applications between 8 and 22 April 2020 for the Covid-19 Disaster Fund. By early August 2020 more than 15 000 small-scale farmers had been selected as beneficiaries throughout the country. The intervention came in the form of vouchers that enabled farmers to purchase inputs and fertiliser from government listed suppliers. DALRRD however clarified that the intervention is meant to be a response to the current Covid-19 crisis and not a long-term aid. In the second round of applications, the fund looked at attracting applications from varied categories of farmers, such as smallholder sugar cane farmers, wool producers, and emerging farmers found in townships (Masiwa, 2020).

While the support measures instituted by government were commendable, the implementation thereof remained challenging. Mkhabela (2020) has listed a number of measures that could be undertaken in order to mitigate these challenges. He states that farmers must have continued access to markets, and small poultry and dairy farmers should receive targeted help regarding input supply and market-access. Furthermore, he highlights the need to implement precautionary health measures and to make testing for Covid-19 available to farm workers, as well as including farm workers and migrant workers in government social assistance programs, both in terms of cash transfers and food security. Lastly, he states that where possible, food parcels should primarily contain local produce.

#### **3.3.4. Trade measures**

Regulations allowed for retail trade of essential food products to continue through-out the entire lockdown (Arndt, et al., 2020). However, the sale of cooked food and alcoholic beverages were not permitted during alert level 5. As such some sectors of the food industry, including markets, restaurants, take-aways, fast food outlets, bars and canteen services, were deemed non-essential

and were prohibited from trading. Furthermore, the possibility of price hiking was an initial concern, and as such regulations were put in place to discourage unfair price hikes to prevent panic buying (The Presidency, 2020a). In ensuring this, the Department of Trade and Industry (DTI) published a list of 22 critical products and categories that would be closely monitored by the National Consumer and Competition Commission. They included basic food items like rice, maize meal, milk, canned vegetables and meats (DTIC, 2020a).

To support informal food trade in townships and villages, a Spaza Shops and General Dealers Support Scheme was established towards the end of alert level 5. However, these shops were required to have applicable licenses and be 100% owned by South Africans. The scheme provided the beneficiaries with working capital investment and revolving credit facility, business management support, and legal compliance (including assistance to register with CIPC, SARS and UIF) (DoSB, 2020b). However, PLAAS (2020: 1) notes that “the distinction drawn between registered and unregistered spaza shops translated into xenophobic attempts to close down all foreign-owned spaza shops (and) other shops owned by foreign nationals (e.g. those selling imported and specialised food from other African countries) were also forced to close down as part of the lockdown”.

When the country moved to alert level 4 at the beginning of May 2020, the restriction of trade on cooked food was lifted; as such, restaurants and all stores that sell cooked food could trade. However, cooked food could only be purchased as collection or for delivery, with ‘sit down’ meals remaining prohibited. This prohibition was lifted during the extended/advanced alert level 3 (The Presidency, 2020b). On the 12<sup>th</sup> of July 2020, the President reinstated the 9pm curfew and as such restaurants remained challenged with regard to serving sit down meals. By the 30<sup>th</sup> of July 2020, the curfew was extended to 10pm. While some restaurants tried to be innovative by changing their business style during this time, many others opted to remain closed during the period that they were only allowed to operate via delivery. Furthermore, restaurants continued to report income losses as the sale of alcohol remained banned through alert level 3. The initial prohibition of trade for restaurants had visible impacts along the local food supply chain. While fishing was declared an essential service, the closure of domestic restaurants reduced the market for many small-scale fishers. This compounded an existing reduction in the traditional markets with respect to the sale of abalone and West Coast Rock Lobster (SA Government, 2020a).

Although regulations regarding price hiking were put in place, food price inflations were observed in the main food supermarkets across the country. According to BFAP (2020), month-on-month inflation was substantial in meat, milk, eggs, cheese and chicken products. This could be treated as an indication that there was a stronger demand for higher-end meat products by consumers who had no alternative for food-away-from-home consumption during the lockdown period. In response, the OECD (2020: 7) writes that “the South African government issued regulations that prohibit an excessive price under section 8(1)(a) of the Competition Act for selected essential goods and services, ranging from foodstuff and medical supplies to face masks and surgical gloves, (whereof), during the State of National Disaster, a price is regarded as excessive if it is higher than the price set prior to March 2020, unless it corresponds with higher costs of production”.

In the period leading to the lockdown, the Competition Commission (CC) noted an excessive increase in the prices of “agricultural products such as wheat, white maize, sunflower seeds, carrots, onions and tomatoes” (CC, 2020a). By mid-May, the CC had received over 1500 complaints or tip-offs of excessive pricing of “basic food products, masks and sanitizers” (CC, 2020b). Food and hygiene accounted for 43.3%, 73% and 80.1% of the total complaints in March, April and May, respectively (NCC, 2020). Of these, 129 investigations into these were approved, 29 were completed of which 11 were closed either due to no contravention of regulations or a settlement being reached (NCC, 2020). The National Consumer Commission (NCC) observed some of the following challenges: inconsistency in the enforcement of the Regulation in the different provinces, and that consumers in rural areas could not adequately benefit as informal traders could not be investigated, given that most are not registered (NCC, 2020). The CC also monitored price increases and explained that the rise in the price of staple foods like bread and flour were due to the rand depreciation and resulting price increase of imported crops (CC, 2020b). According to the CC, price hikes were no longer common on most fresh produce due to the reduced demand from restaurants (CC, 2020b).

While it appeared that the issue of price hiking was dealt with effectively, other difficulties regarding trade still needed to be mitigated. In order to overcome the bottlenecks experienced in supermarkets, contactless and online deliveries were encouraged (Siche, 2020). DEFF implemented some measures specifically to support small scale fishers. Amongst others, these included extending permits and fishing seasons, exempting fishers from travel restrictions, redefining snoek sellers (locally known as *langanas*) as informal traders to facilitate marketing

of snoek and engagements with the department of tourism and licenced fish processing establishments. (SA Government, 2020a).

### **3.3.5. Food safety, food processing and supply chain**

From the initial stages of the hard lockdown (i.e. Alert Level 5), the measures for food safety were primarily guided by the Occupational Health and Safety Act (OHSA), as well as the Current Good Manufacturing Practices (CGMPs). The Covid-19 measures simply placed extra emphasis on food handling, and obedience of the Food Safety and Health Standards (DoSB, 2020a). These guidelines included not staying overnight in a grocery stores, practicing good hygiene in the preparation and handling of food (including regular cleaning and sanitisation of food preparation surfaces). Despite panic regarding risk of Covid-19 infection through food, this was discounted given the lack of medical or scientific evidence to that effect. (CGCSA, 2020a). This is also in line with directives from the Department of Employment and Labour (DoL, 2020). This was further enforced by the Consumer Goods Commission of South Africa (CGCSA) in providing the standard operating procedures for fast food outlets (FFO) during the lockdown. The main principles were social distancing, contact free service, and cleaning and sanitizing hands and equipment. These guidelines for FFOs also considered informal FFOs like mobile food trucks, taverns and open-fire barbecues (*shisanyamas*) under less stringent operating procedures including permission to operate with take-away services from 10h00 to 18h00 to offset mobility concerns (CGCSA & SACCI, 2020).

Towards the end of lockdown level 4, the CGCSA, under its Food Safety Initiative (FSI), further emphasized food safety issues. Manufacturers were reminded to follow usual cleaning and sanitary regimes strictly. Despite worries about contamination of food or packaging, it did not recommend additional sanitation procedures due to the pandemic, given that the final products were usually handled multiple times before reaching the final consumer. However, personal hygiene practices were encouraged throughout the supply chain to avoid contamination of the product and to reduce infection. Furthermore, CGMPs were considered enough to reduce and eliminate contamination through surfaces even if an infected worker had touched surfaces within the facility (CGCSA, 2020b). Practically, there have been numerous instances wherein supermarkets would close for decontamination and sanitisation if an employee tested positive for Covid-19. Generally, the supermarket would open after a period of 24 hours.

According to Farmers Review Africa, while the food processing industry has been able to adequately respond to changing consumer demand, the surge experienced due to the Covid-19 pandemic has been unprecedented. The primary issues that have had to be addressed as a result include ensuring employee welfare while achieving maximum production capacity, location of the suppliers (given movement and import restrictions in certain areas), efficiency of the distributors (which are usually outsourced) and issues of food storage, safety and quality (Farrely, 2020).

In the United States (US), there were Covid-19 outbreaks at 247 food processing plants, with 7908 workers infected and 34 deaths as at 3<sup>rd</sup> August 2020 (Food and Environment Reporting Network, 2020). The conjecture was that working and housing conditions were responsible for these statistics. In Europe, worker exploitation and insufficient safety measures were suggested as the primary causes, highlighting “16 hour working days, low pay, illegal wage deductions and job insecurity (plus)...overcrowded accommodation” (Askew, 2020).

In South Africa, major manufacturers of essential products indicated disruptions in their supply chain, particularly with raw materials obtained from other countries, increased consumer demand for food and household cleaning products, temporary factory shutdown for sanitation due to workers being infected by Covid-19, and reduced business due to the “setbacks” in the tourism industry (Butler, 2020). Further supply chain disruptions were raised regarding commodities that are imported such as rice. Implications were that if export restrictions were imposed by rice-producing countries, there would be significant impact on the South African supply chain (USDA&GAIN, 2020).

Overall, no additional measures were instituted regarding food safety at a production, manufacturing and retail level. Instead, standard Occupational Health and Safety Act (OHSA), as well as Current Good Manufacturing Practices were emphasized, including good hand hygiene and frequent cleaning and sanitising of food preparation services.

### **3.4. Covid-19 impact on agriculture and food production**

This subsection explores the impact of the Covid-19 pandemic on agriculture and food production. Whilst agriculture was declared a critical industry at the onset of the pandemic and therefore exempt from the strictest lockdown regulations, three main factors have shaped and influenced the impacts of the pandemic on the sector. Firstly, the backward and forward linkages of the sector with other sectors of the economy were heavily affected by the pandemic and the lockdown measures. Secondly is the strong international interface of the sector (e.g. as

characterised by the exportation of different agricultural products and importation of various technology and inputs such as machinery, chemicals, plant material and certain fertilizers). This means lockdowns and border restrictions in other countries resulted in bottlenecks and disruptions vis-à-vis the movement of agricultural imports and exports. Thirdly are the effects of social distancing regulations on operations and employment in the agriculture and food production industry during the pandemic and going forward. These 3 factors had effects on such aspects as disruptions on logistics and operations, labour and input supply as well as post-harvest loss. In addition, such exogenous factors as adverse climate may further compromise agriculture and food production in the context of the pandemic.

It is, however, important to highlight that despite the effects of the pandemic, agricultural production was not significantly affected in South Africa. For example, a bumper harvest of maize, the staple crop, is expected for the 2019-2020 season. Good harvests are also expected for most domestically produced food crops, such as fruits. Troskie (2020) writes that volumes of vegetables are also adequate, so is beef; which follows then that there should not be food shortages in the country in the short-term.

### **3.4.1. Impacts on farming systems**

South Africa has a dual agricultural economy made up of a well-developed commercial farming sector and smallholder communal farming (mostly located in former homeland areas) (Goldblatt, n.d.).

#### ***Impacts of the pandemic on the commercial farming sector***

It is important to note that before the Covid-19 outbreak, South Africa's commercial farming system was already under financial stress. The financial stress, manifesting particularly in farmer debts, was caused mainly by expansion of farmed areas (especially in horticulture), as well as frequent droughts which limited farms' agricultural outputs (e.g. the 2019/20 production season came after two drought seasons). Sihlobo (2020) notes that the South African commercial agricultural sector had a total farm debt of about R168 billion as at 2018, hence disruptions due to Covid-19 will be extremely costly financially. These farmer debts mainly include those involving commercial banks (60%) and the Land Bank (29%); with the other portion being distributed between agricultural cooperatives, private persons and other institutions.

South Africa's commercial farming sector is export-oriented, which means most commodities are produced for export markets. There was, for example, about 30% reduction in the docking

of commodities at Transnet Port terminals as compared to the normal capacity. In the Western Cape, the province initially regarded as the epicentre of Covid-19 in the country, ports operated at 50% capacity from levels 5 to 3 of lockdown because of increasing numbers of positive Covid-19 cases.

### ***Impacts of the pandemic on the smallholder farming sector***

The smallholder farming sector is generally characterised as resource poor, mostly made up of family labour and farming activities which prioritise household food security and selling the rest of what is left mainly through informal markets. Cousin (2019) notes that smallholder farmers in South Africa encounter many challenges from unfavourable environmental conditions to input access constraints, finance, irrigation and water infrastructure.

With the onset of the Covid-19 pandemic, many smallholder farmers were affected by lockdown restrictions, which greatly compromised the harvesting and selling of produce. Because it was already harvesting time and a period when smallholder farmers sell their summer crop, anecdotal evidence suggests that most farmers suffered post-harvest losses due to lack of casual labourers to harvest produce. Furthermore, disruptions due to transportation problems left many smallholder farmers who participate in informal markets at a great loss as informal trading was initially not allowed during the first weeks of Level 5 lockdown. As a result, smallholder farmers, most of whom had no permits to operate as per lockdown regulations, lost business daily (Mbatha et al., 2020). Lockdown and restriction of movement regulations did impinge on smallholder farmers as they could not sell their commodities directly through door-to-door marketing. Customers from poor rural and urban communities were also affected by disruptions in smallholder farming activity. Additionally, the lack of Personal Protective Equipment (PPE) including masks, sanitizers and gloves contributed to the farmers' inability to make revenue during the pandemic (Mbatha et al., 2020; Ledwaba, 2020). There was also lack of assistance from agricultural extension workers particularly during the Levels 5 and 4 lockdown period for most smallholder farmers in many areas which affected the transmission of helpful information and advice on coping strategies that smallholder farmers could use in dealing with issues around post-harvest loss and food spoilage.

The R1.2 billion financial assistance package to distressed smallholder farmers announced by the Minister of Agriculture, Land Reform and Rural Development in April 2020 brought some temporary relief. Most farmers however noted that they have not been able to access the fund due to lack of information and assistance even though they meet the requirements (Ledwaba, 2020).

### **3.4.2. Impact on input supply**

South Africa is a net exporter of agricultural products but also imports a substantial share of inputs (BFAP, 2020). Over 80% of domestic fertiliser demand and over 95% of plant protection chemicals, for example, are imported (ibid). Capital intensive farming has been and will therefore continue to be heavily affected especially in instances where production is dependent upon a range of intermediate inputs such as feeds, seeds, fertilisers, pesticides, petrol, diesel and vaccines (FAO, 2020). This also affects smallholder farmers because, whilst many of them utilise their own farm-based inputs, most still must purchase inputs from local and regional markets.

Most of the agricultural value chains were exempted from lockdown restrictions, however, most of the support services required for agriculture and the food system to operate efficiently and effectively were not doing so at full capacity (BFAP, 2020). This is because, to curb the spread of the virus, governments worldwide instituted strict measures such as reduction in transportation of goods both domestically and internationally. Consequently, this posed disruptions in access to and transportation of agricultural inputs.

### **3.4.3. Post-harvest losses**

When lockdown restrictions were imposed in March 2020, the harvesting season for the summer crop was imminent and the lack of workers posed a severe constraint that could lead to loss of produce and shortages on the market. The agriculture workforce was significantly reduced due to travel restrictions, yet harvesting processes rely heavily on seasonal labour. Anecdotal evidence indicate that “some South African fresh produce farmers opted to plough their produce back into the ground rather than sending it to national fresh produce markets due to the low prices which they were being offered” (Sishuba, 2020: 1).

Dairy farmers were also affected by the pandemic. Unprocessed milk production had already stagnated during 2019 and continued to do so in the first quarter of 2020. Following lockdown restrictions relating to trading in restaurants and in hospitality industries, there was a sharp decline in demand for certain dairy products, such as cheese. With South African consumers under economic pressure, it is anticipated that this will continue to drive down the demand of dairy products leaving dairy farmers vulnerable to decreased demand.

### **3.4.4. Potential exogenous hazards that may further jeopardize agricultural production**

The Covid-19 pandemic unfolded in the context of adverse climate patterns in the country, placing additional layers of pressure on agriculture and food production. South Africa is prone



to prolonged droughts, and because of increasing adverse climate patterns, most parts of the country have been receiving less rain than before which affects the yield of rainfed agricultural crops. Scarcity of rainfall is impacting negatively on subsistence crop production which is already characterized by poor productivity (Rankoana, 2019).

Floods, droughts and storms are expected to become more frequent and intense in South Africa due to climate change (FAO, 2017). SAWS (2020: 1) projected that “the multi-model rainfall forecast for mid- and late-winter (Jun-Jul-Aug, Jul-Aug-Sep) indicate increased chances of above-normal rainfall over the South-Western and Southern parts of the country with drier than normal conditions throughout the rest of South Africa”. Due to these conditions, production areas for most crops such as, maize, soybean, sorghum, sunflower and potato may decrease. FAO (2017: 30) emphasises that “in addition to affecting the production capacity of the agriculture sectors, climate change also poses a risk to the potential growth in incomes and the ability of poor people to purchase nutritious food”.

Adverse climatic factors have also been proved to affect crops by spreading new types of diseases (Cohen et al. 2008; Zwane, 2019). This can be affirmed by the recent spread of fall armyworm and foot and mouth disease which has resulted in most farmers in different parts of South Africa, particularly in Limpopo, Mpumalanga, North West Province and Free State losing their livestock and crops. FAO (2020) also highlights the threat of red locust. It notes that with vegetation burning, the red locust problem may aggregate into swarms and, if not controlled, may likely escape outbreak areas and invade and damage cultivated areas. Zayan (2019: 2) states that the “prevalence of extreme weather conditions may also interrupt food delivery and result in increases in food prices due to low supply after extreme events, which are expected to be more frequent in the future”.

### **3.5. Covid-19 impact on food supply and demand**

Agri-food supply chains in South Africa are characterised by market concentration, with very few big actors involved in the production, processing, distribution and marketing of food (Von Bormann, 2019). These big agrofood system players are generally well-organized and are largely efficient in delivering food across the country, including in rural areas (BFAP, 2020a; Crush & Frayne, 2011). The supermarket revolution and the ‘mall culture’ has seen modern food chains opening branches/franchises even in less developed locations of the country (D’Haese & Van Huylenbroeck, 2005; Makhitha & Khumalo, 2019; Weatherspoon & Reardon, 2003). Despite this expansion of modern food value chains, informal traders continue to play

a crucial role in the informal economy, particularly in high-density suburbs, informal settlements and rural areas (Crush & Frayne, 2011; Makhitha & Khumalo, 2019).

Informal food trade is an important part of South Africa's complex food system, and is mostly carried out in city centres, transport terminuses and in poor neighbourhoods. These informal traders sell mostly fresh produce in quantities that are affordable, operate long hours, and often offer credit arrangements with customers due to personal relationships built (Battersby et al, 2018). PLAAS (2020: 1) notes that estimates suggest "the South African's informal food trade sector alone supports an estimated 500 000 livelihoods nationally, and accounts for 40% of the informal township economy". Some estimates indicate that up to 70% of households buy some of their food from informal traders (Crush & Frayne, 2011). The monetary value of informal food trade in South Africa is estimated to be around 40% of national food retail (Moneyweb, 2018; The Citizen, 2018). While the exact figures are debated, there is consensus that informal food traders are important players in the economy, and they play a significant role in the agri-food value chain.

In most years, South Africa produces a surplus over domestic requirements of many food commodities, including maize, the main staple crop (DAFF, 2019). Historical exceptions to surplus production of maize have largely been the result of droughts. However, the country relies on imports for some staples, such as wheat and rice (DAFF, 2019). When it comes to household and individual level food poverty, hunger and malnutrition, the country's food system comes short, even in non-pandemic conditions. For example, while there is enough food to meet the calorie requirements of the country's population, a significant number of households (20%) were considered food insecure in 2019 (Stats SA, 2019; Von Bormann, 2019). The 2020 State of Food Security and Nutrition report (FAO et al., 2019) reported high levels of stunting (27.4%), wasting (5.6%) and overweight (13.3%) among children under the age of 5 in South Africa. The lack of dietary diversity, as well as the inclination towards high calorie processed foods with little nutritional value, has resulted in an obesity crisis, with 28.3% of adults (18 years and above) considered overweight in 2019 (FAO et al., 2019).

A growing urban population has led to increased demand for food in urban areas, and a shift in dietary trends towards highly processed, high calorie and meat-based foods (Cockx et al., 2019). While the increased income levels have led to the inclusion of more protein in typical diets and rapid growth in meat consumption, there is inadequate consumption of micro-nutrient rich foods such as fruits and vegetables (DAFF, 2018; Sinyolo et al., 2020). There has also

been a shift away from home cooked meals towards fast foods and take-aways (Seguin et al., 2016). GCRF-AFRICAP (2018: 14) states that “the increased food demand has brought about rises in food prices and heightened the vulnerability of the urban poor and rural dwellers”. Furthermore, 33% of all food produced within the country’s food system goes to waste, despite the evident need (Von Bormann, 2019). These figures suggest that, even under normal circumstances, the country’s food system generally delivers food that the majority households cannot afford, and for those who can afford it, the food is of poor nutritional content (French et al., 2019). Despite being considered efficient and resilient, the agri-food system fails a huge proportion of the population even in good times. How and to what extent has the Covid-19 pandemic, and measures to curb its spread affected food supply and demand in South Africa? This section presents some of the impacts of the Covid-19 on food supply and demand. As will be shown, the measures that were adopted by the government to curb the spread of the pandemic, while justifiable, had some significant negative effects on both food supply and demand, worsening the already precarious state of food access for the majority of the poor households.

### 3.5.1. Impact on the supply and demand for main staples

The major starches consumed in South Africa are maize, wheat and rice. The evidence that exists indicates that the impact of Covid-19 on the supply of the main staples has been negligible, particularly on the production of summer crops such as maize, as discussed in the previous sub-section. This is because the outbreak of the pandemic occurred when these summer crops were at an advanced stage. As such, the supply of these main commodities is expected to remain stable, at least for the next 12 months (NAMC, 2020b, USDA, 2020d). Table 4 presents the latest annual projections of the domestic supply, demand as well as exports/ imports of selected crops.

**Table 4. Projections of the 2020 supply and demand of main staples as of June 2020**

Commodity	Opening stock	Commercial Deliveries	Domestic Supply	Domestic Demand	Surplus/ Deficit	Import	Export
Maize	1 000 601	14 903 810	15 923 679	11 341 500	4 582 179	0	2 660 000
Wheat	539 079	1 503 000	2 042 079	3 321 000	-1 278 921	1 800 000	104 000
Rice	58 000	0	58 000	935 000	-877 000	1 050 000	115 000
Sorghum	60 423	133 160	193 583	159 420	34 163	5 000	8 000
Soybeans	138 455	1 228 250	1 366 705	1 445 150	-78 745	250 000	4 500

Sources: NAMC (2020), USDA (2020d), SAGIS (2020)

Notes : All the figures are in metric tons

As Table 4 indicates, projections indicate that the country is expected to produce enough maize (white and yellow maize) for both human consumption and animal feed in 2020 (NAMC, 2020b). The maize harvest for the season is expected to be 38% bigger than the 2019 harvest. There were reports of labour shortages in the farming sector during the harvesting period, but these challenges did not significantly reduce the expected maize output. No imports are expected, and the country is expected to export about 2.6 million tonnes of maize, which is 47% higher than the quantities exported in the previous year. For the 2020/21 season, USDA (2020d) estimates that the production of maize will decline by 21% when compared to the expected 2019/20 crop to 12.6 million tons. Despite this expected drop in production, the country is expected to continue as a net exporter of maize because of relatively high stock levels (USDA, 2020d).

Even though there were limited disruptions in the production of maize in the commercial sector, the smallholder farmers had different experiences (FAO, 2020a). As explained in the previous sub-section, the smallholder farmers initially struggled to access their fields, which led to significant harvest losses (PLAAS, 2020). This was mainly because the law enforcement officers were not always convinced that the smallholder farmers were essential players to be exempt during the lockdown period. Unregistered small farmers faced even more difficulty, with fines (of up to R5000) being imposed for moving around, including to access their fields or communal gardens. Even in cases where these issues had been clarified at the national level, local law enforcement agents interpreted these measures unevenly, and to the disadvantage of smallholders and other informal players (PLAAS, 2020). The result was a loss of income and inability to prepare for the new planting season. The extent to which the yields of the smallholder farmers were affected is not yet known, but it is highly likely that the disruptions will exacerbate the food insecurity situation of these poor households.

Table 4 indicates wheat domestic supply of over 2 million tonnes is expected, and imports are expected to be 1.8 million tonnes. The estimated production of 1.5 million tons of wheat represents a decrease of 20 percent from the previous year's crop of 1.9 million tons. However, this decrease in production was not due to the pandemic, but because of unfavourable weather (USDA, 2020d). Imports are normal for wheat, as the country generally does not produce enough wheat to meet domestic demand. While the global supply chains were disrupted due to the Covid-19 pandemic, the country has been able to import enough wheat to meet its domestic demand. However, fears remain that export restrictions from major wheat exporters such as Russia, Canada and Ukraine might cause shortages of wheat, or price increases (IFPRI, 2020).

Overall, there is enough wheat across the globe, as the amount of global wheat production in 2020 increased (IFPRI, 2020).

South Africa imports almost all its rice, as it produces negligible quantities of the crop due to an unfavourable rainfall pattern (USDA, 2020d). Its major suppliers are Thailand (75%) and India (20%), who together supply a combined 95% of the country's rice imports (USDA, 2020d). If there were to be restrictions for rice and wheat, South Africa has enough maize that can act as a substitute. Consumers often substitute rice, wheat, and maize products based on their availability, price and taste preferences (USDA, 2020d). Table 4 also shows that the supply of sorghum is expected to meet domestic demand, while a shortfall is expected for soybeans. OECD (2020a: 4) quotes several reports as indicating that "limits on the mobility of people reduced the availability of seasonal workers for planting of winter crops". However, the latest estimates by the Crop Estimate Committee indicates that these disruptions are not expected to cause significant reductions in area planted for winter crops. For example, the preliminary area estimate for wheat is 517 000 ha, which is just 4% less than the 540 000 ha planted for the previous season. Similarly, the preliminary area estimate for malting barley is 132 760 ha, which is 0,61% more than the 131 960 ha of last season. The demand for these main crops is not expected to change, as their consumption is largely inelastic.

### **3.5.2. Covid-19 impacts on the supply and demand for fruits, vegetables and meat**

The impact of Covid-19 on the production of fruits has been minimal, as South Africa had harvested most fruits by the time of the implementation of the lockdown in March 2020 (Table 5) (USDA, 2020b). The production of apples and soft citrus increased by 5% and 12% compared to the previous year, respectively. The demand for citrus around the globe has been good, with consumers making a conscious effort to boost their immune systems and consume products high in Vitamin C (BFAP, 2020b). Table 5 shows that the consumption of lemons has increased by 14% compared to the previous year, while the consumption of apples and soft citrus has also increased by 7% and 9%, respectively.

**Table 5. Supply and demand of fruits**

Commodities	Production (MT)		Consumption (MT)	
	2018/19	2019/20	2018/19	2019/20
Apples	893 846	942 203	205 597	220 000
Pears	413 245	407 455	43 414	42 000
Table grapes	298 315	320 000	31 506	36 000
Grapefruit	371 849	387 000	7 500	8 500
Oranges	1 590 000	1 600 000	75 000	77 000
Soft Citrus	375 119	421 000	22 000	24 000
Lemons	491 954	579 000	21 000	24 000

Source: USDA (2020a,b)

Reports indicated that the closure of fresh produce markets and pack houses, disrupted the distribution of fresh fruits and vegetables (BFAP, 2020b). This produced a major challenge for smallholder farmers who mainly sell through these markets. Moreover, a lack or a delay of supply of fresh produce affects people in the informal sector who rely on those produce for their livelihood (FAO, 2020b). A report from FACAGRO (2020) noted that market agents from Fresh Produce Markets across South Africa confirmed a reduction in sales and market activity, with most of the food going to waste. The magnitude of the quantities of fruits and vegetables that were lost, as well as the extent to which this resulted in livelihood losses for those dependent on this market, is not yet clear.

Table 6 indicates that the production of meat is also not expected to be significantly affected by the pandemic. Poultry production increased by 5.1% from 19 500 000 birds in 2019 to 20 500 000 in 2020. The table shows that beef and lamb/sheep production contracted.

**Table 6. Supply of meat and dairy products**

Commodities	Production	
	2018/19	2019/20
Poultry (birds)	19 500 000	20 500 000
Beef	16 137	9 136
Dairy (L)	283 028 000	283 000 000
Lamb/Sheep	13 731	5 561
Pig	31 614	31 700

Sources: MPO (2020), USDA (2020e), RPO (2020), Red Meat Producers Organisation (2019)

PLAAS (2020) reported that during the early lockdown period, there was a change in purchasing behaviour, which ultimately results in reduced dietary diversity as households were reducing or even excluding meat, dairy, fruit and vegetables from their shopping in favour of staples and non-perishable foods.

### **3.5.3. Covid-19 impacts on agri-food processing and distribution**

While agricultural production, particularly in the commercial sector, was not significantly affected by the pandemic, their processing and distribution chains were temporarily disrupted, particularly in the early period of the pandemic. The disruptions resulted in short term shortages of cereal products (e.g., pasta, maize meal, etc.) in the shops in certain areas (Business Insider, 2020). The initial detection of Covid-19 cases, as well as the lockdown measures in March 2020, led to periodic short-term operational shutdowns of certain nodes of supply chains, particularly at the processing and delivery levels (BFAP, 2020a). The food supply chain also came under increased pressure due to panic buying during the early period of the lockdown.

The uncertainty and concern that the lockdown measures would halt the domestic and global food supply chains resulted in people hoarding and stocking up huge quantities of food items. This sharp increase in demand for particularly essential and non-perishable food products (such as canned products, maize meal, etc.) within a short while led to a huge strain on the supply chain, and these products became temporarily unavailable in the market. Business Insider (2020), for example, reported that there were widespread shortages of rice, pasta and tinned food in the first two weeks of April 2020. However, after the adjustment of the food supply chains, these products were replenished and became largely available (OECD, 2020a). According to Farmers Review Africa, while the food processing industry has been able to adequately respond to changing consumer demand, the surge experienced due to the Covid-19 pandemic has been unprecedented. The primary issues that have had to be addressed as a result include ensuring employee welfare while achieving maximum production capacity, location of the suppliers (given movement and import restrictions in certain areas), efficiency of the distributors (which are usually outsourced) and issues of food storage, safety and quality (Farrelly, 2020).

Figure 2 shows that there was a general decline in the quantities of maize processed for the local market from March to May 2020. This in contrast to previous years, where the quantities of maize processed increases during these months as deliveries are received from commercial farmers. The minor decline in maize processed indicates that, by and large, the processing of maize was not severely affected by the pandemic and lockdown measures. While there was a drop in April, and May 2020, reports indicated that the processing levels are now back to normal levels.

**Figure 2. Quantities of maize processed for domestic market**

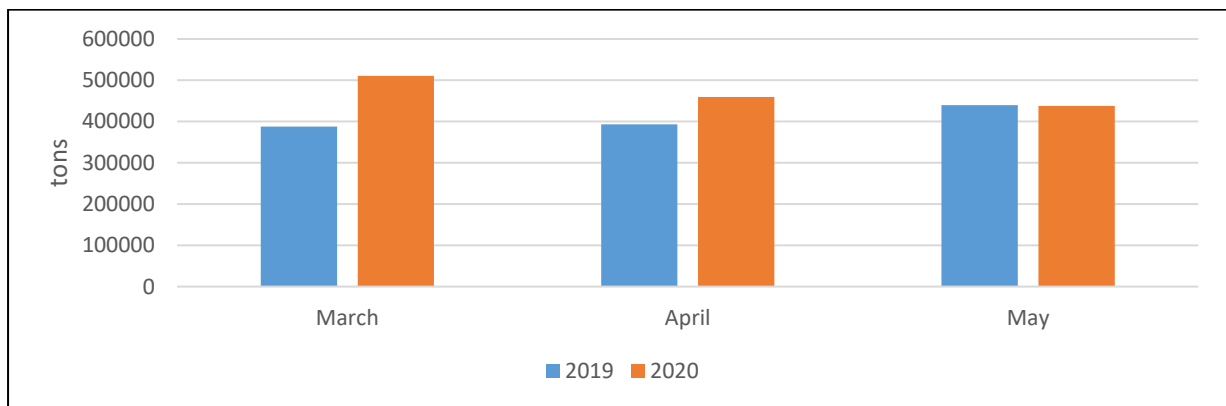


Figure 3 shows that there was a drop in wheat processing in April 2020, followed by a steady increase in May 2020. Compared to the previous year, the figure shows that more quantities of wheat were processed during these months in 2020. The figure shows a major drop in April 2020, which quickly recovered during the month of May 2020.

**Figure 3. Quantities of wheat processed for domestic market**

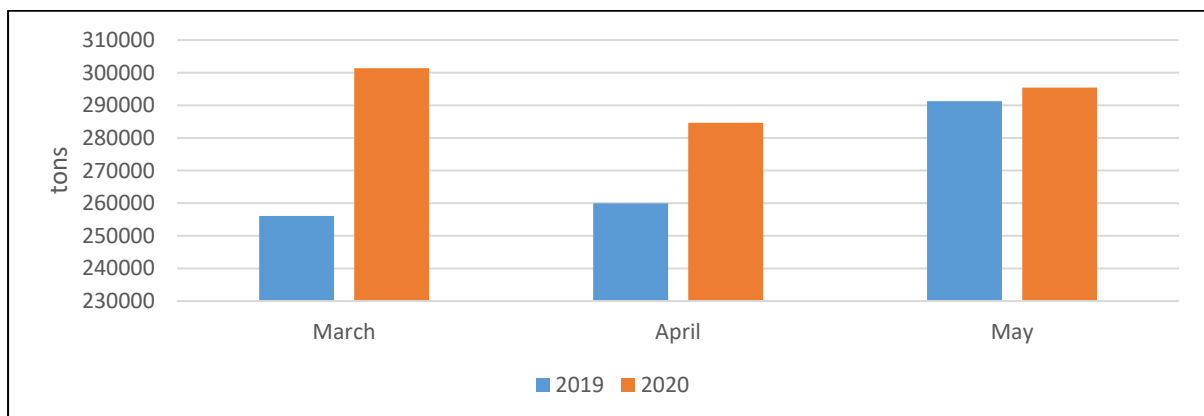
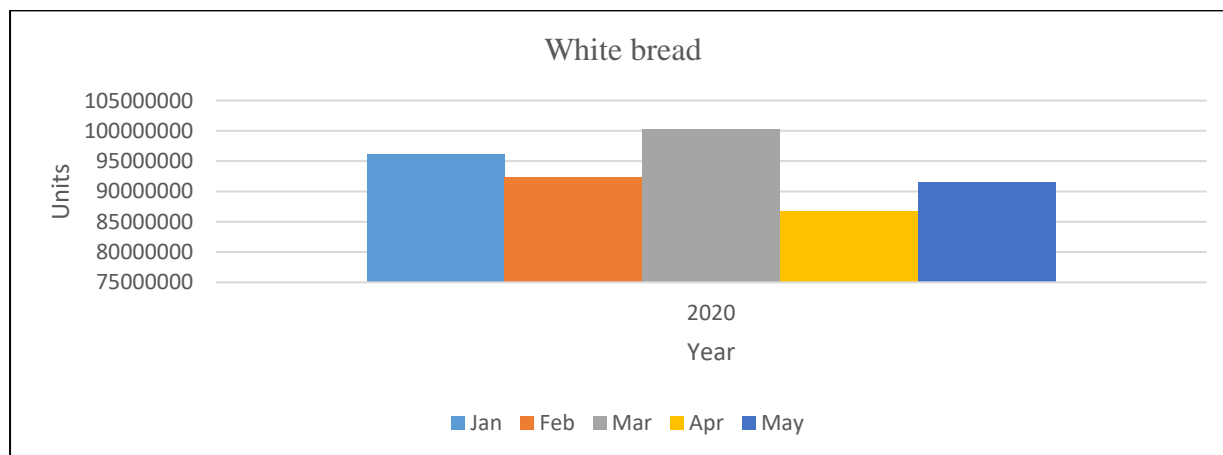


Figure 4, 5 and 6 show, respectively, the quantities of white, brown and whole wheat bread units that were produced during the period January – May 2020. All the three graphs show increases in the production of bread in March, and significant drops during April 2020. The increase in March might be due to increased demand as the people bought more bread as they were preparing to enter the hard lockdown period. The drop in April 2020 was due to the lockdown. In some instances, some bread makers had to close operation due to some of their employees testing positive to the virus, causing disruptions in food processing and distribution. For example, Tiger Brands temporarily closed its Durban Albany bakery as a precautionary measure after some staff members tested positive for Covid-19. All three graphs show that the production of bread recovered in May 2020, with increases in the production of white, brown



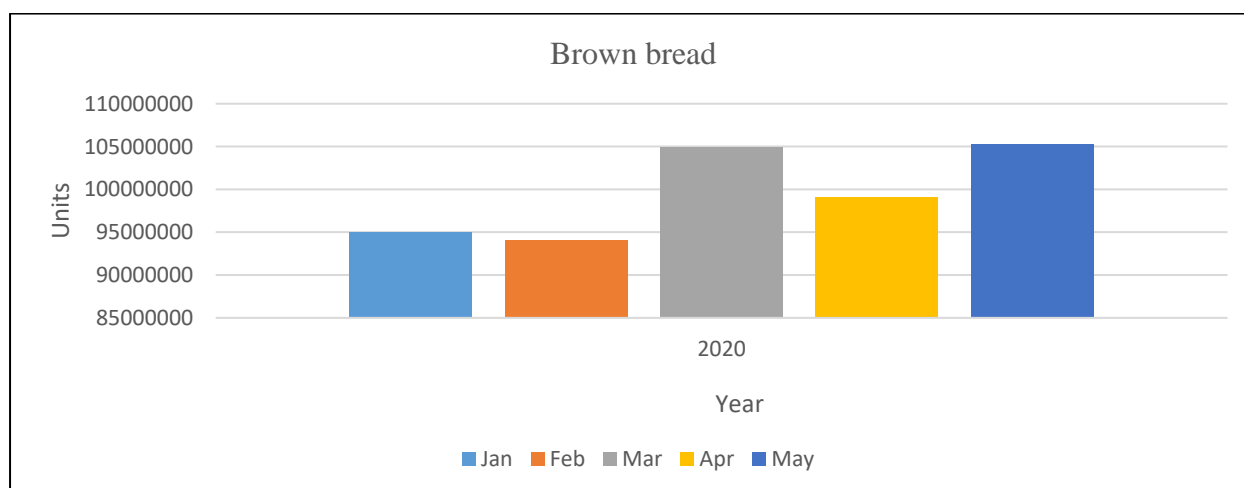
and whole wheat bread. There was particularly good recovery in brown bread production, which went back to its March level.

**Figure 4. Number of white bread units produced, January to May 2020**



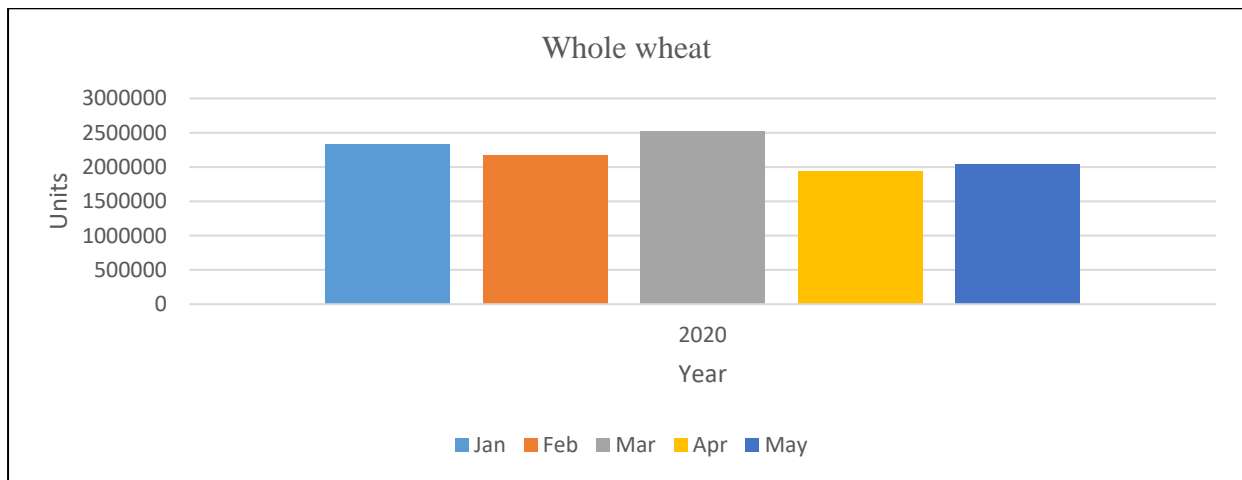
Source: SAGIS 2020

**Figure 5. Number of brown bread units produced, January to May 2020**



Source: SAGIS 2020

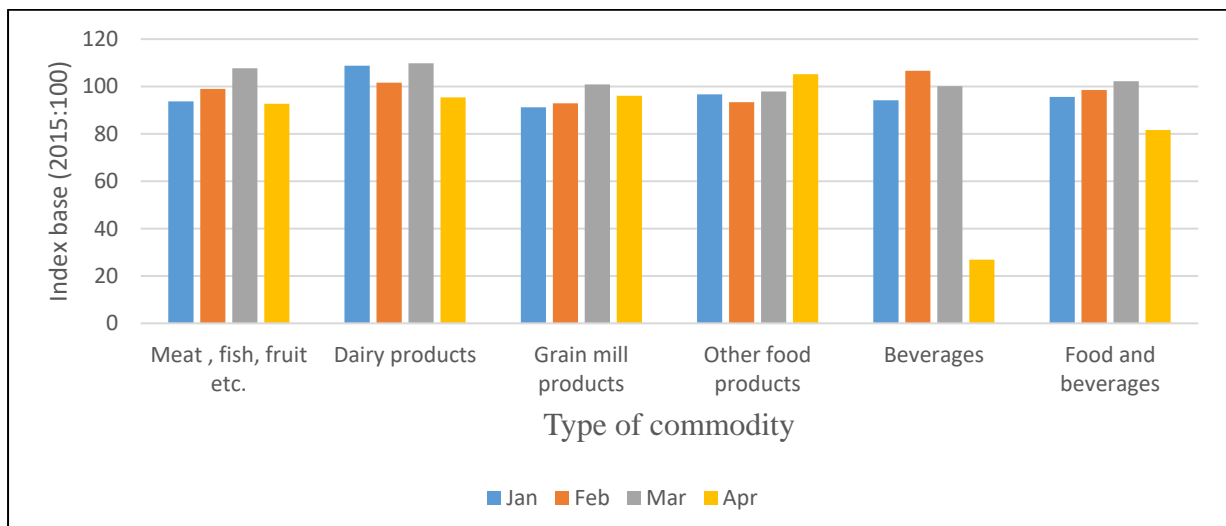
**Figure 5. Number of whole wheat bread units produced, January to May 2020**



Source: SAGIS 2020

Figure 7 shows the index of food processing manufacturing for the period January to April 2020. The figure shows that there were low levels of food processed during the month of April, during the country's hard lockdown. All food items were affected, and beverages were the worst affected. For most of the food categories, there was a sharp increase in March, followed by a decline in April. The increase in March might have been because of increased demand for food by families preparing for the movement restrictions. The drop in April was due to the hard lockdown.

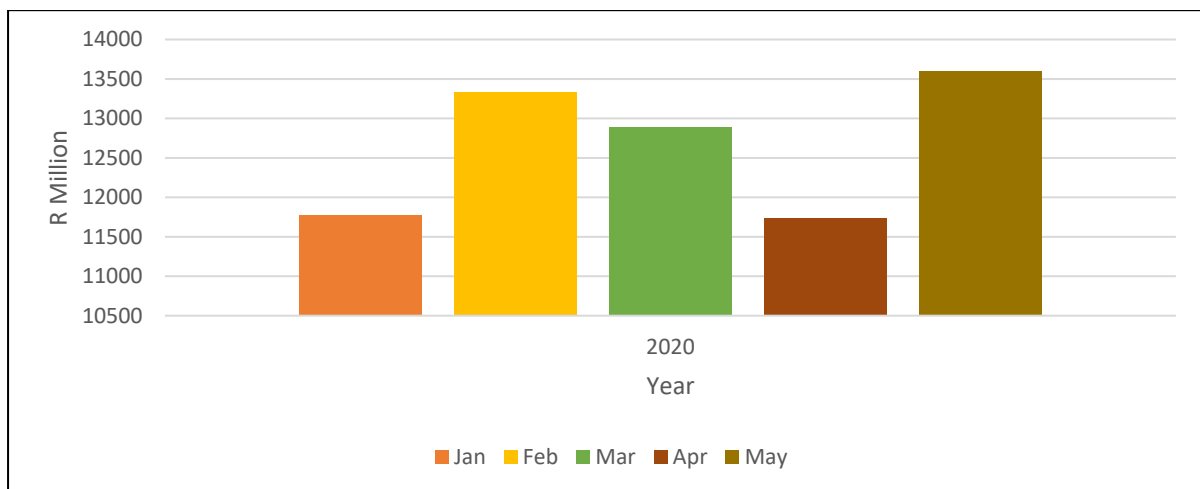
**Figure 7. Index of food manufacturing, January to April 2020**



Source: Stats SA 2020

Figure 8 shows the value of agricultural raw materials and livestock that were traded during the months of January to May 2020. The figure shows that there was a progressive decline in raw material trade from March and April, and then a sharp increase in May, showing recovery.

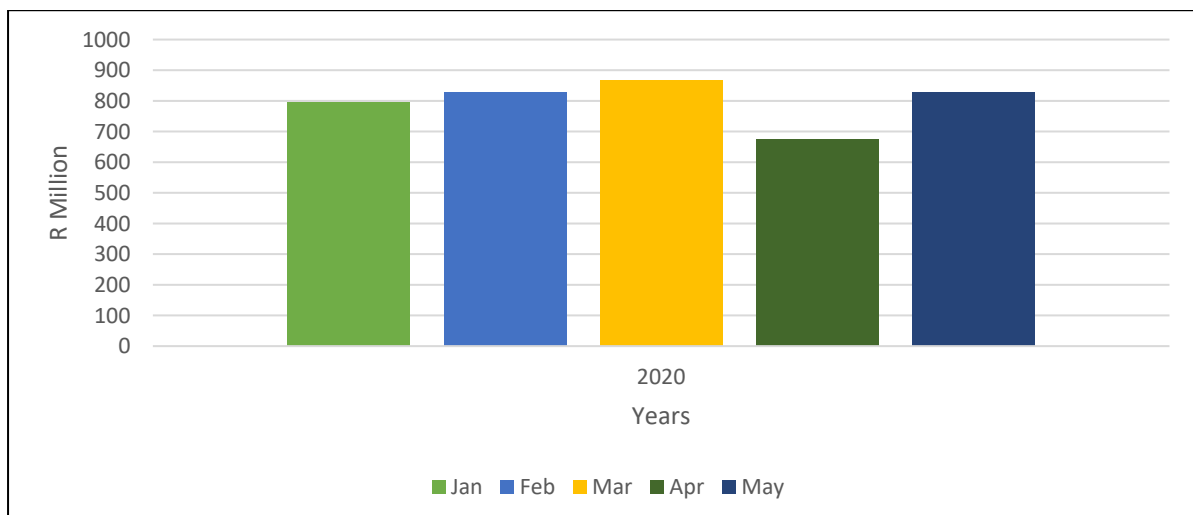
**Figure 8. Value of wholesale trade in agricultural raw materials and livestock, January to May 2020**



Source: Stats-SA 2020

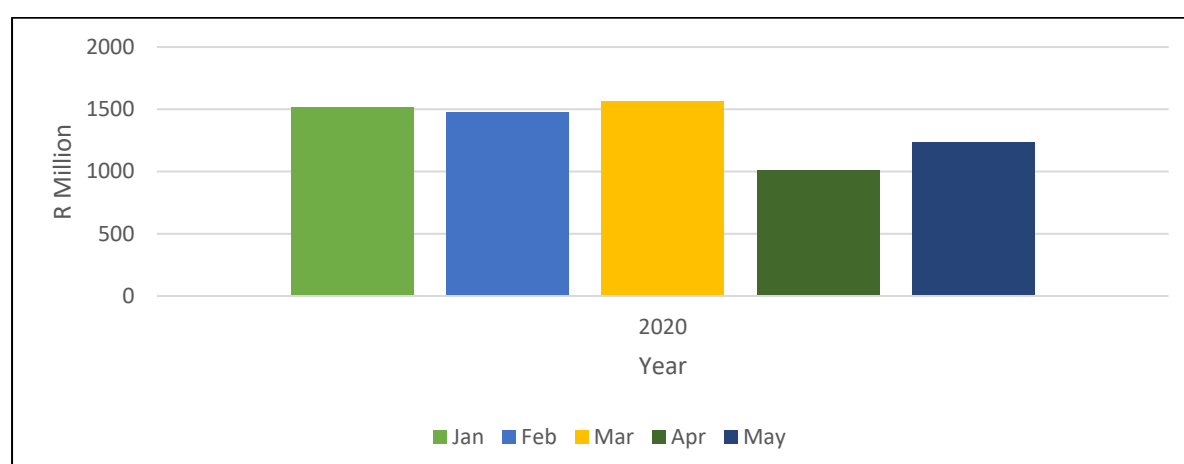
Figure 9 and 10 show a similar trend for the distribution sector. Both graphs show that there was decline in the value traded of both primary agriculture/ forestry products and food products, in April, followed by a recovery in May.

**Figure 9. Transportation of agriculture and forestry primary products**



Source: Stats-SA 2020

**Figure 10. Transportation of manufactured food, beverages and tobacco products**



*Source: StatsSA 2020*

In sum, the agri-food processing activities were mainly affected in the early period of the lockdown, particularly in the month of April 2020. The general trend was a drop in April, and a recovery during the month of May 2020. While there was no access to data for June and July 2020, the expectation was that these activities did fully recover and were producing close to their normal levels.

### **3.5.4. Covid-19 impacts on domestic food trade**

Several retailers across the food supply chain reported facing labour shortages, which affected their retailing activities. For some actors, the challenge was in securing permits for their employees, while in some instances, workers were less available as a result of disruptions in transportation systems as well as restrictions to stop the transmission of the disease, within and across provincial borders (FAO, 2020b). The travel and transport restrictions imposed on the workers had a negative impact on the number of workers going to work and ensuring that the supply of food runs smoothly. For instance, a survey conducted by Stats SA (2020) between 29 April and 6 May 2020 indicated that the national lockdown was the main reason most employees (63.6%) were temporarily absent from work. Some food chains arranged transport for their staff, which reduced the labour disruptions (Naude, 2020).

In addition, the regulations required the food chains to implement several actions such as social distancing, introducing hand sanitizes, and restricting people inside the shop at a time, which increased operating costs and required some changes in the way they run their businesses. There have been numerous instances wherein supermarkets would close for decontamination and sanitisation when an employee tests positive to the Covid-19 virus. Generally, the supermarket would open after a period of 24 hours. The second wave of Stats SA (2020) survey

“showed that nine in ten (90%) responding businesses’ turnover was lower than their normal expected range”, even though this was up from 85% in the first survey (Stats SA, 2020: 1). On one hand, the restrictions on the movement of people saw a decline in food demand for those food traders located far from residential suburbs. On the other, the food chains located within the residential areas experienced increased demand. The latter was particularly the case because of the closure of cooked or fast foods outlets, as well as disruptions in the trading activities of informal traders.

Informal traders, who mainly supply the high-density suburbs and informal settlements in South Africa, faced challenges in trading, especially during the first few weeks of the lockdown (AFRA, 2020). Instead of the informal sector acting as a cushion absorbing newcomers in times of crises, the informal economy was particularly negatively impacted (Rogan & Skinner, 2020). While informal food traders were allowed to trade under level 5 of the lockdown, many were forcefully shut due to misinterpretation of the regulations by officials on the ground – resulting in mass discrepancies of lockdown regulations within and across different provinces. There was initially lack of clarity on whether informal traders were also essential, and even when this clarity was given, law enforcement often restricted their movement and supply of essential commodities in the areas where they operate (PLAAS, 2020). The amendment made to the Disaster Management Act of the 25th of March 2020 indicated that these traders were only allowed to do so after having obtained the necessary permits from local authorities (Western Cape Department of Agriculture, 2020).

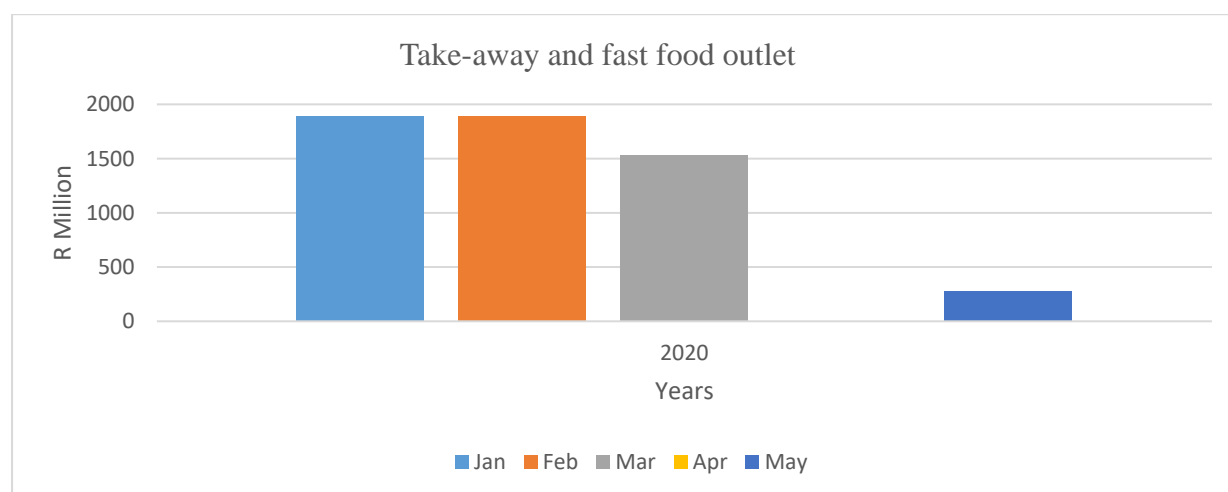
The requirement that the informal traders get permits from their local municipal offices was a challenge because of lack of transport to go to the municipality, but also because of limited information about who to approach, as the municipal offices were also closed during that time (AFRA, 2020). Most of traders had to travel to the municipal offices located in the city centre, far from many traders’ homes and trading sites (C19 People’s Coalition, 2020). Foreign-owned informal food outlets reportedly failed to secure the permits, as most of them are not registered by any authority (International Labour Organisation, 2020). While there is no information on the extent of the decline on the supply of commodities by informal traders due to the pandemic, Arndt et al (2020) suggest that the lockdown led to a significant decline in the supply of informal trading. There has been varied feedback from informal traders. While some have reported increased income due to others not returning to trade at shared locations, others have reported that they were continuously harassed by law enforcement officers during alert level 4 and 5 even though the municipality had provided them with operating licenses or permits

(Webster, 2020). Most households which usually buy from informal traders, where they can negotiate prices, were forced to buy in bigger supermarkets. Evidence on the extent to which this affected what households could buy on their normal budget, does not seem to exist yet.

In addition, because informal food traders, including open air food markets, street food vendors and markets were prohibited from operating, these measures impacted negatively on the food security of households in low income areas. Women play a huge role in household food security, and an even more important role in the informal food sector as street vendors and selling in food markets. Thus, with the implementation of these lockdown restrictions, the source of income for these women was curtailed, resulting in an inability to cater for their households and maintain their livelihoods (Montalvao & Van de Velde, 2020).

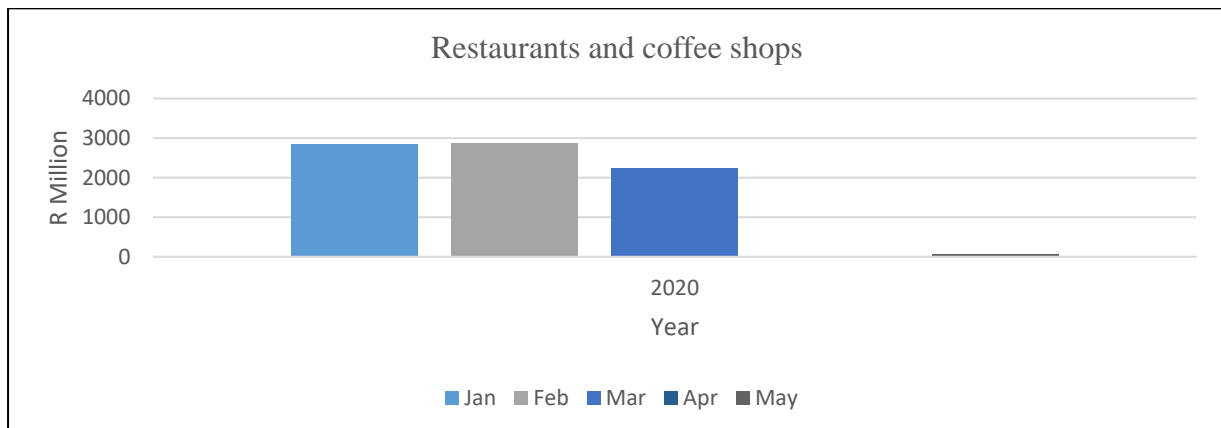
Restaurants, take away and fast foods outlets, were severely and negatively affected by the lockdown measures, as they were completely shut down and not allowed to trade until during alert level 3. Figure 11 and 12 show that no trade occurred in April 2020 for the take-ways, fast food, restaurants and coffee shops. While there was some level of trade among take-way outlets in May 2020, as they were allowed to engage in deliveries, the trade among restaurants remained largely inexistent.

**Figure 11. Sales income among take away and fast food outlets**



Source: Stats-SA 2020

**Figure 12. Sales income among take away and fast food outlets**



Source: Stats-SA 2020

The closure of cooked food outlets such as restaurants, hotels and catering businesses had a disruptive effect on the market for both large- and small-scale producers. These closures led to a shrinkage in the market for some commodities – which resulted in an oversupply of certain fresh produce in grocery shops, such as lettuce and avocados (PMA, 2020). For many food suppliers of these commodities, it was difficult to redirect their products to the grocery shops, and the result were huge food wastes. Stephens et al (2020: 1) note that “the decrease in demand for restaurant and commercial food services, in combination with restrictions in labour, processing capacity, and/or storage, led to farmers discarding their output *en masse*”. Some farmers, particularly in other countries, reportedly ended up burying perishable produce or dumping milk as a result of supply chain disruption coupled with falling consumer demand. On the other hand, food retailers struggled to cope with increased demand for food, as most of the people who would ordinarily buy mostly in restaurants were now going to grocery shops for their food shopping.

The food producers, processors, distributors and retailers were affected by the need to make changes to their business models to comply with regulations. For example, OECD (2020a) reports that social distancing requirement caused disruption in the production activities of some of the actors, which often require workers to work closely together. The transport restrictions also affected the movement of food, especially across provinces. This particularly affected the informal traders (bakkie traders) the most, as they were initially not allowed to trade, and even when allowed to trade, often faced difficulties in securing the permits. For the food retailers, the restricted movement by the customers led to an increased need for deliveries. For many food traders, the delivery capacity was either not there, or was not operating at a level required

to meet the increased demand for this service. As such, several food chain actors had to change their business models and offer services such as deliveries.

### **3.5.5. Covid-19 impacts on incomes and food demand**

The pandemic and the measures to curb its spread (such as the national lockdown restriction), significantly disrupted economic activities, resulting in many people losing their jobs or livelihoods, or being paid only a portion of their salaries (either by the company or through UIF). Stats SA (2020) indicated that unemployment rate had increased to 30.1% during the first quarter of 2020. The situation in the second quarter was worse, as the lockdown measures resulted in many businesses closing or operating at low capacity, leading to many losing their jobs. According to Stats SA (2020), the percentage of respondents who reported receiving no income increased from 5.2% before the lockdown to 15.4% by the sixth week of the national lockdown. The percentage of respondents who reported salaries/wages as their primary source of income decreased from 76.6% before the national lockdown to 66.7% by the sixth week of national lockdown. A survey conducted by the Statistics South Africa (2020) (Wave 2 survey) indicated that 8.1% of the respondents lost their jobs or had to close their businesses and 1.4% became unemployed. An online survey for consumers conducted by TransUnion (2020) indicated that 84% of the interviewed consumers reported that they were negatively impacted financially due to national lockdown. Recent evidence from the National Income Dynamics Study (NIDS)-Coronavirus Rapid Mobile Survey (CRAM) indicated that 40% adults reported that their household had lost its main source of income since lockdown started (Wills et al., 2020).

Analysing the NIDS-CRAM wave 1 data, Rogan & Skinner (2020) found that those who operate in the informal economy (those self-employed in the informal sector, informal employees (both inside and outside of the informal sector and casual workers) were affected more than those in the formal sector. For example, it was found the hours worked within the informal economy among those self-employed decreased by a third and typical hours decreased by more than 50%. Rogan & Skinner (2020) reported that among the informal self-employed who were working in February (before the pandemic) and April (during lockdown), their average earnings decreased by 27% and typical earnings by 60%. About 37% of the informally self-employed reported zero earnings in April. There were gender differences in this loss of income in the informal sector, with women more affected than men. For example, the typical hours worked by women in the informal economy decreased by 49% in April, while men saw a decrease of only 25% (Rogan & Skinner, 2020). According to Rogan & Skinner (2020), the



gender gap in earnings in the informal economy widened significantly between February and April.

Loss of jobs by many has led to decreased disposable income among consumers, and consequently, decreased demand for food and non-food products. BusinessTech (2020: 1) states that “roughly three out of every four respondents (74.9%) whose income reduced reported that they had reduced their spending to compensate for the loss of income”. According to a survey by Stats SA (2020), 38.6% of the respondents reported that they were spending less per week during the lockdown compared to before the national lockdown, while only 35,8% indicated that they were spending more per week. About a fifth of the respondents (19.5%) indicated that they had not changed their usual weekly spending patterns. According to Wills et al (2020), the loss of income had led to high levels of food insecurity and household hunger. The NIDS-CRAM wave 1 survey indicated that 47% of interviewed households “ran out of money to buy food in April; (and) between May and June 2020, 21% reported that someone in the household went hungry in the last 7 days, (whilst) 15% reported that a child went hungry in the last 7 days” (Wills et al., 2020: 1).

The lockdown restrictions resulted in changes in consumer behaviour. Online shopping activities increased, while physical store visits declined. According to Githathu and Charles (2020), there has been a sharp uptick of South Africans shopping online, with 37% of the respondents saying they are shopping more online. According to a survey conducted by McKinsey and Company (2020), between the 1st and the 5th of June 2020, 25% of consumers were shopping at new stores while 37% South Africans were shopping online. South Africa’s online grocery-shopping penetration and usage increased. The fear of the virus also reduced physical shop visits by consumers. Due to fear of Covid-19 and the restrictions of only going to the supermarkets for essential goods, the spending patterns of consumers changed. As already noted earlier in this subsection, 38.6% of respondents from a StatsSA survey highlighted that they were spending less in a week during the lockdown compared to before the lockdown (StatsSA, 2020).

It has been projected that going forward towards the last quarter of 2020 and even into 2021, the shift in consumer demands will continue, with consumers moving to essential goods and away from luxuries (PMA, 2020). Consumers who previously bought first-grade produce might have switched to the second grade so that they are left with more disposable income to buy other essentials (BFAP, 2020b). Some food items have experienced increased demand,

while others have experienced decreases. For example, BFAP (2020b) revealed that there has been a very good demand for citrus both locally and globally, with consumers making a conscious effort to boost their immune systems and consume products high in Vitamin C (BFAP, 2020b). Similarly, in April 2020, there was high demand for eggs. According to BFAP (2020e), the strong demand was subsequently sustained due to eggs being the most affordable source of animal protein such that consumers who face income constraints rely more on eggs as an alternative source of protein, instead of the expensive meat.

Food spending and affordability tracking highlighted that a large proportion of South Africans were struggling to afford a basic healthy food basket (BFAP, 2020c). Poorer households dedicate a significant proportion of total spending to buying food, which has wide-ranging implications, given that income dropped suddenly for some households, and food prices increase unexpectedly for some food products. Considering the absence of school feeding scheme due to the national Covid-19 lockdown, an affected family had to spend approximately 32% more to be able to afford basic healthy eating (BFAP, 2020d).

### **3.5.6. Covid-19 impacts on food prices**

During the entire period of lockdown, there was a significant change in the prices of different commodities. Between the period of March and April 2020, price of commodities such as sunflower oil (750ml) and super maize (2.5kg) increased from R22.78 to R29.78 and R25.26 to R26.06 respectively, while the price of 2.5kg white sugar decreased by R1.78 in the same period (NAMC, 2020a). According to Stats SA (2020a) the overall prices of essential products decreased by 0.5% during alert level 5 lockdown in April 2020. For example, the price of bread and cereal decreased by 0.6%, frozen chicken by 5.3%, and cheddar cheese by 0.8%. However, in the same month of April, price of products such as milk and eggs increased by 0.2% (Stats SA, 2020). The figures, as explained earlier, indicate that a shift in the demand from expensive sources of protein such as meat to alternatives such as eggs and dairy products. Similarly, evidence from NAMC (2020a) monthly food basket price show that there were some price differences in items such as sunflower oil, super maize and a loaf of white bread between April 2020 and March 2020 across urban and rural areas. According to NAMC (2020) the food items that showed price differences between April 2020 and March 2020 in urban and rural areas included sunflower oil (750ml) at a difference of R7.00, super maize (2.5kg) at R0.80 difference, and a loaf of white bread (700g) at a difference of R0.77. This implies that urban consumers paid R0.50 more on average, for these items during April 2020. Consequently, price differences influence consumers to look for other alternatives.

### **3.6. Covid-19 impact on food trade**

Food trade plays a significant role in terms of addressing issues such as food production shortages due to climatic conditions or insufficient resources. South Africa depends on other countries in order to meet its local demand by importing essential food products such as rice (90% imported), wheat (50% imported), and palm oil (100% imported). The role of agrofood trade is significant in terms of making sure there are no food shortage within the country especially in contexts of such crises as Covid-19.

Sihlobo (2020) notes that before the Covid-19 lockdowns were implemented across the globe, South Africa recorded an agricultural trade surplus of US\$ 773 million. The surplus is up by 16% year-on-year, mainly through current exports such as grapes, maize, wool, pears, apples, palms, lemons and macadamia nuts (Dempsey, 2020). From January to April 2020, South African Revenue Services (SARS) reported exports of live animals and animal products going up by 9.8%, vegetable and fruit exports by 35.7%, and fats and oil products by 20.8% (NAMC, 2020). Furthermore, imports of vegetables and fruit products, as well as fats and oils were up by an average of 34% compared with the first quarter of 2019. As a consistent net exporter of agrofood products, the value of both exports and imports have been rising since 2008 to 2018 (i.e. from 8.5% to 11.3% for exports and from 5.2% to 7.1 % for imports). Agrofood imports are equally distributed among those for final consumption (54% of total imports, predominantly processed products) and for further processing in industry (46%) (OECD, 2020).

#### **3.6.1. Covid-19 and impacts on key food imports**

South Africa is a net importer of rice (NAMC, 2020). The country also imports wheat. Wheat imports for 2020/21 are estimated at a 1.9 million tons, 5% less than the previous year (2019/20) on increased local production. Rice imports are expected to rise by 1% to 1.1 million tons on a marginal increase in demand (USDA, 2020).

The pandemic interrupted the global supply chain of rice. For instance, India stopped signing new export contracts amid a nationwide lockdown, while Vietnam introduced a rice export quota (USDA, 2020). India's decision on rice exports is expected to have a huge impact on South Africa, as it supplies about 20 percent of local rice consumption (USDA, 2020c). The restrictions by Vietnam should have a limited impact on South Africa, as the country does not import a lot of rice from the country. However, export restrictions by rice exporting countries might lead to reduced global supplies, resulting in increased global prices. Therefore, a

prolonged Covid-19 situation (including a second wave of the pandemic) could cause major disruptions in South Africa's rice supply chain.

The implementation of trade-distorting remedies has had a direct impact on the country's rice food stock, coupled with various spill-over effects such as fluctuations in food prices, food insecurity and the possibility of food riots, as has been witnessed in other hunger-stricken countries (NAMC, 2020). Vietnam (one of the largest rice exporters) temporarily introduced a ban on rice exports as from 28 March 2020 (BFAP, 2020). Such measures did not necessarily result in a shortage of rice, but global prices already responded negatively to news of the export ban. Russia, a significant wheat exporter, stopped processed grain exports as from 20 March 2020, whilst Kazakhstan (major global soft commodities explorer) suspended exports of wheat flour, buckwheat, sugar, sunflower oil, and some vegetables until April 15 2020.

BFAP (2020) notes that most companies seem, in the short term, to have the capacity to absorb higher raw material prices. However, if the Covid-19 situation prolongs, rice affordability of could become an issue. The value chain may not be able to fully absorb a 30% to 40% increase in raw materials process. In the same vein, households in the low-income bracket, who are already spending a significant share of their income on food, will be under even more pressure. In terms of wheat, South Africa imports 40% of its annual wheat requirement and price increases could be eminent amid market uncertainty. The depreciation of the rand is also set to play a big role in local prices. The agriculture sector in South Africa is equipped to sustainably supply other staple food items like maize meal despite the impact of the pandemic (NAMC, 2020).

### **3.6.2. Agrofood export-import logistics capacity**

Historically, South Africa has had adequate infrastructure at its major ports to handle large volumes of agricultural commodities that the country imports and exports. Terminal operators at all harbours work closely with economic development authorities and other actors (like clearing and forwarding agents) in the respective provinces and cities. Transnet National Ports Authority (TNPA) manages the harbours in Cape Town, Durban, East London and Port Elizabeth that are the main hubs for bulk agrofoods shipping, including livestock. While the Cape Town terminal has been the main harbour for agricultural exports, particularly horticultural fruits, the expanding trade of recent years has placed its ageing infrastructure under pressure. This situation has resulted in calls for upgrades to the ports terminal processing capacity and the diversion of some shipping through Durban and Port Elizabeth harbours

(Phakathi 2020; Meintjes 2020a). The Port of Durban, for instance, is a major gateway that links many landlocked countries in SADC to international trade (Rosario 2020; Freight News 2020; DHL Resilience360 2019). Even though physical infrastructure is the mainstay of ports terminals, it forms but one set of determinants of logistics productivity and efficiency. Container availability, storage capacity and the functionality of ICTs also influence the efficiency of ports terminals. Furthermore, given that onshore transportation of farm output exports and imports is heavily dependent on trucking and rail services, efficient ports terminals should cater for adequate connections to multimodal logistic facilities.

In compliance with the hard lockdown regulations (level 5 restrictions) of March 2020, Transnet Port Terminals (TPT) reduced their operational activities and capacities for 21 days, except for goods and services declared to be essential (particularly food). Transnet issued a circular shortly after the nationwide lockdown announcement, stating: “Agri-Bulk products (grains, soya bean meal, fertiliser and woodchips) deemed an essential service will operate on a single berth operation at East London, Richards Bay and Durban Agri terminals.” (Transnet Circular, 26 March 2020). This suggests that shipping of large volumes of non-food agricultural exports and imports continued during lockdown level 5 albeit at reduced volumes and subject to other Covid-19-related delays. Furthermore, unlike grains, the severity of the impact of lockdown restrictions on transporting food and non-food agricultural exports also varied in relation to the shelf-life of commodities (especially perishables reliant of air cargo deliveries). Nevertheless, even after the removal of all restrictions on agricultural exports and imports through SA ports on 1 May 2020, it took time for port terminals to ramp up to 100% operational capacity, with ongoing delays in the shipping of goods being reported throughout July (Njini 2020; Phakathi 2020). In response to this exports-imports logistics crisis, several shipping lines bypassed Cape Town, stopping at Durban and Port Elizabeth.

The Covid-19 pandemic and its containment measures affected agrofood imports and exports logistics through diverse channels, each with unique sets of underlying mechanisms. Even though a detailed examination of these channels and each mechanism goes beyond the scope of this rapid overview, a summary of pertinent factors should suffice to shed light on how overlaps and interactions of these mechanisms impacted on agrofood trade up to mid-July 2020.

### ***Compliance with Covid-19 containment measures***

Transnet management at ports terminals implemented the containment or lockdown measures in accordance with gazetted regulations. Food and transportation, according to these regulations, were classified as essential goods and services, hence their prioritisation at ports. However, compliance with level 5 lockdown (March – April 2020) regulations reduced port terminal operations and this slowed the processing of agrofood imports and exports, especially at Cape Town harbour. Lifting all lockdown restrictions on food imports and exports on 1 May 2020 did not immediately end shipping and delivery delays. In early July at the Cape Town harbour, for instance, “vessels have been waiting outside the port for two weeks before they could berth. Some export orders from three months ago have not been shipped, several importers have been waiting for more than a month after the delivery date to receive their containers.” (Phakathi 2020). Inclement weather in Cape Town contributed to the TPT in Cape Town missing its targeted date for clearing the backlog in cargo from the end of July to mid-August. This invariably affected the agrofood sector too.

### ***Covid-19 positive employees interrupted terminal operations***

Rising levels of Covid-19 infections among employees (especially among berthing gang operators) at ports terminals precluded a return to full capacity even after 1 May 2020, with considerable delays in cargo clearance. As Njini (2020) wrote,

*“While activity has increased since the authorities began easing the curbs on May 1, the container terminal is still only operating at 60% of capacity and the multipurpose terminal at 75%, said state-owned Transnet SOC Ltd., which runs the main ports. Just 60% of port staff are at work.”*

At the beginning of July, for instance, workers that tested positive or who had been in quarantine resulted in only 60% of the work force on duty at the Cape Town TPT.

### ***Type and quality of exported/imported agrofoods***

The impacts of reduced capacity and operational slowdowns at ports terminals varied by agrofood commodity type (including lower consumer demand as well as restaurant and hospitality/tourism sector closures). Seasonality, product perishability and export/import quality control measures in SA and in overseas markets also affected trade volumes. While wine and table grapes exporters (end-of harvesting season in the Cape region) worried about losing their traditional markets in Europe, the citrus sector appeared more optimistic at the start

of its season. Overseas demand for fruits with high concentrations of Vitamin C coupled with the bumper harvest of citrus crops underpinned these positive prospects. In the meanwhile, citrus exporters have embraced a “multimode logistic model” for quicker delivery to strategic markets abroad where competition from other countries has intensified.

Avocado exporters, during the pre-peak season in May adjusted their projected export volumes downwards (from 18m cartons to 16m cartons) as it became increasingly difficult to access the Baltic States and Southern Europe (Meintjes 2020b). However, the Subtropical Growers’ Association (Subtrop) anticipated mid-season improvements as lucrative contracts with Japanese and Indian importers of avocado were reaching finalisation. This health crisis also called for modifications in quality control procedures for agrofood exports. Perishable Products Export Control Board (PPECB), responsible for quality certification of agrofood exports, had to invest in PPE for frontline inspectors and assessors to continue their duties (Freight News May 2020). Inspections at packhouses continued as PPECB tried to ensure the protection of staff health and minimise (or avoid) interruptions to the smooth movement of exports.

Trade in agricultural inputs, ranging from fertilizer to machines, could not evade Covid19-related regulations in countries that supply’s SA’s highly mechanised farming sector with these inputs.

### ***Altered shipping routes, transportation modes and container availability***

The cargo backlog crisis lasted well into early-July with spill-over effects across the logistics sector. As noted above, agro-food exporters adopted costlier modes and routes of the transportation to meet their delivery agreements. In a summary of extreme sectoral responses in overcoming the logistical barriers, one journalist reported:

*“Some exporters of perishable agriculture produce have been trucking their goods to Port Elizabeth, which lies 750 kilometers (466 miles), to the east, or northeast to Durban, a 1,635 kilometer drive away.... About 500 containers with fruit destined for the EU were transported from the Western Cape to Port Elizabeth in the past four weeks”* (Njini 2020)

Media reports also showcased the severity of container shortages, highlighting that “shipping lines have begun transporting empty containers back to South Africa to mitigate the effects of the container shortage.” Towards the end of May, the shortage of containers at ports had brought meat exports to a standstill. The suboptimal use of shipping, trucking and containers

are intrinsically inefficient. Other dimensions of this logistics inefficiency included delays in the delivery dates of containers with imported goods “and transporters often able to collect only one container per day, which is not financially sustainable”.

Deutsche Afrika-Linien (or DAL), a shipping liner, decided to temporarily switch its primary stopover from Cape Town to Port Elizabeth with a feeder services in between the two ports, raising transportation costs. Other shipping liners like MSC Group and Ocean Networks Express (ONE) Holdings, for example, opted to limited Cape Town port to smaller weekly routes. Normally, these added costs manifest in food retail price inflation, which means the differential transmission of food access costs to final consumers.

### **3.6.3. Trading routes and exchange-rate issues**

South Africa actively trades in agrofood commodities with most countries around the world either as sources of its imports or destinations of its exports. The country’s agrofood exports and imports regime evolved over decades and it is impossible to explain the influences of the pandemic on agricultural trade without reference to pre-pandemic trends. Given that the pandemic and measures to contain the large-scale virus contagion are continuing, the most useful timeframe categorisation currently is between pre-Covid-19 (historical) and Covid-19 (current) situations. Therefore, structural factors coupled with global and domestic policies that have shaped South Africa’s agrofood trading system before March 2020 will be highlighted whenever history can shed light on current and unfolding trade patterns.

Declared an ‘essential good’ at the onset of the pandemic, food items were not subjected to any visible and official restrictions in terms of imports, exports, handling at ports of entry and onward distribution to local fresh produce markets, food wholesalers and retail outlets (including informal traders) (NAMC 2020, PPECB 2020, AgBiz 2020). Even though South African authorities promoted agrofood trade with trading partners globally, it is not the same as how other states have reacted to the impact of Covid-19 and what effects it might have had on their export-import decisions. It is too early to say with confidence how the spread of the pandemic in trading partner economies, as well as measures to break the chain of virus transmission in those countries, influenced trade flows between them and South Africa. Curbing the spread of the virus through restrictions on the movements of goods might have dampened agrofood exports and imports but any accurate account of the magnitude of this impact can only be done when reliable and up-to-date data become available. This sub-section examines different aspects of the trade situation in South Africa relative to its trading partners.



More specifically, it addresses the following question: How has Covid-19 affected the agrofood trading patterns between South Africa and the rest of the world?

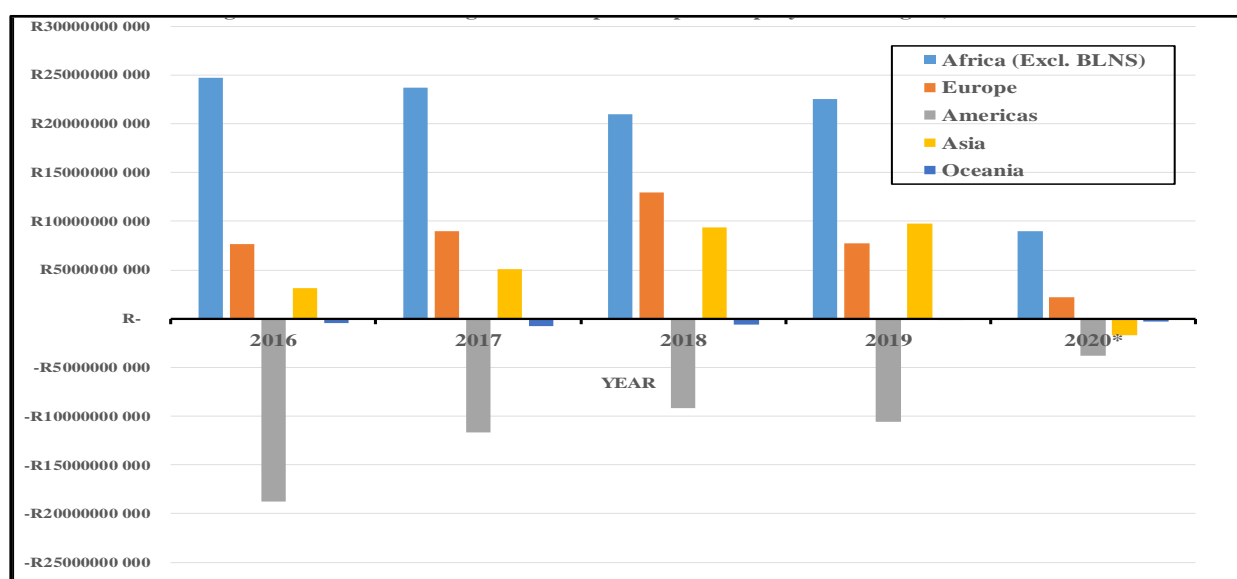
To place agrofood trade in perspective, Figure 13 reports information about the 4 years before 2020 to year-on-year changes in the most recent years. The importance of the last 2 months of 2019 in this comparison serves as a coarse marker of the initial diagnosis of the novel SARS-Cov-2 virus in Wuhan, in Hubei Province, China. Although the outbreak started around November 2019 in China, measures to contain its spread started later, with disruptions to global agrofood trade more common and visible after the World Health Organisation (WHO) had declared it a global pandemic in early February 2020. As already noted earlier, the first reported positive cases of Covid-19 arrived in South Africa in early March 2020, with clusters of infectious and rapid community transition only becoming a concern after the first quarter of 2020.

To explore how Covid-19 has affected South Africa's agrofood trade status, it is useful to begin with the export-import gap ("agricultural goods trade balance") between South Africa and major regions of the world. This descriptive analysis helps to describe if South Africa enjoys a net-export or net-import position in its agricultural trading relationship with another country or region.

Until the end of 2019, South Africa maintained an aggregate net-export position for three trading regions: Africa (excluding BLNS countries), Europe and Asia. At that time the country had a net-importer position in its agricultural trade relations with the Americas and Oceania. In this pre-2020 net-exporter situation it is interesting to note that by 2019, Asia would overtake Europe but will be well behind Africa as destinations of South Africa's agricultural exports. It is also worth pointing out that South Africa did not have any stable net-exporter nor net-importer trade relations in agriculture with any major region and disaggregated data should tell a more nuanced story.

For the period January – April 2020 (early Covid-19 period), which covers 1 quarter rather and 1 year resulting in big differences in aggregated value of imports and exports, the country would maintain its agricultural trade surplus with Africa and Europe. During this period an agrofood trade deficit had opened with Asia, thus joining the Americas and Oceania as regions from which South Africa imports exceeded its exports.

**Figure 13. South Africa's Agrofood export-import gap by trade region, 2016-2020**

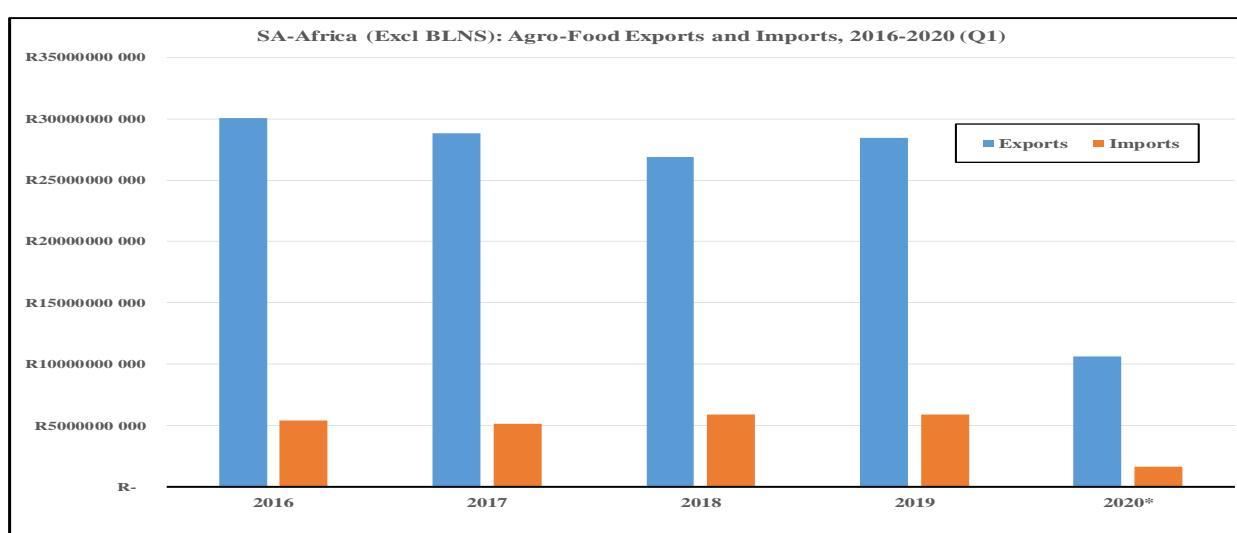


Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\* = January-April 2020 (Early Covid-19 period)

Figure 14 takes a closer look at South Africa's total agrofood trade with the African region, excluding the BLSN neighbours. Agricultural exports to Africa fluctuated in the R30bn-R25bn range, trending downwards. Imports from the rest of the continent hovered around R5bn but was slightly higher in 2019 compared to 2016. No sharp reversal in this relation between exports and imports took place in the first 4 months of 2020.

**Figure 14. SA-Africa (Excluding BLNS): Agrofood exports and imports, 2016-2020 (Q1)**



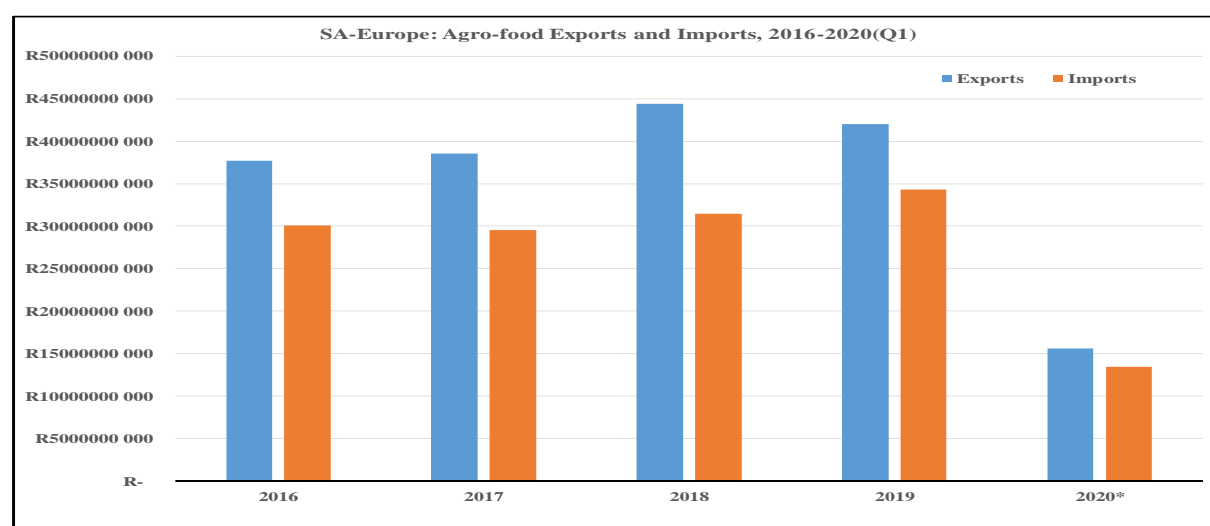
Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\* = January-April 2020 (Early Covid-19 period)

Figure 15 compares the total value of agrofood exports and imports for South Africa and Europe. It gives a sense of overall trends in agrofood trade with the European region rather than detailing specific food items, standardised food groups and countries trading with South Africa.

Looking at the limited number of yearly data for the brief period under review, South Africa's exports to Europe peaked in 2018, reaching R44bn before slipping back to R42bn in 2019. Imports, by contrast, steadily increased throughout this period, reaching R34bn in 2019. In the first four months of 2020, South Africa's net-exporter advantage in agriculture disappeared but a more fine-grained analysis is needed to identify the reasons for this shift, especially for the major trade partners in this region.

**Figure 15. SA-Europe: Agrofood exports and imports, 2016-2020 (Q1)**



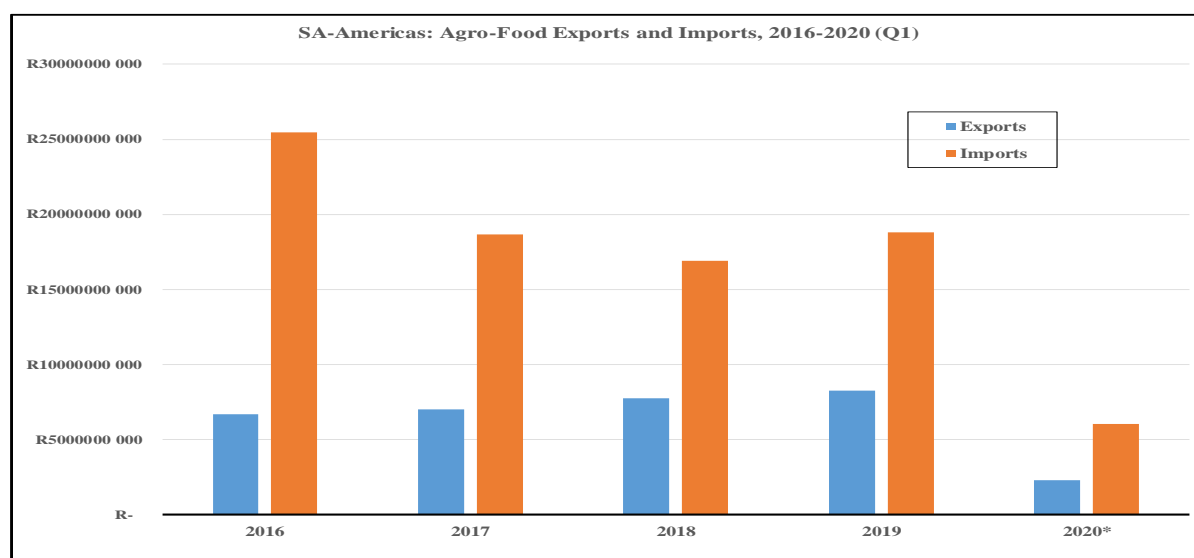
*Source: South African Revenue Services (SARS), Merchandise Trade Database (online)*

*Note: 2020\*= January-April 2020 (Early Covid-19 period)*

Figure 16 shows that during the 4 years up to 2019, South Africa's agricultural imports from the Americas trended downwards from above R25bn per year in 2016 to below R20bn in 2019. By contrast, agricultural exports reflect a marginal improvement but remained well below R10bn in 2019.

Imports of agricultural commodities continued to exceed exports in the first 4 months of 2020.

**Figure 16. SA-Americas: Agrofood exports and imports, 2016-2020 (Q1)**



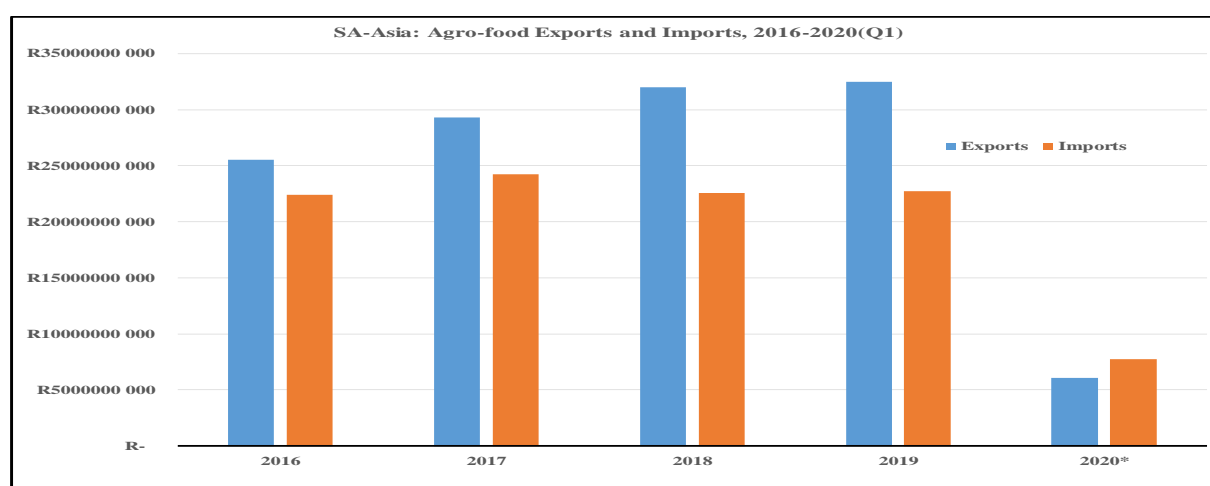
Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

Before the start of 2020, South Africa's agricultural exports to Asia steadily increased from roughly R25 bn in 2016 to well above R30 bn in 2019. Agricultural imports from Asia peaked around 2017 but thereafter trended downwards.

In the first 4 months of the 2020, the country's agricultural imports (R7,7 bn) from Asia exceeded its exports (R6bn) from this region.

**Figure 17. SA-Asia: Agrofood exports and imports, 2016-2020 (Q1)**



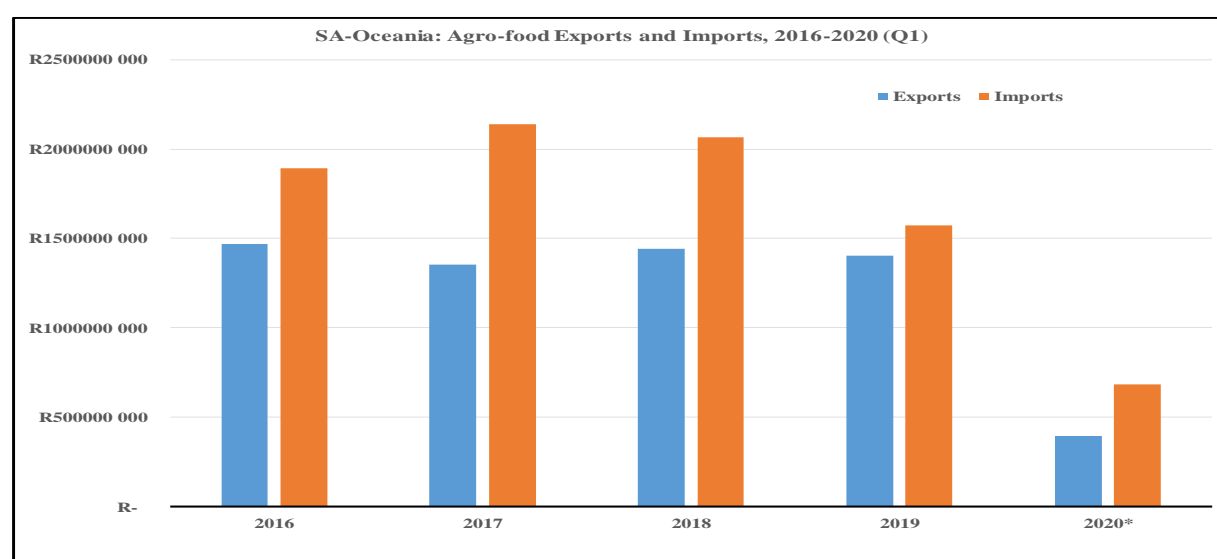
Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

Agricultural trade with Oceania does not only make up a small fraction of South Africa's total exports and imports, it concentrated among a handful of countries in that region. After peaking in 2017, at R2,1bn, South Africa's imports from the Oceania trended downwards, with the largest year-on-year decline registered between 2018 and 2019. Exports, by contrast, fluctuated below R1,5 bn throughout this period.

In the first 4 months of 2020, South Africa retained its net-importer status in its agricultural trade with countries in Oceania.

**Figure 18. SA-Oceania: Agrofood exports and imports, 2016-2020 (Q1)**



Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

Trade statistics of SARS report 4 categories for agricultural imports and exports: vegetables, animals (livestock), fats and oils and processed foods. Besides the data tracked through the commodity producer associations, the SARS trade database is the most authoritative administrative data on agricultural trade, despite possible commodity misclassifications (especially in vegetables and processed foods) and the scale of data easily accessible from its website. Vegetables, for example, includes horticultural fruits (like citrus) that often rank among the top 10 export commodities alongside some cereal grain imports (especially wheat and rice). Processed agrofoods traded, on the other hand, make no distinction between the degree or stage of processed items imported or exported.

Figures below summarise and compare changes in the groups of agricultural commodities South Africa traded with each trading region for the period 2016-2019 and the first four months

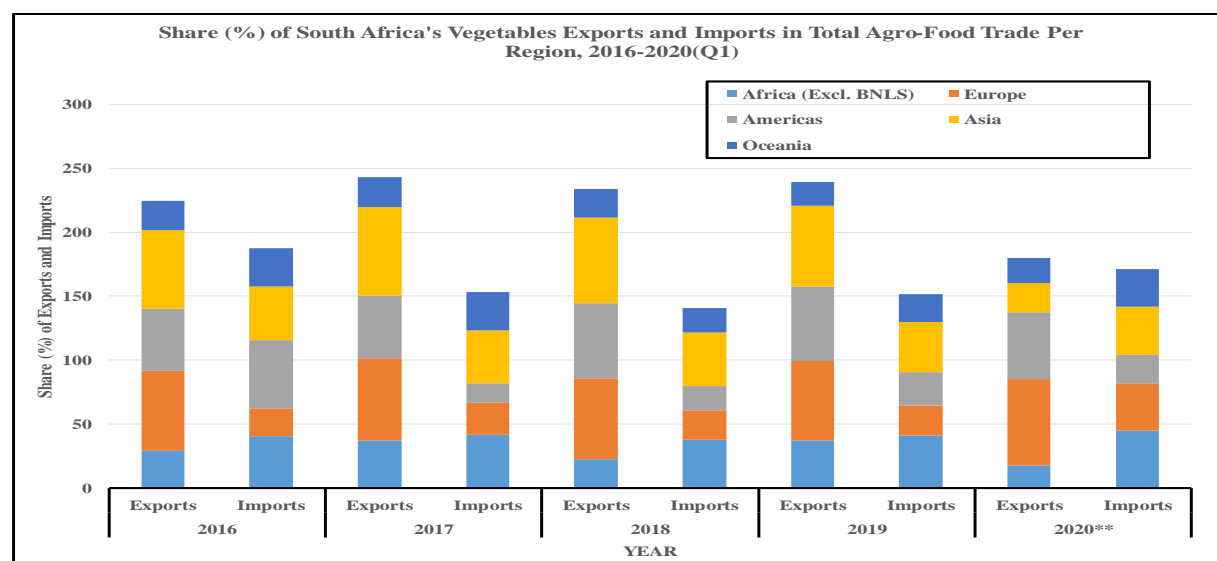
of 2020. With the aid of each figure, it is possible to answer the following questions: What is the share of a commodity group in South Africa's total exports to (or imports from) a trading region? How stable has the share been before the pandemic and during the first four months of 2020? How do these shares compare across different regions? The figures below zoom in on three broad categories of commodities broadly defined in the SA Revenue Services merchandise trade database.

Until the end of 2019, South Africa's vegetable export shares to all regions have been fairly stable. Even though vegetable exports to Europe and Asia overshadowed agricultural exports to each region, the proportion of vegetable exports to Asia was the largest, the growth in this share was marginal. It is noteworthy that between 2016 and 2019, vegetable exports to the America's increased by 10 percentage point from 48% to 58%, making it the region with the fastest growing vegetable exports share. Unlike exports, the weight of vegetable imports over this period display greater instability. Vegetable imports from Africa, Europe and Asia increased marginally until 2019 whereas the weight of vegetables in total agricultural imports from the America's and Oceania was shrinking.

During the early stages of Covid-19 (Jan-April 2020), South Africa's vegetable exports as a share of total agricultural exports to Europe and Americas did not register any substantial differences compared to 2019. The two regions continued to rank among the leading destinations of South Africa vegetable exports, at shares of 67% and 53% respectively. This category of the agricultural exports for Asia and Africa, however, display sharp contractions relative to the previous years. This decline in proportion of vegetables exported to Asia, from 60% to slightly above 20% in the early Covid-19 period, resulted in the region occupying a lower rank as a destination for South Africa vegetable exports.

South Africa's share of imported vegetables from each region showed almost no change in the initial Covid-19 period compared to previous years. Africa and Asia continued to be main regions on which South Africa relied for its vegetable imports in the Jan-April 2020, with shares in total imports of 45% and 37% respectively. The share of vegetable imported from Europe increased by more than 50% relative to the previous year, up from 23% to 37%, lifting the region into a major of source of South Africa's vegetable imports.

**Figure 19. Share (%) of South Africa's vegetable exports and imports in total agrofood trade per region, 2016-2020 (Q1)**



Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*\*= January-April 2020 (Early Covid-19 period)

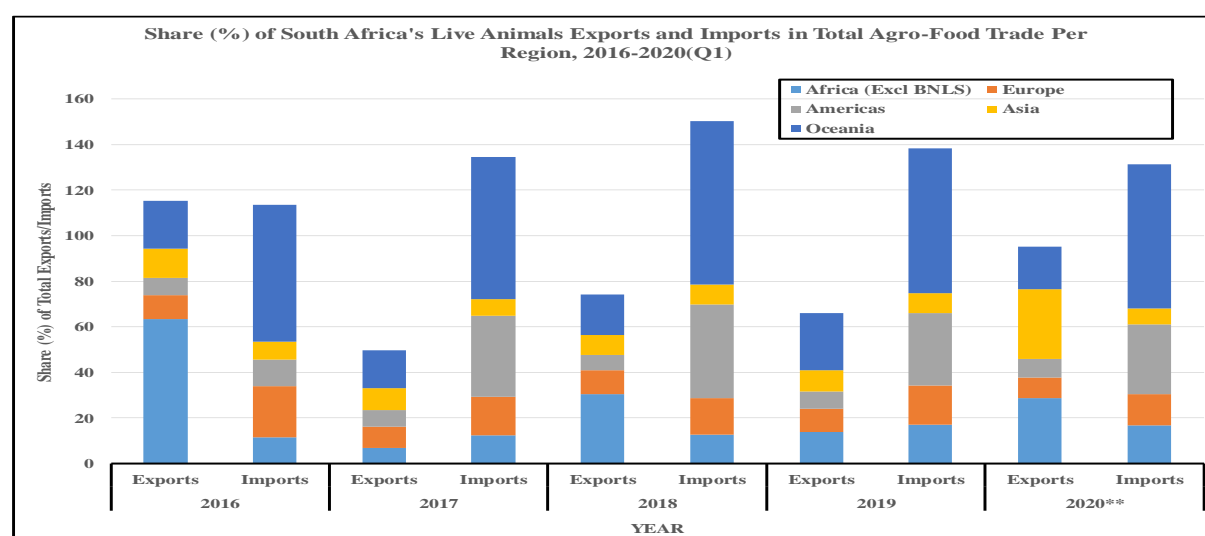
Before 2020, the value of live animal exports to South Africa's trading regions rarely exceeded 30% of total exports and in 2016 made up more than 60% of agricultural exports to Africa before declining in subsequent years. Over this period, Asia's live animals export share contracted by 4 percentage points, from 12% to 8%. This export share was stable for Europe and the Americas, whilst for Oceania its weight in total agricultural exports moved from 21% in 2016 to 25% in 2019.

With the exception of South Africa's share of live animal imports from Asia, the share for all other regions show a gradual increase in the pre-2020 years. While the monetary value of live animal imports from Oceania is consistently the smallest, the proportion of this category of imports has ranged between 60% and 72% of total agricultural imports, peaking 71,6% in 2018 before slightly contracting to 63% in 2019.

Asia emerged as a leading destination for South Africa's livestock exports for January through April 2020. Compared to the previous period, Asia's export share increased more than threefold (from 9% to 31%). The share of live animal exports to Africa stood at 29% over this period, which is a doubling in the share for this destination region compared to 2019. Live animal export shares to the Americas and Europe show marginal increases and decreases relative to 2019 whereas the share for Oceania dropped by more than 6 percentage points (from 25% to 19%).

For the period January-April 2020, the overall patterns of import shares of live animals per major trading region show only marginal changes. The share of livestock imported from Oceania outweighs other categories, making it the region with the dominant share (at 63%), which the Americas (with a share of 30%) a distant second ranked sources for agricultural category. South Africa's import shares of live animals from Africa, Europe and Asia were all marginally lower than in 2019.

**Figure 20. Share (%) of South Africa's live animals exports and imports in total agrofood trade per region, 2016-2020 (Q1)**



Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

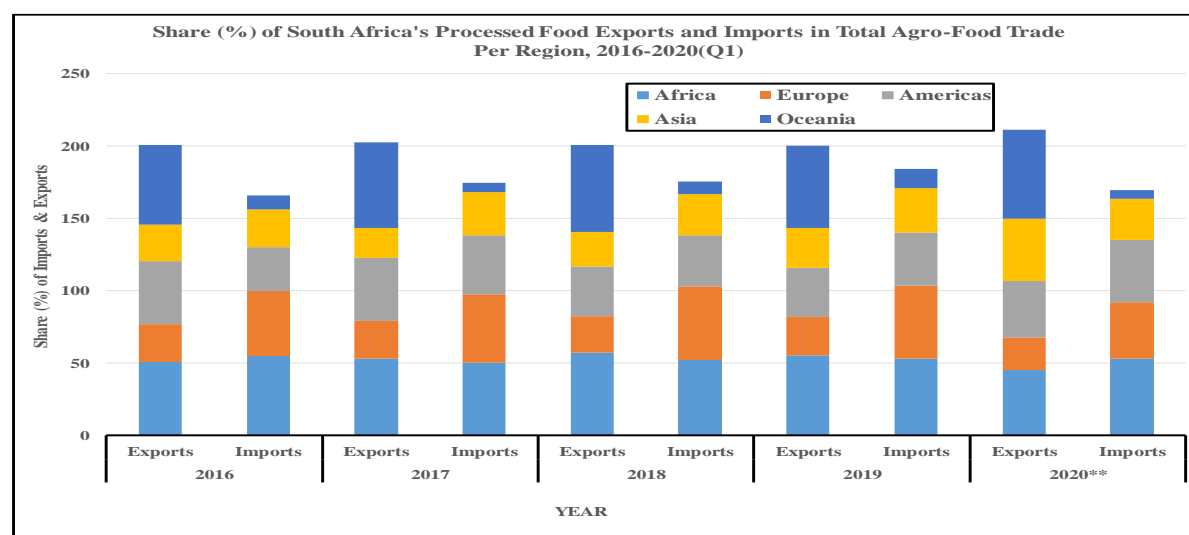
Figure 21 draws attention to growing the weight of agro-processed food in the composition of South Africa's imports and exports. In 2016 and 2017, Oceania and the Americas were the regions with the top shares of prepared foods in total agricultural exports. Thereafter, Oceania's export share remained relatively stable, whilst the share for the Americas contracted by 10 percentage points to 33% in 2019. Throughout this period, Europe reported the highest share of prepared food imports for South Africa at 50% in 2019 compared to 44% in 2016. Shares of prepared food imports from Africa, the Americas, Asia and Oceania fluctuated in tight ranges.

On average, the shares of processed agrofoods in total exports (imports) were marginally higher during the early Covid-19 pandemic phase (January- April 2020). Ranking the processed agrofood exports shares by region shows that Oceania (61%) and Africa (53%) as the leading destinations, with Europe (22%) the recipient with the smallest proportion of this category of agrofood exports. With the exception of processed agrofood imports from the Americas, with



the highest share at 43% and slightly higher than 2019, the shares for Africa, Asia, Europe and Oceania were marginally lower than the previous year.

**Figure 21. Share (%) of South Africa's processed food exports and imports in total agrofood trade per region, 2016-2020 (Q1)**



Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

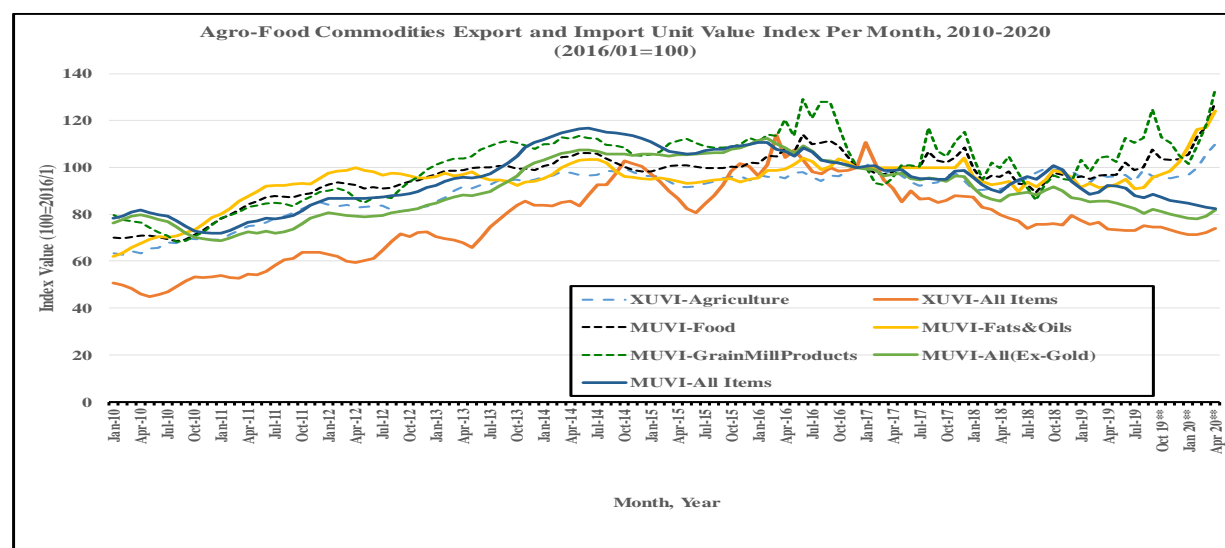
Figure 22 reports the monthly export and import unit value indices, XUVI and MUVI respectively, for agrofood items since January 2010. Similar to traditional CPIs and PPIs, XUVI and MUVI compare the monetary values of imports and exports that factor in exchange rate fluctuations and differentials between South Africa and its trading partners (usually the SA Rand and US\$ exchange rates). Standardisation in index unit values allow for general and specific comparisons. This means, the agrofood commodity or sector unit value index can be compared the 'all item' index values. Furthermore, it also allows for a comparison of the unit value indices of exports and imports.

To begin, the graph of the agriculture export unit value index (XUVI- Agriculture) reveals informative patterns about exports for entire sector rather than specific commodities. With few exceptions, this line is above the XUVI-All items plot and trends upwards in the last quarter of 2019 and first quarter of 2020. This suggests a marked improvement in returns from agricultural exports (relative to many other exports) and this appears to be unaffected by the early onset of the pandemic in countries that import from South Africa.

On the import side, the pattern appears to be similar. The MUVI-Food, for instance, points to rising costs of food imports, with it particularly steep increases in 2019-Q1 and 2020-Q2. More

importantly, the higher costs of imported foods are particularly sensitive to the costs of importing gains as MUVI-GrainMillProducts is evidently pulling the costs of imported foods higher.

**Figure 22. Agrofood commodities export and import unit value index per month, 2010-2020**



Source: South African Revenue Services (SARS), Merchandise Trade Database (online)

Note: 2020\*= January-April 2020 (Early Covid-19 period)

### 3.7. Literature review summary

This literature review chapter has provided an overview of the impact of the Covid-19 pandemic on various aspects of agriculture and the food system in South Africa. The main message emerging from this chapter is that the pandemic, and, in particular, the various lockdown and restriction of movement regulations resulting as a response to it, have had far-reaching negative economic and social impacts due to closure of businesses and constriction of employment opportunities, disruption of supply chains, and general uncertainty in the business environment. As the pandemic unfolds, the full impact picture is yet to come out. There is still a dearth in academic and scholarly material (e.g. journal articles, working papers, books, policy briefs, statistics) on the issue; however, different sources and material used in undertaking the literature review enabled the production of a comprehensive story of what the unfolding situation is like with respect to various aspects of agriculture and the food system in South Africa.

## 4. SECONDARY DATA ANALYSIS

### 4.1. Introduction

This section analyses existing secondary data towards understanding the impact of Covid-19 and measures that were implemented to reduce its spread on food production, processing/manufacturing, distribution and consumption. Analysis is focussed on grains (maize, wheat, rice, etc.) and oilseeds.

### 4.2. Maize

#### 4.2.1. Maize production and deliveries

The impact of Covid-19 and the lockdown measures on commercial production of different maize, South Africa's main staple, was negligible. This is because when the first Covid-19 case was reported in South Africa in March 2020, and when lockdown measures were introduced later during the same month, the maize crop was at an advanced stage. Also, because agriculture was considered essential, the maize sector faced limited disruptions in production and harvesting activities. Table 7 indicates that, based on the 6<sup>th</sup> forecast of the maize harvest for the season by the Crop Estimate Committee (CEC), the country is expecting a bumper harvest of more than 15.5 mil tons in 2020, 37% bigger than the 2019 harvest. White maize is expected to grow by 68%, while yellow maize is expected to grow by 12%. White maize is mainly used for human consumption, while yellow maize is mainly for animal feed. The main drivers of good yields were good weather and good prices in the previous season. Because of this bumper maize harvests, BFAP (2020) projects that the agricultural sector will grow by 13% this year. The agricultural sector grew by 27.8% in the first quarter of 2020.

**Table 7. Annual maize production levels, 2019 and 2020**

	2020	2019	% change 2020/2019
White maize (tons)	9,106,160	5,545,000	64%
Yellow maize (tons)	6,438,950	5,730,000	12%
Total maize (tons)	15,545,110	11,275,000	37%

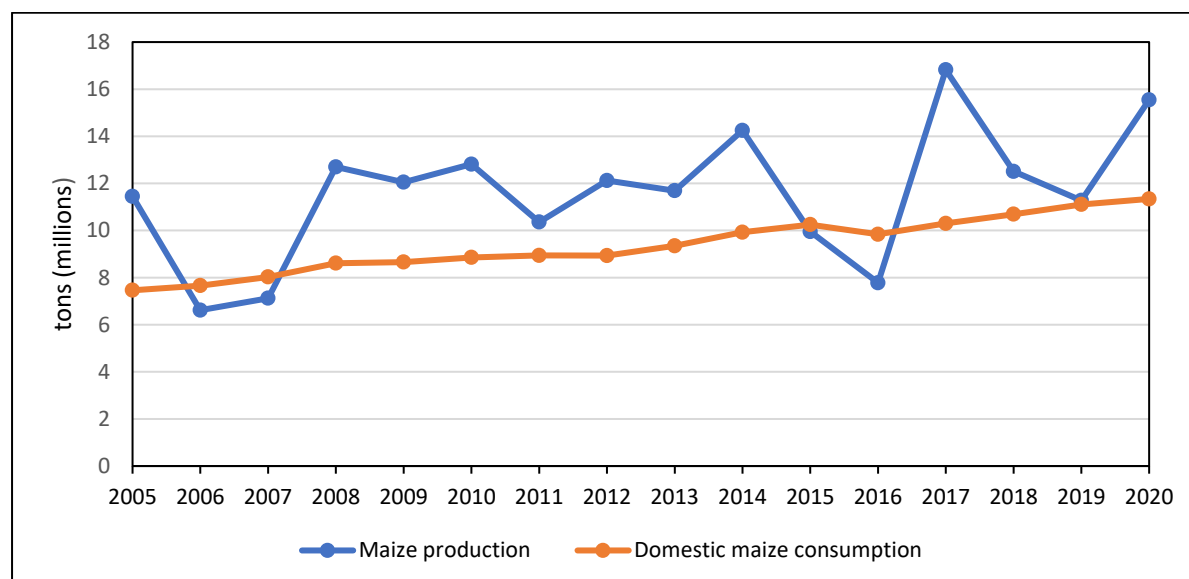
Notes: \*The 2020 figures are estimates, as harvesting is still underway

Source: Crop Estimate Committee (CEC), 6<sup>th</sup> forecast, July 2020

Figure 23 indicates that the country is expected to produce enough maize (white and yellow maize) for both human consumption and animal feed in 2020. The graph indicates that, except in few years (such as in 2016 due to drought), the country generally produces a surplus for maize. While this is good news, it should be borne in mind that the main challenge in South Africa is not about food availability, but about distribution and access to the food by the poor

households. It is therefore important that interventions focus on ensuring access to maize, which is the country's main staple, for many poor households.

**Figure 23. Annual maize production and consumption levels**



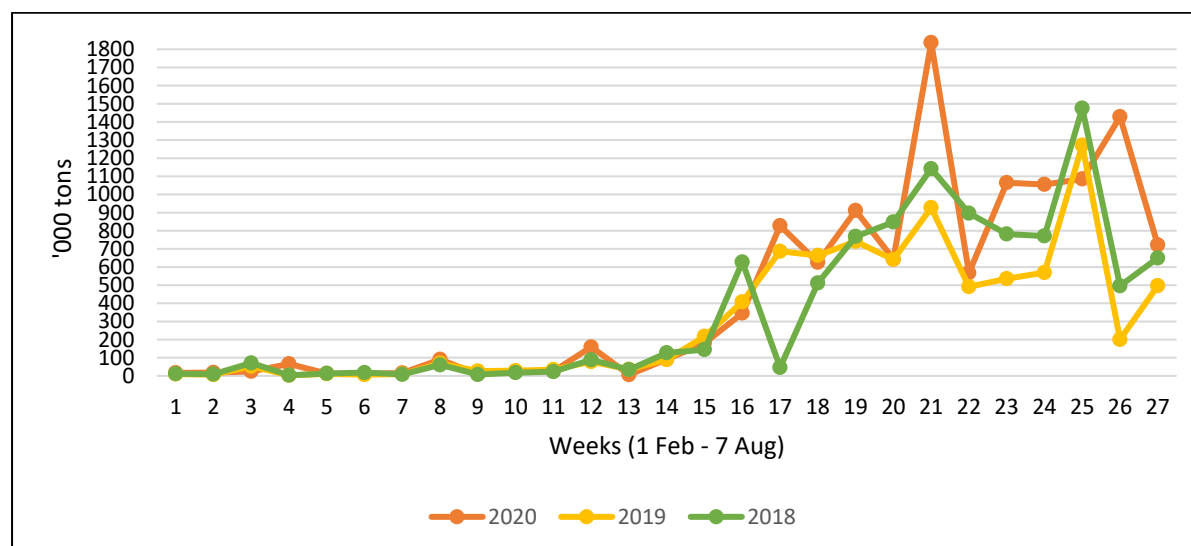
*Source: Authors derivations using SAGIS & CEC data*

*Notes: the 2020 figures are estimates*

Reports have indicated that the pandemic and lockdown measures potentially disrupted maize harvesting and deliveries to the market. To begin with, maize harvesting was expected to be delayed, given that planting activities had been delayed in some areas due to late rains. Figure 24 compares weekly maize deliveries by commercial producers for the period February to August for the past three years before the pandemic. The graph shows that the 2020 weekly maize deliveries were generally consistent with previous trends for most of the weeks (2018 or 2019 trends or both), with some exceptions around week 20 and 21 (mid-June), where weekly deliveries for 2020 peaked at more than 1.8 mil tons in one week (22 – 26 June 2020). The 2020 maize deliveries were slightly below the average levels for the previous years around late-April/earlier May period, indicating a delay, as expected. This might also be due to lockdown restrictions, which might have negatively impacted the quantity of maize deliveries, albeit only somewhat. While the figure shows that the 2020 weekly deliveries were more volatile and had a very high peak around mid-June, it is not clear the extent to which this was due to the uncertainty or disruptions related to the pandemic and lockdown measures. After the mid-June peak in maize deliveries, the figure shows that the next peak for the 2020 weekly deliveries was during week 26 (last week of July), a week or so later than in the past two years.

In sum, Figure 24 does not seem to suggest that the pandemic or lockdown measures significantly disrupted commercial deliveries of maize.

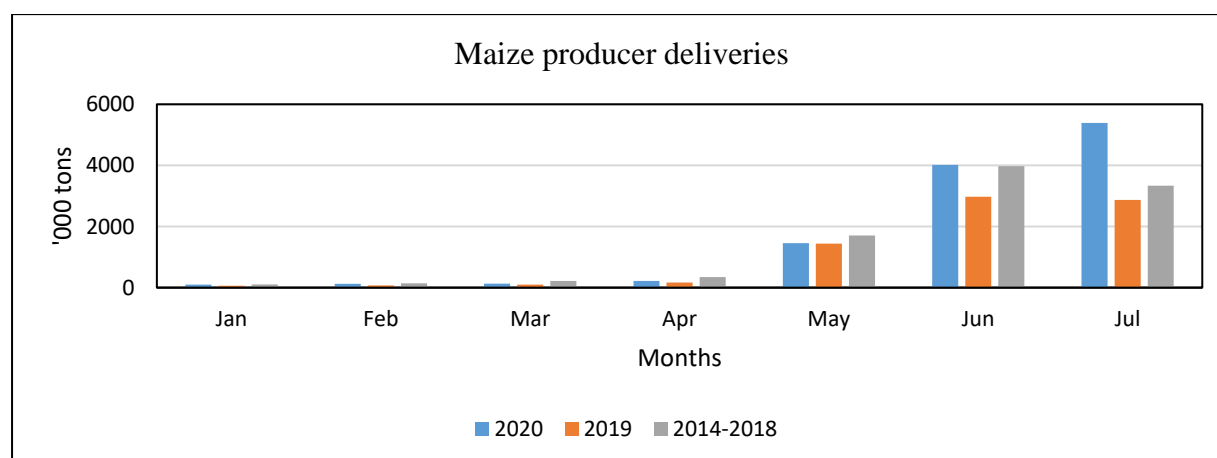
**Figure 24. Weekly deliveries of total maize, February to August**



Source: Authors derivations using SAGIS data

Figure 25 shows the monthly deliveries of total maize for the months of January to July for the 2020, 2019 and 2014 -2018 periods. The graph shows that maize deliveries for 2020 were lower than average (2014 – 18) for most of the months, until June, even though they were higher than last year. The figure shows that in July, maize deliveries were over 60% higher than that of previous years, in line with the bumper harvest expected for the 2019/20 season. This figure indicates limited disruptions in maize harvests and deliveries in South Africa by commercial farmers.

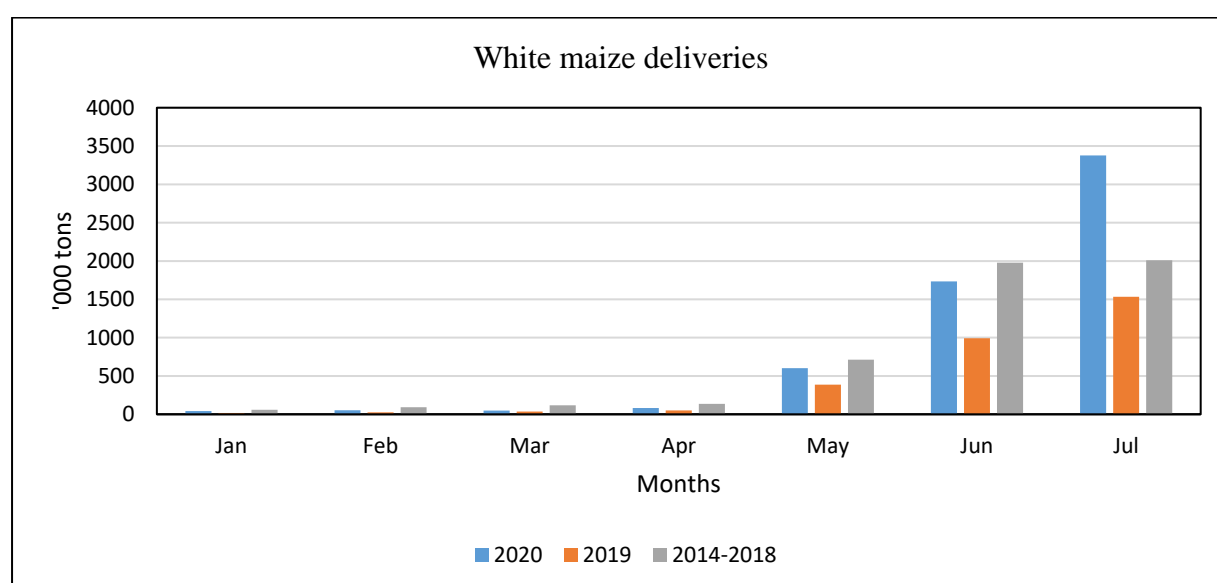
**Figure 25. Quantity of total maize commercial deliveries per month**



Source: Authors derivations using SAGIS data

To further the analysis on the extent to which the pandemic and lockdown measures impacted maize deliveries, we compare monthly deliveries for white maize and yellow maize separately. It is possible that white maize and yellow maize harvests and deliveries could have been impacted differently. Figure 26 shows the monthly commercial deliveries of white maize for the February to July period for the past five years. The graph shows that, compared to 2019, the quantities of white maize delivered by commercial producers were higher across all the months for 2020. However, comparison with the 2019 figure is limited, since the harvest was smaller than the normal average in 2019, as indicated in Figure 24. Comparison with the average monthly commercial deliveries for the 2014 – 18 period shows that the 2020 white maize deliveries were below the average for all the months under consideration, until June. The figure shows that the white maize commercial deliveries were above average in July, the latest figure analysed. Further to delayed harvests due to late planting, the fact that maize deliveries remained below average even for the month of June might be because of the pandemic, especially given the high expected harvests for white maize in 2020. However, the effect was not very big, as the level of white maize deliveries largely follows the 2014 -18 average trend.

**Figure 26. Quantity of white maize commercial deliveries per month**

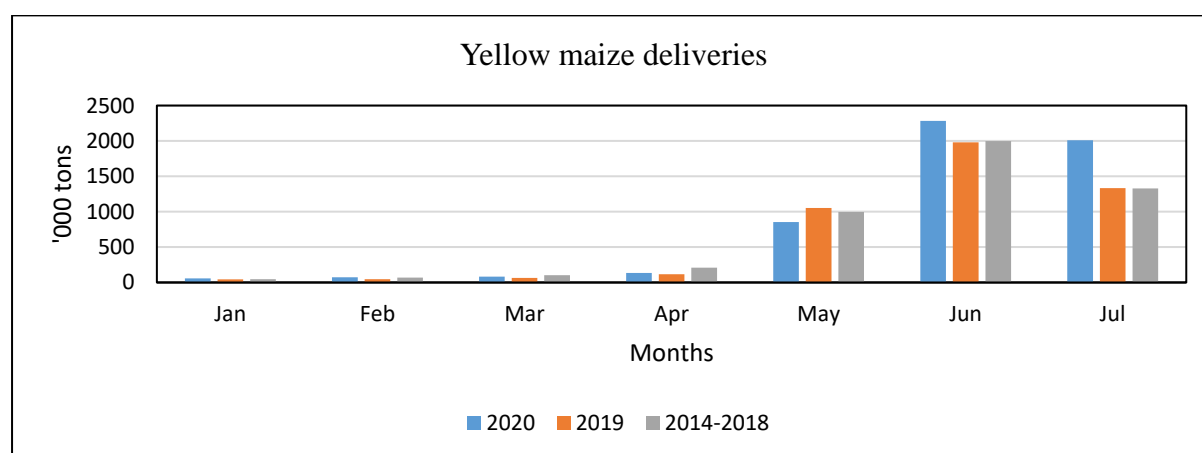


*Source: Authors derivations using SAGIS data*

Figure 27 shows that the 2020 monthly deliveries of yellow maize by commercial producers were lower than the 2014 – 18 average during April and May and were higher in June and July. The figure suggests that the progress in the harvesting of yellow maize in 2020, which seems to be the reason for the peak in mid-June (**Error! Reference source not found.**), is ahead that of white maize. The quantity of yellow maize deliveries in 2020 was lower than the 2014 – 18

average for the previous years in April and May. However, by June 2020, the quantity of yellow maize deliveries was higher than that of the previous years. These figures suggest that the delay in maize harvesting might have affected white maize deliveries than it did yellow maize. Also, the delivery interruptions were less pronounced for yellow maize than they were for white maize.

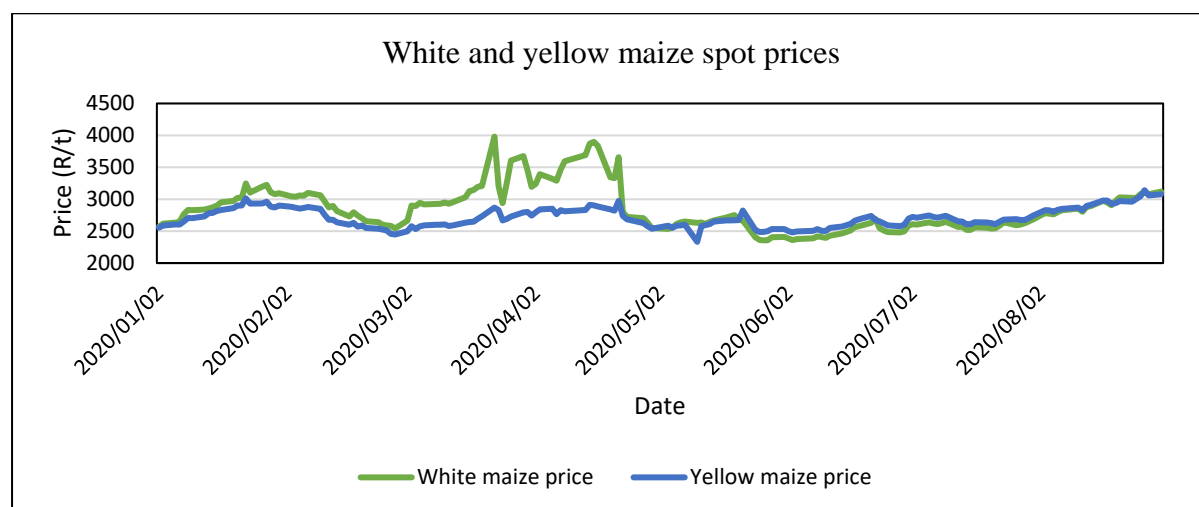
**Figure 27. Quantity of yellow maize commercial deliveries per month**



*Source: Authors calculations using SAGIS data*

Figure 28 shows the spot prices of both white and yellow maize from January to August 2020. The graph shows huge fluctuations in the prices of maize, especially that of white maize. The price was very high in April, reaching its peak a few days after the lockdown period commenced. The prices then decreased in May, and remained below R3,000 per tonne for May, June and July, until it steadily increased during the first weeks of August. The price of maize, particularly white maize rose highly because of the uncertainty about the extent of the disruptions that were to be caused by the lockdown restrictions in the local and global supply chains.

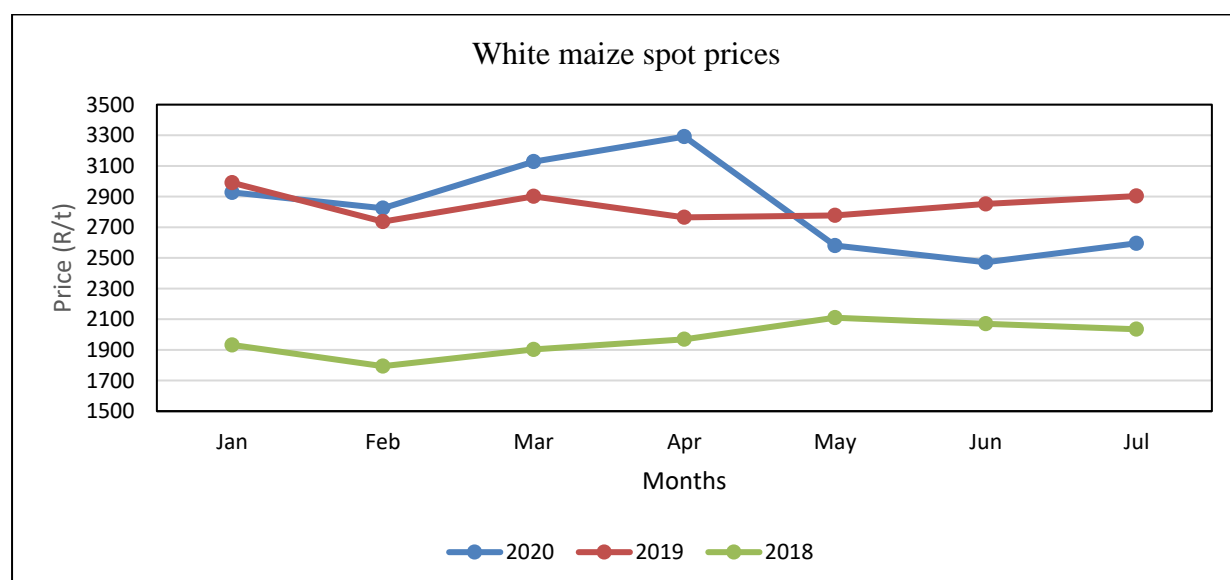
**Figure 28. Trends in spot prices of white and yellow maize, 2020**



Source: Authors calculations using SAFEX data

The sharp increase in the spot price of white in April 2020 was not expected, as the previous three years have not experienced that level of price increase during the same month. Figure 29 shows that prices of white maize experienced more fluctuations in 2020 than in the past two years. Further to uncertainties due to lockdown measures, the increased in prices of white maize was due to increased international demand for maize, following the weakening of the local currency (Rand).

**Figure 29. Trends in spot prices of white maize, 2018 - 2020**



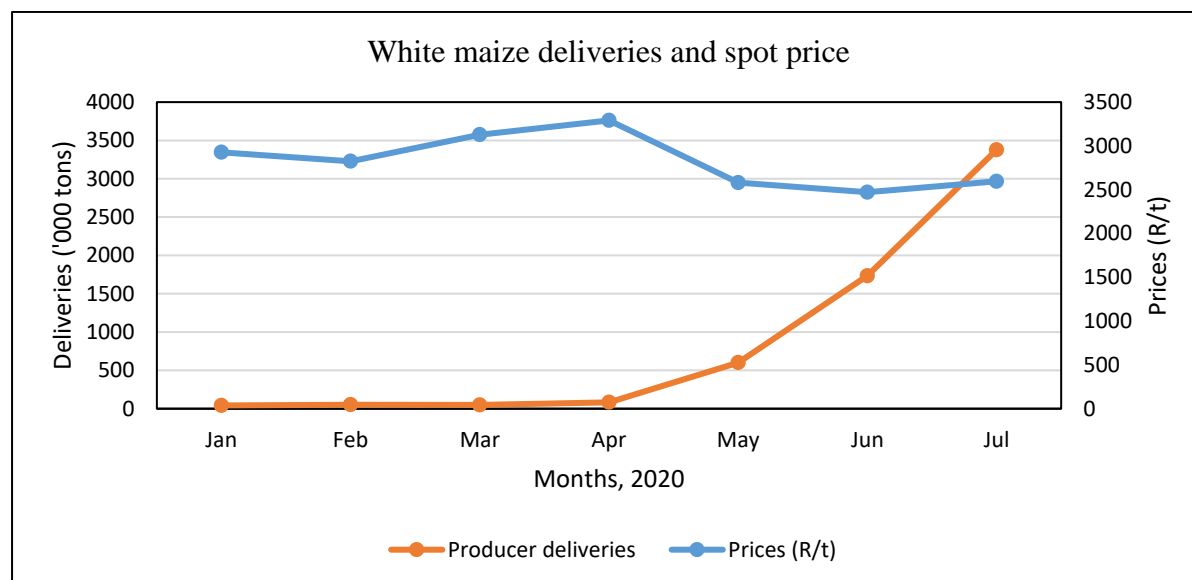
Source: SAFEX

However, the price decreased in May as more deliveries reached the market, declining below its price last year since May. Figure 30 shows that the price of maize decreased due to



increasing deliveries, particularly for the months of May and June. This graph shows that, while the uncertainty around April led to increased prices, increased deliveries in July do not seem to have resulted in further price decreases.

**Figure 30. White maize deliveries and spot prices, Jan – Jul 2020**



Source: SAFEX, SAGIS

The 2020 prices for yellow maize were not very high compared to previous year, even though it also increased in April (Figure 31). This was followed by a decrease in May, and since then, the 2020 monthly price has remained below the 2019 monthly averages. This suggests that the price of yellow maize was not significantly affected by the disruptions and uncertainty related to the pandemic.

**Figure 10. Trends in spot prices of yellow maize, 2018 - 2020**

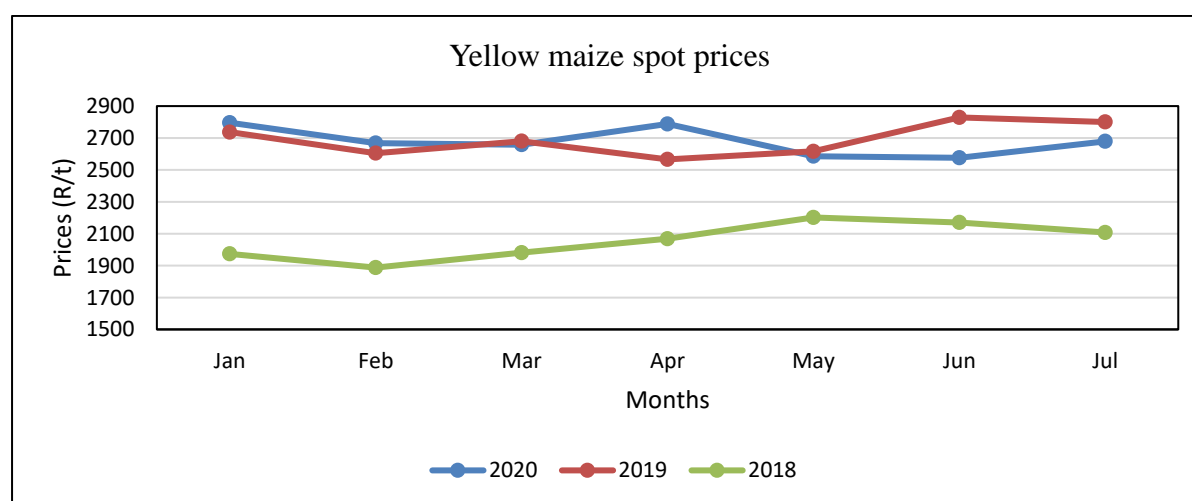
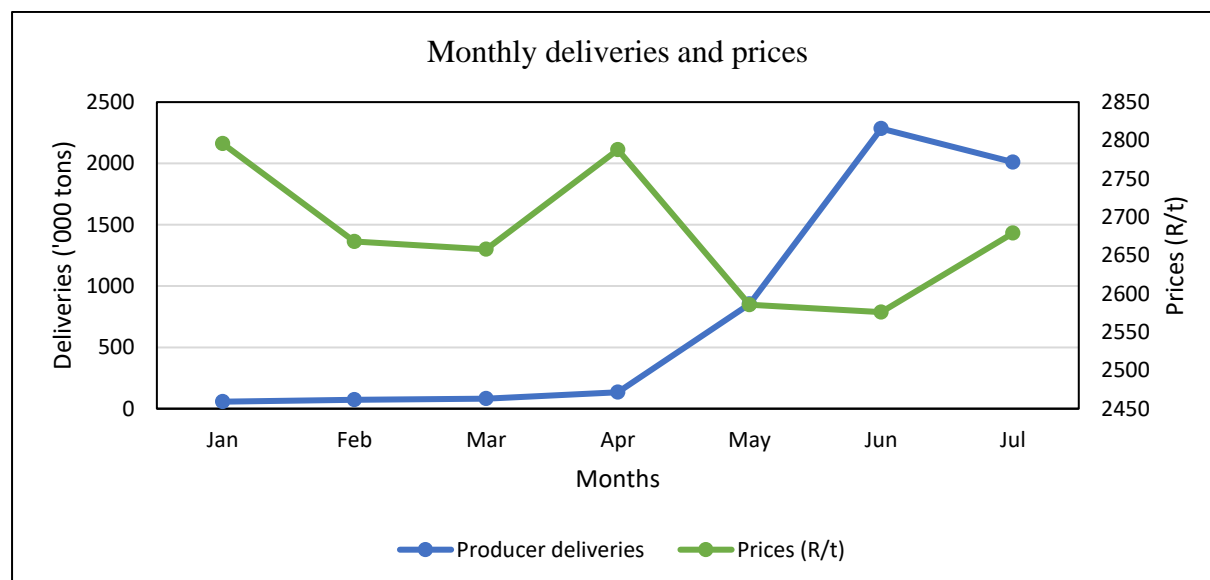


Figure 32 shows that, just like in the case of white maize, increased deliveries of maize were associated with a decline in the price of maize. While the deliveries increased in April and June, the graph shows a decline in July, which is associated with an increased in price.

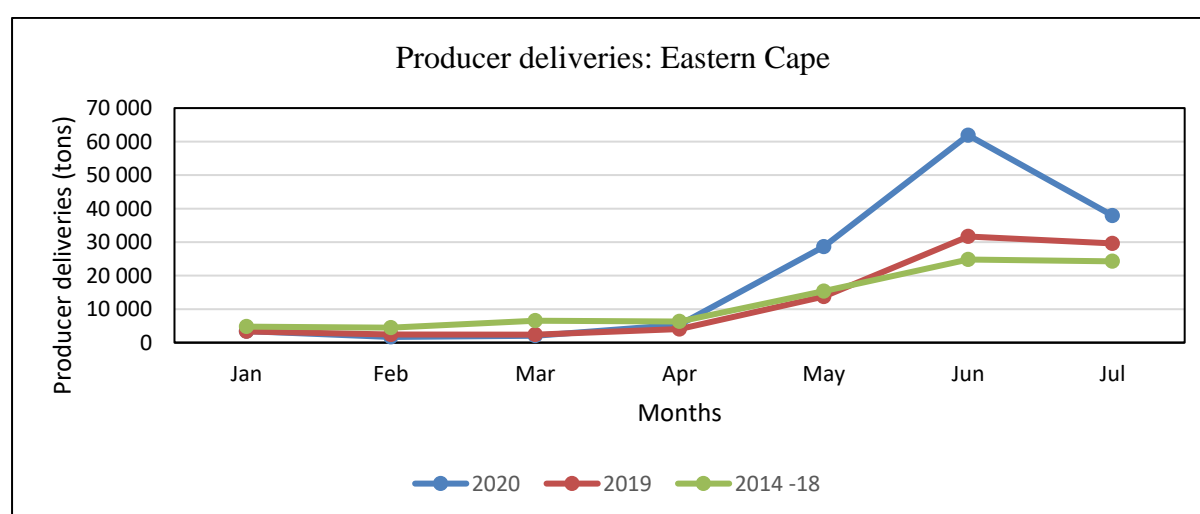
**Figure 11. Yellow maize deliveries and spot prices, Jan – Jul 2020**



Source: SAGIS & SAFEX

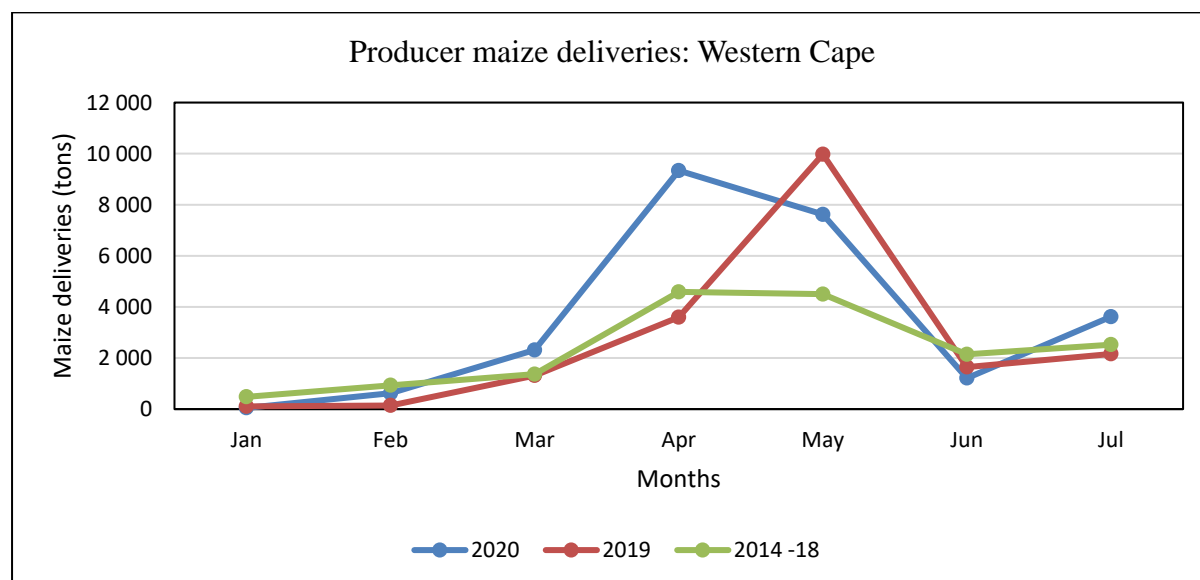
The next graphs investigate the extent to which commercial maize deliveries varied across provinces. Figure 33 shows that commercial deliveries in the Eastern Cape increased in April, above the levels achieved in the past 2 years. The graph suggests that maize harvest was not significantly affected in the Eastern Cape. The drop in July suggests that most of the harvesting activities had been completed in the province.

**Figure 33. Commercial maize deliveries per month, Eastern Cape**



Similarly, maize deliveries for 2020 were higher than the previous years in March and April. However, the level of maize deliveries declined below the 2019 figure in May and June and increased above average in July. The Western Cape experienced higher infection and death rates due to the pandemic during April and May, which might be the reason why the harvesting activities might have been disrupted.

**Figure 34. Commercial maize deliveries per month, Western Cape**



Maize deliveries were largely below their averages for Gauteng in April, May and June 2020 (Figure 35). The Gauteng province led in terms of the daily Covid-19 infection rates during the early months of the lockdown. The graph shows that the quantities delivered was above average in July 2020, increasing during a month it normally decreases as harvesting activities are finalised.

**Figure 35. Commercial maize deliveries per month, Gauteng**

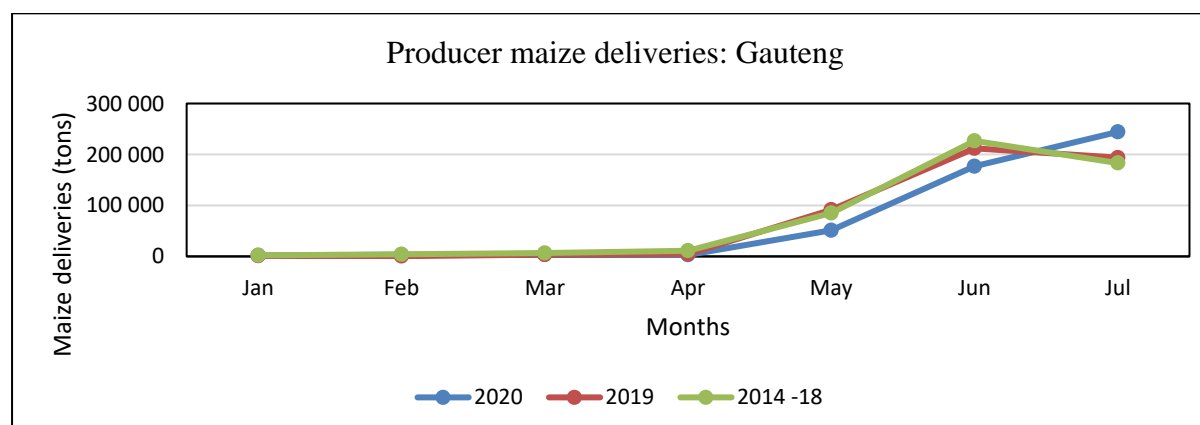
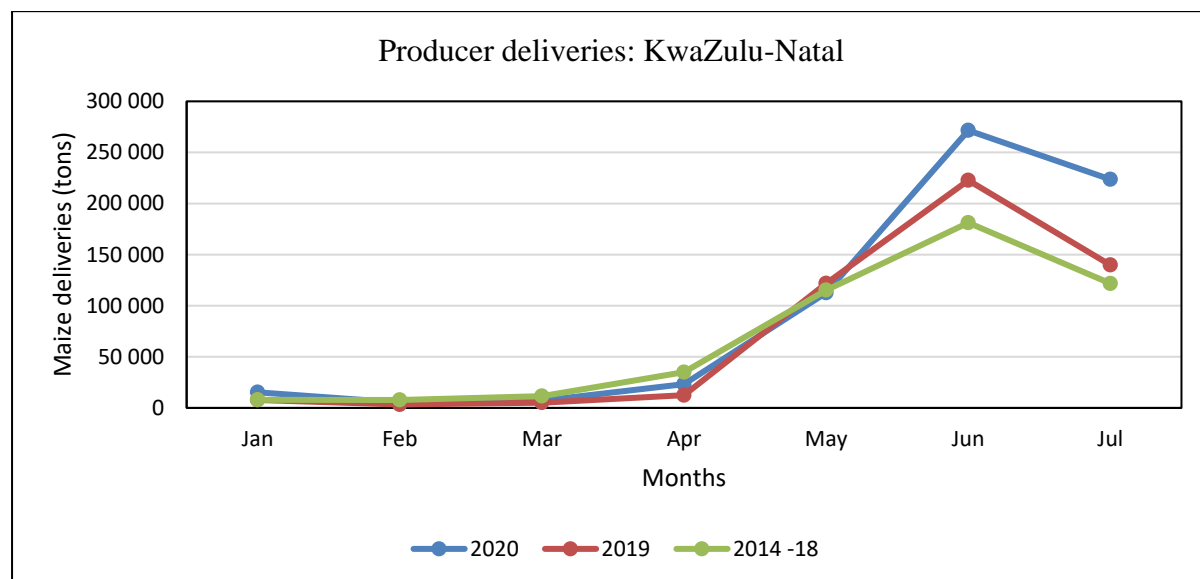


Figure 36 shows that the 2020 monthly commercial maize deliveries largely followed the trends for previous years and were higher in June and July than in previous years. The graph shows that maize harvesting experienced limited, if any, disruptions in the KwaZulu-Natal province.

**Figure 36. Commercial maize deliveries per month, KwaZulu-Natal**



Maize deliveries remained somewhat below average in the Northern Cape for the months of May and June (Figure 37). However, the trends were like previous years.

**Figure 37. Commercial maize deliveries per month, Northern Cape**

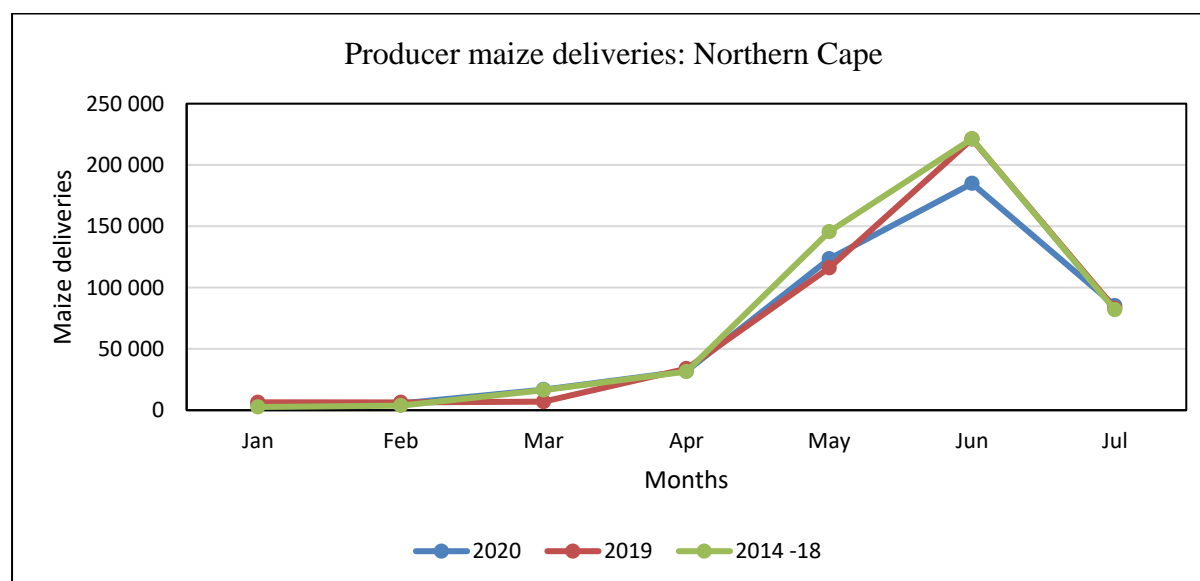
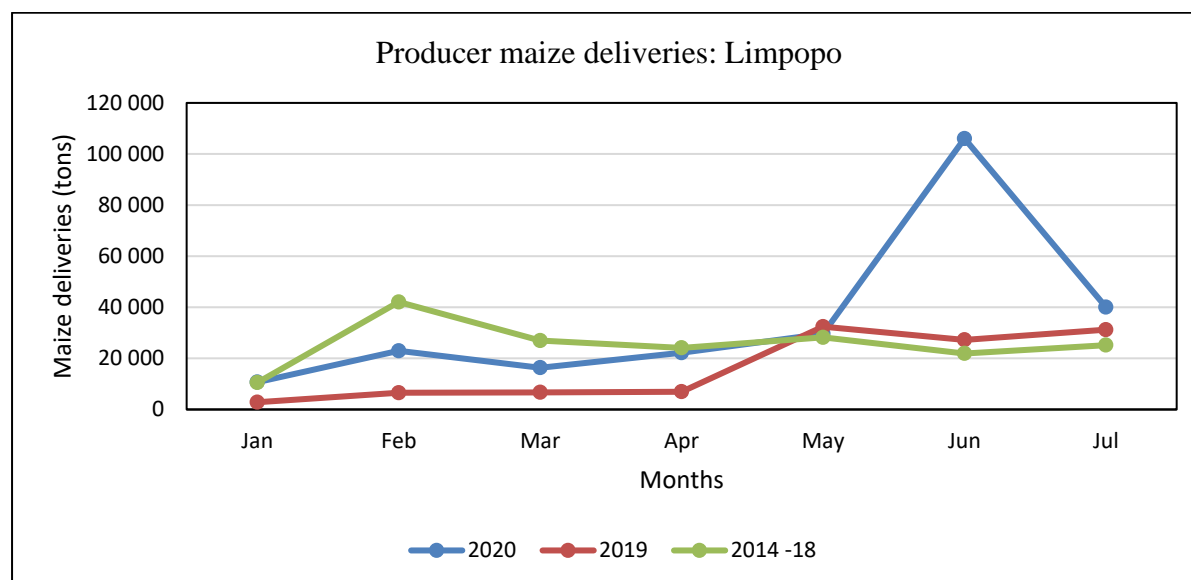


Figure 38 shows that maize deliveries in Limpopo were below the 2014-18 average before the pandemic, and during the first three months of the pandemic (March – May). However, there

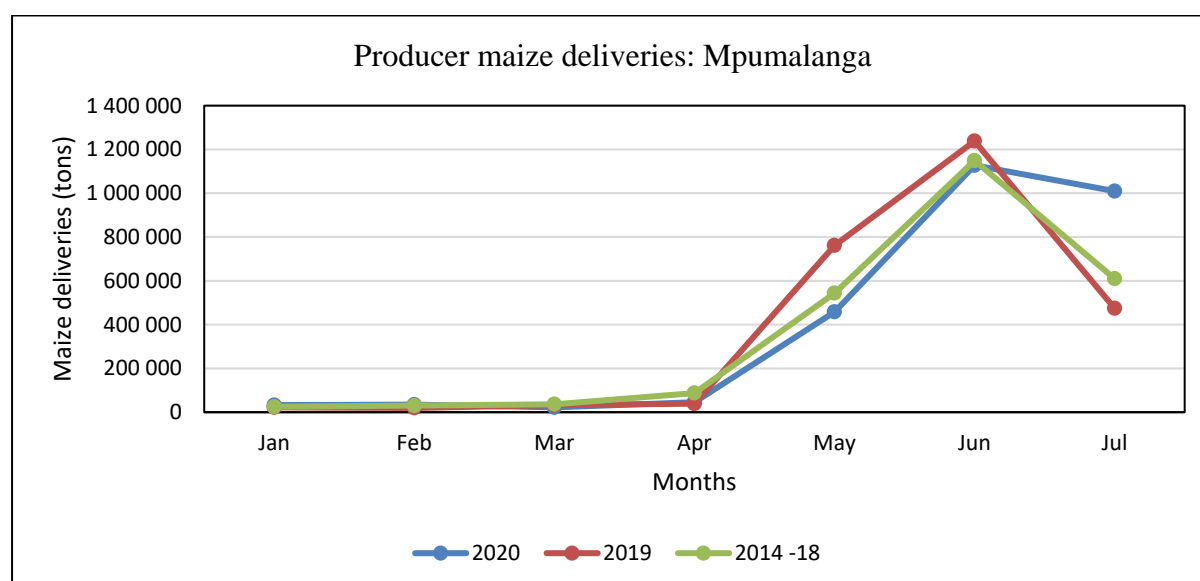
was a sharp increase in the deliveries in June, higher than in previous years. This suggests that most deliveries were done during this month, after months of delays for some farmers.

**Figure 38. Commercial maize deliveries per month, Limpopo**



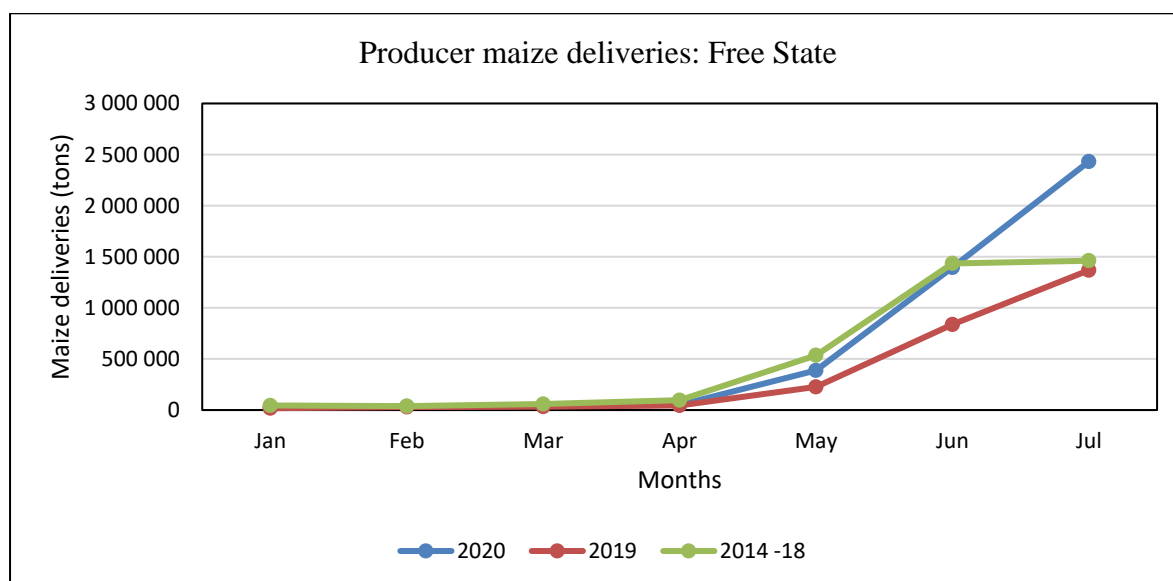
The last three graphs show maize deliveries by the three main maize producing provinces (Mpumalanga, Free State and North West) in South Africa. Figure 39 shows that the 2020 monthly maize deliveries were below the levels for previous years between April and June in the Mpumalanga province. However, maize deliveries were higher than in previous years.

**Figure 39. Commercial maize deliveries per month, Mpumalanga**



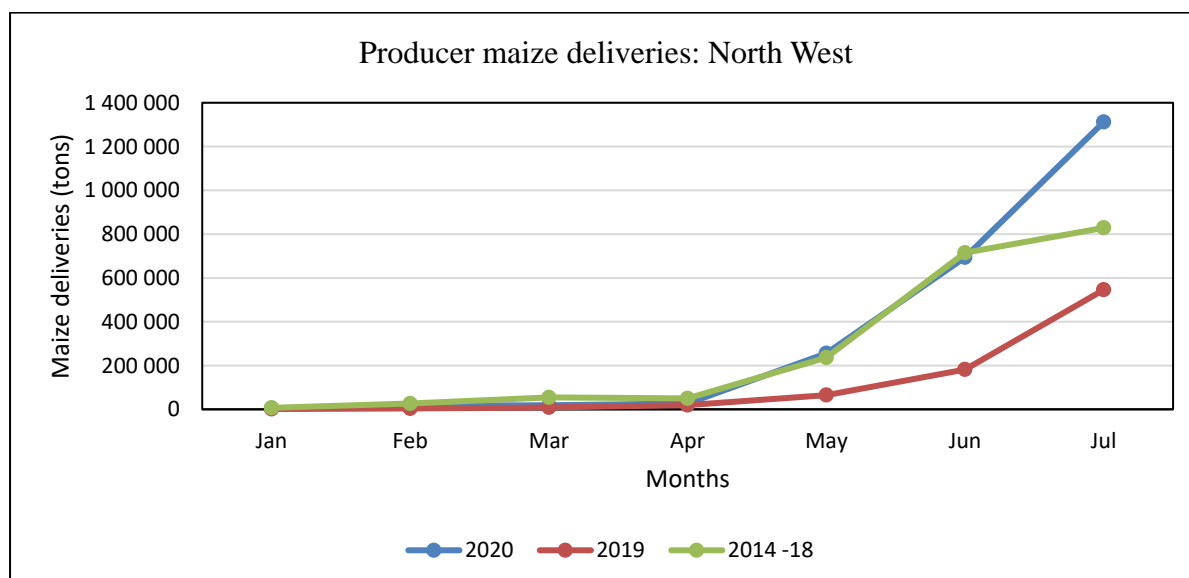
Similarly, Figure 40 shows that maize deliveries in the Free State were lower than in the previous years for April and June, and higher than average in July.

**Figure 40. Commercial maize deliveries per month, Free State**



In the North West, maize deliveries were in line with the 2014-18 averages for most months, until June. In July, the quantities delivered were significantly higher than in previous years.

**Figure 41. Commercial maize deliveries per month, North West**



In sum, the analysis limited disruptions in the quantities of maize deliveries as a result of the pandemic and lockdown measures. However, there are some variations according to maize type (white vs yellow) and province. For example, the analysis has indicated that white maize deliveries recovered a month later than that of yellow maize. Also, the price of white maize fluctuated more than that of yellow maize during the months of April and May, showing that white maize prices were more sensitive to the lockdown and uncertainty than that of yellow maize. Some provinces (e.g., North West, Eastern Cape, KwaZulu-Natal) experienced limited

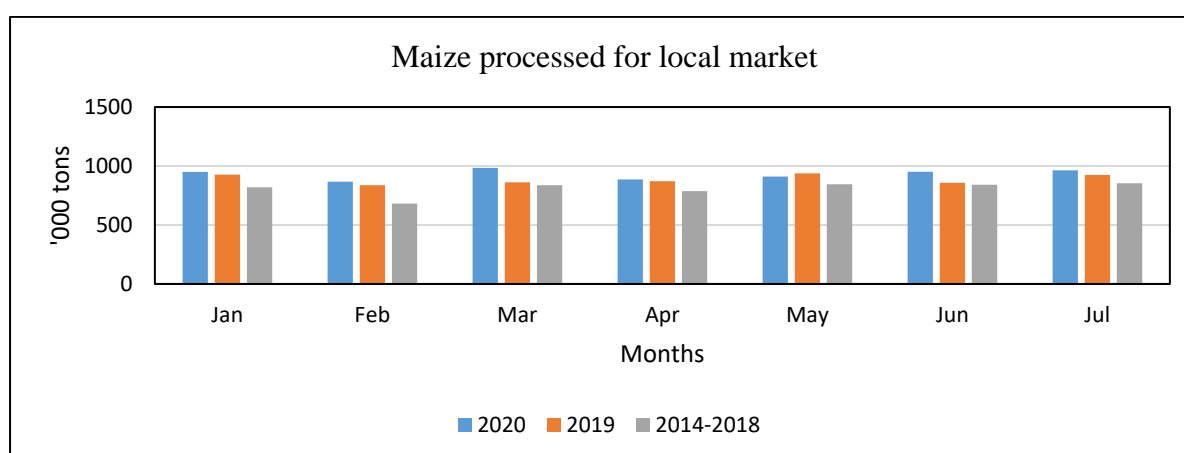
disruptions, with quantities delivered largely in line with or higher than in previous years. However, maize deliveries were lower for some provinces (e.g., Free State, Mpumalanga, Gauteng), particularly between April and June (peak of the lockdown period).

#### 4.2.2. Maize processing

Figure 42 shows the quantities of maize that were processed for human consumption and animal feed during the period February - July 2020. Total maize processed include white maize, which is mainly processed for human consumption, and yellow maize, which is mainly processed for animal feed. For comparison purposes, the quantities that were processed during these months for the past year, and an average trend over the previous 5-year period before 2019, are also presented. The figure shows that the amount of white maize that was processed per month fluctuated more in 2020 during the months under consideration than in previous years. There was an increase in maize processed in March 2020 compared to February 2020, followed drops in April 2020. The major increase in March might be because of increased demand when people were buying in bulk in preparation for the lockdown period.

The declines in maize processed during the months of April 2020 compared to the previous months might be due to the lockdown measures, which restricted movements particularly during the hard lockdown phase in April 2020. While the food sector was considered essential, and therefore exempt from production and trade restrictions, production activities experienced disruptions due to adjustments to new Covid-19 requirements (e.g., social distancing) as well as transport challenges that faced workers in travelling to work. The graph shows that by June 2020, the quantities processed increased, indicating recovery back to the pre-lockdown levels.

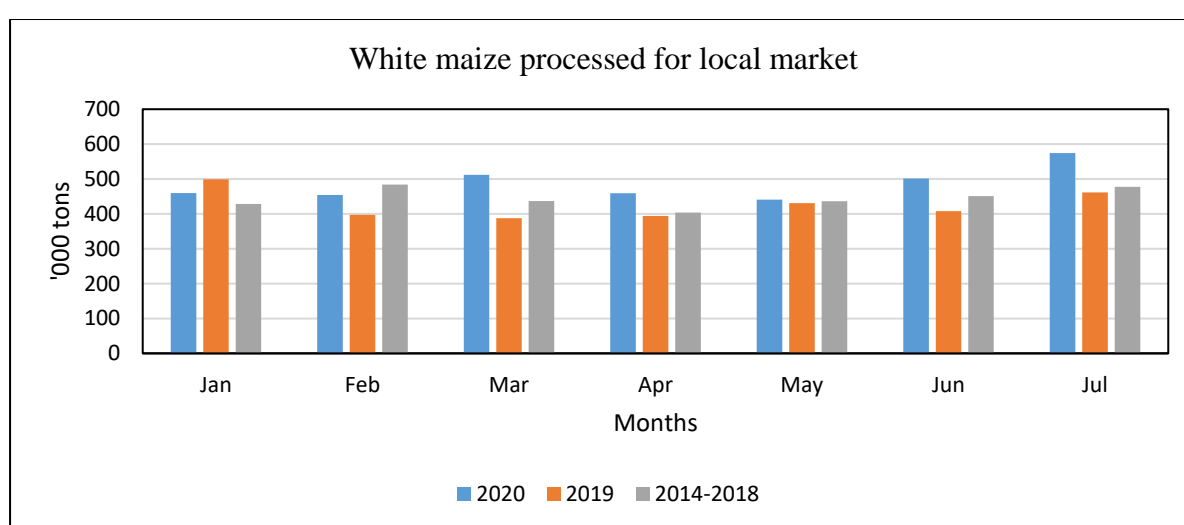
**Figure 42. Quantity of maize processed for the local market**



Source: Authors calculations using SAGIS data

Figure 43 shows that the 2020 white maize processing trend is slightly different from that of the previous year, and the average trend, particularly for the period April and May. While in previous years the quantities processed have increased between April and May as commercial deliveries increased during harvesting that occurs during these months, there was a decrease in May 2020. Compared to previous years, the figure shows that for the year 2020, the quantities of white maize that was processed was higher, except for May when it was at its historical average level. This is in line with expectations, given the high maize production levels reported for 2020.

**Figure 43. Trends in white maize processed for the local market**

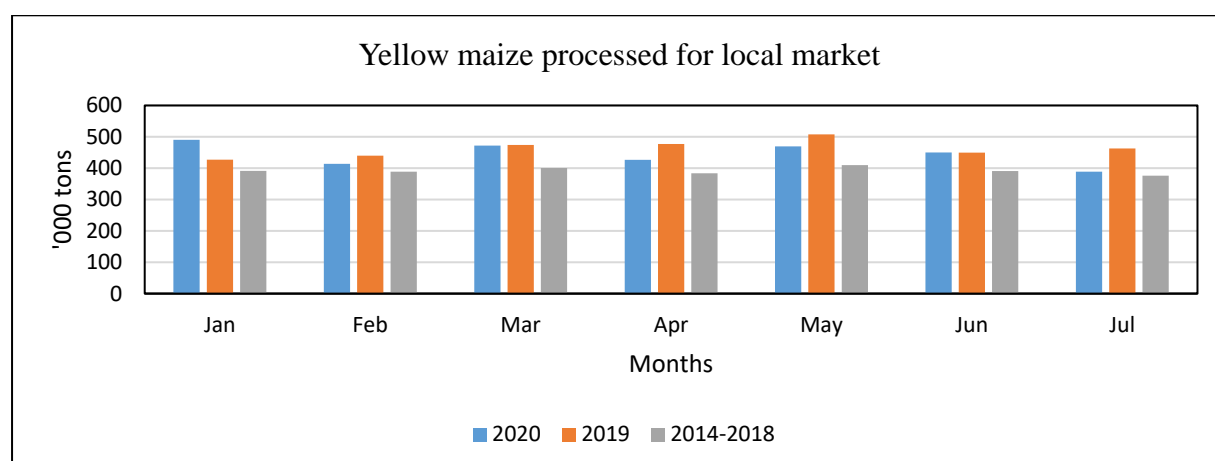


*Source: Authors calculations using SAGIS data*

Figure 44 shows the quantities of yellow maize that were processed for mainly animal feed. The figure shows that the level of yellow maize processing increased by 13% in March 2020 compared to the previous month, followed by a 9% decrease in April 2020 during the hard lockdown. After an increase of just below 9% in May, there was a minor decrease (3%) in the amount of yellow maize that was processed in June 2020. There was a further decrease in July. The shows that there has been an increase in yellow maize processing in recent years, as the 2019 and 2020 values were overall higher than the 2014 – 2018 average. While the 2020 level of yellow maize processing was below that of 2019, it is higher than the average monthly figures for the previous 5 years before 2019. Overall, the pandemic or lockdown regulations had a negligible impact on the amount of yellow maize processed for the market.



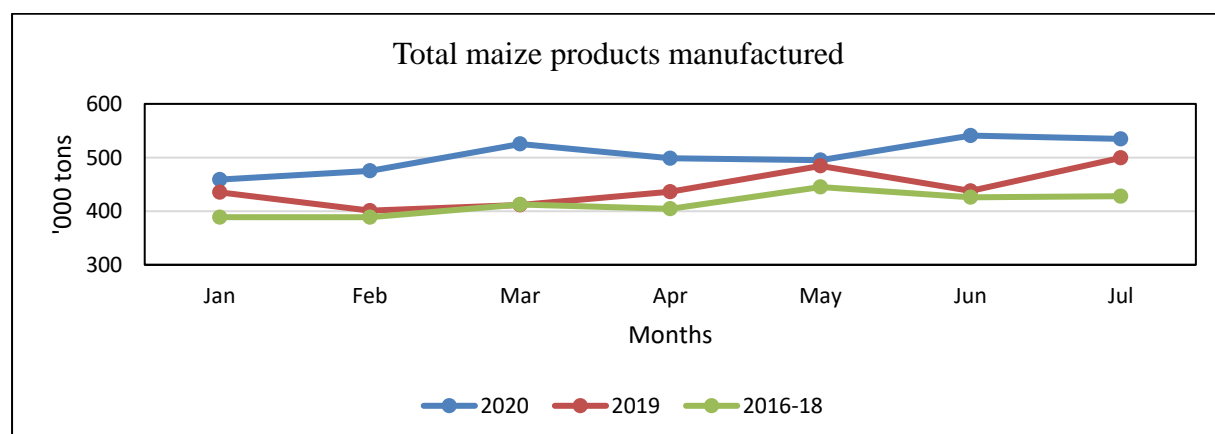
**Figure 44. Quantity of yellow maize processed for the local market**



Source: Authors calculations using SAGIS data

Figure 45 presents the quantities of maize products manufactured during the January to July period. The products include super maize meal, maize chop, maize grits and samp. The figure indicates that there was generally a positive increase in the quantity of maize products manufactured in 2020 than the previous year or in comparison to the average of the three years before 2019. The graph indicates a progressive increase from January 2020 to March 2020, and then a decline in April and May, followed by an increase in June 2020, in the level of manufacturing of maize products. Among the months under consideration, the highest level of maize products manufacturing is usually seen in May in previous years, while it is in June for 2020. The quantity of maize products manufactured in April 2020 grew by 14% compared to that of April 2019. The sharp increase in June 2020 compared to May 2020 can be attributed to the increase in demand for maize products as consumer consumption patterns shifted to staples due to decreases in incomes as well as restricted movements.

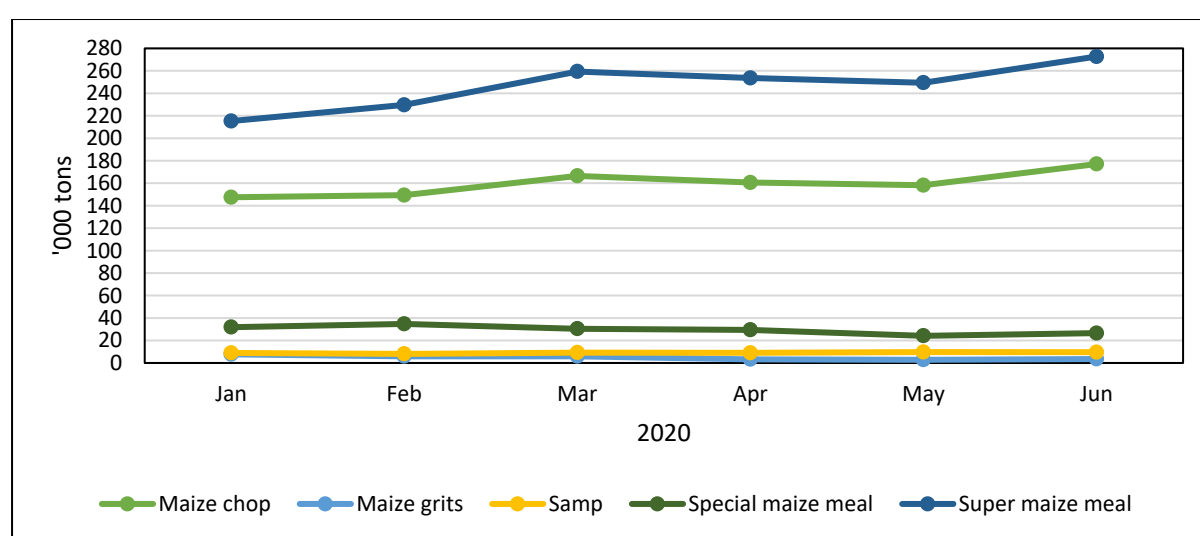
**Figure 45. Quantity of maize products manufactured per month**



Source: Authors calculations using SAGIS data

As shown in Figure 46, the trend in maize products manufactured between January and June 2020 was mainly driven by the movement of two key products – super maize meal and maize chop. The two products increased in March, followed by declines in May and June, and then increased in June. The increase in super maize meal production in March 2020 might have been in response to increased demand, as people stocked non-perishable foods such as maize meal in bulk in preparation for the hard lockdown. The figure shows that samp production remained relatively constant during the period, while special maize meal and maize grits had not yet recovered to their pre-pandemic level by June 2020.

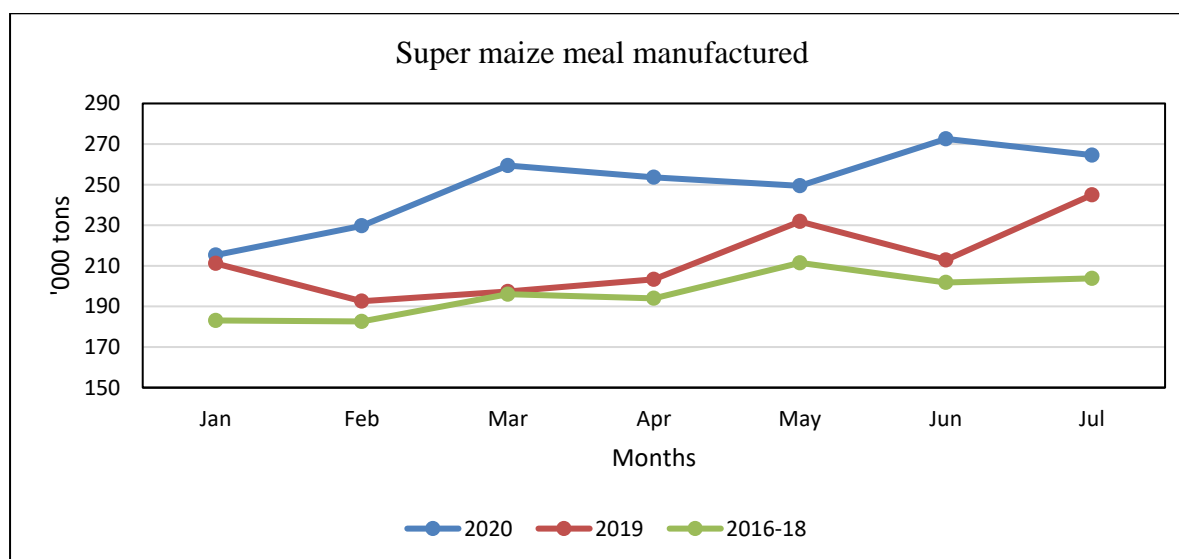
**Figure 46. Main maize products manufactured, January - June 2020**



*Source: Authors calculations using SAGIS data*

Figure 47 shows that the quantities of manufactured super maize meal, experienced decreases in April and May, following an increase in March 2020. This was not in line with previous years, suggesting that the pandemic and lockdown measures might have impacted the production activities, leading to increased fluctuations in the quantities manufactured. However, the quantities of super maize meal manufactured in 2020 were higher than in previous years across all the months under consideration.

**Figure 47. Quantity of super maize meal manufactured**



The quantities of special maize meal manufactured in 2020 fell dramatically between February and May 2020. Figure 48 shows that in February 2020, the quantity of special maize meal manufactured was at a higher level than the average for previous years, and then fell to levels even below the 2019 quantities. While there is evidence of recovery in June, the level of super maize meal manufactured remained below previous years.

**Figure 48. Quantity of special maize meal manufactured**

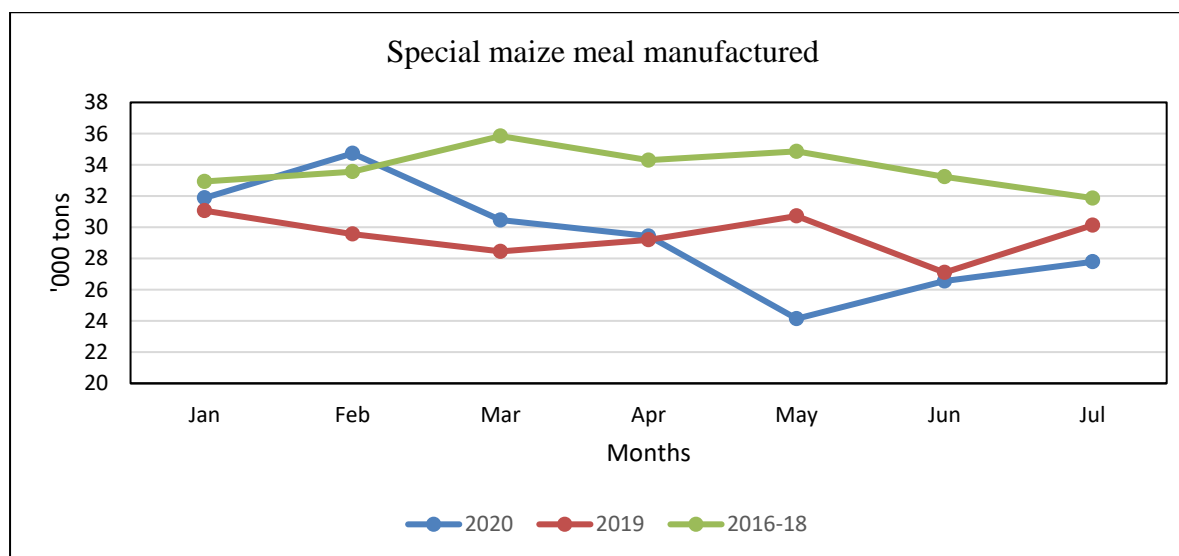
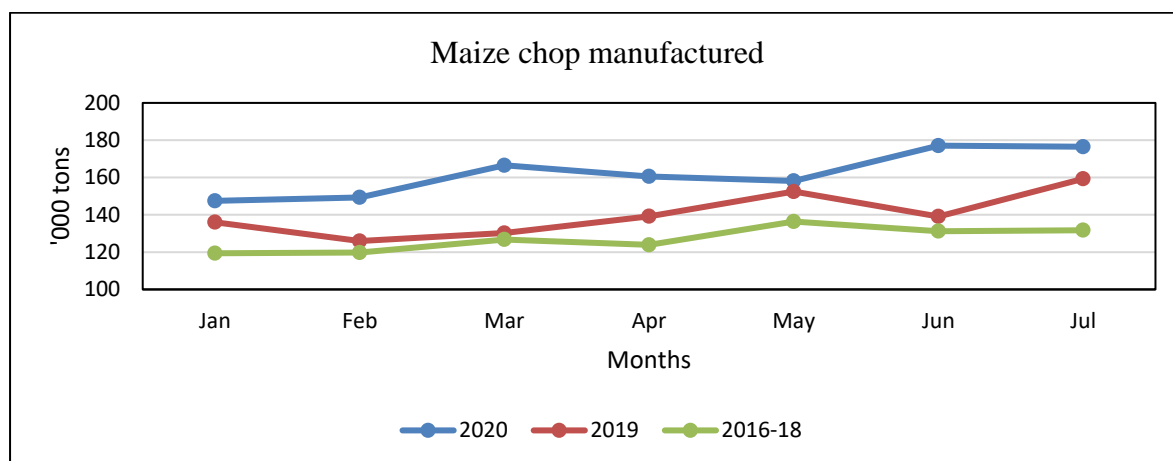


Figure 49 shows that the quantity of maize chop manufactured was higher in 2020 than in previous years across all the months considered. It also shows a different trend for 2020 than in previous years. For example, there was an increase in quantities manufactured in March,

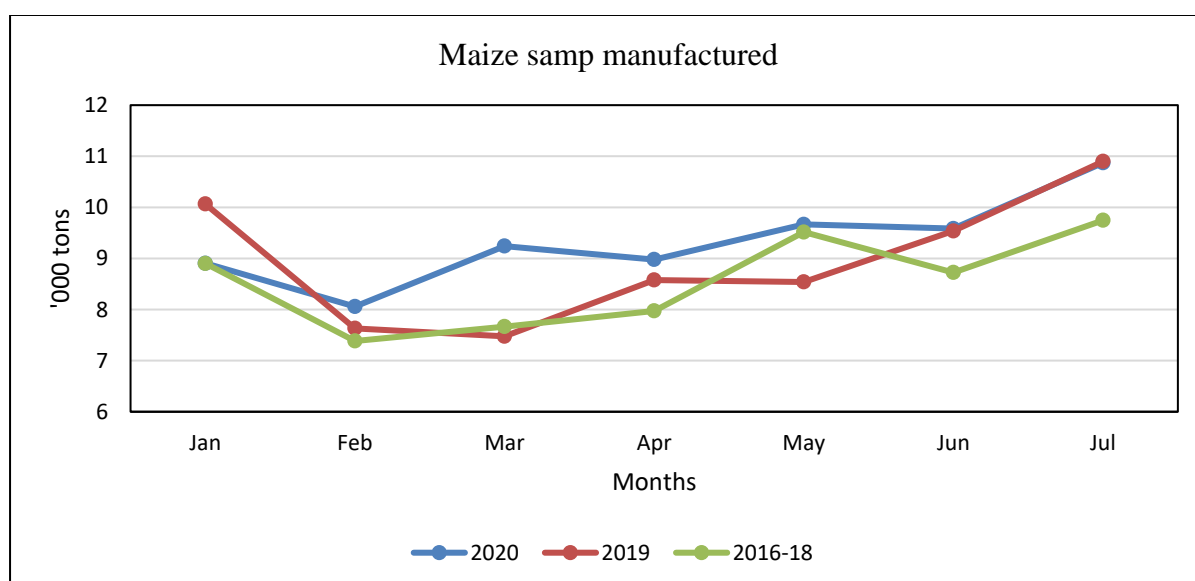
followed by a decrease in April and May. In contrast, the quantities increase until May, and then they decline.

**Figure 49. Quantity of maize chop manufactured**



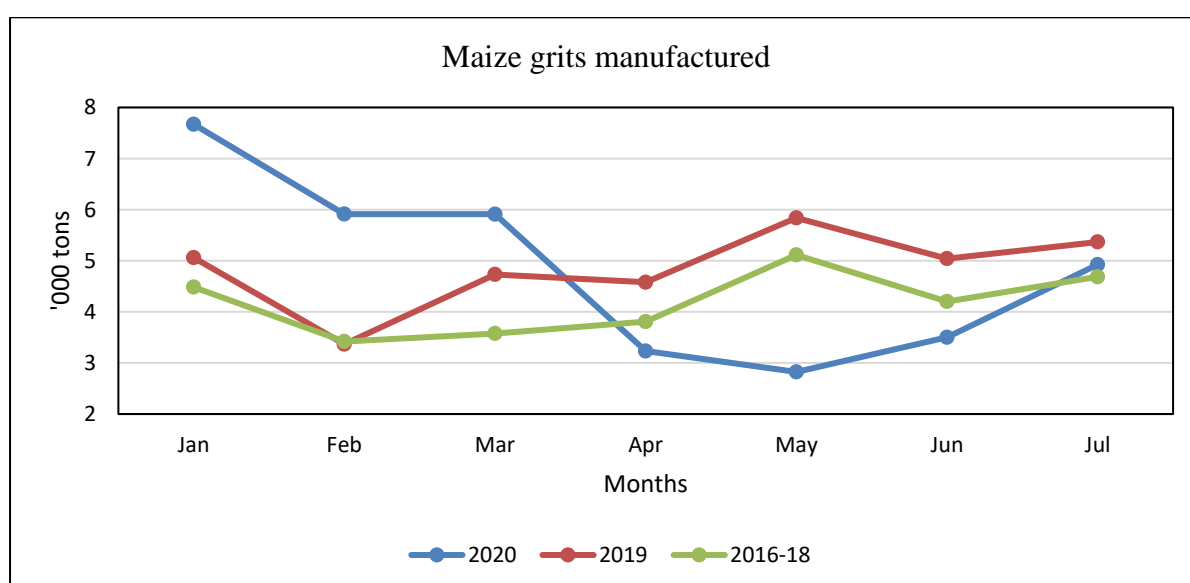
The quantity of samp manufactured was not significantly disrupted by the pandemic or lockdown measures. Figure 50 shows that it remained higher, and in line with previous trends.

**Figure 50. Quantity of maize samp manufactured**



The quantity of maize grits manufactured dropped significantly during the months of March and April 2020, as shown in Figure 51. While the quantities usually increase during April and May, the graph shows decrease in these months, suggesting a negative effect of the pandemic. The grits manufacturing levels increased in June and July.

**Figure 51. Quantity of maize samp manufactured**



To summarise, the analysis has shown that maize manufacturing was to a large extent disrupted by the pandemic and lockdown measures. The magnitude of the disruption differed according to specific products. For example, there is evidence that suggests that the levels of special maize meal and grits manufacturing were more affected than that of super maize meal. However, the disruptions were temporary, and the duration varied (one month for super maize meal, and about three months for special maize meal). All the major maize products analysed indicated recovery in July, back to their pre-Covid-19 levels (often higher).

#### **4.2.3. Exports and imports of maize and maize products**

South Africa is net exporter of maize. Due to a good harvest of maize, the country is expected to export about 2.6 million tonnes of maize, which is 47% higher than the quantities exported in the previous year. No imports of maize are expected. For the 2020/21 season, USDA (2020) estimates that the production of maize will decline by 21% when compared to the expected 2019/20 crop to 12.6 million tons. Despite this expected drop in production, the country is expected to continue as a net exporter of maize because of relatively high stock levels (USDA, 2020). After an initial decrease between March and April, Figure 52 indicates that the quantities of maize exported in 2020 increased significantly in June, driven by increased international demand due to a weak Rand. The quantity of maize exported remained higher than in previous years. The figure shows that the lockdown measures might have resulted in a temporary drop in export levels in April, followed by good recovery to reach record levels in June.

**Figure 52. Quantity of maize export exported, 2014 - 2020**

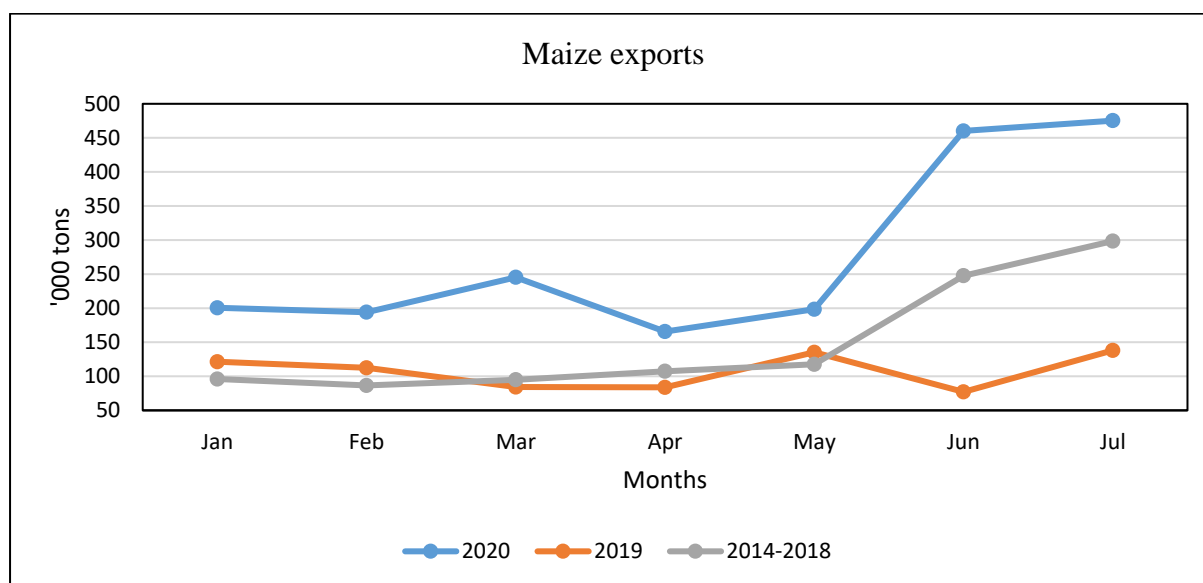
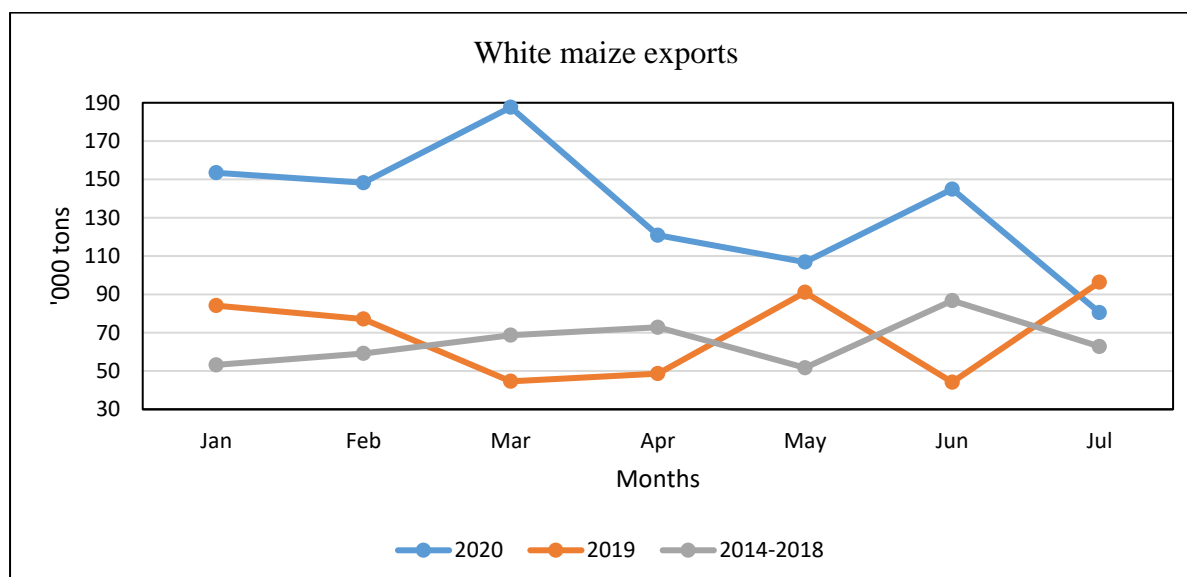
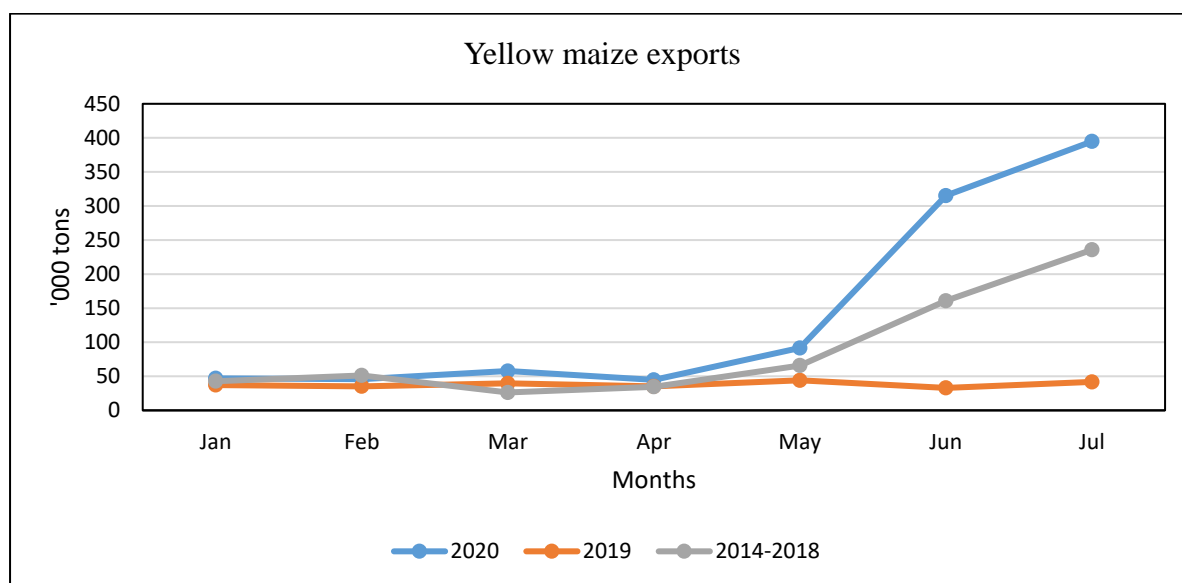


Figure 53 and Figure 54 show that the trends in white and yellow maize differed. Exports of white maize were high in March, followed by a significant drop in April and May, and then a recovery in June (Figure 53). In contrast, the exports of yellow maize were low in March, followed by an increased in May, June and July. For both white and yellow maize, the trends largely follow previous years, except that the 2020 figures are higher in magnitude.

**Figure 53. Quantity of white maize export exported, 2014 – 2020**

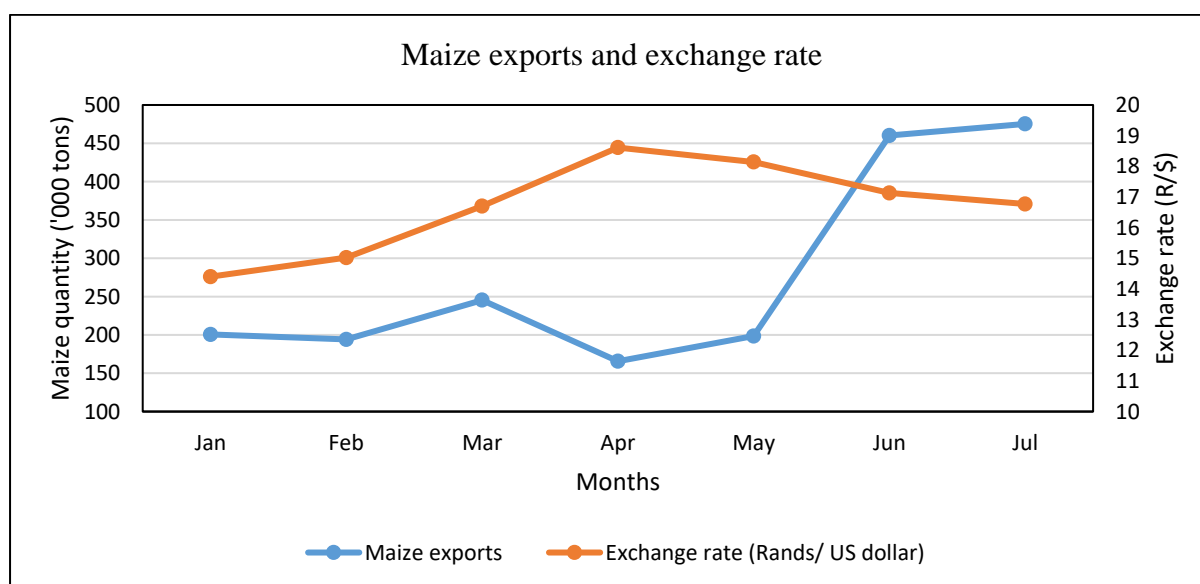


**Figure 54. Quantity of yellow maize export exported, 2014 – 2020**



As shown in Figure 55, the quantity of maize exported increased when the value of the local currency weakened (i.e. exchange rate increased) before the pandemic (Jan – Mar). However, despite the further weakening of the local currency in April, the quantity exported decreased, suggesting that disruptions due to lockdown measures. The graph shows that from May onwards, maize exports increased despite the local currency strengthening, in response to increase local deliveries.

**Figure 55. Maize exports and exchange rate**



In addition, the export realisation price for 2020 remained stable at around R2,200 per tonne, which explains why the producers continued to export more despite a strengthening local currency. The local producer prices of maize decreased in May and June.

**Figure 56. Export realisation price for maize**

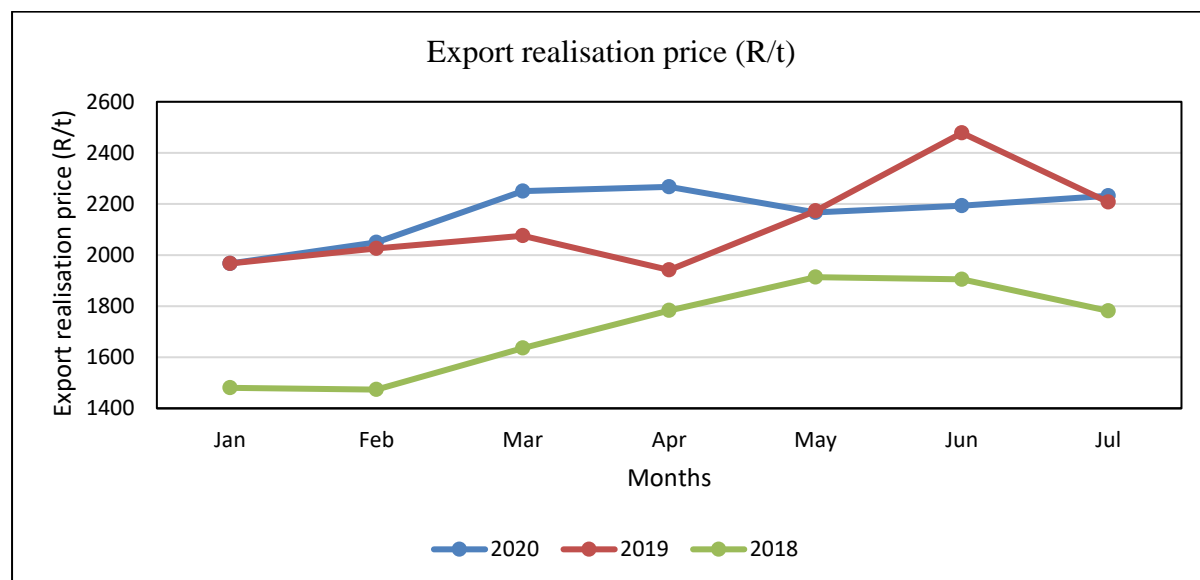
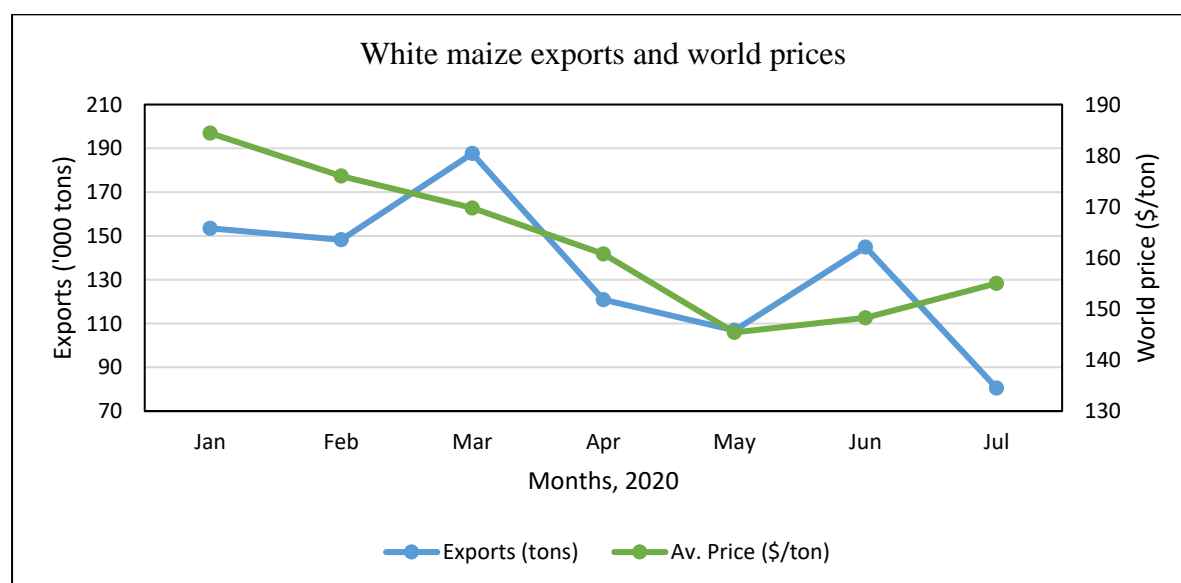


Figure 57 shows that the world prices of maize decreased until May and increased somewhat in June and July. The graph shows that the exports of white maize decreased as world price decreased and recovered in June when the world price increased. This suggest that the local producer is sensitive to the world price of white maize, exporting more when the price is high.

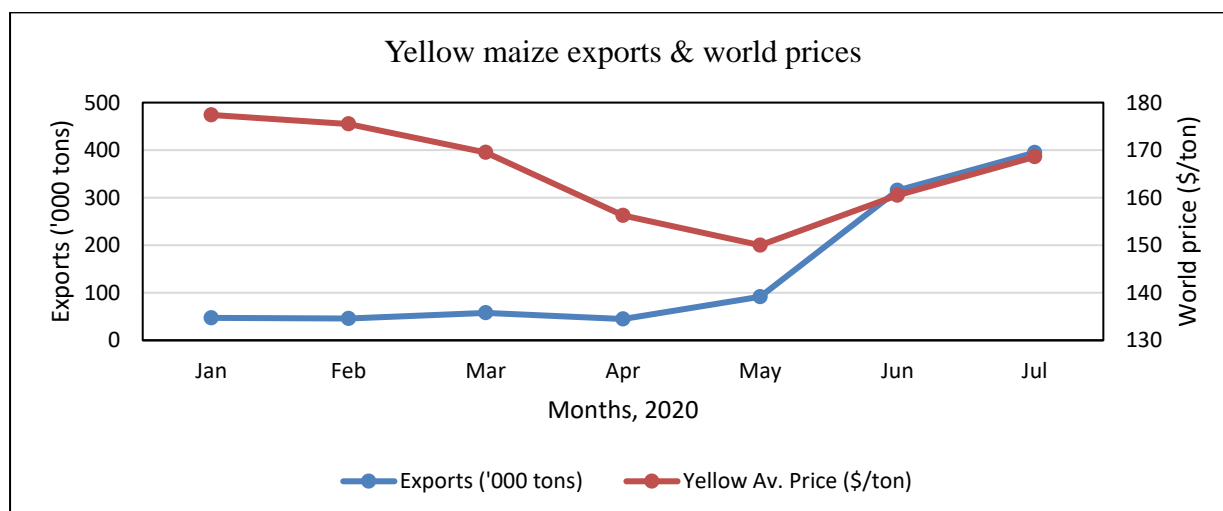
**Figure 57. White maize exports and world price**





Similarly, the exports of yellow maize increased from May onwards, following the trend in global price (Figure 58).

**Figure 58. Yellow maize exports and world prices**

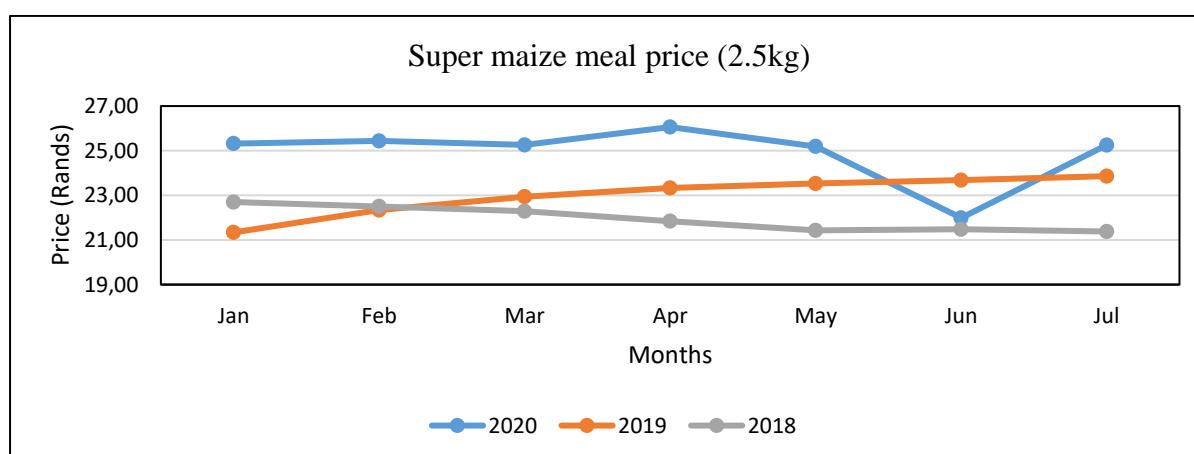


Source: International Grain Centre; South African Reserve Bank

#### 4.2.4. Prices of maize products

The prices of basic food items were affected by the pandemic and lockdown measures. Figure 59 presents the price of super maize meal during the February to July period. The figure shows that the price of super maize meal increased in April, followed by a drop in May and June. Compared to previous years, the price of super maize meal fluctuated significantly in 2020. By July 2020, the price of super maize was back to its pre-Covid-19 level.

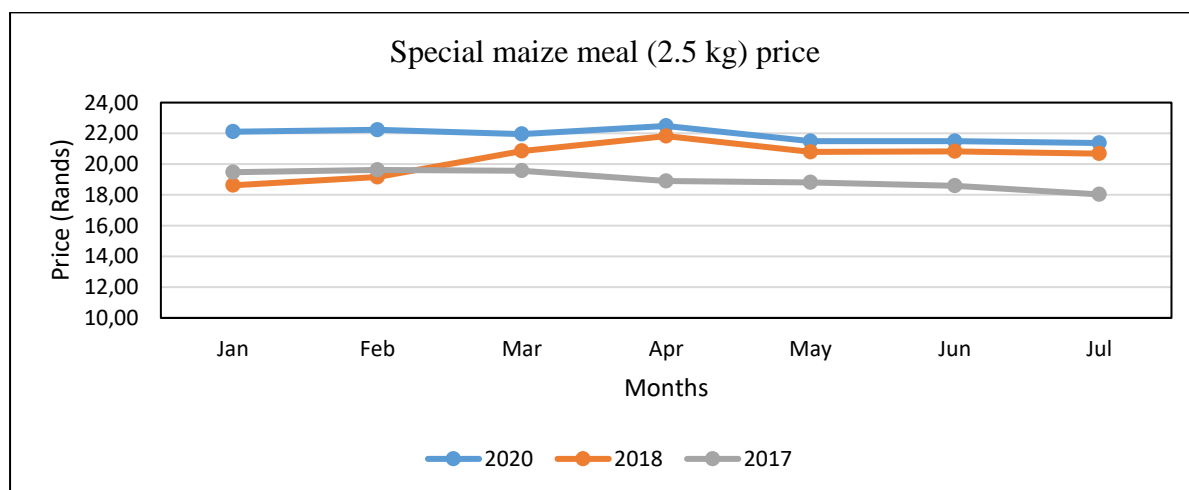
**Figure 59. Price of super maize meal**



Source: Stats SA 2020

The price of special maize largely followed its previous years trends and remained largely constant (Figure 60).

**Figure 60. Price of special maize meal**

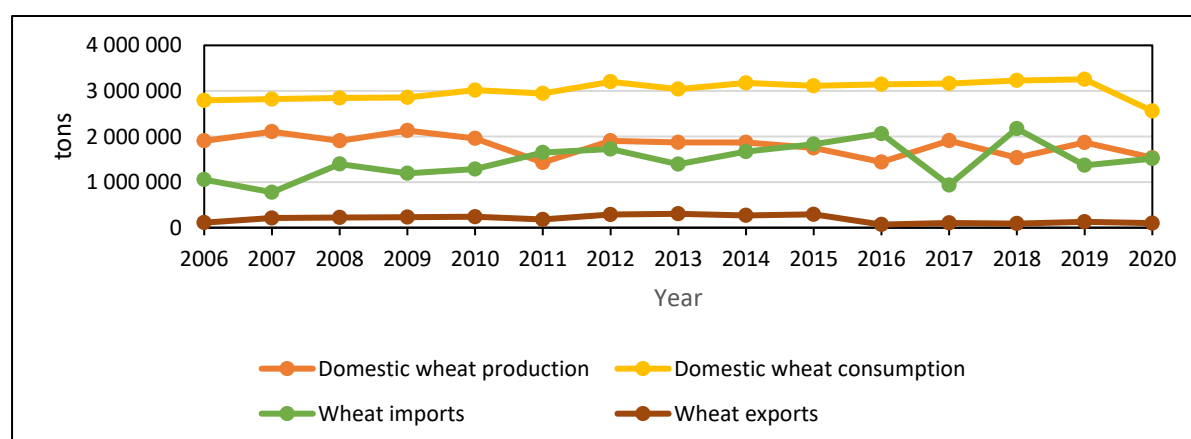


### 4.3. Wheat

#### 4.3.1. Local wheat production and deliveries

Wheat is an important winter cereal in South Africa. The country does not produce enough wheat to meet domestic demand, and imports about 50% of wheat consumed in the country. For the 2019/20 winter season, the country produced 1.5 mil tons of wheat, against domestic demand of 2.6 mil tons (a 21% drop from the 2018's domestic consumption level) (Figure 61). The production activities of the 2019/20 winter season were not affected by the pandemic or lockdown restrictions, as it was already at the harvesting stage when the outbreak occurred in South Africa.

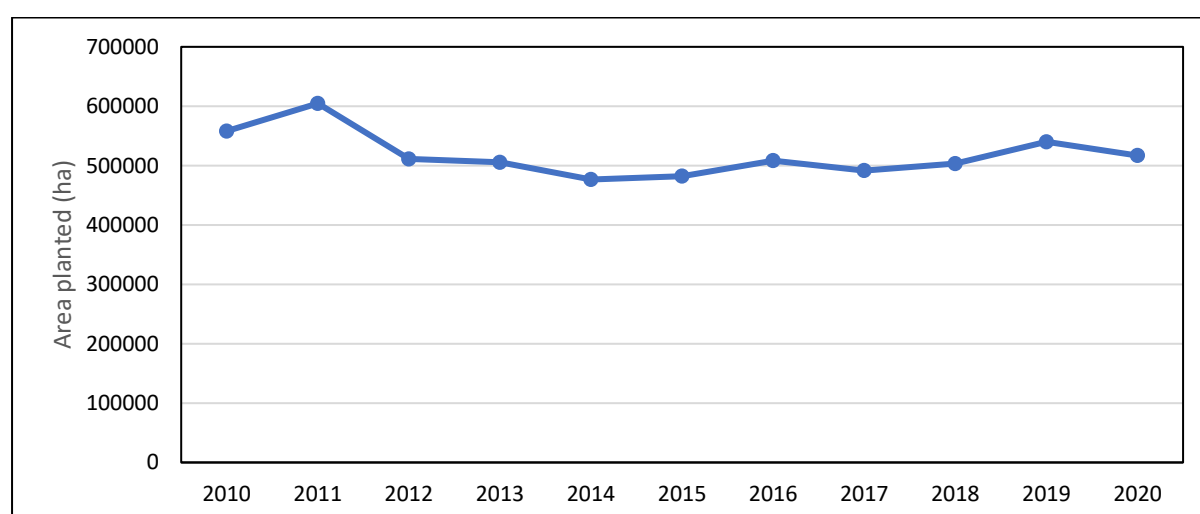
**Figure 61. Wheat production, consumption, imports and exports in South Africa, 2005 – 2019**



Source: Authors calculations using SAGIS data

For the 2020/21 winter season in South Africa, the Crop Estimate Committee projects that the land under wheat cultivation will experience a 4% decline in comparison to the 2019 area cultivated (Figure 62). The decrease in the area under wheat is not necessarily because of the pandemic or regulatory measures, but because of the responses of the farmers to the price or profit signals. The wheat planting process is highly mechanised and does not fall under the category of those activities that are disrupted due to the need to enforce social distancing measures. Also, the estimated decline in 2020 is within the average trend.

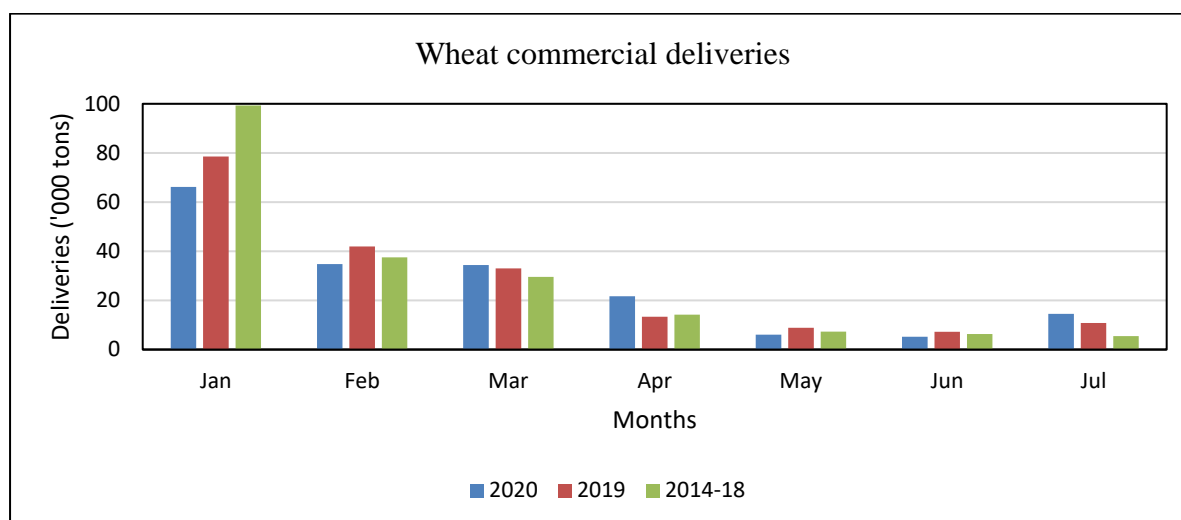
**Figure 62. Area under wheat, 2010 – 2020**



*Source: Authors calculations using CEC data, July 2020*

Figure 63 shows the quantity of wheat deliveries during the months of February to July. The graph shows that more tons of wheat were delivered in March and April 2020 than in previous years. However, lower quantities of wheat were delivered in May and June 2020 when compared to the averages for previous years. While these figures suggest that there might have been disruptions in wheat deliveries in May and June, these seem to be small and negligible, as the trend of declining deliveries is in line with previous years. The figure shows that the deliveries had recovered in July, as the quantity of wheat delivered for 2020 was higher than that of previous years.

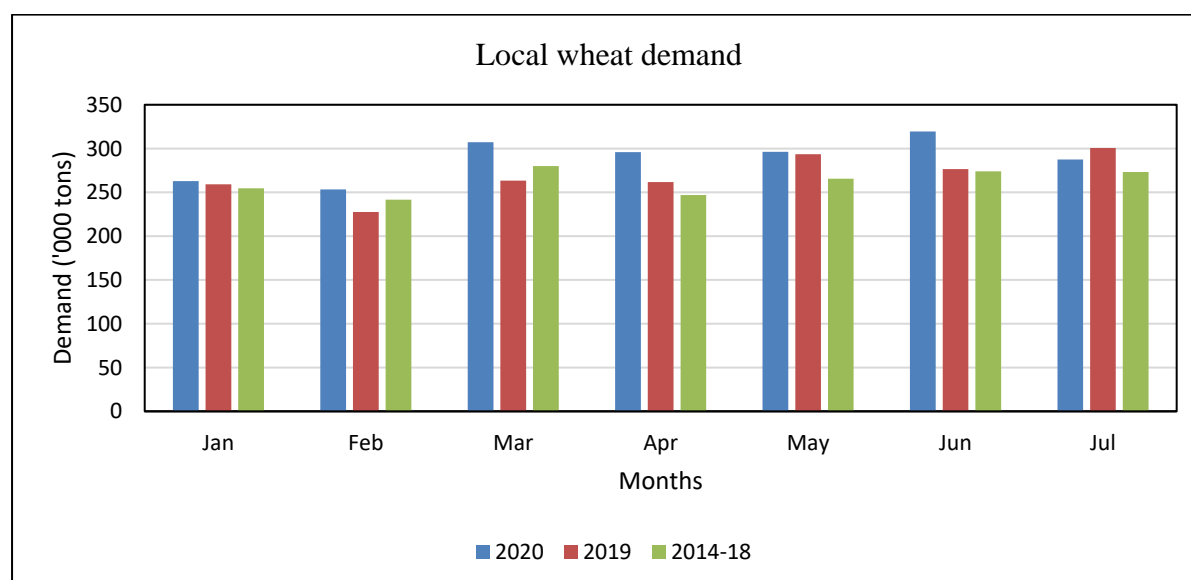
**Figure 63. Monthly commercial deliveries of wheat**



*Source: Authors calculations using SAGIS data*

As shown in Figure 64, there was a sharp increase in local demand in March 2020, the first month, followed by decreases and stabilisation of demand in April and May, respectively. Subsequently, local demand for wheat increased in June. Overall, local demand of wheat was higher in 2020 than in previous years for most of the months, except for July, where local demand for 2020 was lower than that of the previous year (2019).

**Figure 64. Local demand for wheat**



Comparing the monthly deliveries of wheat by commercial producers and local demand, indicates that local demand outstrips deliveries by a wide margin during the months under review (Figure 65). As such, the country imports to meet the excess demand for wheat.

**Figure 65. Local wheat deliveries and demand**

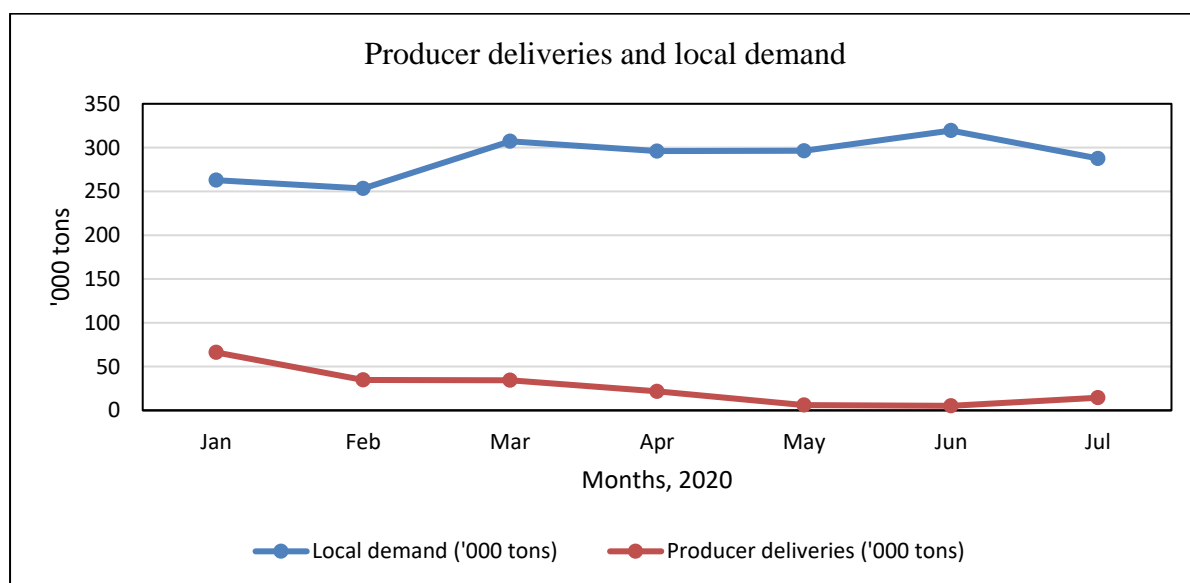


Figure 66 show that the 2020 producer prices of wheat increased between March and April, and fell between May and June, after which it increased in July. While wheat prices have generally increased over the years, the graph shows that wheat prices started at their 2019 January price, increased even before the pandemic (February), before further increases in March and April.

**Figure 66. Local wheat price movements**

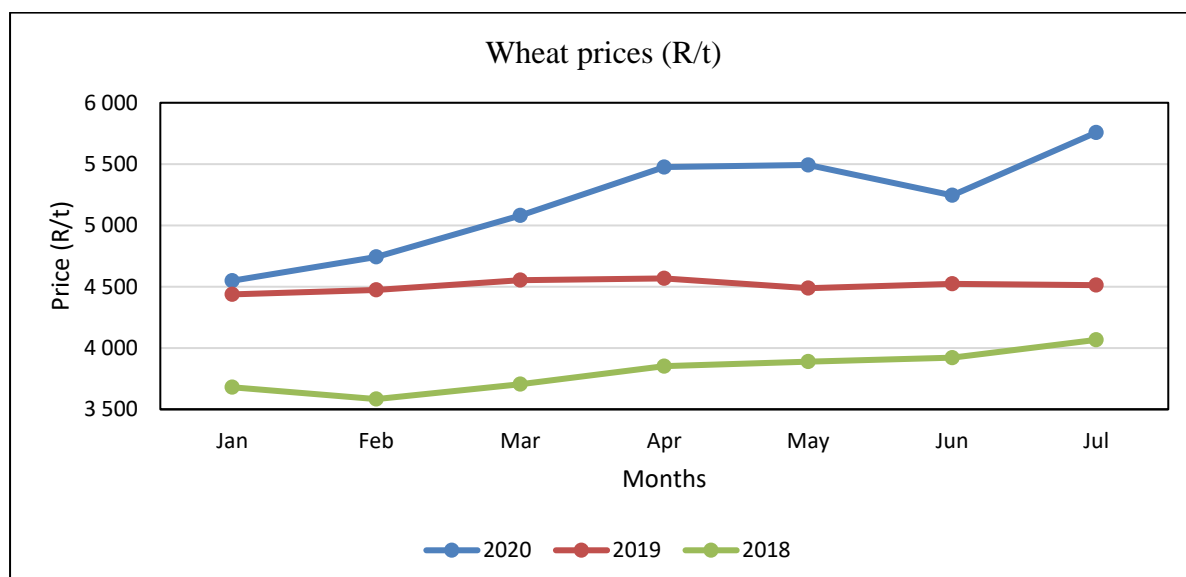
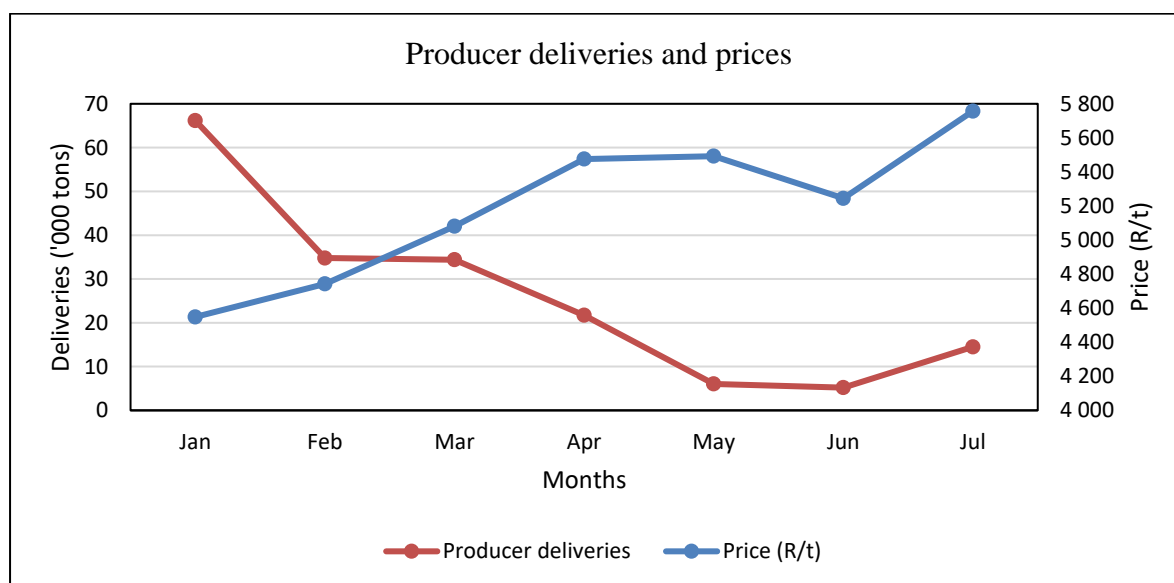


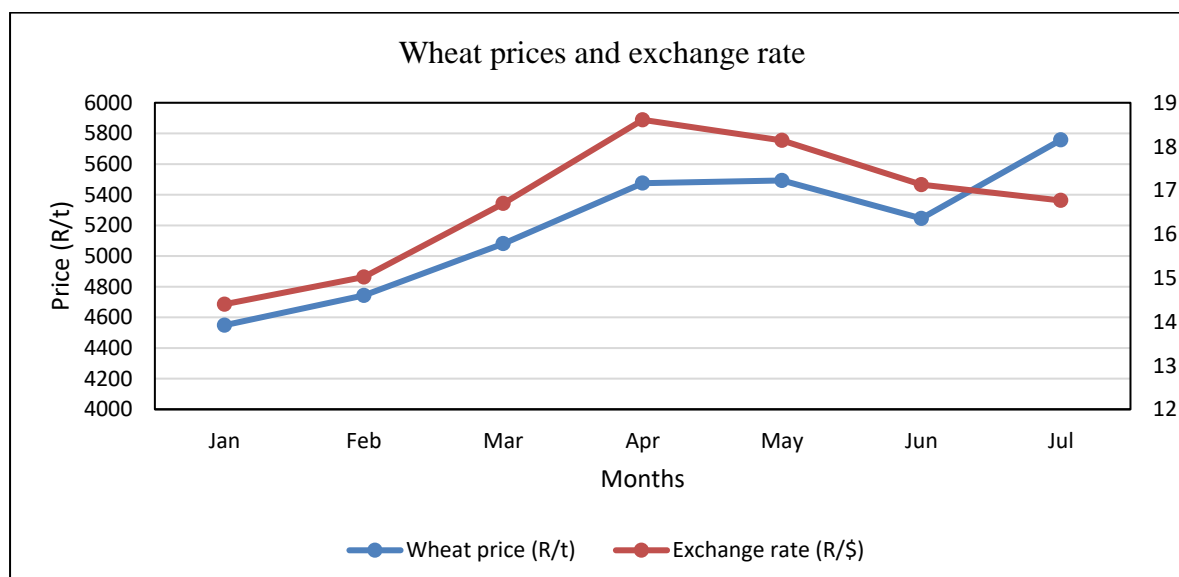
Figure 67 shows that the local producer prices increased as wheat deliveries decreased, highlighting the price increase was mainly driven by dwindling local supplies amidst increasing local demand.

**Figure 67. Wheat deliveries and local producer prices**



Given the need for imports to meet local demand, Figure 68 shows that the exchange rate is the main driver of local prices, with the price increase associated with local currency depreciation. As such, the pandemic and lockdown measures affected the local price of wheat through their impact on the local currency, which depreciated significantly during the first few two months of the lockdown period (March and April).

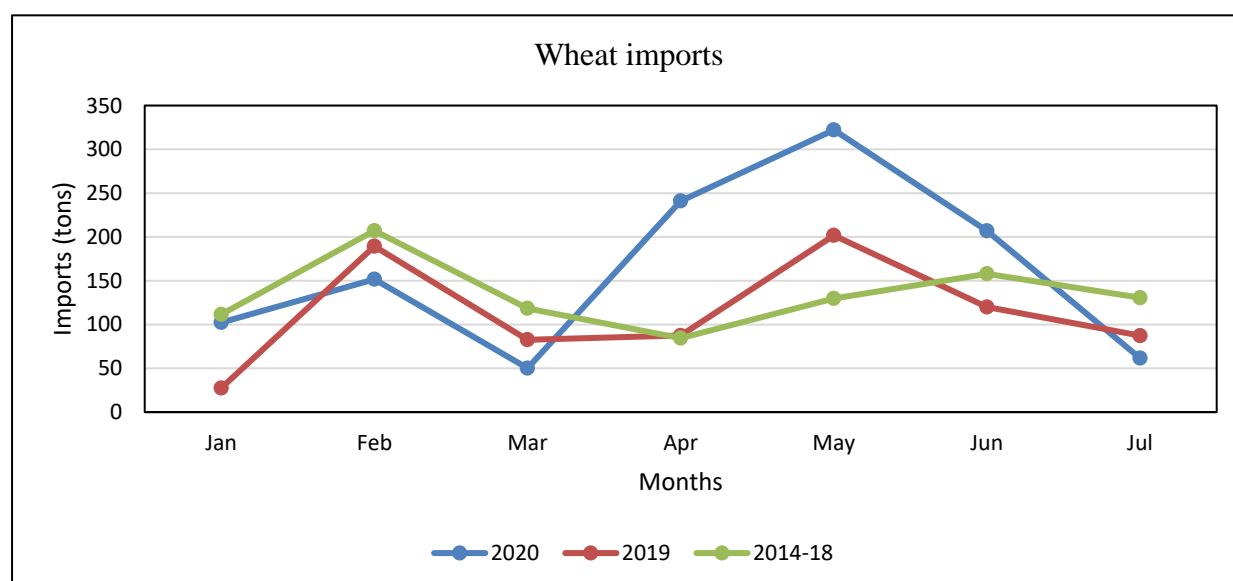
**Figure 68. Wheat prices and exchange rate**



While global supply chains were disrupted due to the Covid-19 pandemic amidst closure of borders by many countries, the country has been able to import enough wheat to meet its domestic demand. Figure 69 shows that the quantity of wheat that is imported reached its

minimum in March 2020, and increased thereafter and reached its maximum in May 2020, during the months under consideration. These levels of wheat imports correspond to Figure 63, indicating that wheat imports were required during the months where smaller quantities of wheat were delivered by the local commercial producers. While the imports of wheat largely continued with minimum disruptions, fears remain that export restrictions from major wheat exporters such as Russia, Canada and Ukraine might cause shortages of wheat, or price increases. Overall, there is enough wheat across the globe, as the amount of global wheat production in 2020 increased.

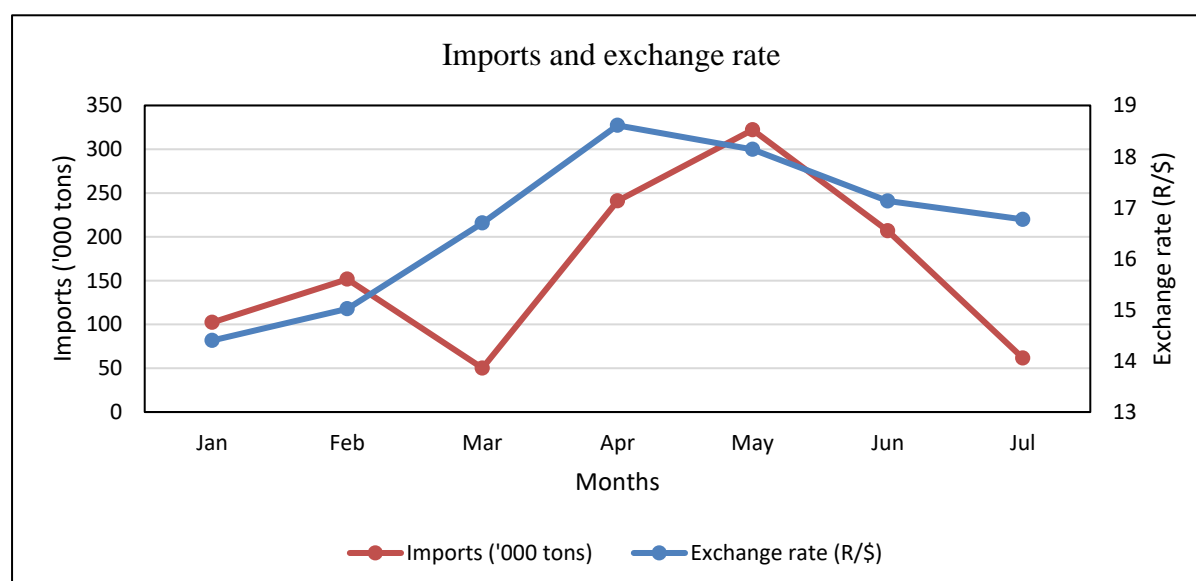
**Figure 69. Wheat imports, January – July**



*Source: Authors calculations using SAGIS data*

The level of imports increased between March and reached its peak in May, despite local currency depreciation which led to increased local prices in the same period (Figure 70). However, the graph indicates that the amount of wheat imported fell dramatically in July, even as the exchange rate was appreciating. This suggests that the amount of wheat imported was not very sensitive to the exchange rate in that period.

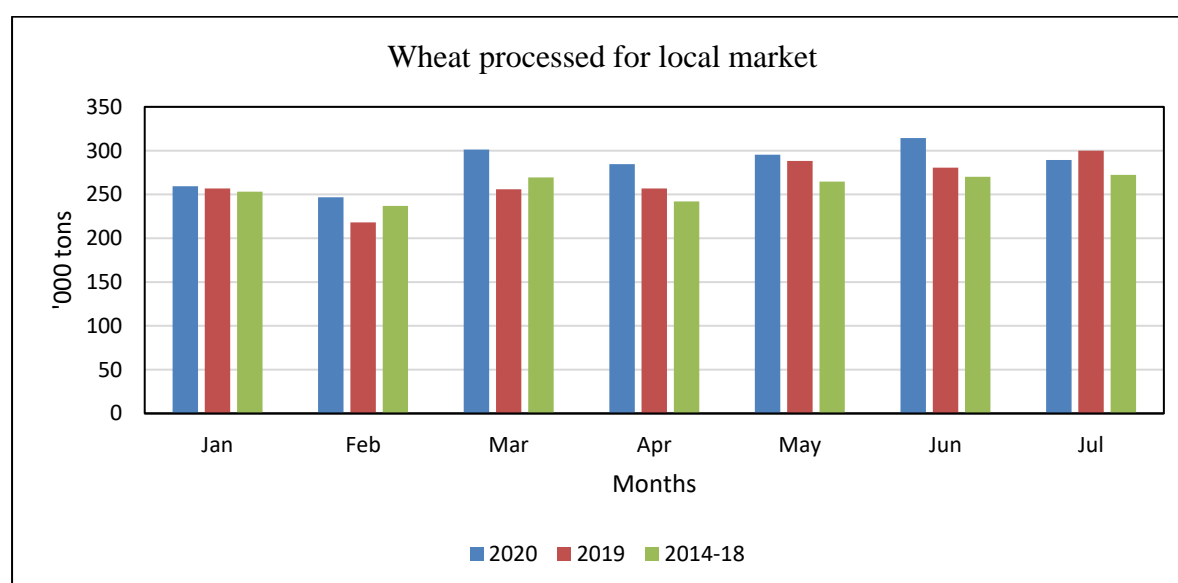
**Figure 70. Wheat imports and exchange rate**



#### 4.3.2. Wheat processing

The quantities of wheat that were milled were largely unaffected by the pandemic and lockdown measures. Figure 71 shows a minor drop in the quantities processed in April compared to March, followed by an increase in May and June. This minor drop in April is in line with the historical trends, and the quantities processed quickly recovered and were higher than the March level in June 2020. The June level is not in line with the previous year and its historical averages, which usually drop during the month of June.

**Figure 71. Quantities of wheat processed for the local market**

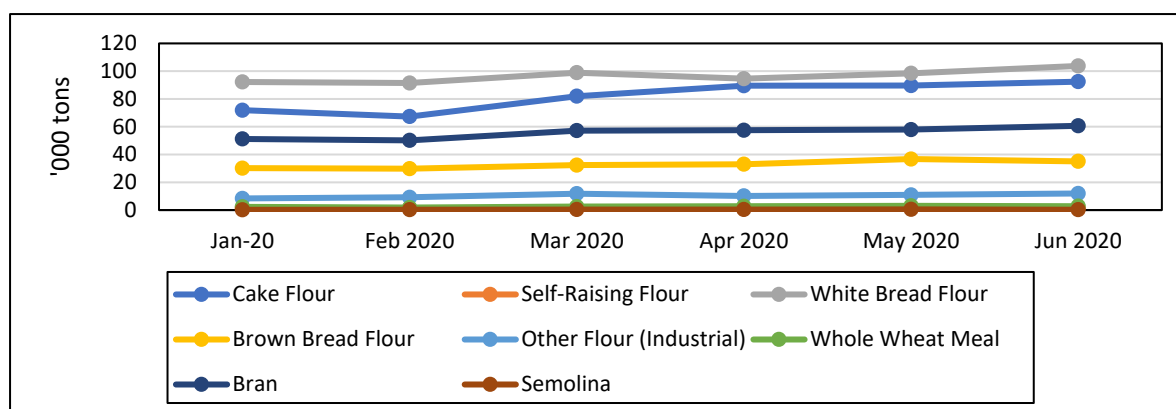


Source: Authors calculations using SAGIS data



Figure 72 shows the quantities of wheat products that were manufactured per month between January and June 2020. The figure shows that the quantities of wheat products manufactured increased in March (particularly for cake flour, white bread flour and bran), followed by a steady decline in April when the country entered the hard lockdown period. The graph shows that manufacturing activities generally stabilised during the months of May and June 2020.

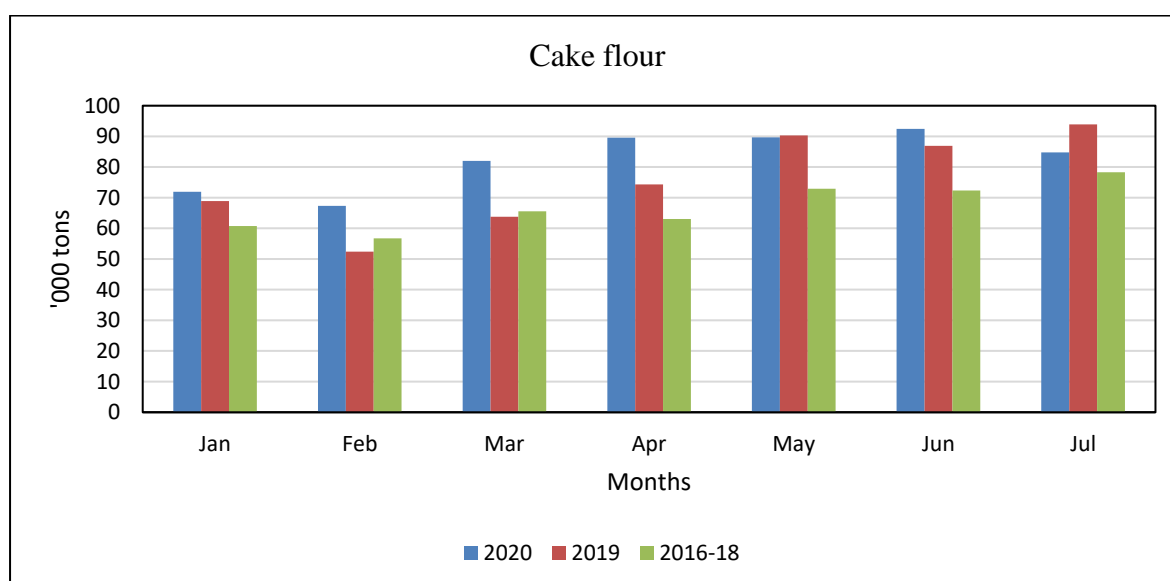
**Figure 72. Wheat products manufactured per month, January to June 2020**



*Source: Authors calculations using SAGIS data*

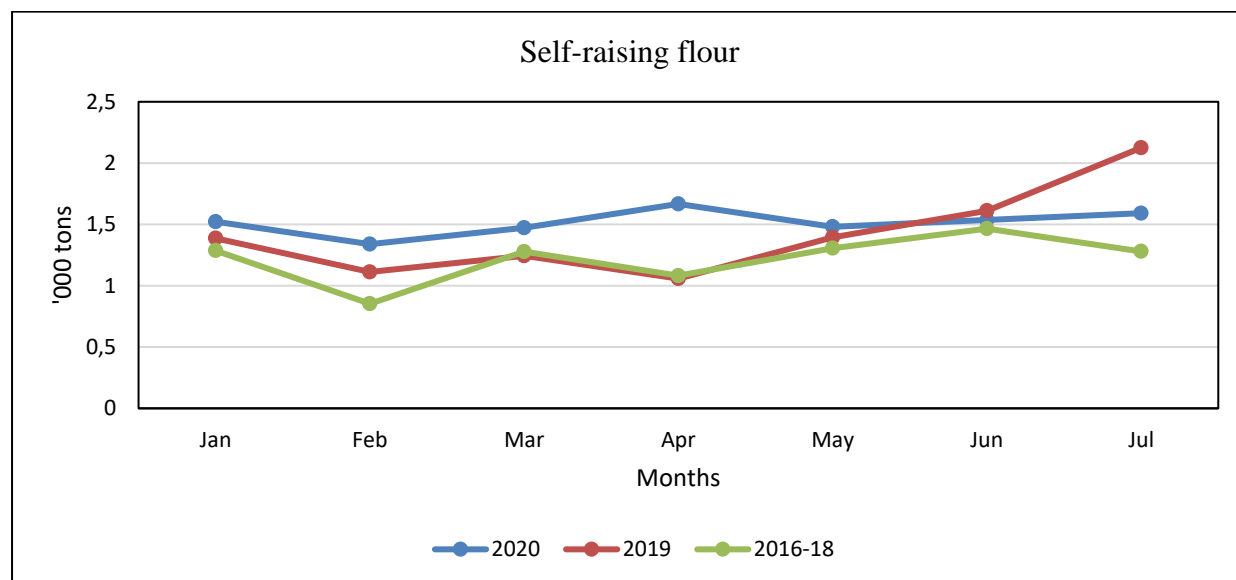
The quantity of cake flour manufactured in 2020 was generally higher than in previous years, as shown in Figure 73. The graph shows there was limited disruption in the milling of cake flour due to the pandemic or lockdown measures.

**Figure 73. Quantity of cake flour manufactured**



Similarly, Figure 74 shows that the quantity of self-raising flour manufactured was largely in line with previous years, with limited evidence of negative impact of the pandemic and lockdown measures.

**Figure 74. Quantity of self-raising flour manufactured**



The quantity of white bread flour shows evidence of some level of disruption during the month of April, particularly when compared to the level for 2019 during the same month (Figure 75). However, the 2020 figure is a few tonnes below the 2019 level and increased in May and June 2020.

**Figure 75. Quantity of white bread flour manufactured**

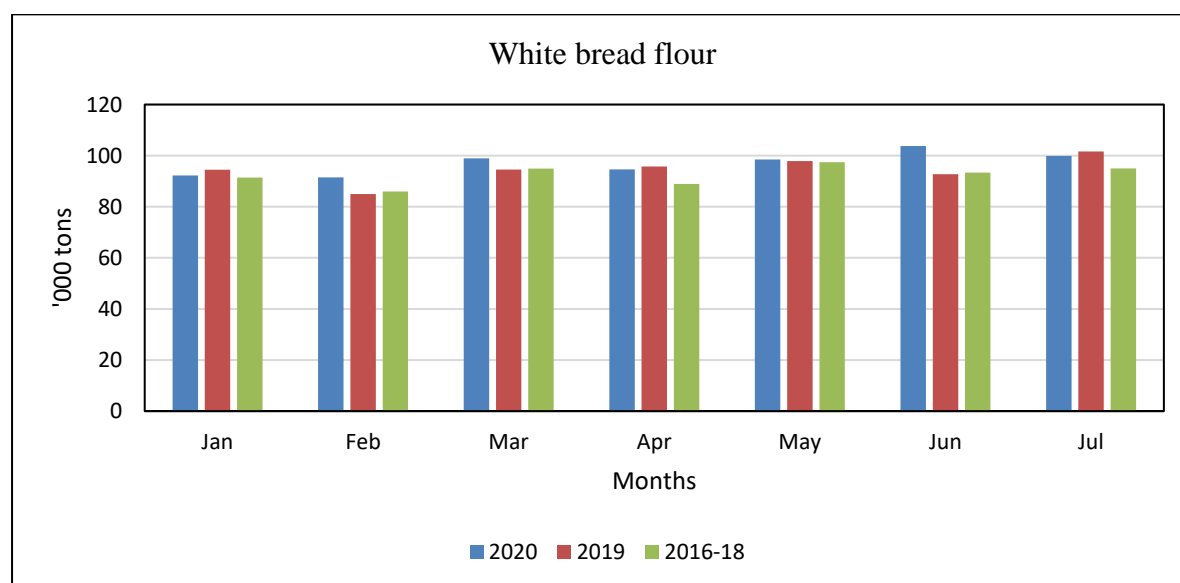


Figure 76 shows that brown bread flour produced was largely in line with trends from previous years, indicating limited impact of the pandemic.

**Figure 76. Quantity of brown bread flour manufactured**

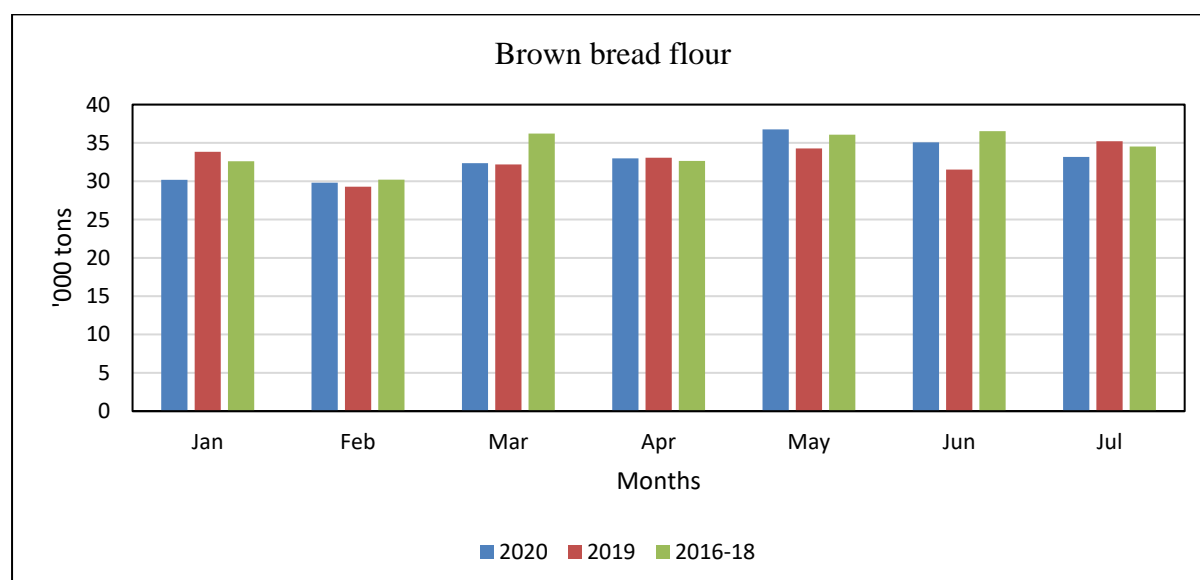
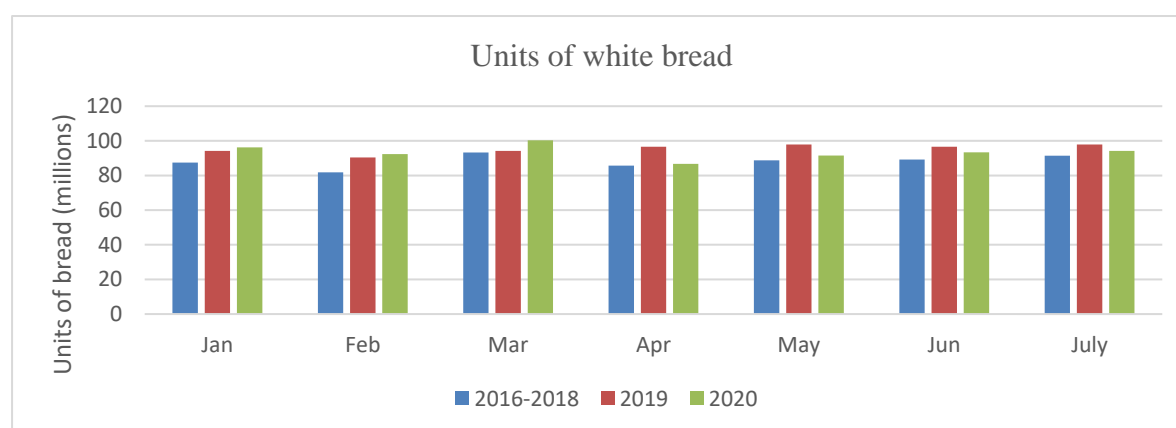


Figure 77 shows the units of white bread produced a few months before and during the pandemic and lockdown period in South Africa. The figure shows that the units of white bread produced dropped in February 2020, and then increased by about 9% in March 2020. This was followed by a significant drop in April 2020 (14%), during the hard lockdown period, and a recovery in May 2020 when the lockdown restrictions were eased. In comparison to the previous year, the number of bread units produced in March 2020 were higher than in March 2019, and lower than in previous years for April, May and June. Instead, the production levels for April and May were consistent with the 2016 – 18 levels.

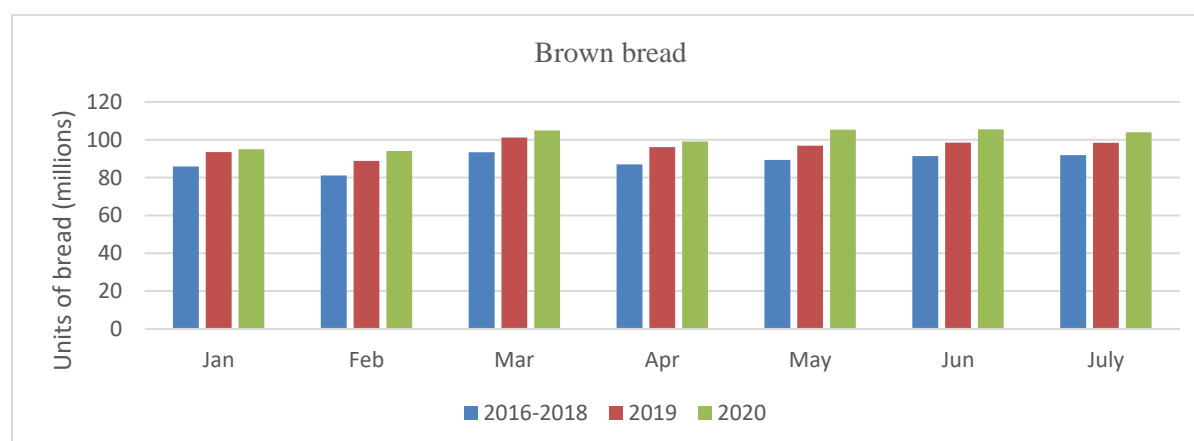
**Figure 77. Quantities of white bread produced, Jan – May 2020**



Source: Authors calculations using SAGIS data

The trend in the production of brown bread was like that of white bread, as Figure 78 shows. The production levels were stable in January and February, followed by a huge jump upwards in March, a decline in April, and then recovery in May. Unlike white bread, the production levels in May were at the same level as that in March.

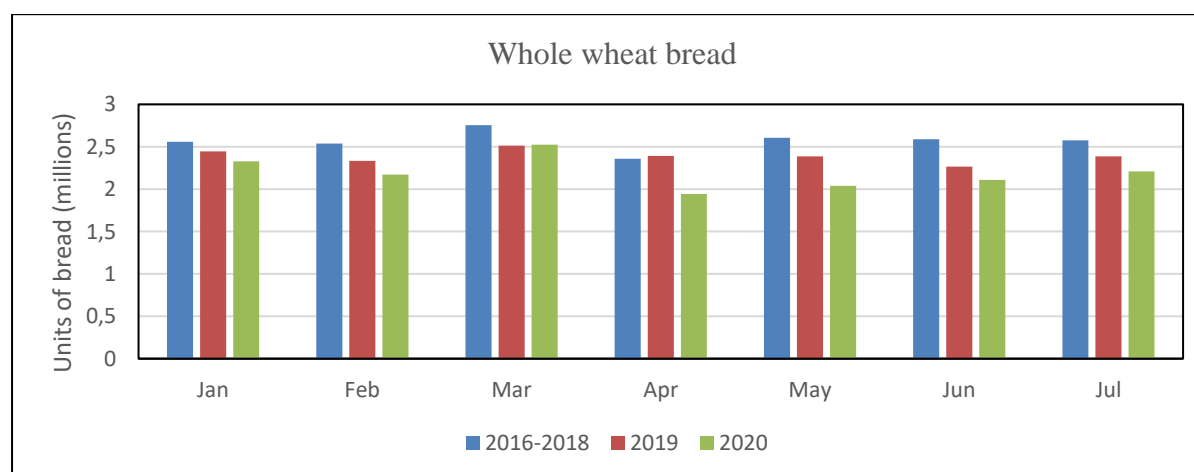
**Figure 78. Quantity of brown bread produced**



*Source: Author's calculations using SAGIS data*

Figure 79 shows that on average, the production of whole wheat bread declined by 19% in April 2020 when compared to April 2019. Moreover, although the production is showing a recovery in May 2020, it has significantly dropped by 15% compared to May 2019. The temporary closure of some firms due to positive Covid-19 cases could be the reason for this massive disruption. In some instances, lockdown measures such as the travel ban and required traveling permit have disrupted the production as some employees were unable to go to work during the hard phase of the national lockdown.

**Figure 79. Quantities of whole wheat bread produced**

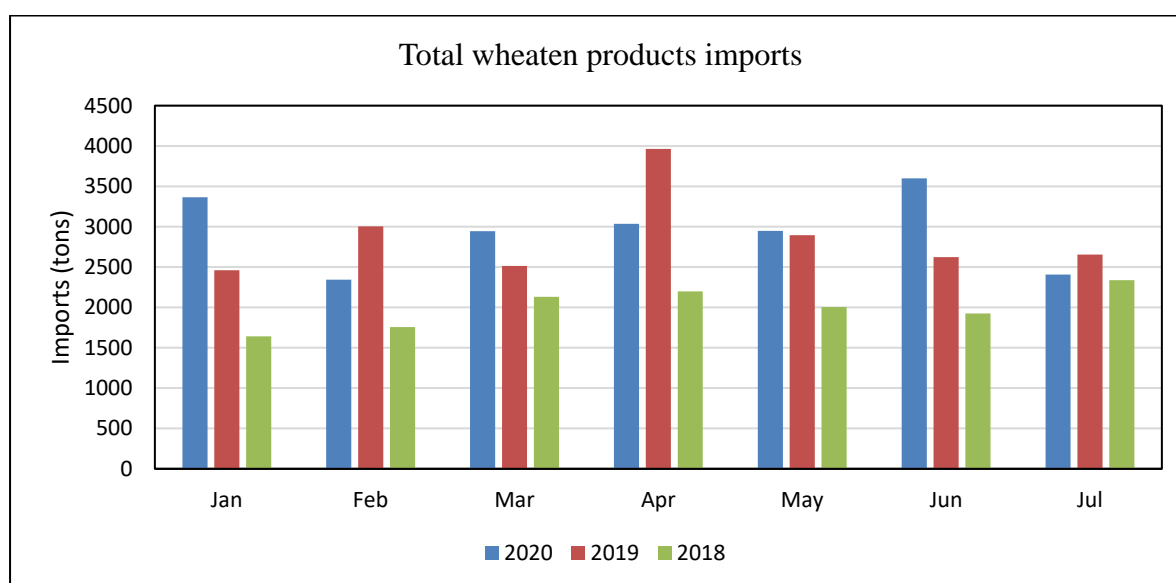


*Source: Author's calculations using SAGIS data*

### 4.3.3. Imports and exports of wheat products

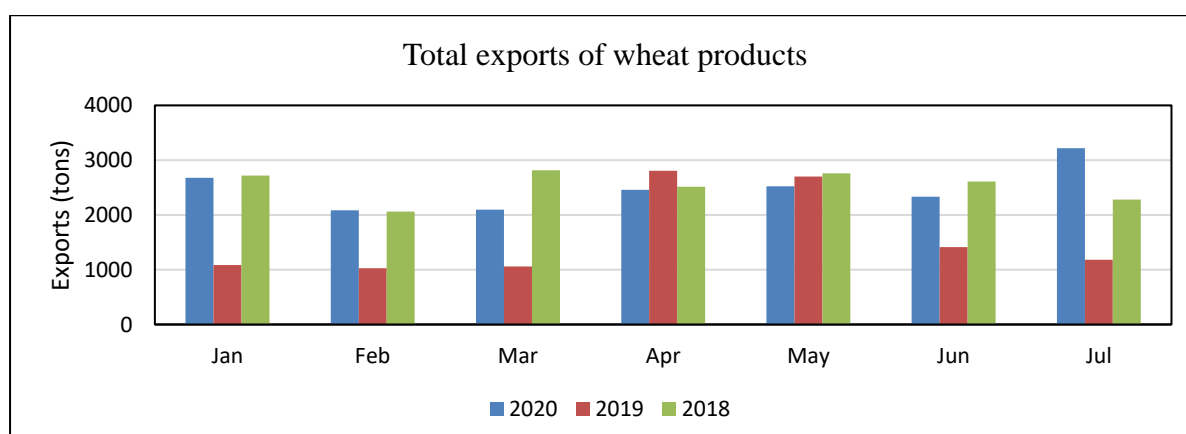
South Africa imports wheat products, and the main products include cake flour, white bread flour, brown bread flour and bran. Figure 80 shows that the imports of wheaten products remained constant during the months of March, April and May. However, the 2020 import levels of wheat imports were higher than the previous years in March, and below the 2019 level in April. The figure does not provide evidence that suggests that imports of wheat products was significantly disrupted by the pandemic and lockdown measures.

**Figure 80. Total wheaten products imported**



South Africa exports some wheat products. The main products are cake flour, white bread flour, and brown bread flour. Figure 81 indicates that the exports of wheaten exports was also in line with previous years and months during the lockdown period, suggesting limited evidence of disruption.

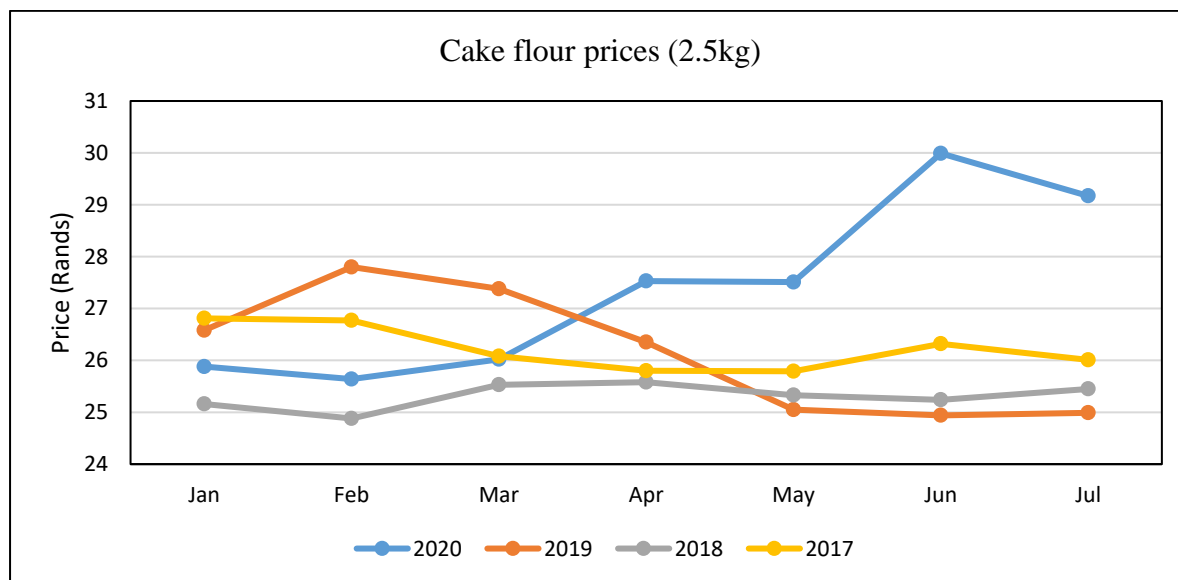
**Figure 81. Total wheaten products exports**



#### 4.3.4. Prices of wheat products

The prices of cake flour increased significantly from March 2020, reaching its peak in June (Figure 82). This is in constraints to previous years, suggesting that the price increase was as a result of supply chain disruptions due to lockdown measures.

**Figure 82. Cake flour prices**



The price of bread flour decreased in April 2020, followed by increases in May to July, as presented in Figure 83. The figure shows that, unlike cake flour prices, the 2020 bread flour prices were below prices of previous years.

**Figure 83. Bread flour prices**

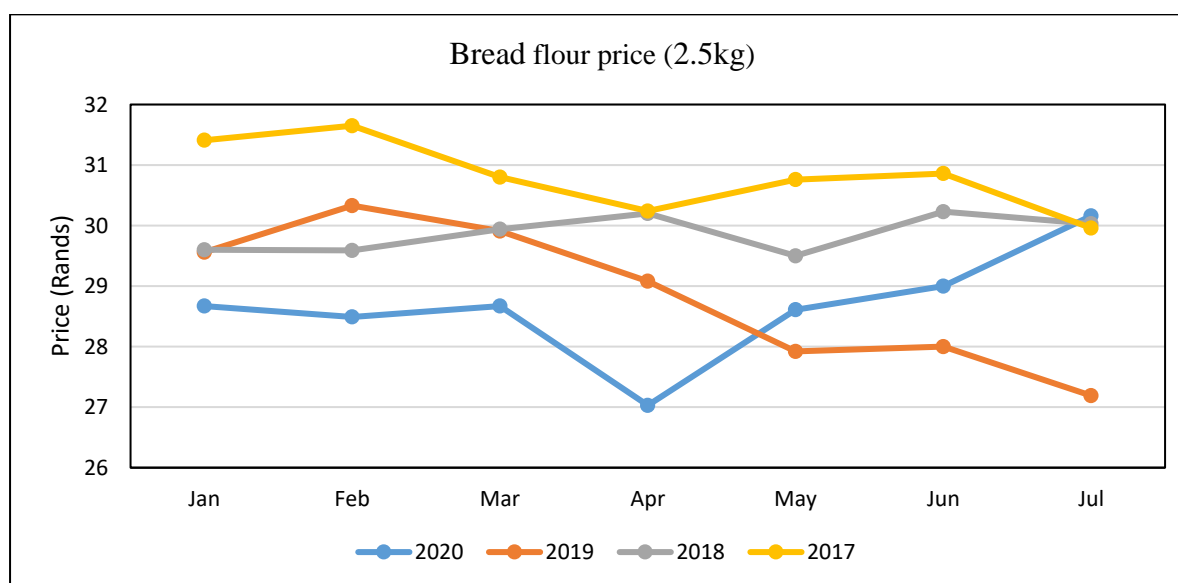
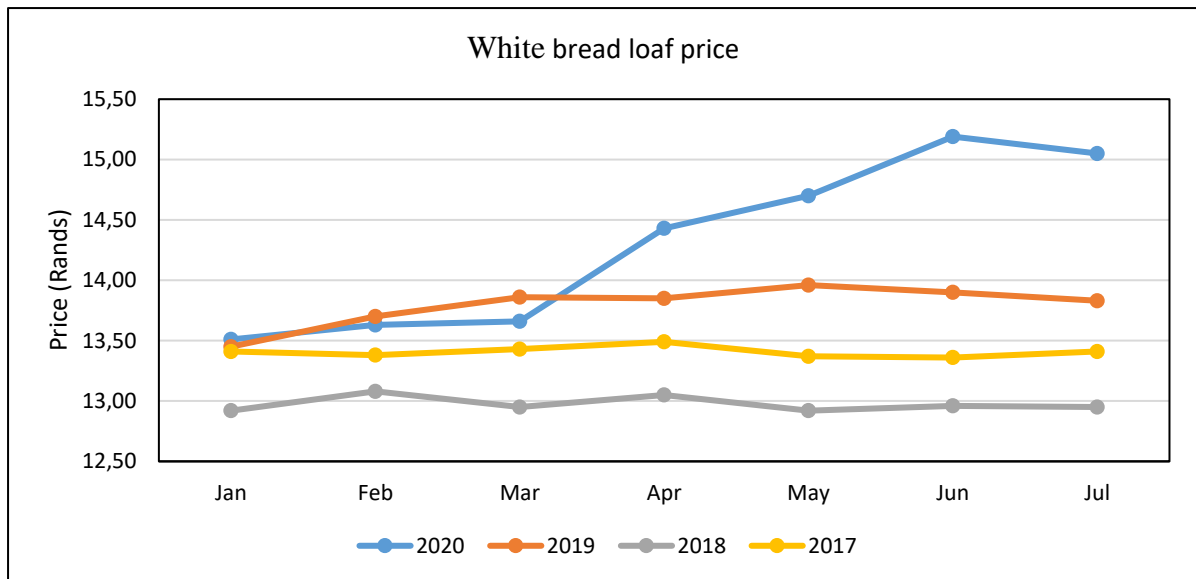


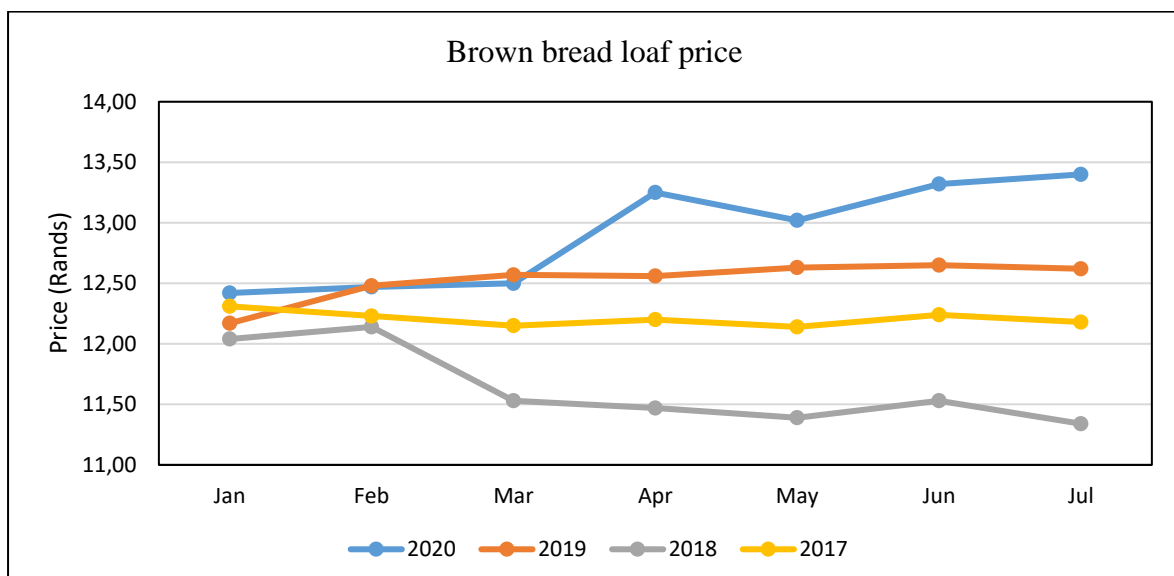
Figure 84 shows that the price of white bread increased from March to June, and only decreasing in July 2020. While the price of white bread is generally constant over these months, based on trends from previous years, the graph shows that the lockdown measures in March resulted in increased prices of white bread. The price of white bread remain at more than R15 a loaf in July, R1.50 more than its pre-lockdown level of about R13.50.

**Figure 84. White bread flour prices**



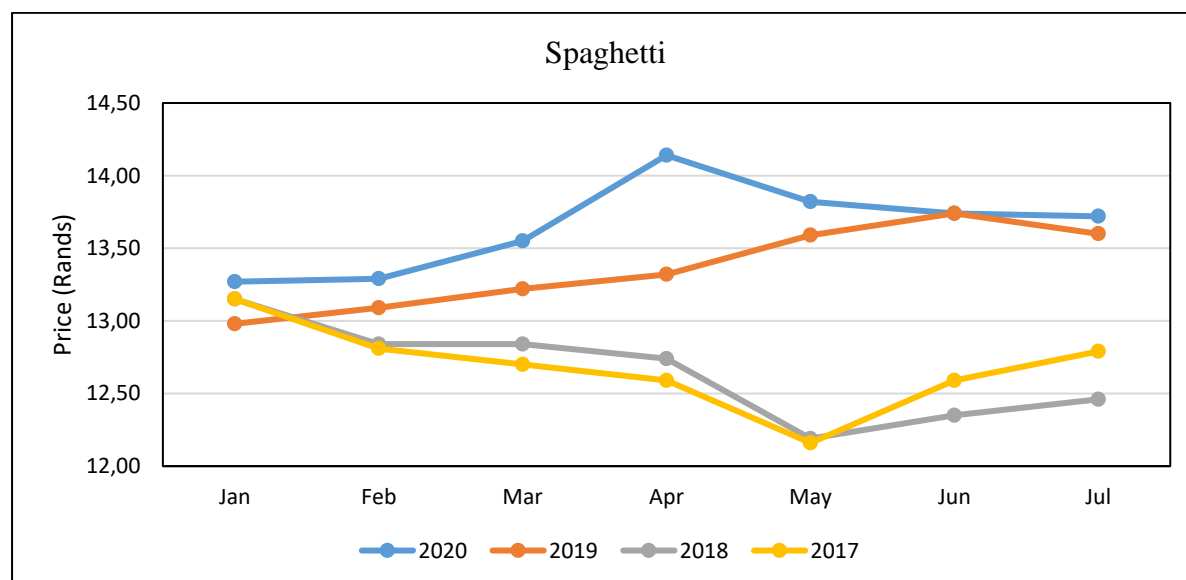
The price of brown bread increased in April 2020, followed by a decrease in May. Overall, the price of brown bread increased from below R12.50 before the lockdown, to about r13.50 in July 2020.

**Figure 85. Brown bread price**



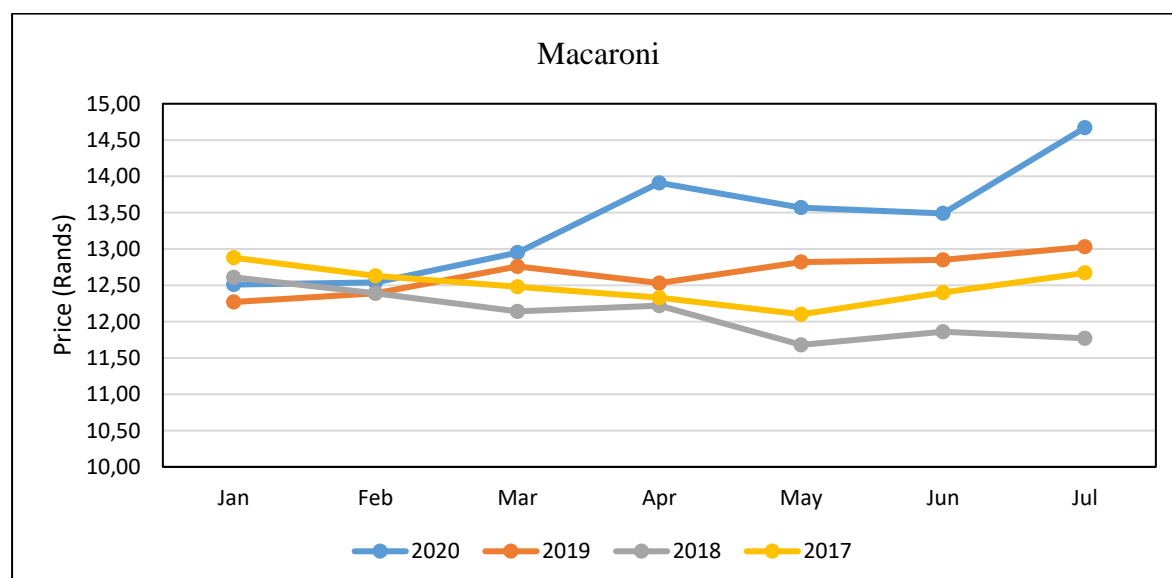
The price of spaghetti increased sharply in April 2020, followed by a steady decline in May, June and July (Figure 86). While spaghetti prices increased in 2019 in the same period, the increase was higher in April during the lockdown than in 2019, suggesting that the disruptions associated with lockdown measures might have been the major driver of the price.

**Figure 86. Price of spaghetti**



The price of macaroni, like that of spaghetti, experienced a sharp increase in April 2020, followed steady dips in May and June. However, the price increased again in July. The 2020 price movement is largely different from that of previous years, suggesting lockdown measures might have negatively impact the price of macaroni.

**Figure 87. Price of macaroni**

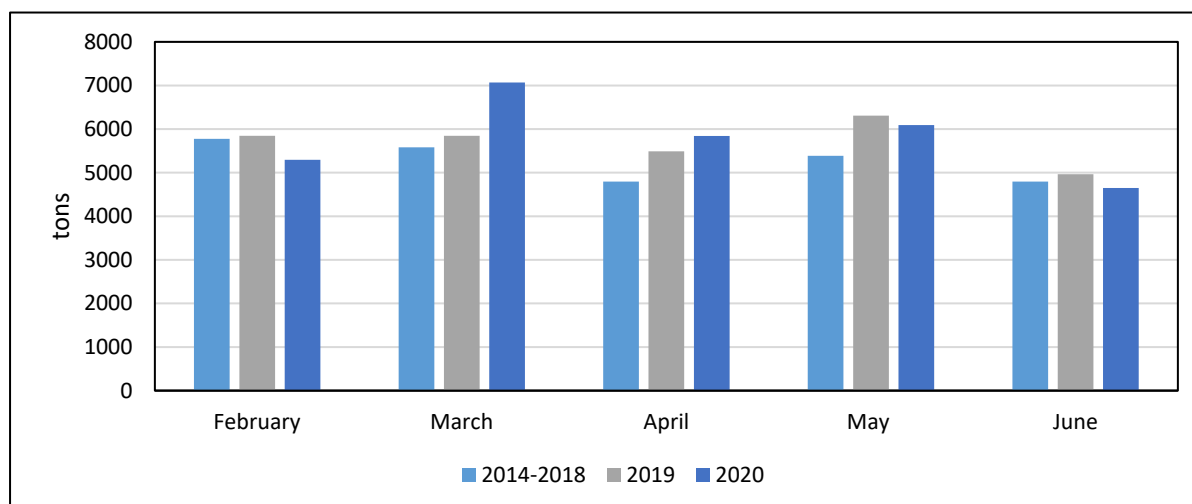




#### 4.4. Other cereals (e.g., oats, sorghum, rice, barley)

Figure 88 shows that there was a 17% increase in oats processed for the local market in March 2020 compared to 2019. While the quantity processed in April 2020 declined when compared to the previous month, it remained at a higher level than the average for the month in previous years. The quantity of oats processed has been largely in line with previous trends but has been at a lower level compared to the average in previous years for the months of May and June.

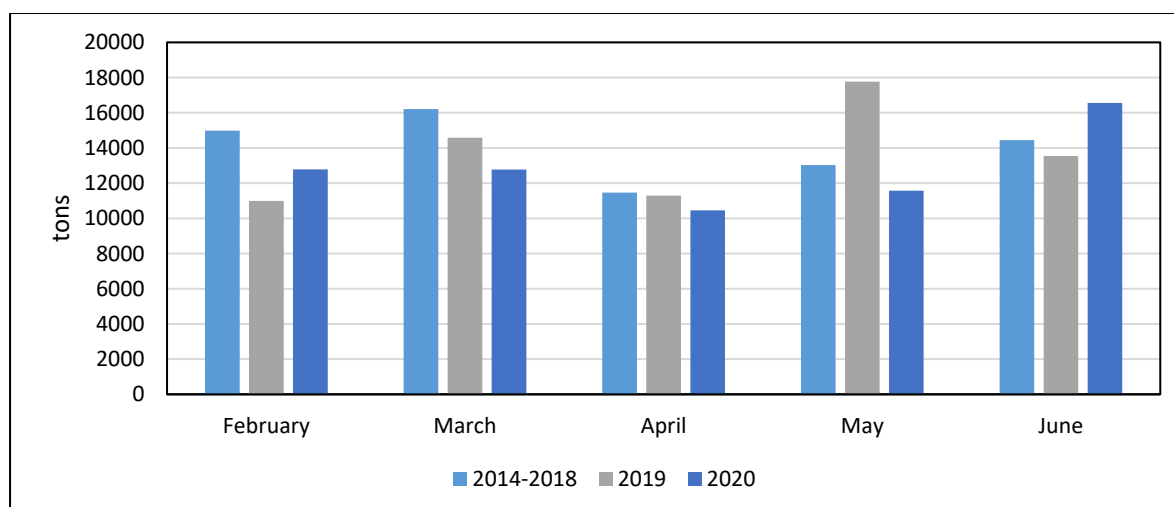
**Figure 88. Quantities of oats processed for the local market**



*Source: Authors calculations using SAGIS data*

Compared to 2019, Figure 89 shows that the amount of sorghum processed declined by about 20% in March 2020, 7% in April, and 35% in May. However, the amount processed in June 2020 was higher than the average of previous years.

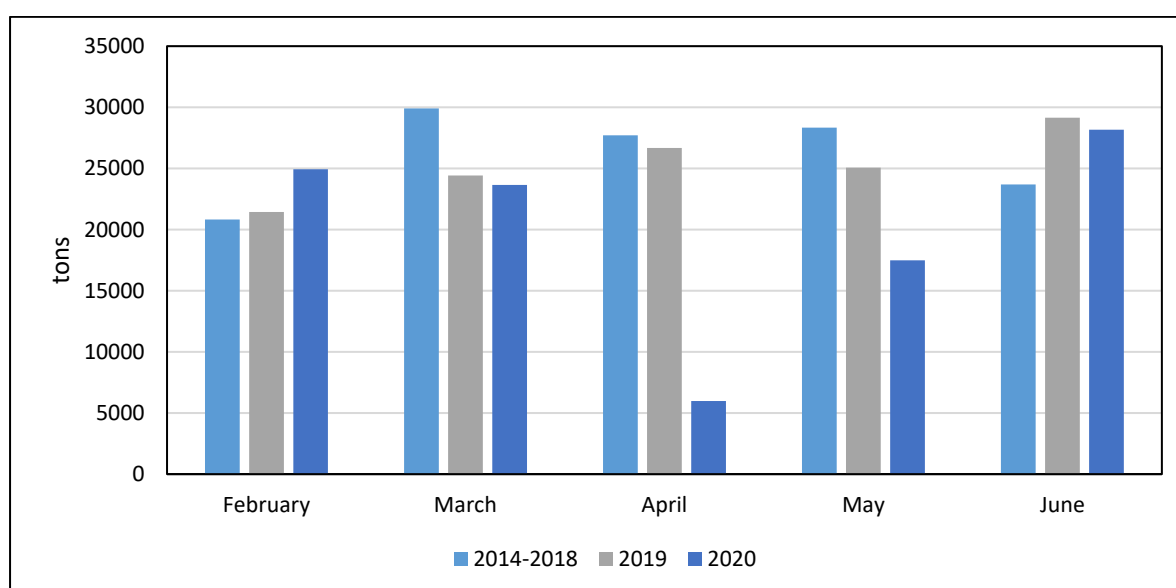
**Figure 89. Quantities of sorghum processed for the local market**



*Source: Authors calculations using SAGIS data*

Barley is processed for alcohol production, and the lockdown regulations which stopped the sale of alcohol had a negative impact on barley processing (Figure 90). Over the period of March to May 2020, barley processing declined compared to the same period in the previous years. The April 2020 level shows a 75% decline compared to March 2020, before the lockdown regulations stopped the sale of alcohol. The quantity processed recovered in May, and at a higher level in June 2020.

**Figure 90. Quantities of barley processed for the local market**



*Source: Author's calculations using SAGIS data*

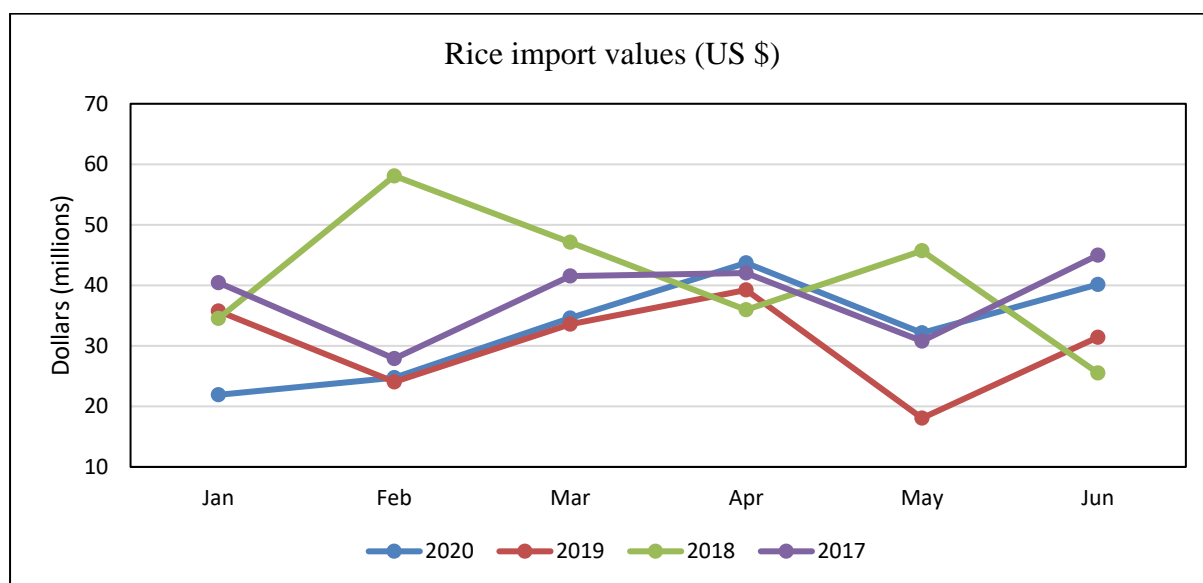
Table 8 shows that South Africa imports all its rice, as it produces negligible quantities of the crop due to an unfavourable rainfall pattern. Its major suppliers are Thailand (75%) and India (20%), who together supply a combined 95% of the country's rice imports (USDA, 2020).

**Table 8. Rice supply and demand, 2020**

Commodity	Opening stock	Deliveries	Domestic Supply	Local Demand	Deficit	Import	Export
Rice (tons)	58 000	0	58 000	935 000	-877 000	1 050 000	115 000

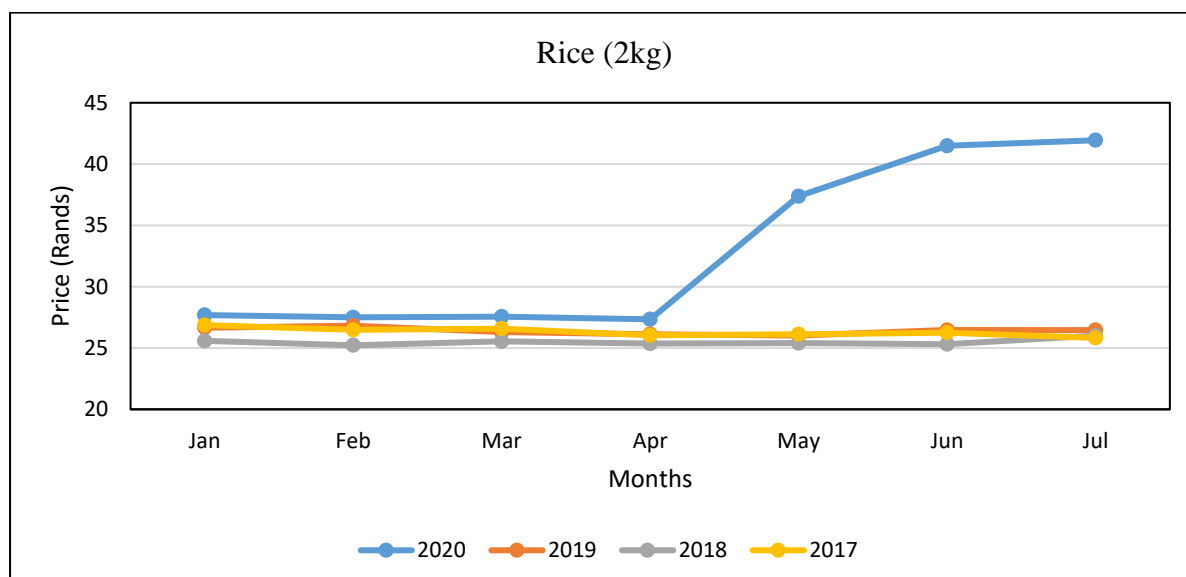
Figure 91 shows that the value of rice imports (in US dollars) in 2020 was largely consistent with previous years, indicating that disruptions due to the lockdown measures were not much.

**Figure 91. Value of rice imports, January – June**



However, the price of rice increased sharply from April, during the lockdown, as shown in Figure 92. The figure shows that in the past three years, the price of a 2 kg of rice is usually stable across the months under consideration. This was also the case in 2020, until April, and the price of rice jumped by more than 50% between April and June. While there was no big increase in July, the price of rice remained very high, compared to its pre-lockdown level.

**Figure 92. Price of rice in South Africa**

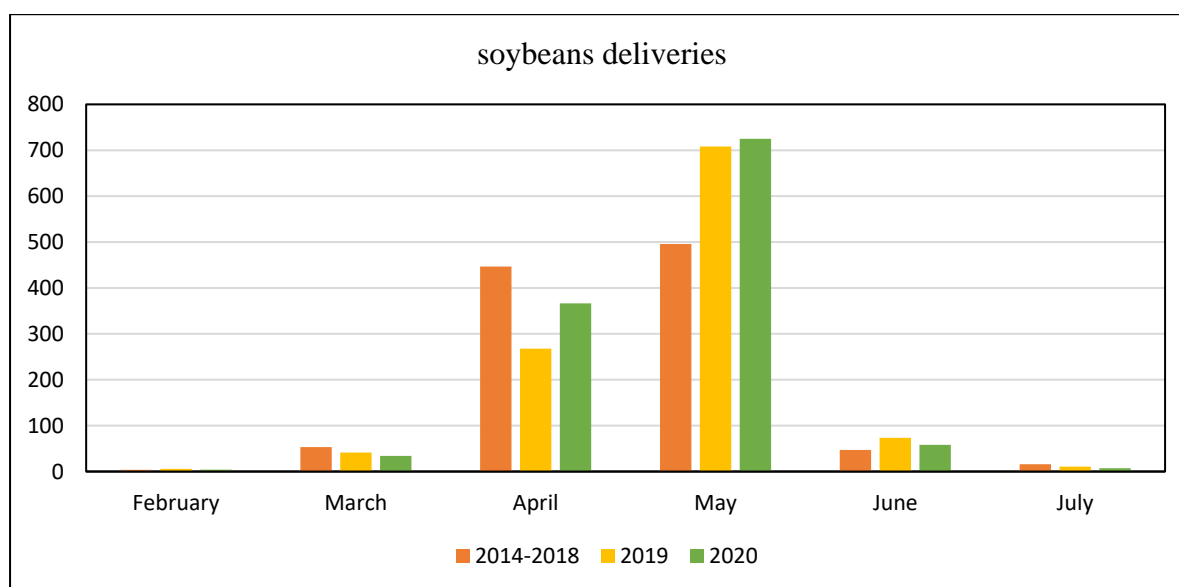


## 4.5. Oilseeds

### 4.5.1. Oilseeds production

Figure 93 shows that soybeans deliveries were below average in April 2020 but increased to above average in May 2020. While it was below average during the months of June and July, the magnitude was small, suggesting that there has been a minimal effect on soybeans deliveries by the pandemic.

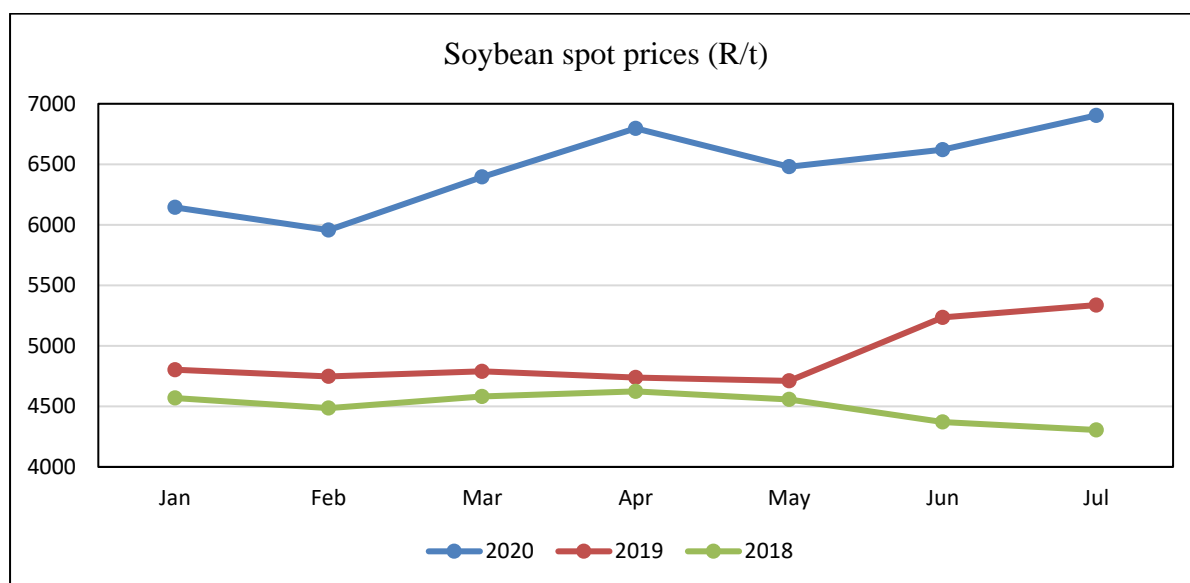
**Figure 93. Quantity of soybean deliveries per month**



*Source: Authors calculations using SAGIS data*

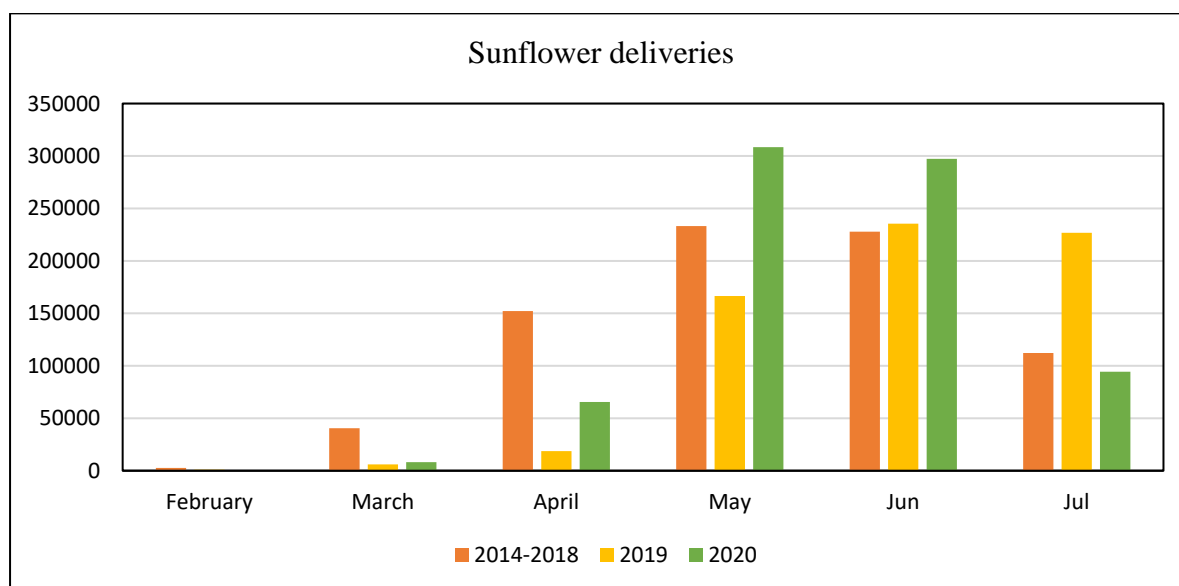
Figure 94 shows that the spot price of soybean increased significantly in March and April 2020, achieving a level of price movement that has not occurred in the past years. Given the increase soybean deliveries during the month, the expectation is that the price would decrease, at least remain constant. While the price then decreased in May, this was only temporary, as the spot prices of soybean increased again in June and July. The decrease in May seem to be because of increased commercial deliveries, while the increased prices in June and July seem to be due to decreased deliveries. The price increase for the last two months in the graph are in line with the experience of last year, suggesting that this increase is not because of shocks associated with the pandemic.

**Figure 94. Spot prices of soybean**



Sunflower deliveries were lower in 2020 than its average in March and April, and then increased above their averages in May and June, Figure 95 shows. That the deliveries were lower than their averages in the first two months of the lockdown period suggests that there might have been disruptions. However, these were higher than the 2019 levels.

**Figure 95. Quantity of sunflower deliveries per month**

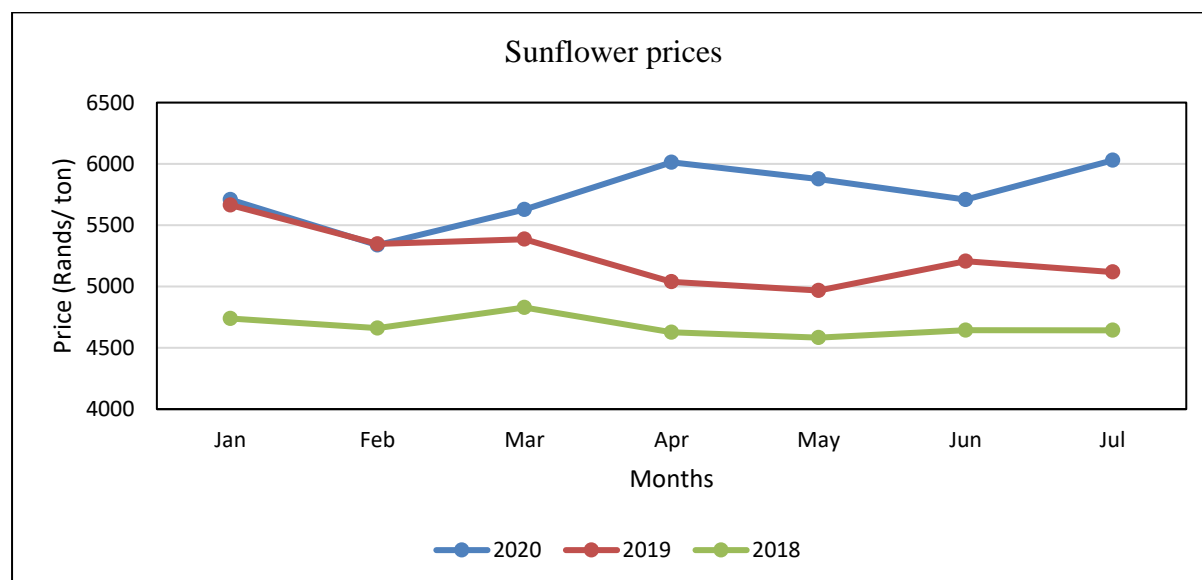


*Source: Author's calculations using SAGIS data*

The spot price of sunflower increased during April and May, a trend that is not expected. Figure 96 indicates that in previous years, the price of sunflower declines during that period, as more sunflower becomes available from harvesting activities. Like the price of many other

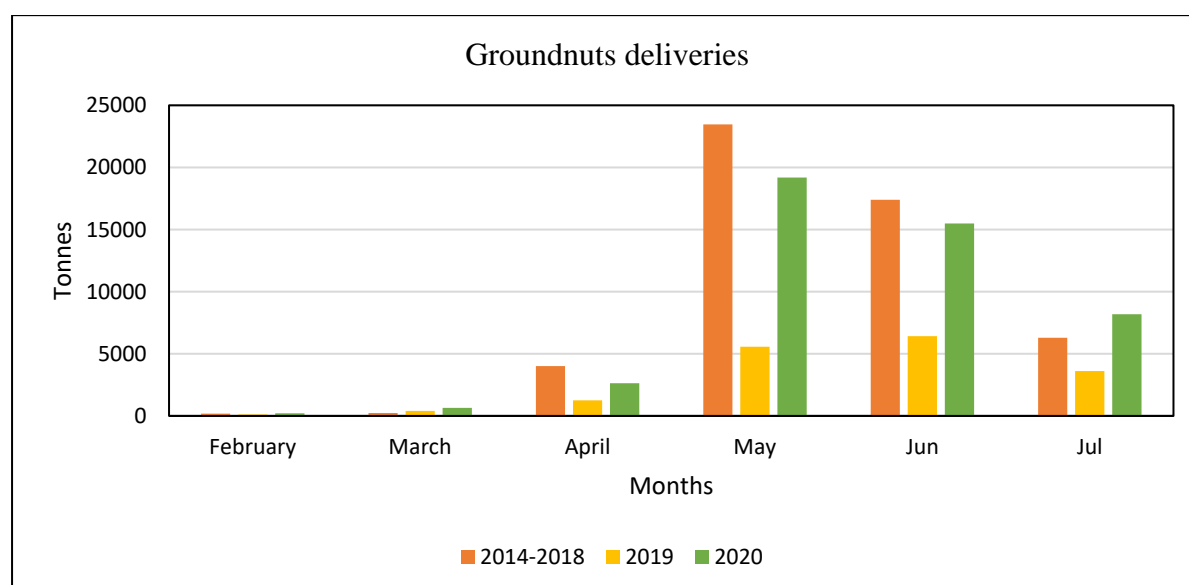
commodities, the increase might have been a shock as a result of the pandemic and lockdown measures.

**Figure 96. Sunflower spot prices**



For groundnuts, the 2020 deliveries were lower than the 2014 -18 average between April and June, even though it was better than last year (Figure 97). The figure shows that the groundnut deliveries were higher than in previous years in July, suggesting full recovery after the lockdown measures had been eased.

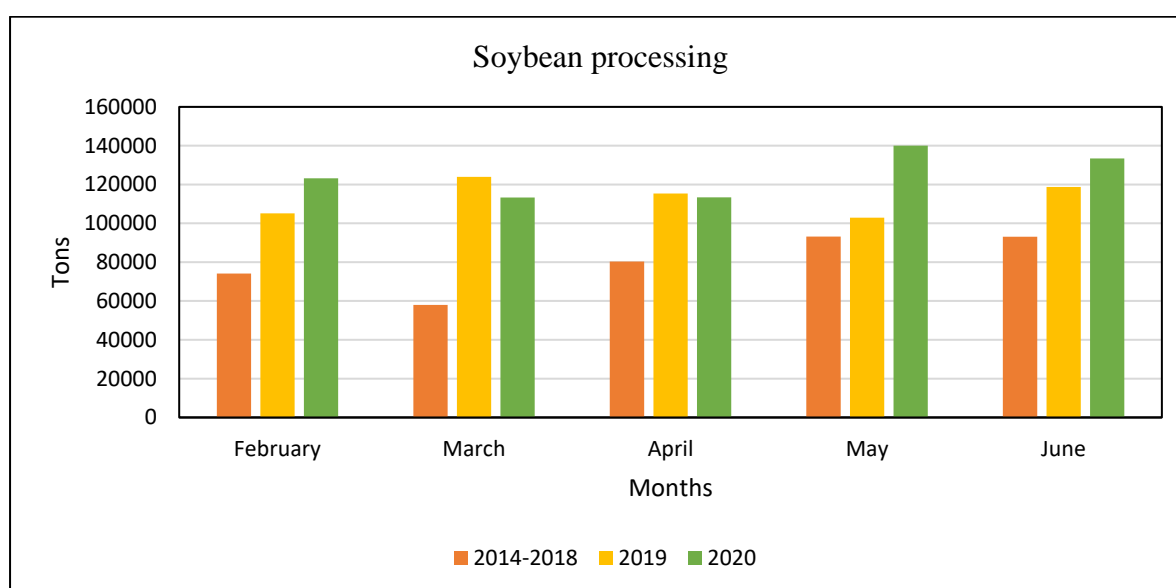
**Figure 97. Quantity of groundnut deliveries per month**



#### 4.5.2. Oilseeds processing

Figure 98 shows that soybeans processing decreased in March 2020 from the February 2020 level. While there was further decline in April, the quantity of soybean processed increased by over 23% in May 2020. The May 2020 level represent a 27% increase compared to May 2019. While the quantities processed decreased in June compared to May 2020, the levels remain higher than the averages of previous years. This trend suggests that while there was a slight decline in soybean processing during the months of March and April, the processing levels reached high levels in May and June 2020.

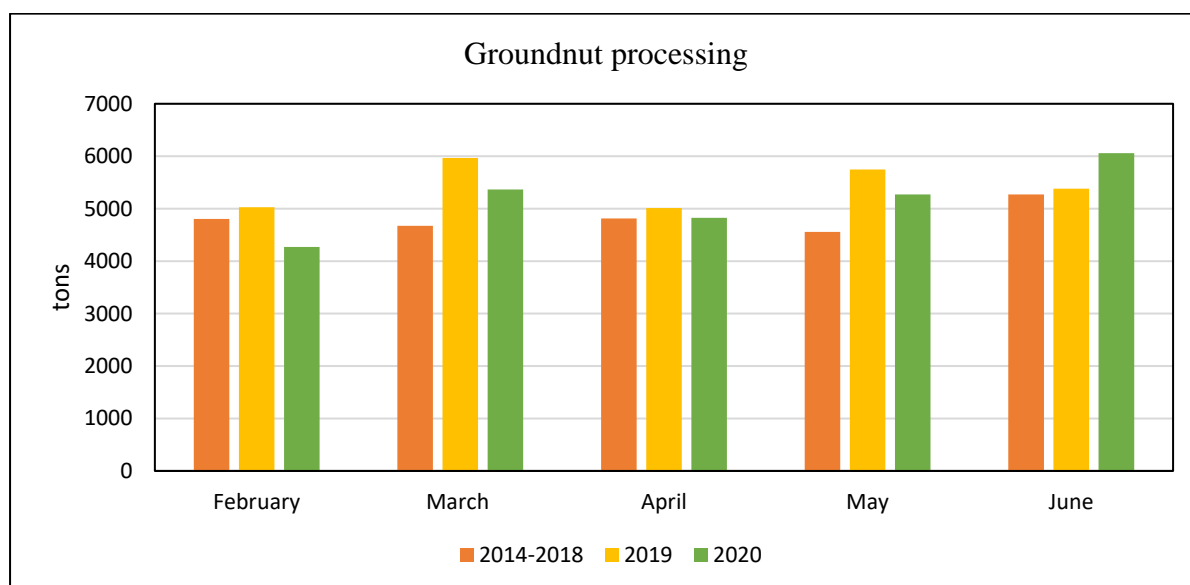
**Figure 98. Quantities of soybeans processed for the local market**



*Source: Authors calculations using SAGIS data*

Figure 99 shows that there was limited reduction in groundnut processing during the month of April 2020, and a quick recovery during the months of May and June 2020. The trend is largely in line with previous levels, suggesting that the impact of the pandemic and lockdown regulations did not significantly disrupt groundnut processing.

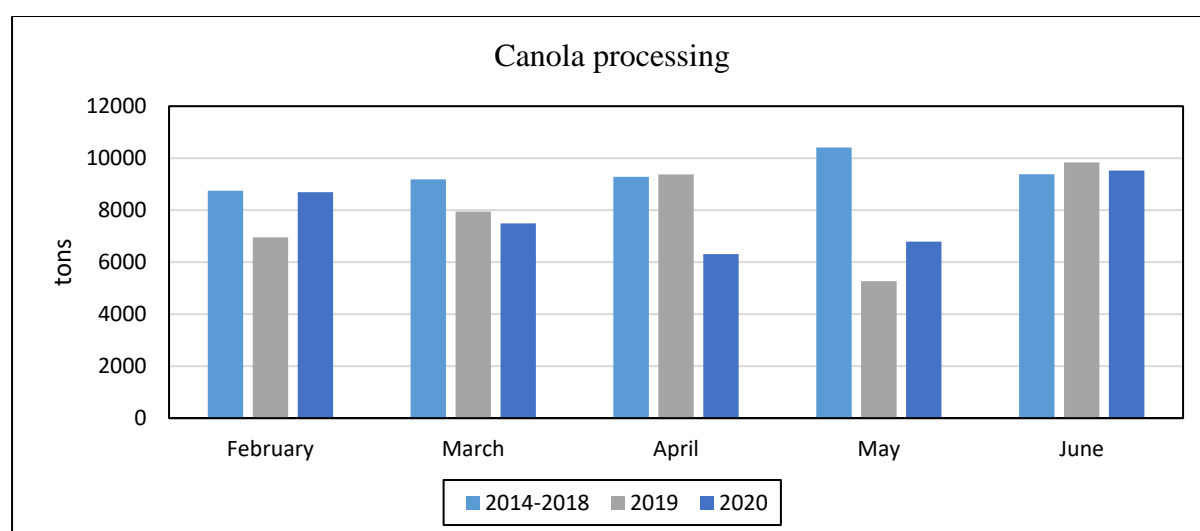
**Figure 99. Quantity of groundnuts processed for the local market**



*Source: Authors calculations using SAGIS data*

Figure 100 shows a steady decrease in the quantity from February 2020 to April 2020, and a rise in the subsequent months, of canola processing. While the February 2020 canola processing level was at par with the 2014 – 2018 average level, the graph shows that it decreased and was below this average during the three months of March, April and May, and recovered to the average by June 2020. This suggests that canola processing was significantly affected by Covid-19 and the lockdown measures. The worst affected months were April and May, during the hard lockdown.

**Figure 100. Quantity of canola processed for the local market**

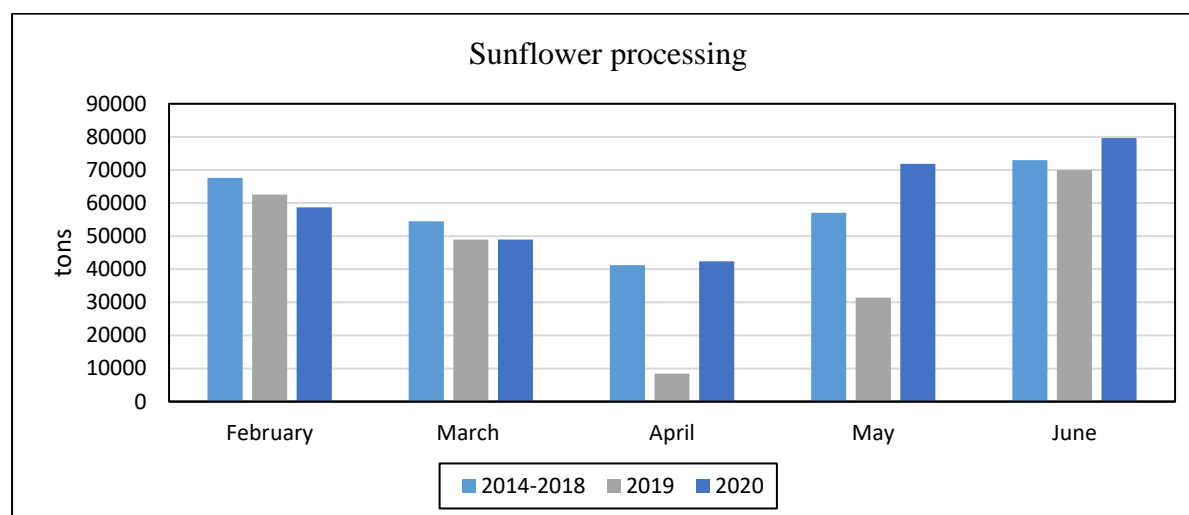


*Source: Authors calculations using SAGIS data*



Figure 101 shows that sunflower processing was in line with its normal trend. While it was at lower levels compared to the previous years' figures for the month of February and March, the processing levels increased in May and June, and remain at higher levels than in previous years.

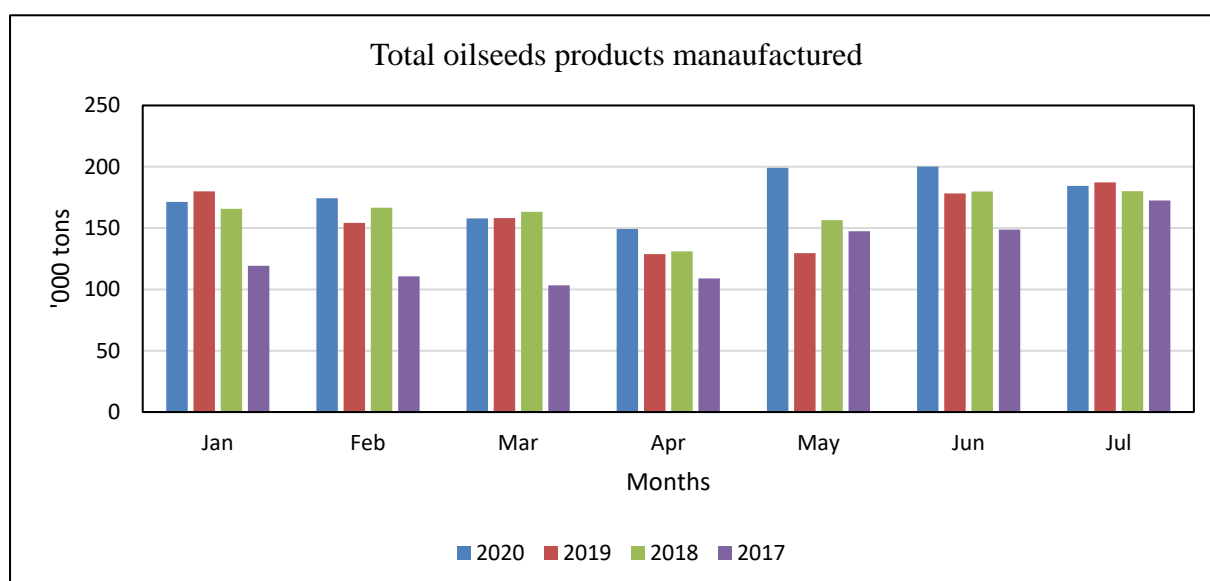
**Figure 101: Quantity of sunflower processed for the local market**



*Source: Authors calculations using SAGIS data*

Figure 102 indicates the level of total oil seeds products manufactured per month between January and June across 4 years. The products include oils (e.g., sunflower oil, soybean oil, etc.), oilcakes, peanut butter, etc., manufactured from the different oilseeds. The figure shows that, by and large, the trend in the manufacturing of the oil seeds products in 2020 was consistent with the trends in previous years. Just like in previous years, the quantity of oilseeds products manufactured takes a dip in April, and then recover in the next month or two. However, the recovery in 2020 was steep, with the manufacturing levels reaching a level that has not been reached in the past few years. This suggests that the impact of the pandemic and lockdown measures were largely negligible when it comes to the manufacturing of the oil seeds. While there was a decline in April 2020, this might not be because of the pandemic or lockdown measures, as it is consistent with the historical trends.

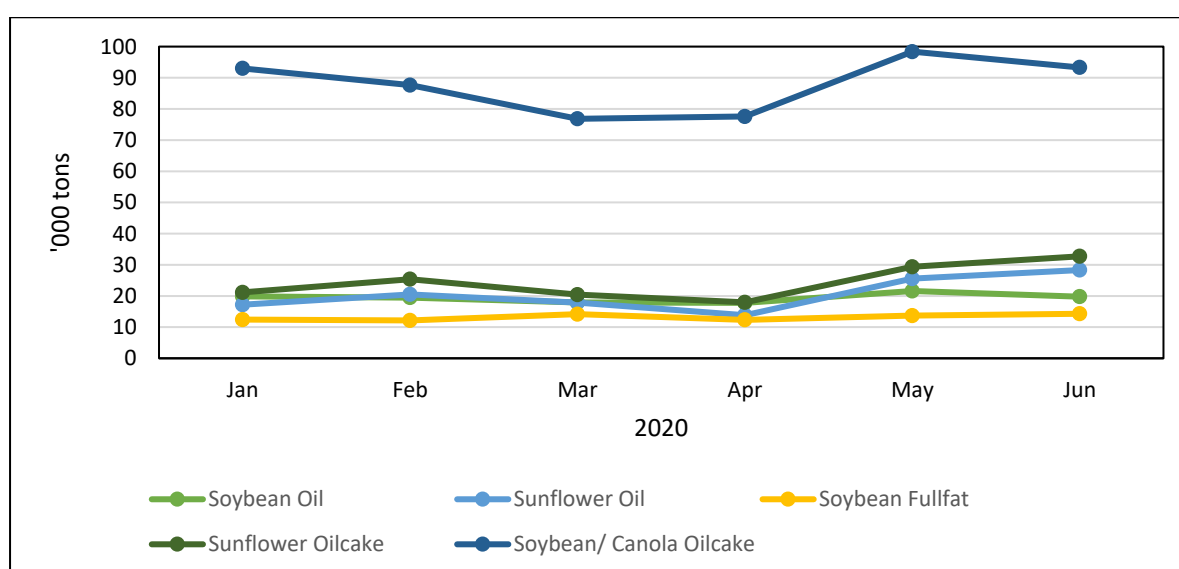
**Figure 102. Oil seeds products manufactured per month**



*Source: Author's calculations using SAGIS data*

Among the specific key oilseeds products manufactured, Figure 103 shows that most experienced a decline for two months (March and April), before an increase in May. The increase in May was only temporary for soybean oil and soybean/ canola oilcake, as the increases were followed by a decline again in June. The sunflower products continued in a positive trajectory June.

**Figure 103. Key oilseeds products manufactured**

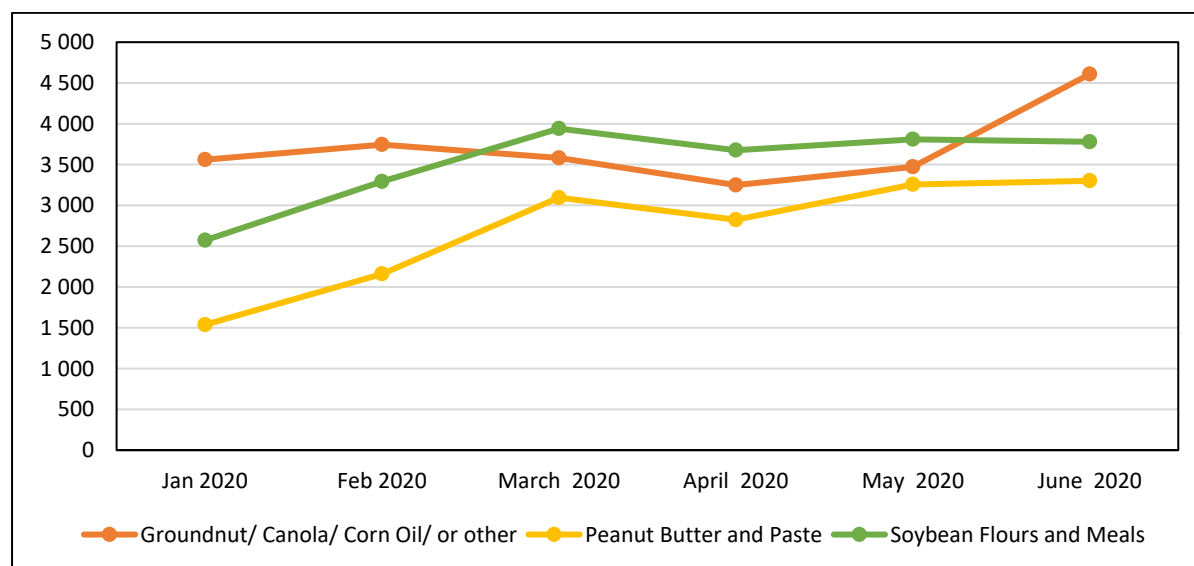


*Source: Author's calculations using SAGIS data*

Among the key soybean and canola products, Figure 104 shows that manufacturing levels of soybean oil production, which is the main product, experienced a decline for two months (in

March and April), before it turned the tide in May. The increase in May was only temporary, as it was followed by a decline again in June. In contrast, the production of soybean flours or meals only experienced a dip in April, followed by an upturn in May. The manufacturing of full fat remained largely constant across the months.

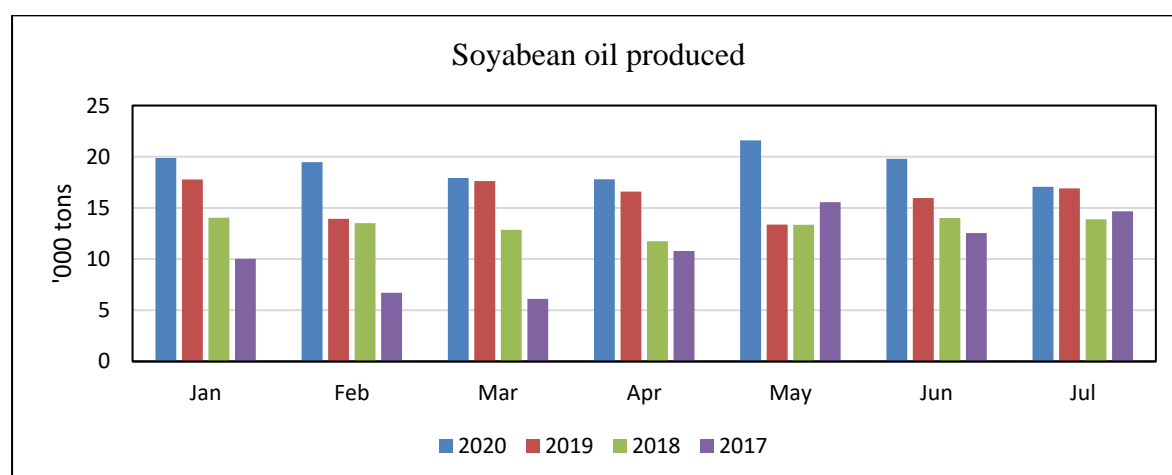
**Figure 104. Other oilseeds products manufactured per month**



*Source: Author's calculations using SAGIS data*

Figure 105 shows that the levels of soybean oil manufacturing were higher in 2020 than in previous years. While there was a dip in March and April 2020, as well as in July, these levels remained higher than those witnessed in the past four years.

**Figure 105. Quantity of soybean oil manufactured**



The production of sunflower experienced significant drops in March and April 2020, suggesting a negative impact of the lockdown measures, particularly during the more restrictive

period. While it was above the 2019 level, the quantity of sunflower oil produced were below the 2017 and 2018 levels.

**Figure 106. Quantity of sunflower oil produced**

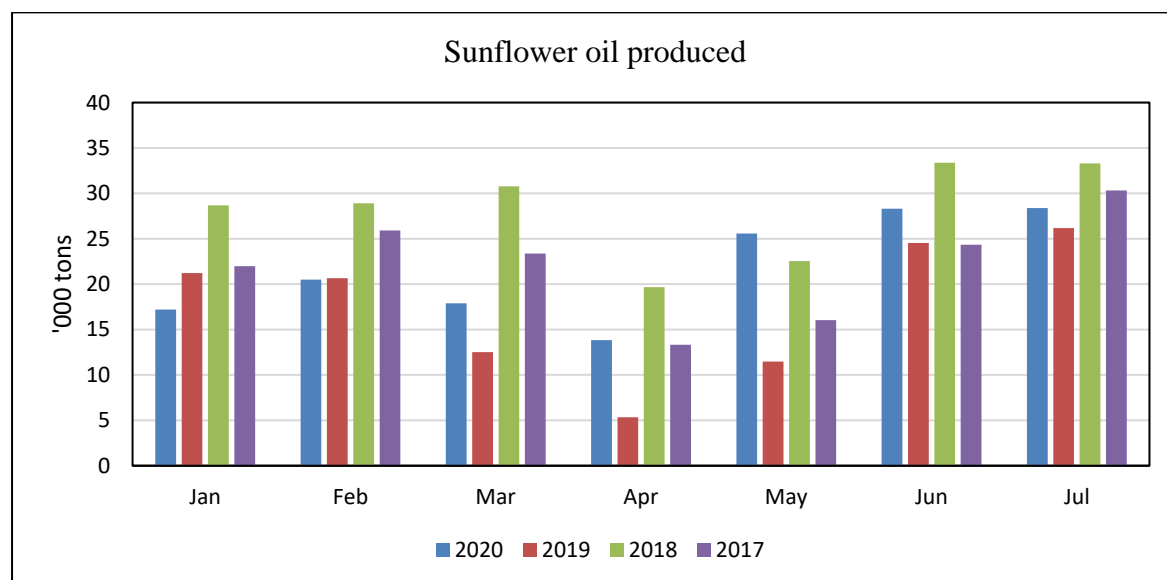
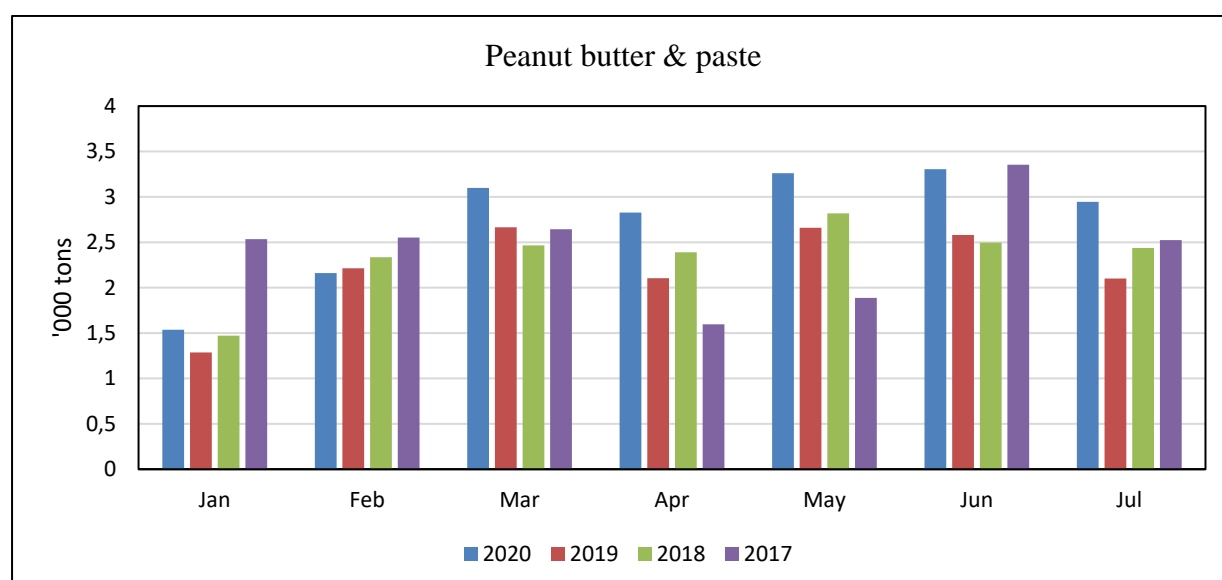


Figure 107 show that the production of peanut butter and paste was not significantly affected. While a minor dip can be observed when comparing the March and April 2020 figures, the production levels remained higher than in previous.

**Figure 107. Peanut butter and paste produced**

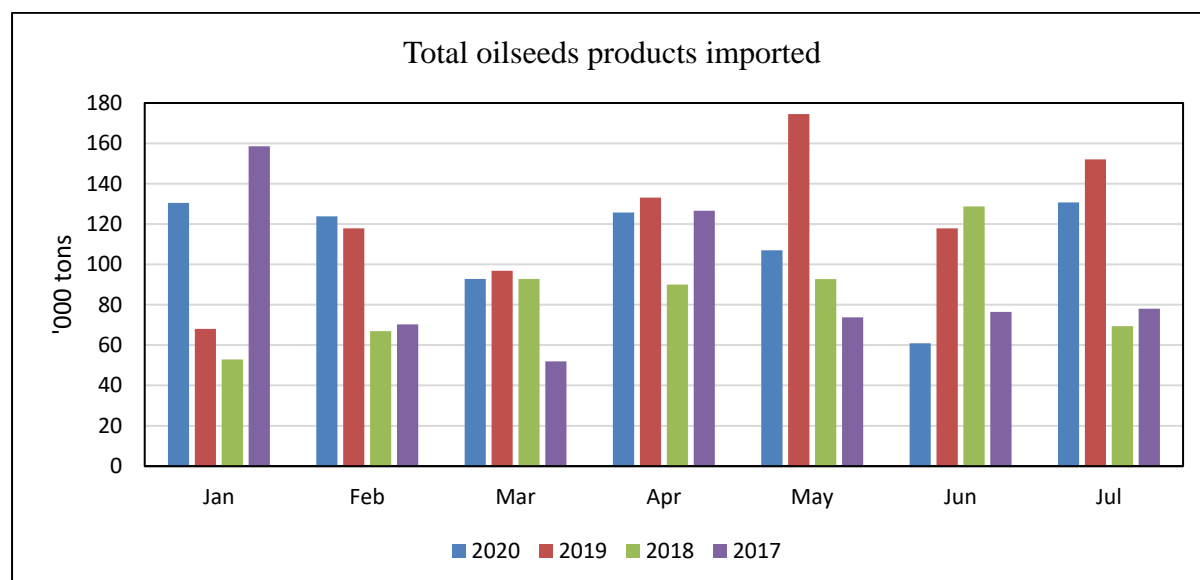


#### 4.5.3. Imports and exports of oilseeds products

South Africa imports and exports some of the oilseeds products. Figure 108 shows that there were high levels of fluctuations in oilseeds products during the March to July period. The figure

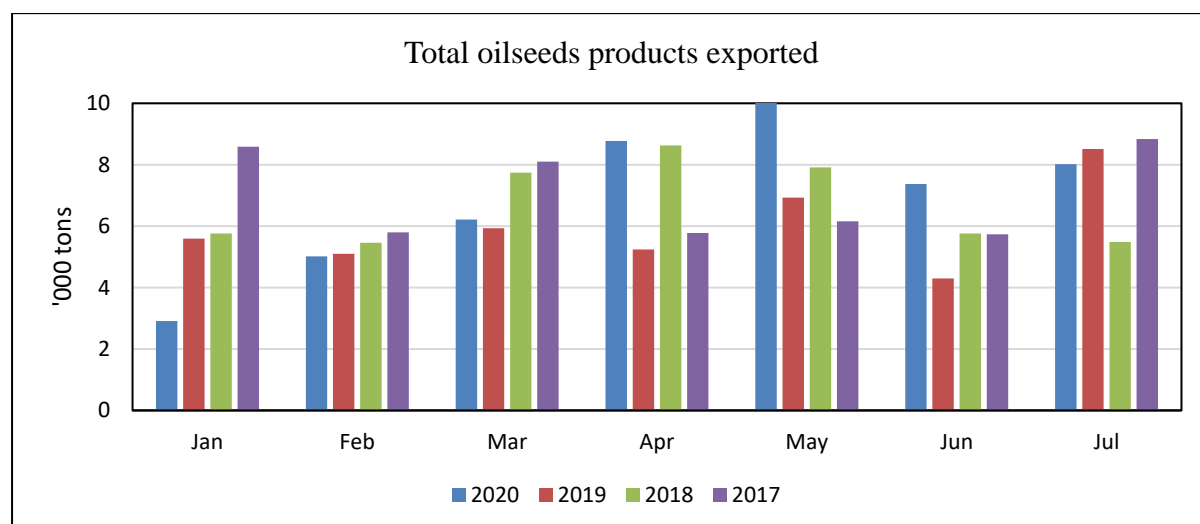
shows a drop in oilseeds products imported in March, followed by an increase in April, and then drops in May and June. In July, oilseeds products imported increased. Overall, the quantities of oilseeds imported was lower in 2020, mainly because of increased local production.

**Figure 108. Total oilseeds products imported**



The amount of exports were higher in April and May 2020 than in previous years, as shown in Figure 109.

**Figure 109. Total oilseeds products exported**

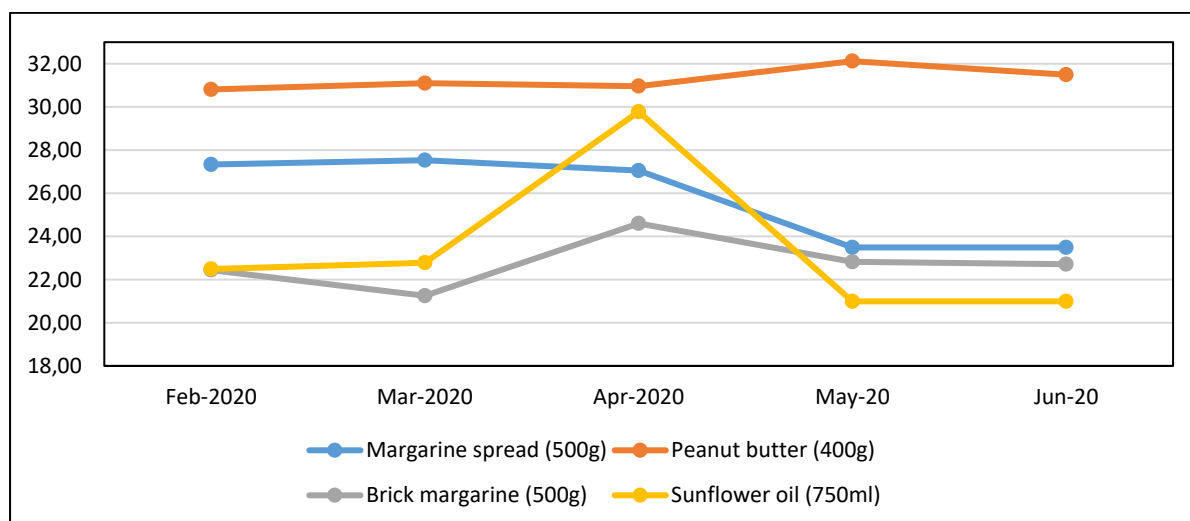


#### 4.5.4. Prices of oilseeds products

The next figures analyse consumer price movements for selected oilseeds prices. Figure 110 shows that the prices of margarine and sunflower oil experienced overall price declines

between February and June. On the other hand, the peanut butter and brick margarine marginally increased within the same period. However, the prices of these items were characterised by high monthly fluctuations. For example, the price of sunflower oil increased by 31% in April, followed by a 30% decrease in May, followed by no change in June.

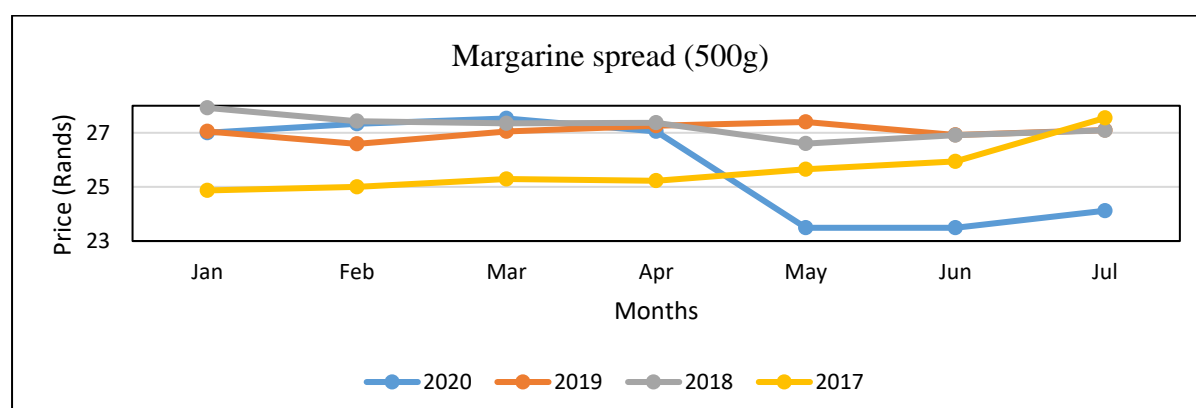
**Figure 110. Prices of selected oilseeds products**



Source: Stats SA 2020

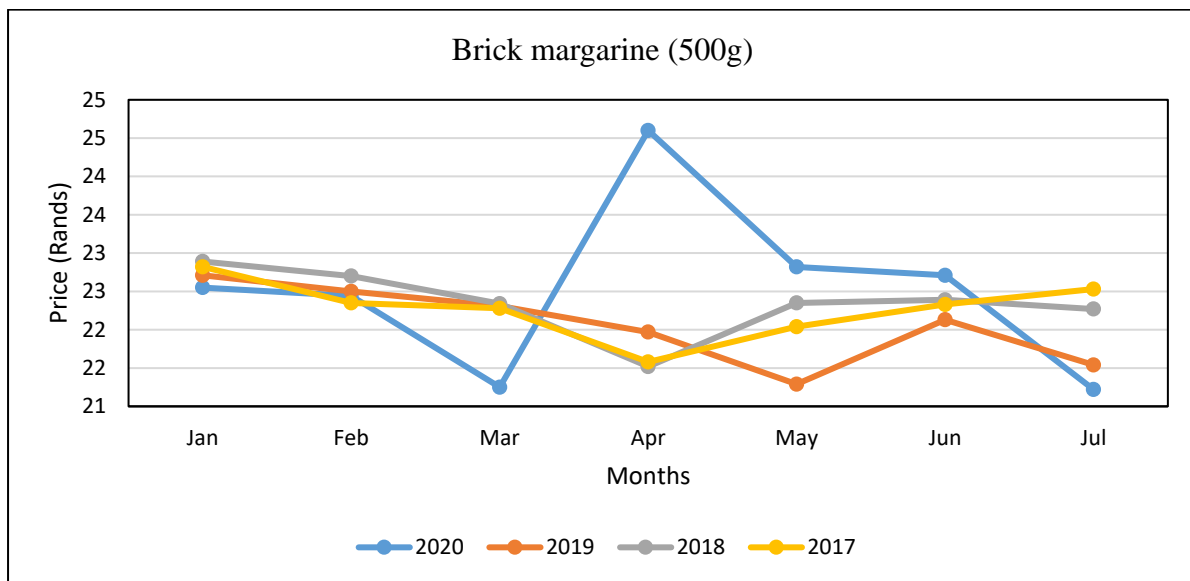
Figure 111 shows that the price of margarine declined in April and remained lower than in previous years in June and July (despite a minor increase in July). This might be because of decreased demand for margarine, as consumers' spending power decreased and they prioritised more important basic food items.

**Figure 111. Consumer prices of margarine spread**



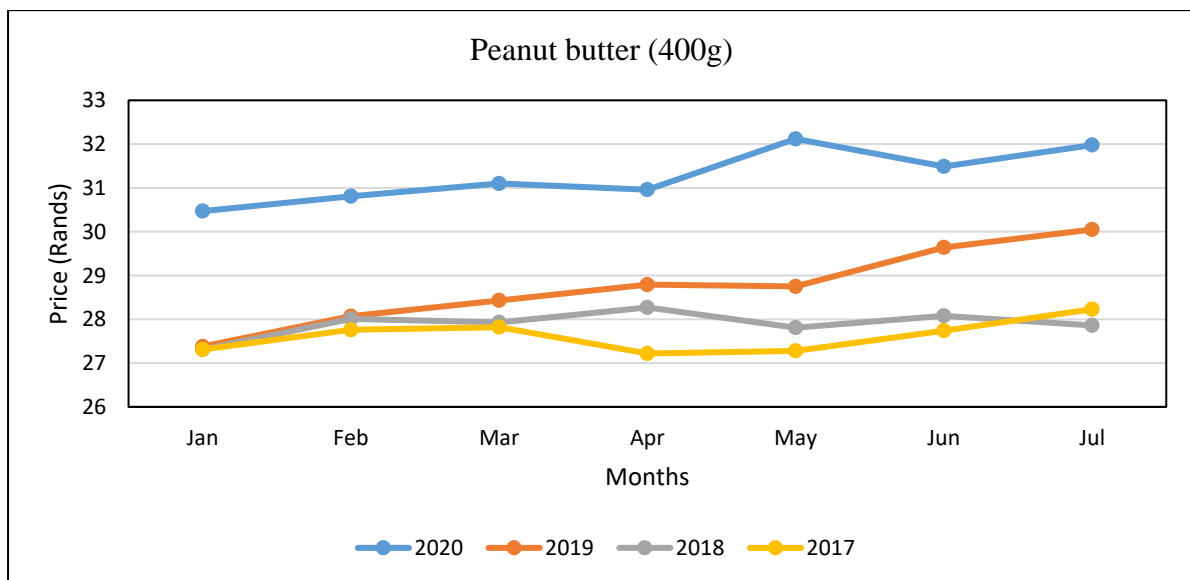
The price of brick margarine was very volatile during the period under review (Figure 112). It had a sharp decrease in March 2020, followed by a sharp increase in April, and a sharp decrease in May. However, in July 2020, it was low.

**Figure 112. Consumer prices of brick margarine**



The price of peanut butter remained steady, but significantly higher than in previous years (Figure 113). It only increased by R1 in May, and by July, it had increased about R1.50 compared to its January level.

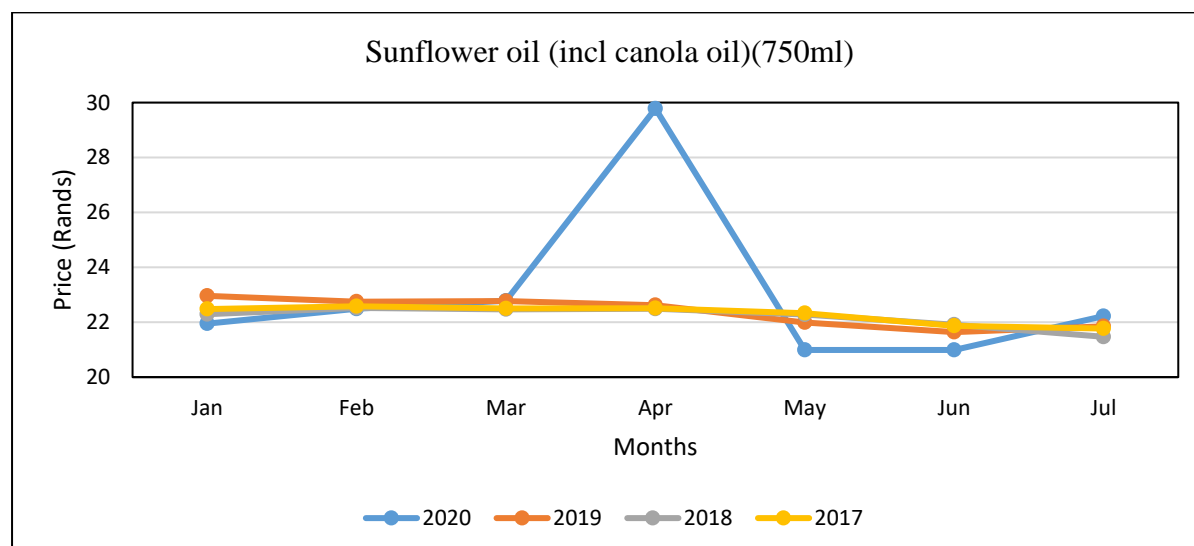
**Figure 113. Consumer prices of peanut butter**



As shown in Figure 114, the price of a 750 ml of sunflower oil experienced a significant jump in April, followed by a decline in the later months. By July 2020, the price had gone back to its pre-lockdown level. The over 32% jump in April might have been due to the shortages that were reported during the first few weeks of the hard lockdown, and the uncertainty about its

availability. However, that increase was only temporary, as it was followed by a huge decline in May.

**Figure 114. Consumer prices of sunflower oil (including canola oil)**



#### 4.6. Impact of Covid-19 and lockdown measures on fruits and vegetable supply chains

The fruit and vegetable industry play a central role in job creation, economic development and food security in South Africa. According to BFAP (2020), vegetable production has a gross value of R17.7 billion, with potatoes, mealies and tomatoes constituting 80% of this value. Globally, South Africa is a known exporter of citrus, deciduous and tropical fruits. In 2018, the potato industry was worth about R7.8 billion, producing almost 2.5 million tons on a total of 53,011 hectares. Meanwhile, carrot production was valued at over R700 million, producing over 200,000 tons per annum. In 2018, the tomato sector was worth R2.7 billion, with 695 producers planting on about 4,800 hectares, to produce about 575,000 tons of produce. Onions had a gross value of about R1.8 million, with over 700,000 tons produced per annum. Cabbages were valued at R310 million, producing 161,000 tons.

##### 4.6.1. Fruits

###### *Fruits production*

The impact of Covid-19 on the production of fruits was minimal, as South Africa had harvested most fruits by the time of the implementation of the lockdown in March 2020 (Table 3) (USDA, 2020b). The table shows that production for most fruits increased in 2020 compared to 2019. In addition, the table indicates that South Africa produces more quantities that needed for



domestic demand and is a net exporter of fruits. About 44 713 hectares were cultivated in the 2019/20 season, for the estimated 1.6 million tonnes of orange that is projected to be produced by the end of 2019/20 season. The production of apples and soft citrus is expected to increase by 5% and 12% compared to the previous year, respectively. The demand for citrus around the globe has been good, with consumers making a conscious effort to boost their immune systems and consume products high in Vitamin C (BFAP, 2020b). Table 9 shows that the consumption of lemons increased by 14% compared to the previous year, while the consumption of apples and soft citrus increased by 7% and 9%, respectively.

**Table 9. Production and consumption demand of fruits**

Commodities	Production (MT)		Consumption (MT)	
	2018/19	2019/20*	2018/19	2019/20*
Apples	893 846	942 203	205 597	220 000
Pears	413 245	407 455	43 414	42 000
Table grapes	298 315	320 000	31 506	36 000
Grapefruit	371 849	387 000	7 500	8 500
Oranges	1 590 000	1 600 000	75 000	77 000
Soft Citrus	375 119	421 000	22 000	24 000
Lemons	491 954	579 000	21 000	24 000

*Notes: 2019/20 figures are projections*

*Source: USDA (2020a,b), BFAP (2020)*

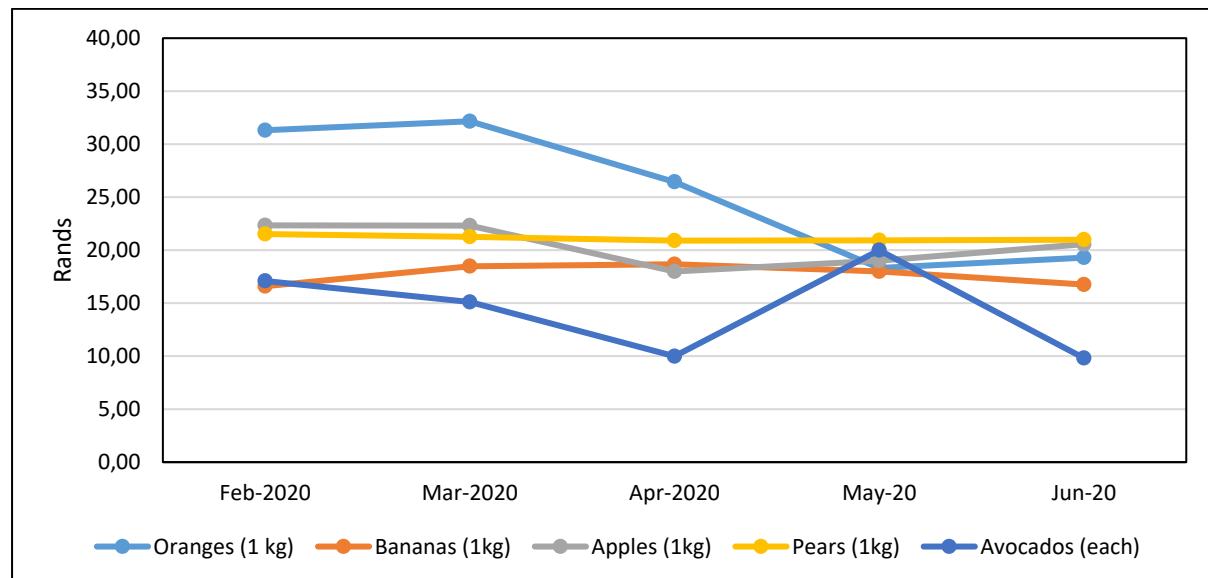
### ***Price dynamics***

Figure 115 shows the price movements for selected fruits between February and June 2020. The graph shows that for most of the fruits, there were high levels of price fluctuations during the more restrictive lockdown levels between March and May. The graph shows that the price of oranges experienced a 11% increase in March, followed by steep declines in April (18%) and May (31%). In June, the price of oranges increased by 6%. When comparing the February (pre-Covid-19) and June prices for oranges, the price decreased by 31%. Avocados, like oranges, experienced huge decreases in the period under review. Between February and June, the price of avocados decreased by 43%. However, this decrease was not smooth, but was characterised by price volatility. After a 34% significant monthly decline in avocado prices in April, there was huge increase in May, with the price doubling in one month from R10 to R20. The avocado prices eventually decreased to their April prices, representing an overall decrease in prices between February and June.

Pears largely maintained their pre-pandemic prices, while bananas experienced a 11% increase in prices in March, which remained at that level in April and May, before decreasing to about

their February price level in June. Therefore, between February and June, the prices of bananas remained largely stable. After a 20% decline of apple price between March and April, the price of apples steadily picked up in May (6%) and June (8%). The result is that the price of apples in June decreased by 8% when compared to the February price.

**Figure 115. Prices of selected fruits**



Source: Stats SA 2020

Figure 116 shows that, while the orange prices largely followed trends from years, even though the prices were higher than in previous years. The graph suggests that the price of oranges decreases during harvesting, often reaching lower levels in July. However, in 2020, the price of oranges did not decline to lower levels in July, because of increased demand (both locally and internationally). Because of its health benefits, particularly the potential role that citrus fruits such as oranges play in improving the body's resistance to viruses, there has been an increase in the demand for oranges.

**Figure 116. Orange prices, 2017 - 2020**

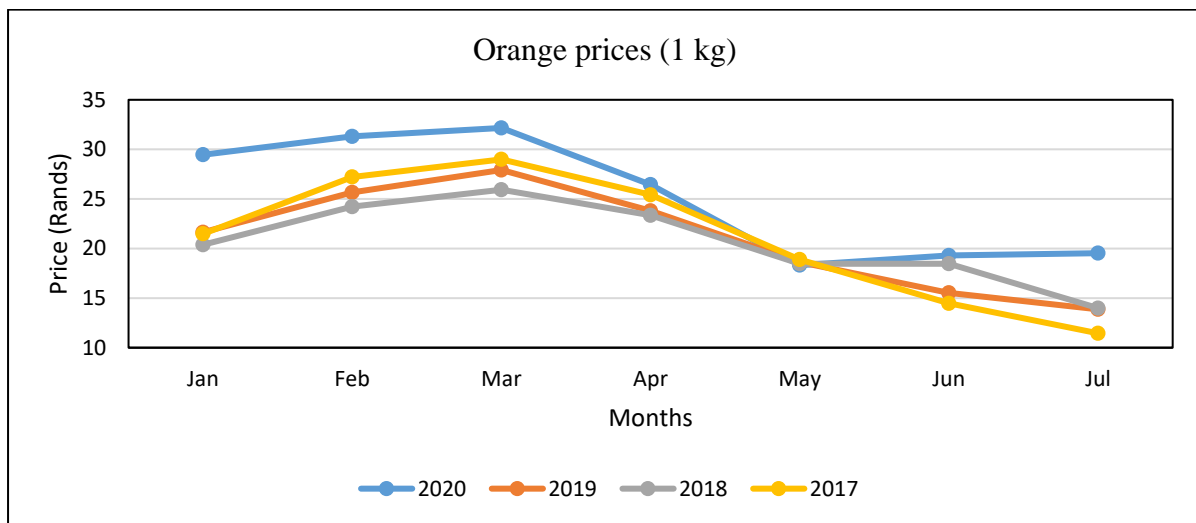


Figure 117 shows that the price of apples for 2020 fluctuated more than in previous years. However, comparing the pre-lockdown prices and the July figure, the price of apples decreased, which is good news for consumers. The price of apples increased during the harvesting months, and the price was below than that of previous years in July because of the higher harvests for apples this year than in previous years.

**Figure 117. Prices of apples, 2017 - 2020**

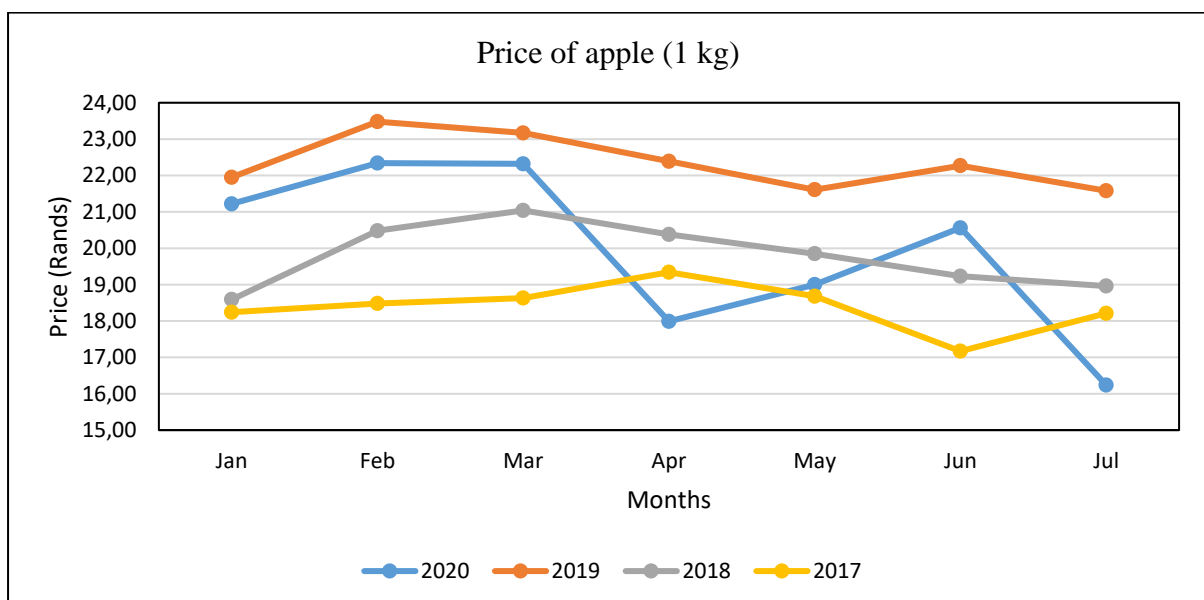
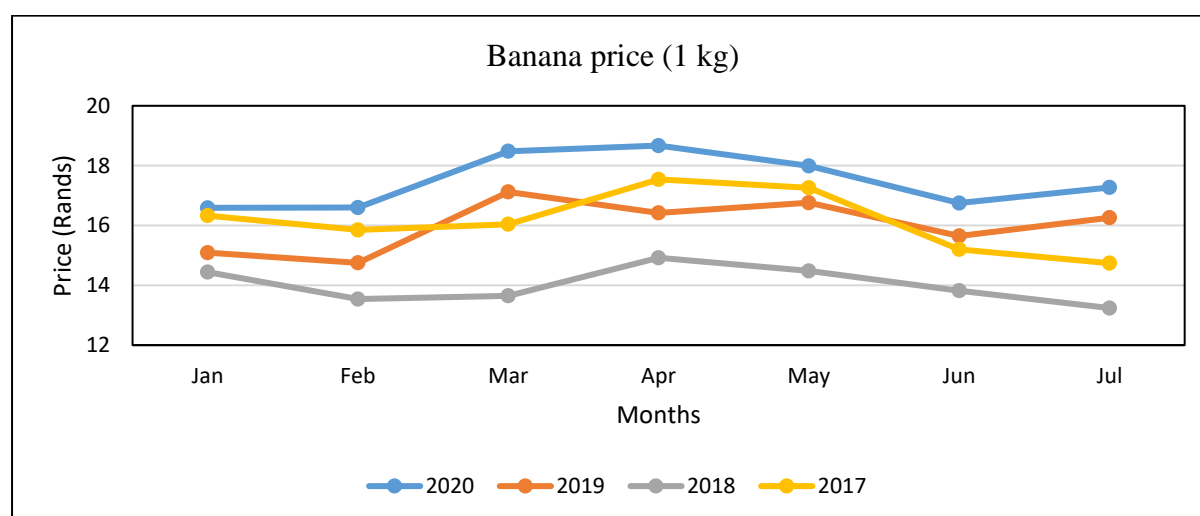


Figure 118 records the price trend for bananas. We see that the price is highest in April 2020 and gradually declines from then. This is correlates with previous years, even though the 2020 prices are higher. These figures indicate little evidence of impact of the pandemic or lockdown measures on banana prices.

**Figure 118. Price of bananas, 2017 – 2020**



### ***Fruits export and imports***

Fruits exports contribute significantly to the South African economy. According to FPEF (2019), around 2,7 million tons of fruits were exported to over 90 countries in 2019, generating about \$2,4 billion in foreign earnings. Overall, approximately 35% of agricultural exports are fresh fruits. One major challenge faced due to the Covid-19 pandemic was the issue of backlog at the ports. This was primarily due to the restrictions imposed by various countries, as well as the reduced workforce employed. Following are charts that present the dollar value of various fruits exported from South Africa. The charts show the average value of the commodities exported from 2014-2018, compared with the values from 2019 and 2020. This is evaluated for January to June, each year.

Figure 119 shows the total value of edible fruit and nuts exported from 2014 to 2020. The 2020 trends in fruits and nuts exports is similar to previous years, but the value of total edible fruits and nuts exported in 2020 is higher in every month, than for the same months in previous years. The widest gaps are observed in April (worth over 50 million dollars more than in previous years) and June (over 70 million dollars more than in 2019, and 50 million dollars more than previous years). Both months correlate with the periods of early and late harvest. There was also increased global demand for fruits, which coupled with a weak local currency, led to increased exports of fruits.

**Figure 119. Total value of fruits and nuts exports, 2014 - 2020**

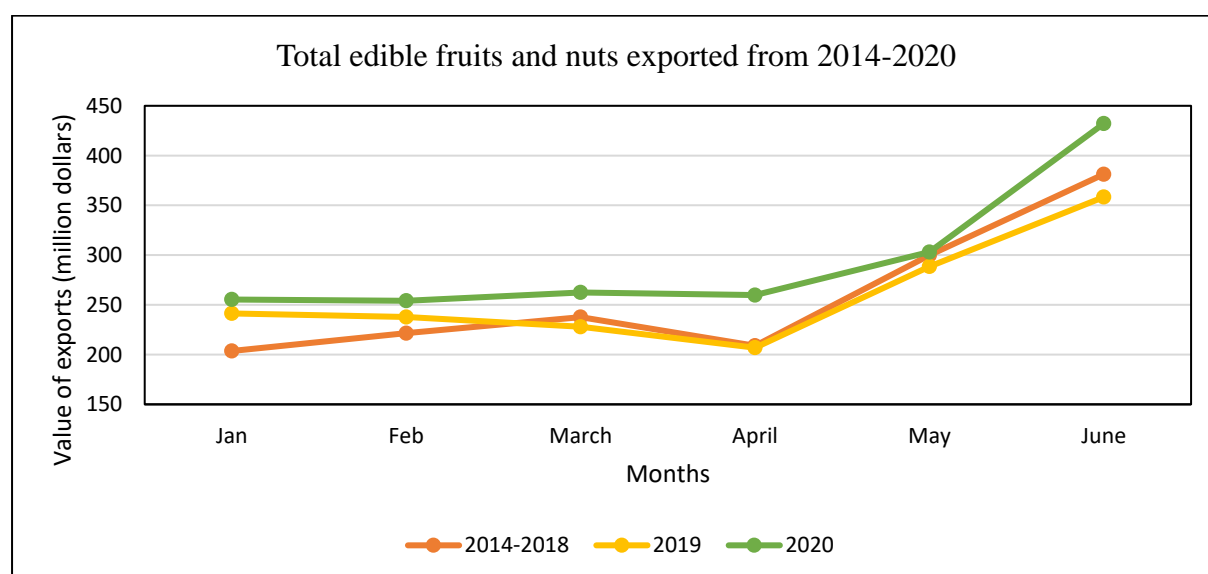
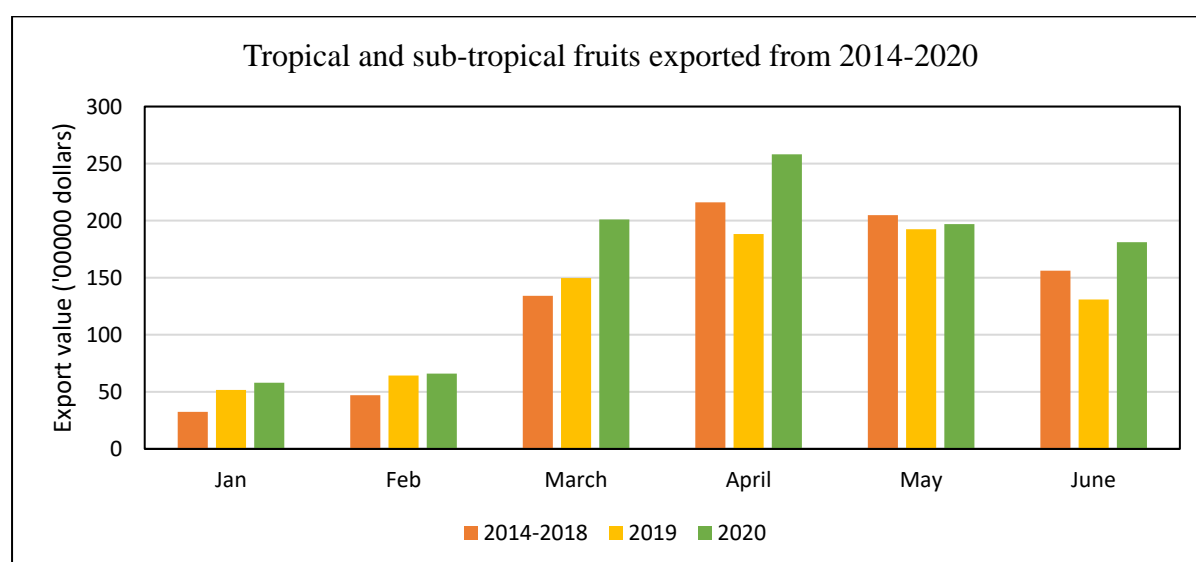


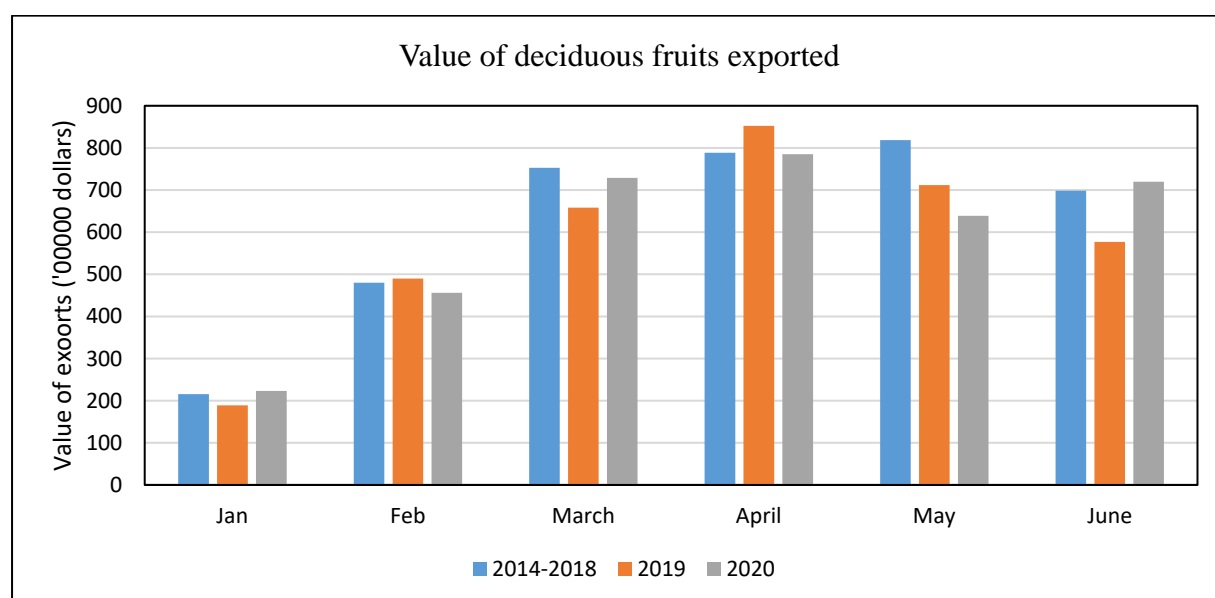
Figure 120 shows the value of tropical and sub-tropical fruits exported from South Africa from 2014-2020. The fruits included in this group are bananas, dates, figs, pineapples, avocados, guavas, mangoes and mangosteens. The chart shows that the values exported in 2020 are higher than the trend in previous years, for March and April. This is mainly because of the weak Rand.

**Figure 120. Exports of tropical and sub-tropical fruits**



The exports of deciduous fruits such as apples, pears and quinces for 2020, does not alter from previous years (Figure 121). This implies that there was no obvious impact of the Covid-19 pandemic and lockdown on the export of deciduous fruit. June 2020 has values higher than in 2019, however the value does not vary much from the values in 2014-2020.

**Figure 121. Value of deciduous fruits exports**



The export values for citrus fruits (Figure 122) followed the general trend for citrus exports. Compared with previous years, the values in 2020 were higher, with significant increases in April (about 96 million dollars compared to 44 million in 2019 and 48 million in previous years) and June (284 million, compared to 225 million in 2019 and 237 million in 2020).

**Figure 122. Value of citrus fruits exports**

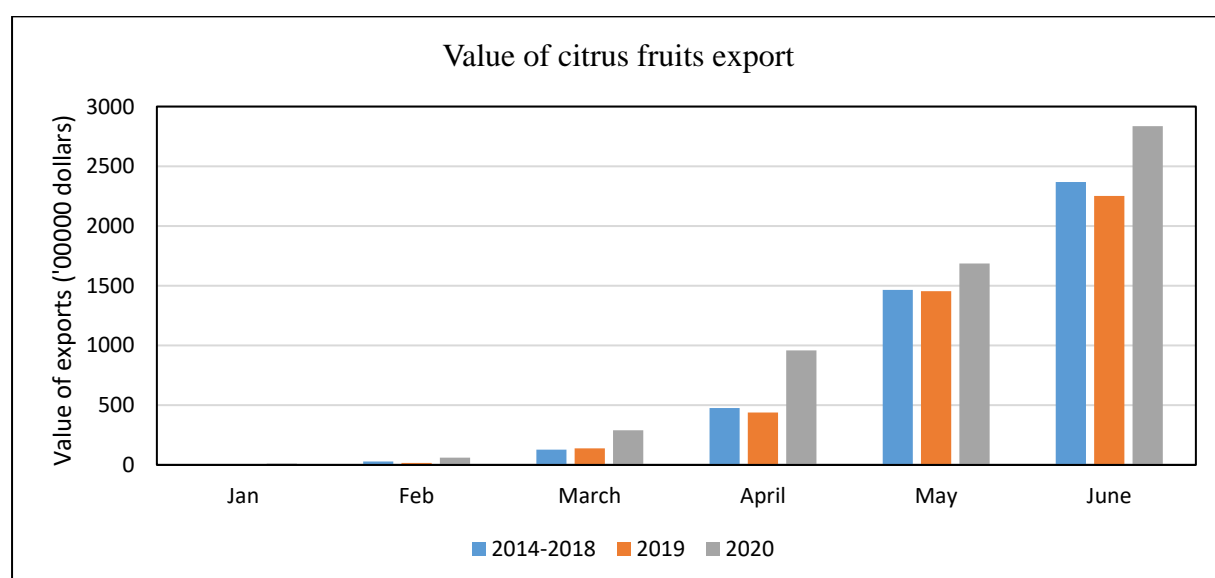
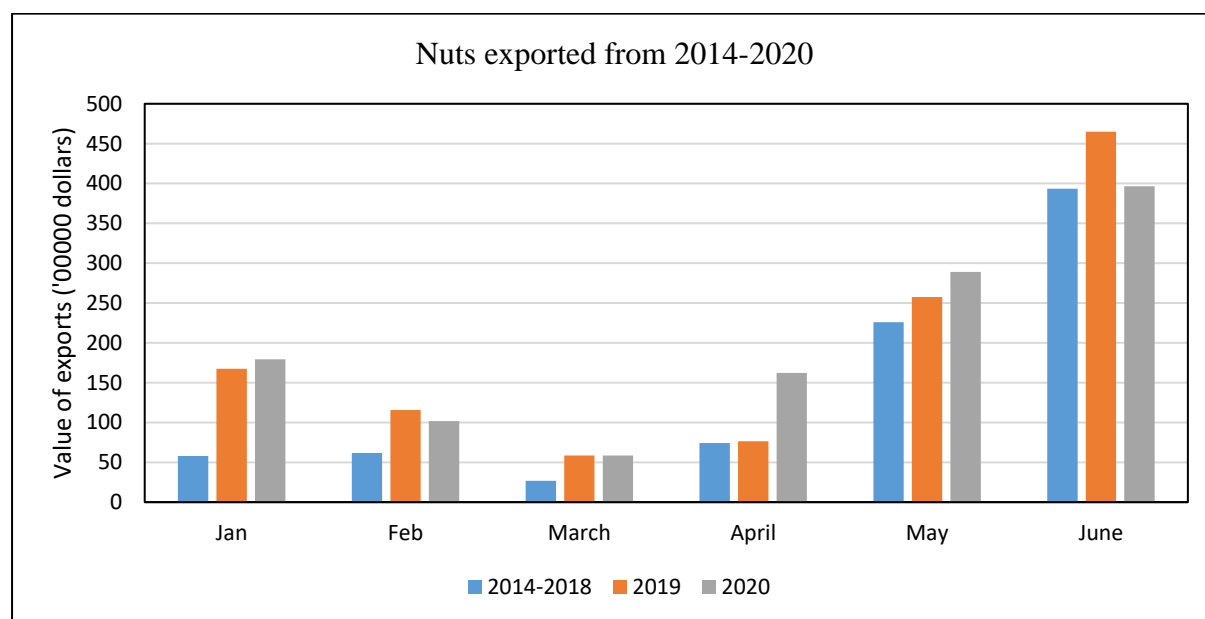


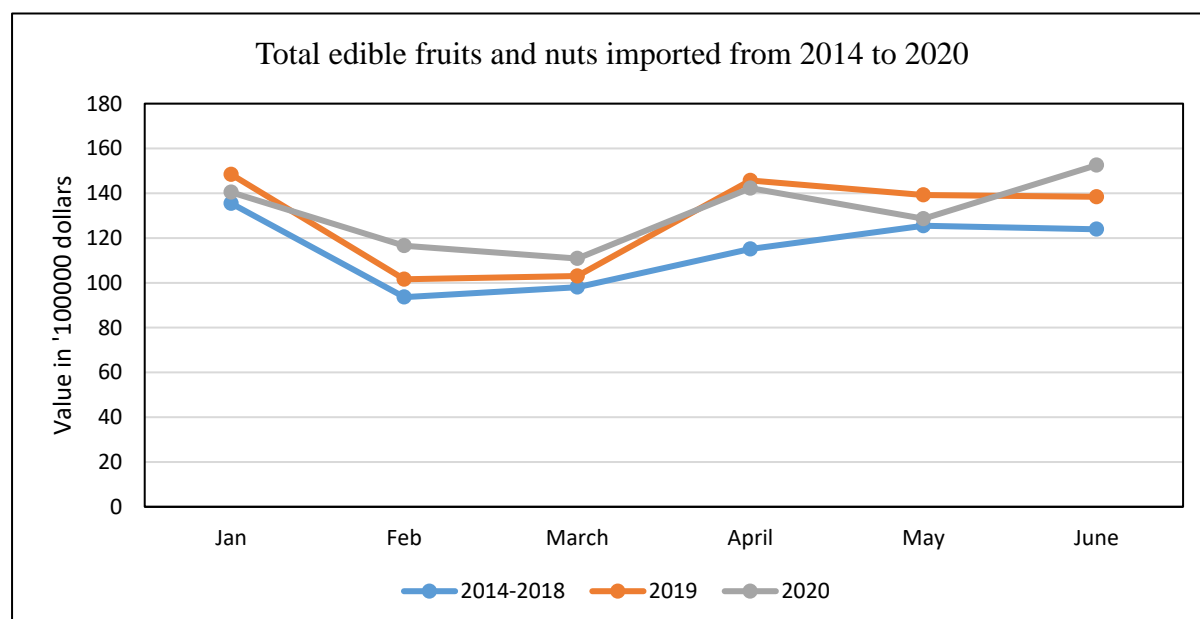
Figure 123 shows the dollar value of nuts exported from 2014 to 2020. There is a notably vast change (more than a 100% increase) in the value of nuts exported in April 2020 compared to previous years.

**Figure 123. Value of nuts exported**



While South Africa is net exporter of most fruits and nuts, it does imports some of these commodities. Figure 124 shows the total dollar value of edible fruits and nuts imported from South Africa, from 2014 to 2020. The overall value of imports was higher in 2019 and 2020, than in 2014-2018. However, the values in April and May 2020 were lower in 2020, compared to 2019. Given that the values are around those of previous years, there is not enough evidence to conclude that this decline is due to the Covid-19 pandemic.

**Figure 124. Value of fruits and nuts imports**



#### 4.6.2. Vegetables

##### *Price dynamics*

Figure 125 shows that the prices of all selected vegetables remain largely constant in the period under consideration, with most experiencing minor decreases in June when compared to February, except for the price of frozen vegetables which experienced an overall increase of 5%, and cauliflower which experienced an overall increase of 4%. Among the listed vegetables, tomatoes experienced the highest overall decline (18%), followed by cabbages (7%) and broccoli (7%). After an 8% increase in April, the price of lettuce decreased progressively in May (4%) and June (8%), representing an overall 6% decrease in price in June in comparison to February. The price of cabbages increased in May, and then decreased in June, resulting in an overall price decline between February and June.

**Figure 125. Prices of selected vegetables**

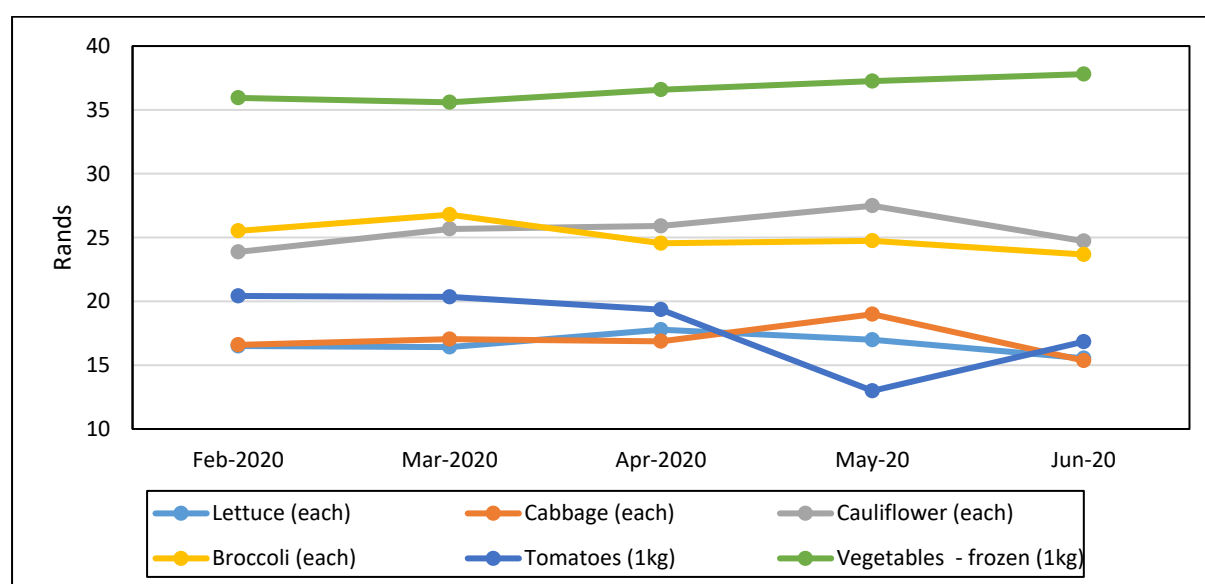
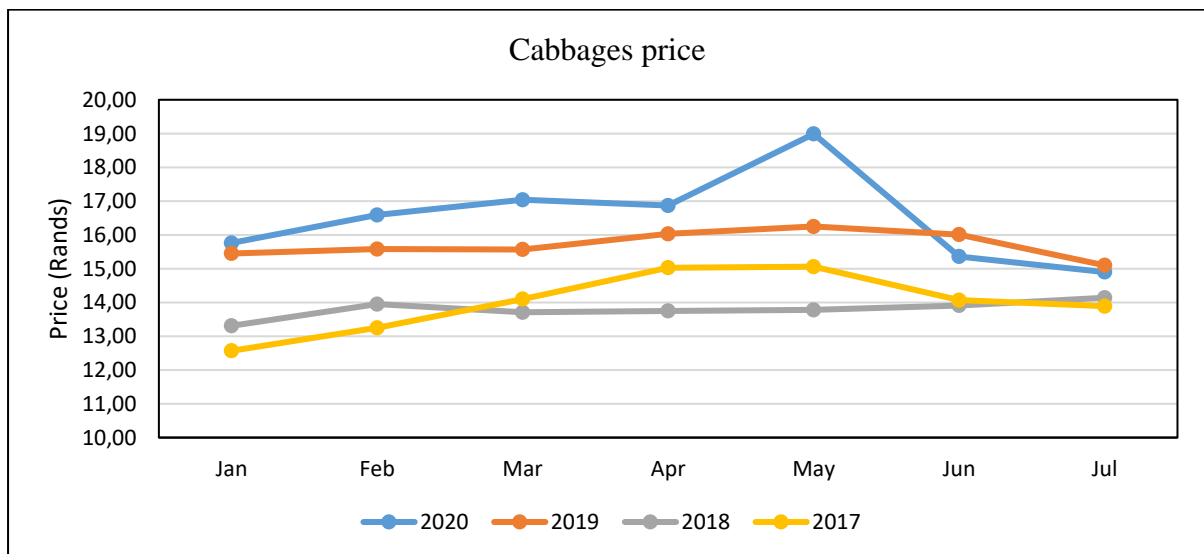


Figure 126 shows that the sharp increase in the price of cabbage in May 2020 was not expected, when compared to the price movements for the past three years. This suggests that the price increase might have been due to lockdown measures, that might have disrupted the cabbage value chains, leading to price increases. However, the price increase was only for one month, and decreased in June and July.

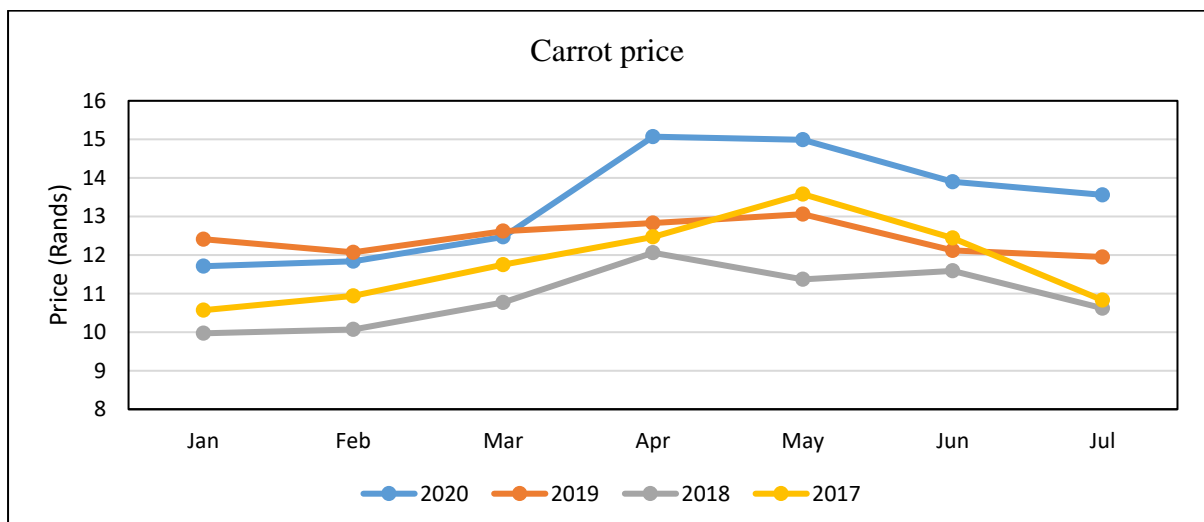


**Figure 126. Price of cabbage**



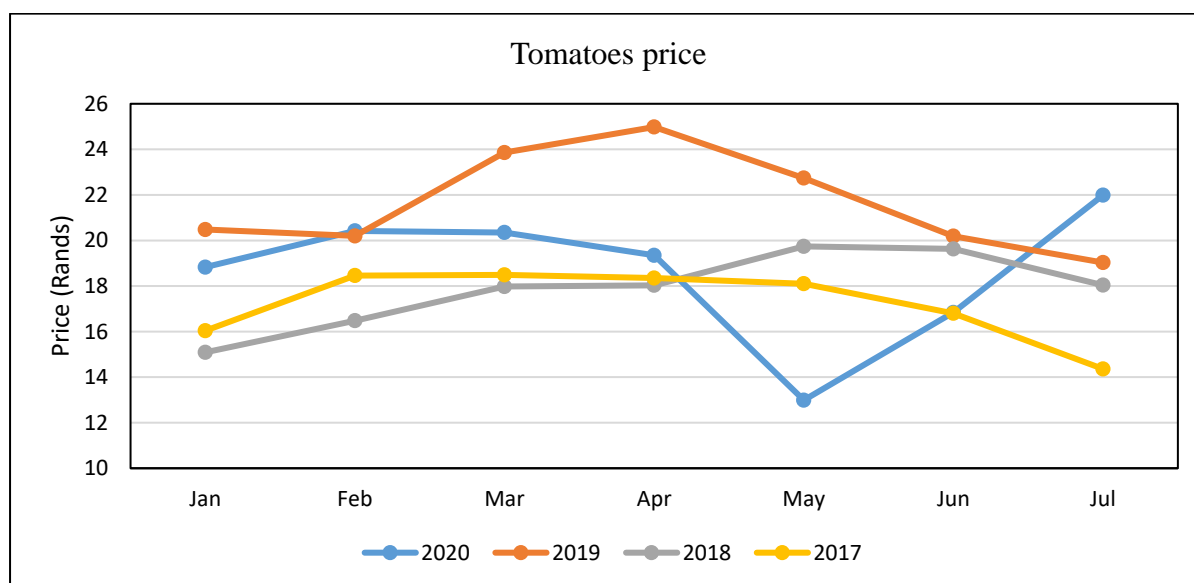
The price of carrot increased in April, during the hard lockdown period, and remained higher than its pre-lockdown level in July (Figure 127). Overall, the graph shows that the lockdown measures led to increases in the price of carrots, particularly in April and May.

**Figure 127. Price of carrots**



In Figure 128, the prices of tomatoes from 2017 to 2020 are presented. The graph shows a fall in the price of tomatoes from March to June, compared to 2019. In May and June, the values are even lower than in previous years. This suggests that, due to decreased demand for perishable items such as tomatoes, and increasing supply due to harvesting activities, the price of tomatoes decreased. However, the price of tomatoes was higher in July.

**Figure 128. Price of tomatoes**



The price of onions is highest in May 2020 and decreased thereafter (Figure 129). This suggests that bulk buying amidst uncertainty during the initial period of the lockdown led to a temporary increase in onion prices.

**Figure 129. Price of onions**

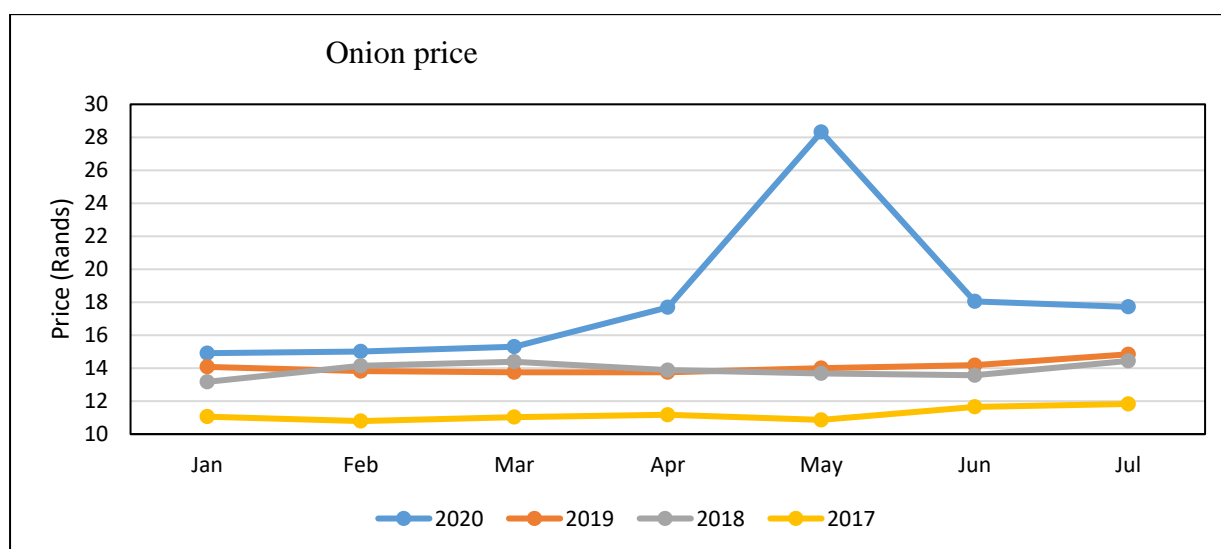
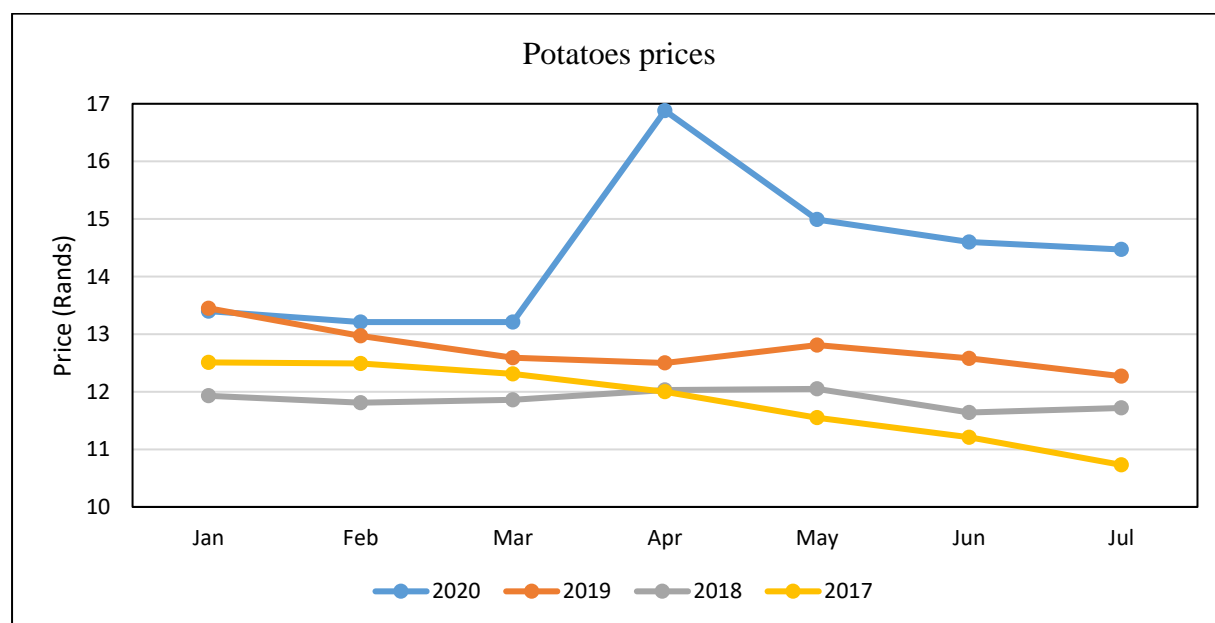


Figure 130 presents the price trend of potatoes from 2017 to 2020. The prices of potatoes increased sharply in April (panic buying), and then decreased in the subsequent months.

**Figure 130. Prices of potatoes, 2017 – 2020**



### *Vegetable exports and imports*

This section focuses on the major vegetable crops exported from South Africa, particularly potatoes, tomatoes, onions, cabbages and carrots. Figure 131 shows the total value of vegetables exported from 2014 to 2020. The value exported between March and April drops significantly in 2020 and stays roughly the same up till June 2020. Though the values in June correlate with the value in previous years (likely due to the loosened regulations in lockdown level 3), the difference is evident in previous months. This suggests that lockdown measures impacted negatively on the exports of vegetables.

**Figure 131. Value of vegetable exports**

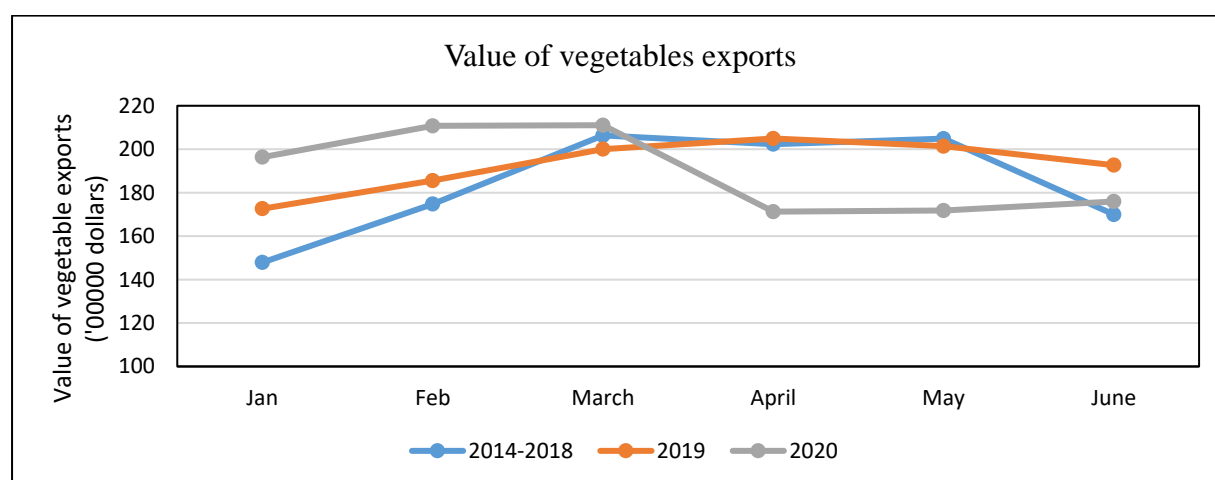
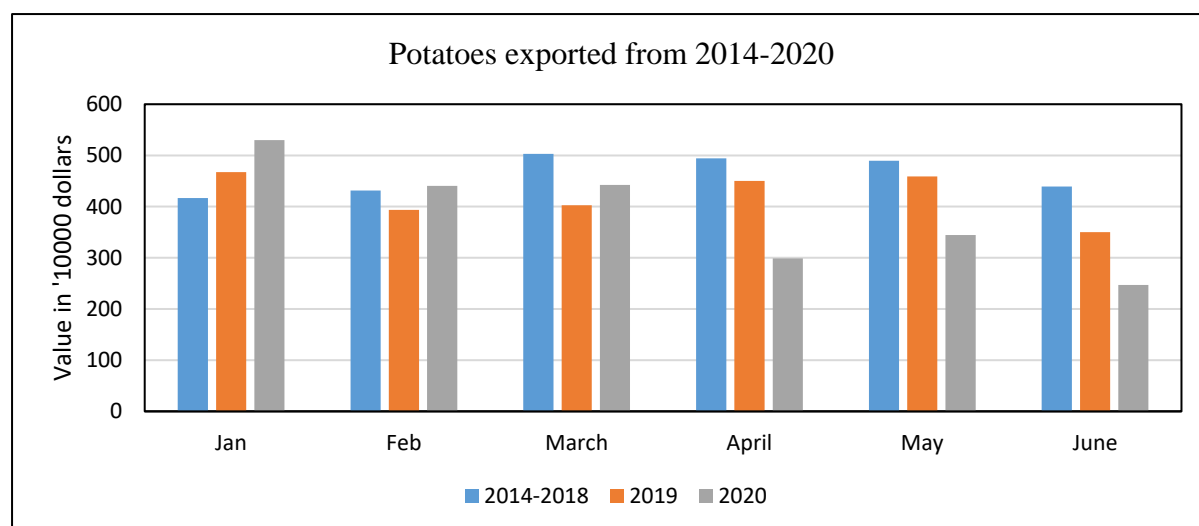
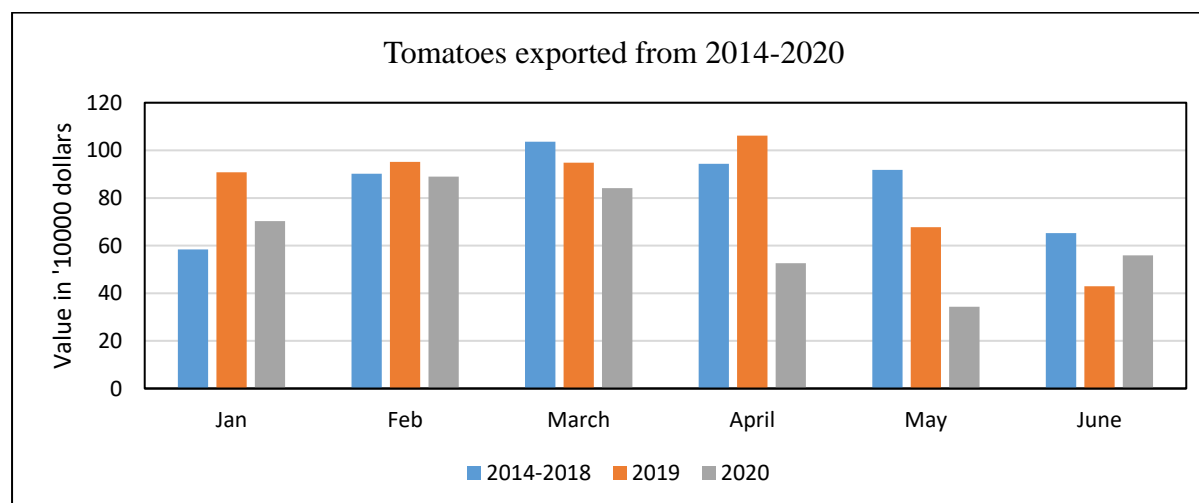


Figure 132 presents the dollar value of potatoes exported between 2014 and 2020. It shows a decline in the value exported from April 2020, compared with previous years. This trend is also observed in the value of tomato (Figure 133), onion (Figure 134) and carrot (Figure 135) exports. This might be attributed to the inadvertent effects of the lockdown regulations including harvest losses due to restricted movement.

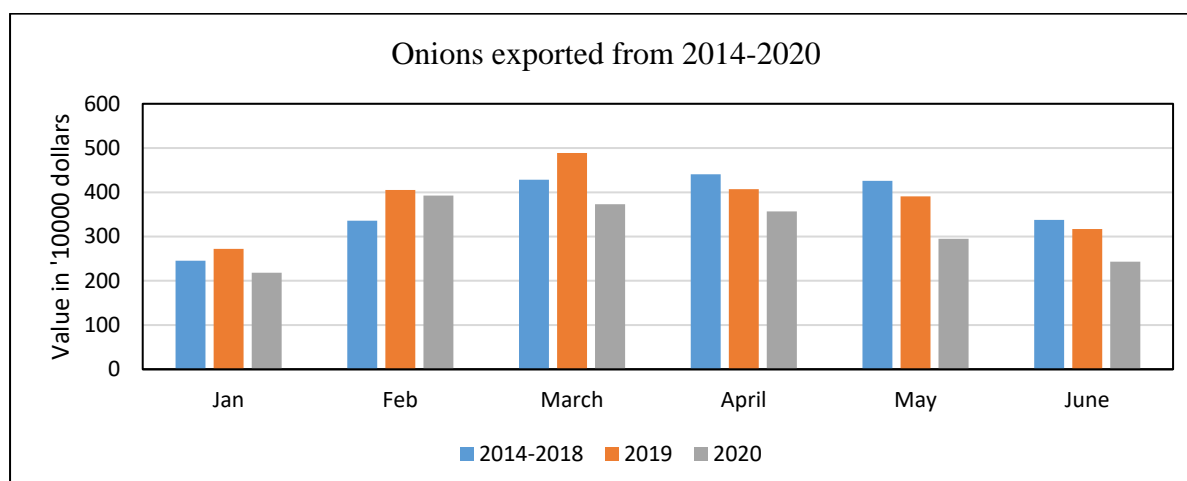
**Figure 132. Value of potato exports**



**Figure 133. Value of tomato exports**



**Figure 134. Value of onion exports**



**Figure 135. Value of carrots exports**

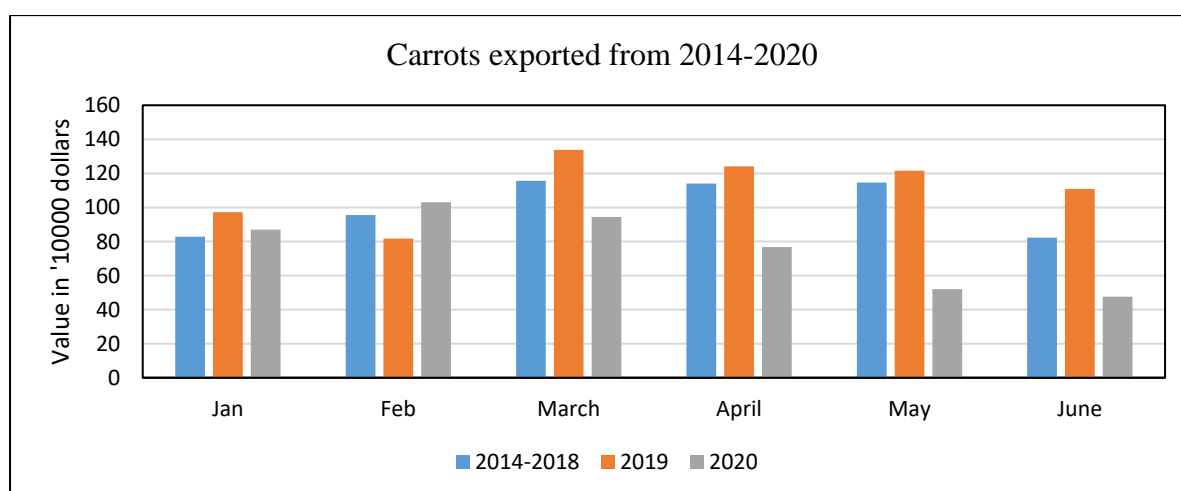


Figure 136 shows the value of cabbages exported from South Africa. The value exported in 2020 was lower than in 2019 but of similar value with 2014-2018. It is difficult to determine the implication, given that the values in January and February 2020 are higher compared to 2019. It is possible that the lockdown stifled any chance of similar export values as in 2019, due to factors like harvest losses.

**Figure 136. Value of cabbages exports**

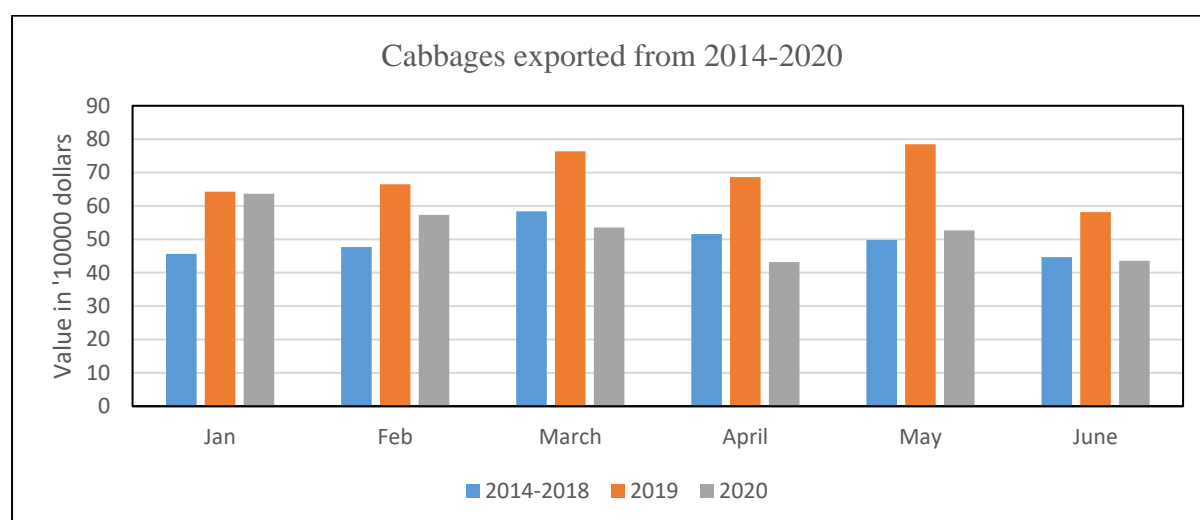
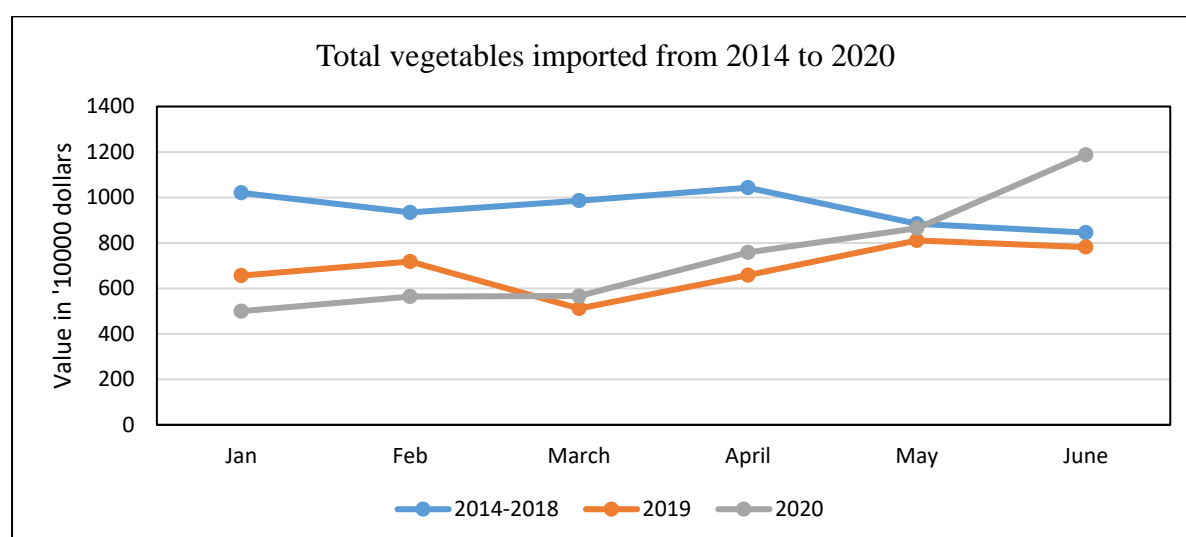


Figure 137 shows the value of all vegetables imported from 2014 to 2020. The value of imports from March to May 2020 is comparable to 2019. However, in June, it is much higher than in previous years. This correlates with the opening of the economy and the end of production for most vegetable commodities, and could thus, be an explanation for these figures.

**Figure 137. Value of vegetables imported**



## 4.7. Impact of Covid-19 and lockdown measures on meat and dairy supply chains

### 4.7.1. Livestock production

The Covid-19 pandemic and the national lockdown has impacted negatively on the key sectors which also contributes to global food security. According to the FAO (2020: 4), “the actions taken in many countries, such as lockdown, travel restrictions and border controls, have resulted in unintended or negative consequences for the livestock sector, including but not

limited to (i) difficulty moving live animals and animal products like milk, meat and eggs to markets, (ii) restrictions potentially limiting seasonal border crossings (transhumance) with ruminants, (iii) restricted capacity to purchase necessary production inputs, (iv) restricted access to labour and professional services”. In South Africa the precautionary quarantine due to Foot and Mouth disease has exacerbated the disruption in terms of livestock value chain, particularly exports of live animals to trade partner countries.

Table 10 indicates that the production of meat is also not expected to be significantly affected by the pandemic. Poultry production increased by 5.1% from 19 500 000 birds in 2019 to 20 500 000 in 2020. The table shows that beef and lamb/sheep production contracted.

**Table 10. Animal production levels, 2019 and 2020**

Commodities	Production	
	2018/19	2019/20
Poultry (birds)	19 500 000	20 500 000
Beef	16 137	9 136
Dairy (L)	283 028 000	283 000 000
Lamb/Sheep	13 731	5 561
Pig	31 614	31 700

Sources: MPO (2020), USDA (2020e), RPO (2020), Red Meat Producers Organisation (2019)

However, it can be observed from Table 5 that the total number of live animals expected to be slaughtered in 2019/20 season is expected to be lower than in previous years. The projections are that the total number of to be slaughtered will decrease by 20.14% compared to the previous years, with sheep and cattle showing a significant decline by 24.10% and 19.00%, respectively. It can be observed in Table 11 that under normal circumstances over 10.8 million live animals were slaughtered in 2018/19, while only 8.6 million were slaughtered in 2019/20. This decline can be attributed to the precautionary quarantines and lockdown measures.

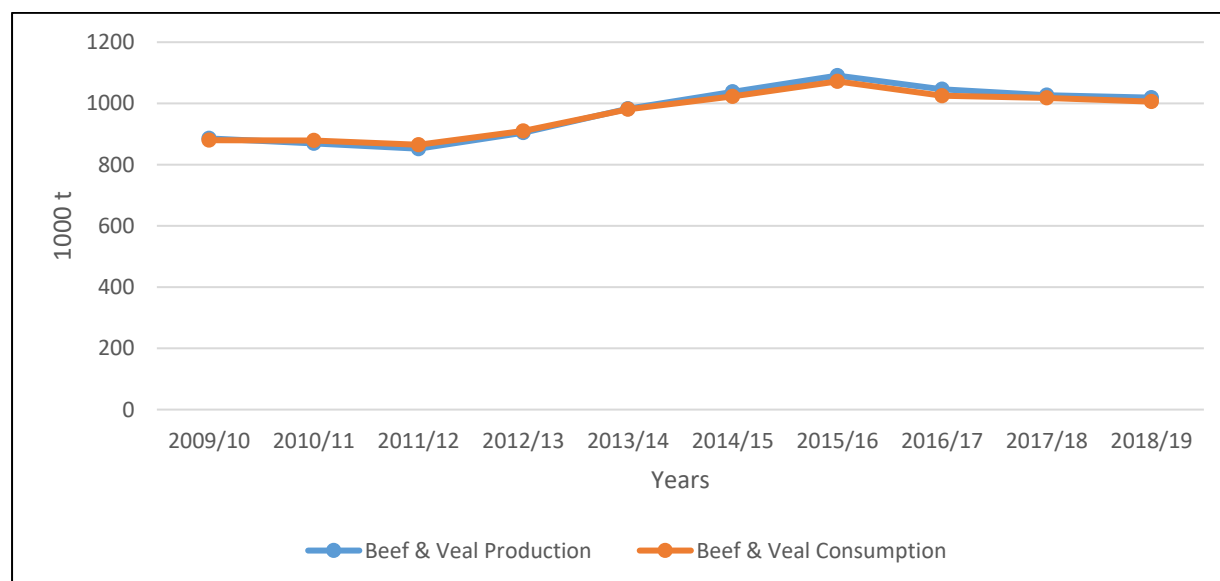
**Table 11. Annual livestock slaughter**

	2018/19	2019/20	% change
Cattle	2656812	2159642	19.00%
Sheep	4935311	3746959	24.10%
Pig	3224841	2731446	15.30%
Total Slaughter	10816964	8638047	20.14%

Source: Red Meat Levy Admin 2018/19 & 2019/20

### 4.7.2 Beef products

**Figure 138. beef & veal production and consumption**

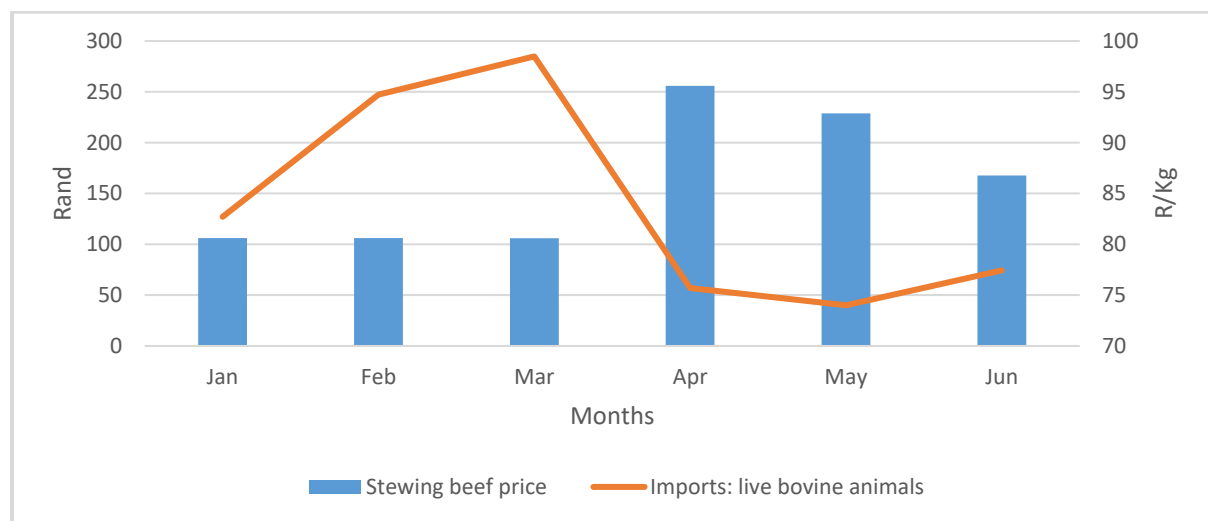


Source: DALRRD 2020

According to the abstract of agriculture (DALRRD, 2020), there are over 12 million cattle in South Africa, “with a well-developed commercial sector and an informal sector consisting of many communal subsistence farmers and a growing number of emerging farmers” (USDA 2018: 2) playing an intrinsic role in beef production. Figure 138 shows that the total production of beef and veal in South Africa declined by 0.76% in 2018/19, while the consumption of beef and veal declined by 1.17% in the same year. The decline in beef and veal production in South Africa could be a result of a prolonged drought that the country has been experiencing as well as the outbreak of the foot and mouth disease in the country. The outbreak of the foot and mouth disease has a significant impact on the beef industry because sales and movement of cattle from other regions that were severely affected by the outbreak had to be suspended, which severely disrupt the supply chain of beef as the number of cattle available for slaughter in the country were limited.



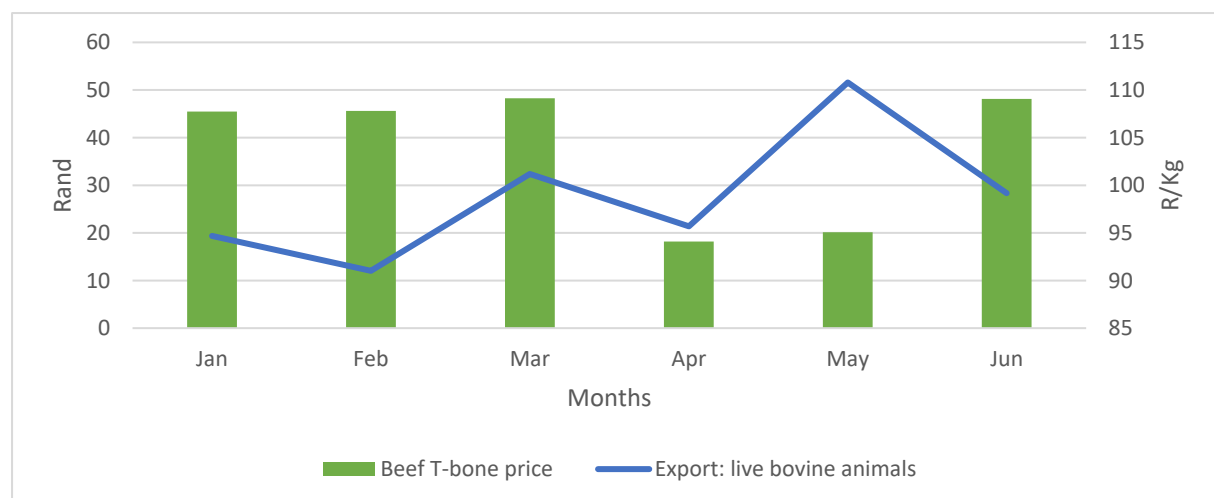
**Figure 139. Stewing beef price vs imports of live bovine animals**



Source: StatSA & Quantec 2020

Figure 139 shows the stewing beef price and the import value of live bovine animals for the period from January to June 2020. The graph indicates that there was a significant decline of 97.99% in the imports of live bovine animals in the first month of lockdown in April. This significant decline has led to a significant rise in the stewing beef price by 18.59% during the same month. This significant decline in April could be attributed to trade restrictions imposed by different countries to curb the spread of the covid19 pandemic. It can also be observed from figure 139 that as countries continue to ease their trade restrictions, the imports of live bovine animals recovered by 85.61% in the month of June, which led to a decline in the price of stewing beef by 6.56% from R92.87 to R86.77 per Kg.

**Figure 140. Beef T-bone price vs exports of live bovine animals**

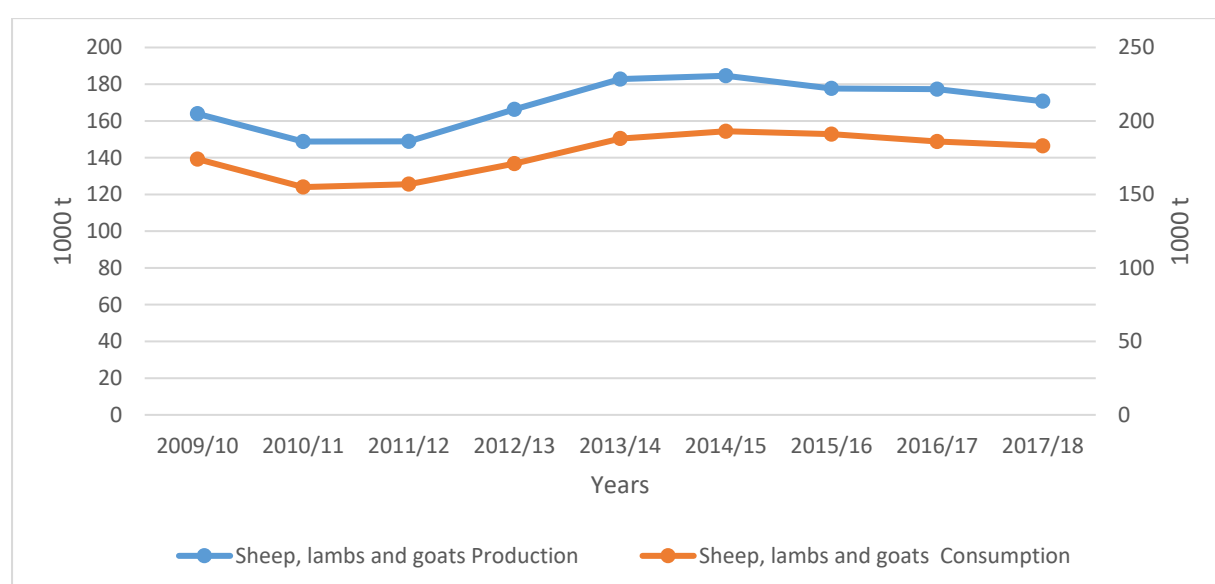


Source: StatSA & Quantec 2020

Figure 140 shows the price of beef T-bone and the export value of live bovine animals for the period from January to June 2020. It can be observed that the level 5 lockdown measures have had a negative impact on the exports of live bovine animals and the price of beef T-bone. Figure 140 indicates that the price of beef T-bone significantly dropped in April by 13.77% from R109,13 per Kg to R94.10, while the export value of live bovine dropped by 33.96% in the same month. This negative growth in April could be as a result of congestion in country borders, excessive lockdown regulations, and inefficient bureaucracy during the initial levels of lockdown, because immediately when the country move from level 5 to level 4, the exports of live bovine animal started to pick up again.

### 4.7.3. Sheep products

**Figure 141. Sheep production and consumption**

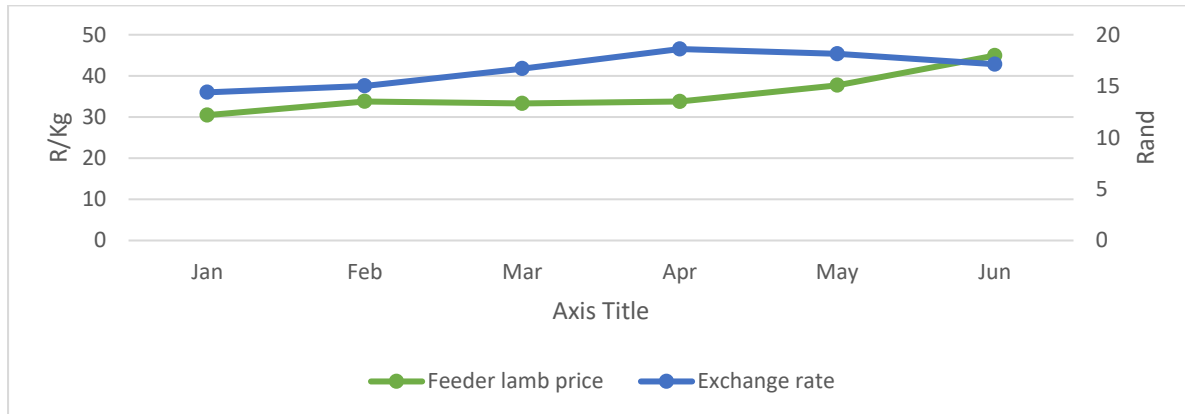


Source: DALRRD 2020

Figure 141 shows the latest figures for sheep, lambs, and goats production and consumption from the Department of Agriculture Land Reform and Rural Development. Although the graph does not reflect the figures for 2019/20 which is of interest to this study, it can be observed that South Africa produces a surplus of sheep, lambs, and goats as the level of consumption for sheep, lambs and goats is below the level of production. According to the graph above, the production and consumption of sheep, lambs, and goats are showing similar trends, when the level of production declines, the level of consumption declines as well. Figure 141 shows that during the 2017/18 production season, the production of sheep, lambs and goats declined by 3.72%, while the consumption decline by 1.61% in the same season. The decline in sheep,

lamb, and goats can be attributed to low rainfall received in major sheep, lamb, and goats production regions such as Northern Cape and Eastern Cape.

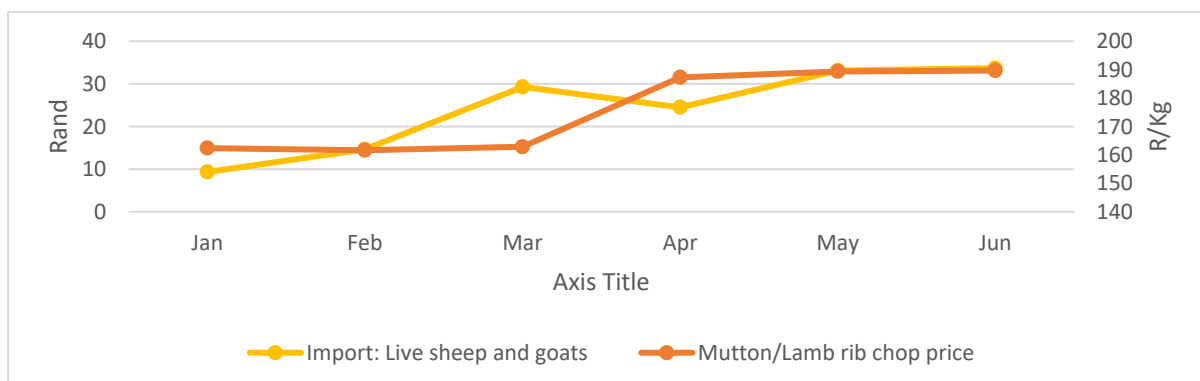
**Figure 142. Feeder lamb price vs exchange rate**



Source: Absa 2020 & StatsSA 2020

Figure 142 shows the price of feeder lamb for the period from January to Jun 2020. As indicated in Figure 142, the month on month comparison shows that the price of feeder increased in May and June 11.66% and 19.14%, respectively. The limited supply of feeder due to travel restrictions and interprovincial movement could have influenced the price change of feeder lamb. The limited supply from the manufacturer could have influenced the increase in the price of feeders as some manufacturing companies were working in bubbles due to social distancing precautions that need to be followed to curb the spread of the virus. It can be observed that the exchange rate did not have a significant impact on the price of feeder lamb because under normal circumstances it would be expected that when the exchange is high the domestic price of feeder would be expensive.

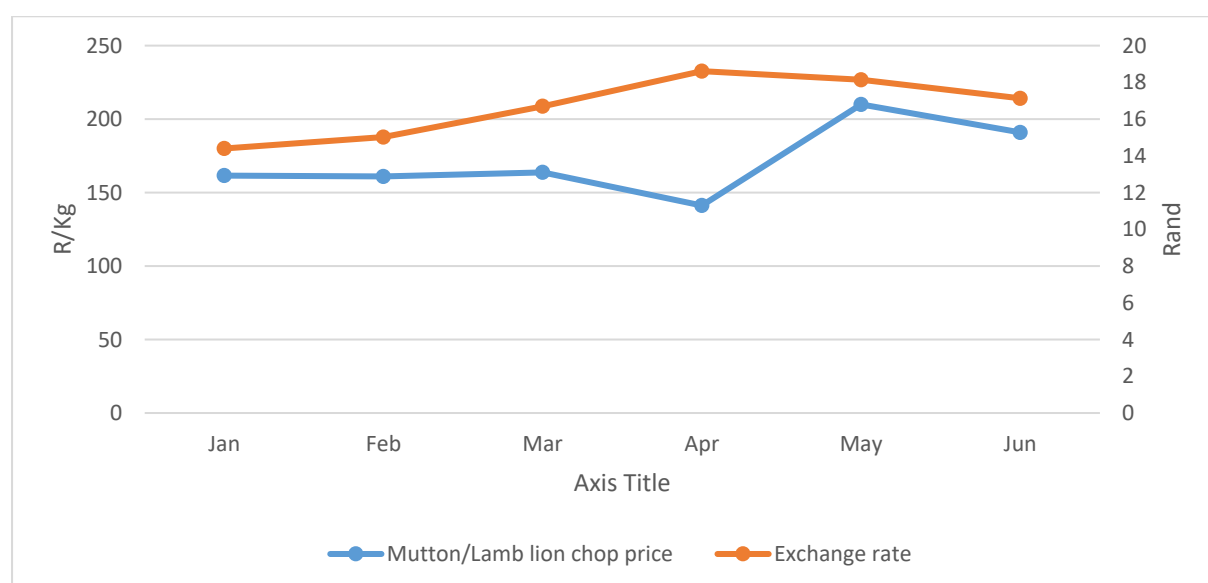
**Figure 143. Mutton/Lamb rib chop price vs Import of live sheep and goats**



Source: StastSA & Quantec 2020

As highlighted in Figure 143, the value of imports of live sheep and goats had a significant impact on the price of mutton/lamb rib chop. The graph shows that the decrease of 16.32% in the value of live sheep and goats imports in April has led to a significant rise of 14.98% of the price of mutton/lamb rib chop from R162,86 per kg in March to R187,27 in April. This shows that the limited supply of sheep in the country due to import restrictions in response to curb the spread of the virus has negatively affected the price of mutton/lamb rib chop.

**Figure 144. Mutton/lamb lion chop price vs exchange rate**

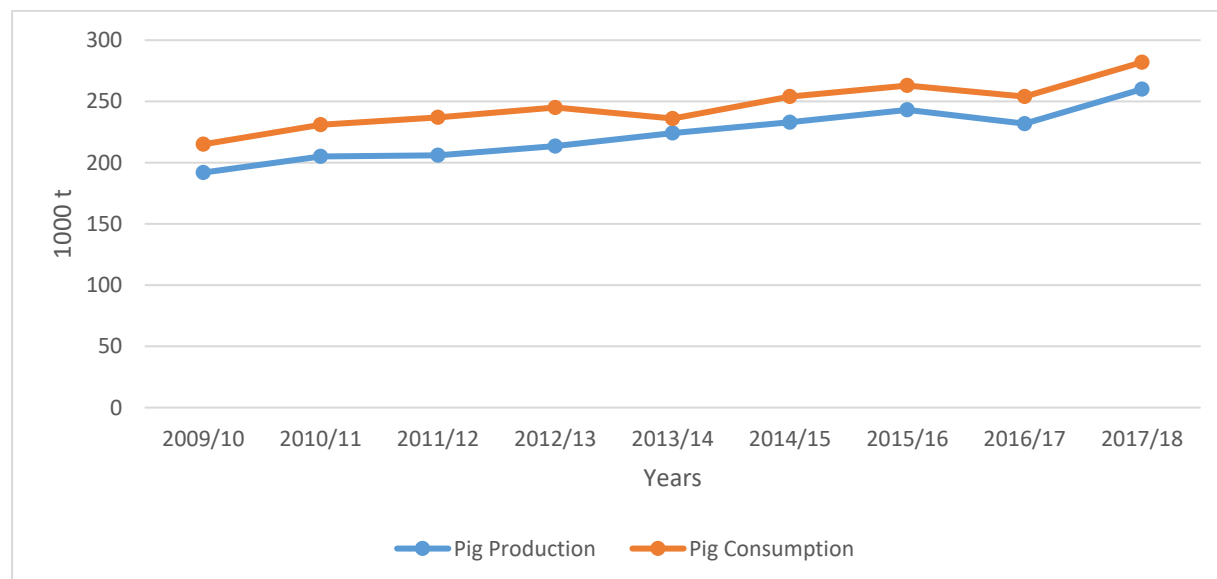


Source: StatSA & Quantec 2020

Figure 144 shows that the price of the mutton/lamb lion chop declined by 13.76% in April 2020. This decline during the first months of the lockdown in April could be as a result of the people buying products with long shelf life because they were not sure about the duration of the lockdown, this could have impacted sales of mutton/lamb lion chop, however, as the lockdown restrictions were eased plus limited supply of lamb due to suspended livestock sales through actions, the price of lamb picked again the following month in May. The exchange could also be one of the contributing factors to the changes in the price of mutton/lamb lion chop because they are showing similar trends. When the value of rand declined by 5.56% in June, the price of mutton/lamb lion declined by 9.09% during the same month.

#### 4.7.4. Pig products

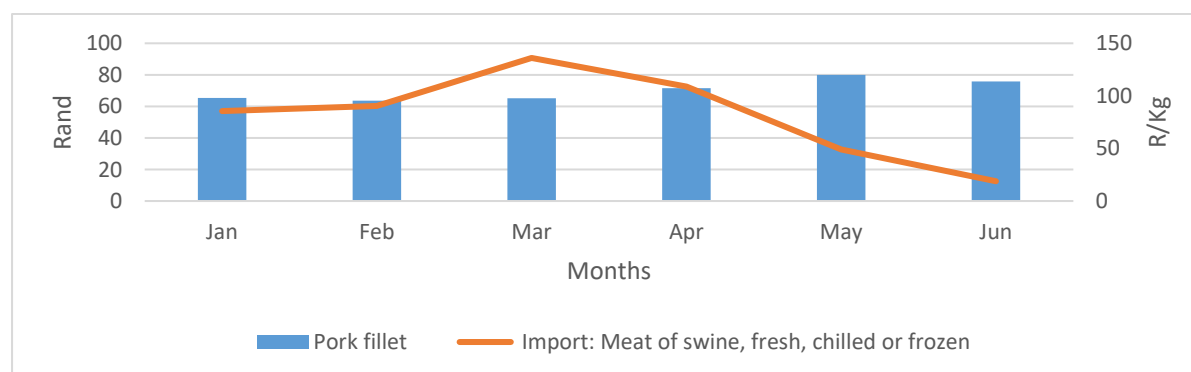
**Figure 145. Pig production and consumption**



Source: DALRRD 2020

A similar trend is observed in the production and consumption pattern of pigs in South Africa. It can be observed that an increase in the production of pigs results in an increase in the consumption of pigs, vice versa. Figure 145 shows that the consumption of Pig in South Africa is highly dependent on external international markets, as the country's level of consumption is higher than its domestic production. According to the graph above, over 250 thousand pigs were produced in the 2017/18 season, while over 280 thousand were consumed during the same. This implies that any significant change in the exchange rate and imports of pigs would have a significant impact on domestic pig prices.

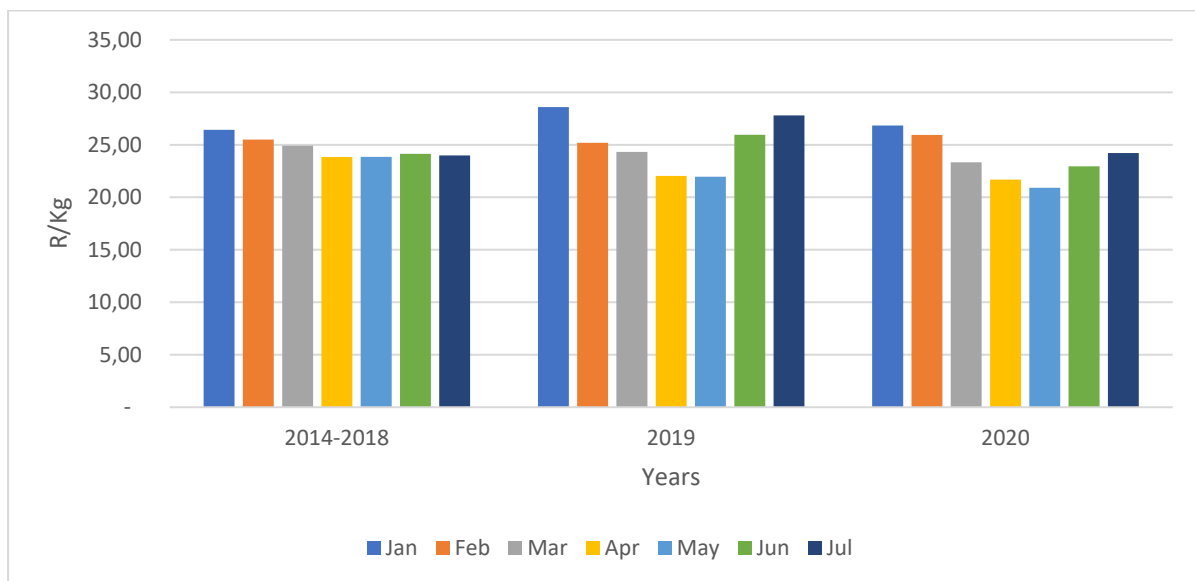
**Figure 146. Pork fillet price vs import value of swine**



Source: StatsSA & Quantec 2020

Figure 146 shows the relationship between the price of pork fillet and the import value of swine, fresh, chilled, or frozen from the period from January to June 2020. The graph shows that the imports of swine declined from April, May, and June, 20.04%, 54.92%, and 61.57%, respectively. This significant decline in imports of swine during lockdown has a negative impact on the price of pork fillet. The price of pork fillet increased significantly by 11.81% May from R107.3 per kg in April. This implies that low imports of swine have disrupted the supply of pork fillets on the domestic markets which led to the price changes.

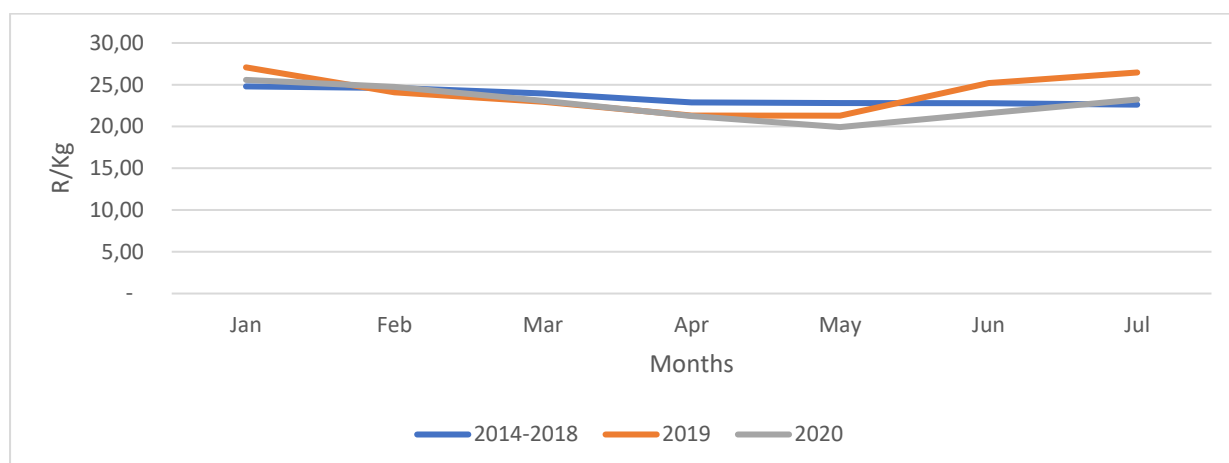
**Figure 147. Porker prices**



Source: Absa 2020

The COVID-19 pandemic has had a negative impact on farming activities in the first two months of the lockdown, which could also have impact on the sale of livestock. According to Figure 147, the price of porker declined in April and May 7.07% and 3.55%, respectively, followed by a recovery of 9.75% in June 2020. Year to year comparison shows that the price of porker decreases by 1.63% from R22.04/Kg in April 2019 to R21.68% in April 2020. The decline in the price of a porker in 2020 could be attributed to oversupply as many individuals prioritized to purchase essential tinned long shelf-life products.

**Figure 148. Baconer prices**

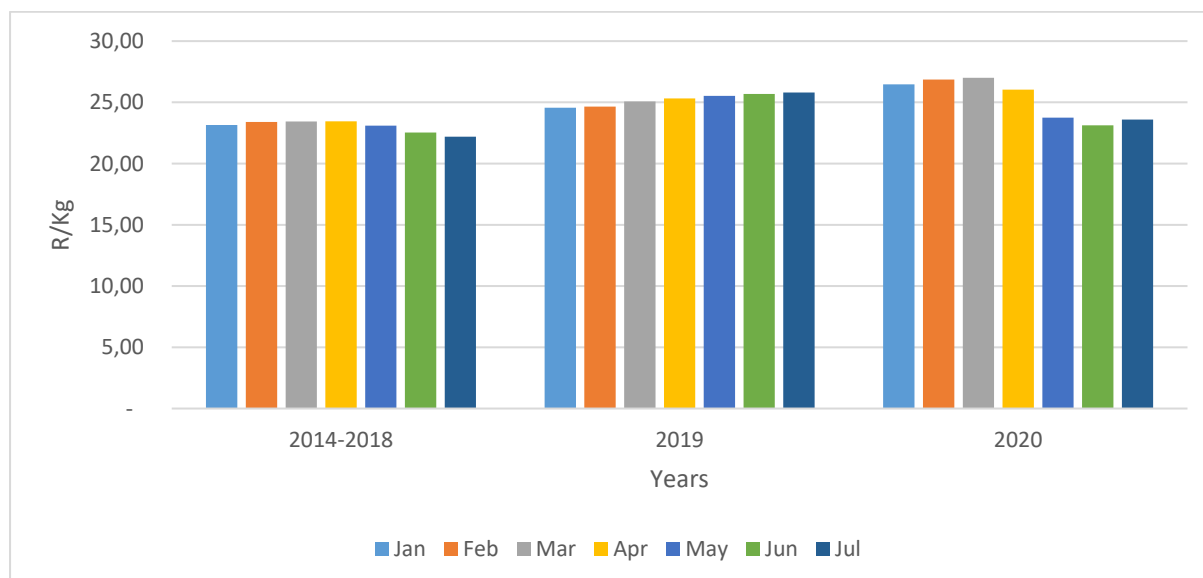


Sources: Absa 2020

Figure 148 shows the price of Baconer from 2014 to 2020 during the period from January to July. It can be observed from the graph above that the price of Baconer declined in April and May 7.84% and 6.25%, followed by a recovery in June 8.42%. Limited demand and changes in consumer income could be the main factors contributing to the decline in the price of Baconer.

#### 4.7.5. Poultry products

**Figure 149. Frozen whole bird price**

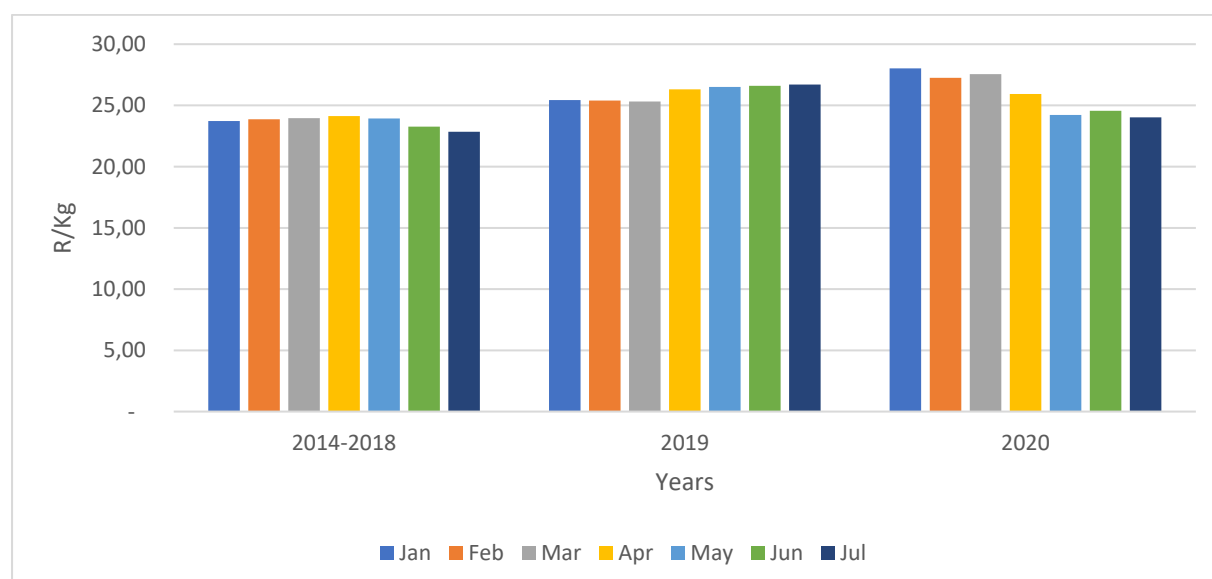


Source: Absa 2020

The covid19 pandemic has negatively affected the poultry industry. Figure 149 shows that the price of frozen whole bird declined from May and June 8.75% and 2.65%, respectively. This decline was followed by a recovery in July 2.03%. Lack of market due to the nonoperational

of informal traders who deal with cooked food and restaurants could have resulted in an oversupply of frozen whole bird which led to the decline in price. The easing of lockdown which allowed restaurants to operate in July has helped the frozen whole bird market to recover as indicated in Figure 149.

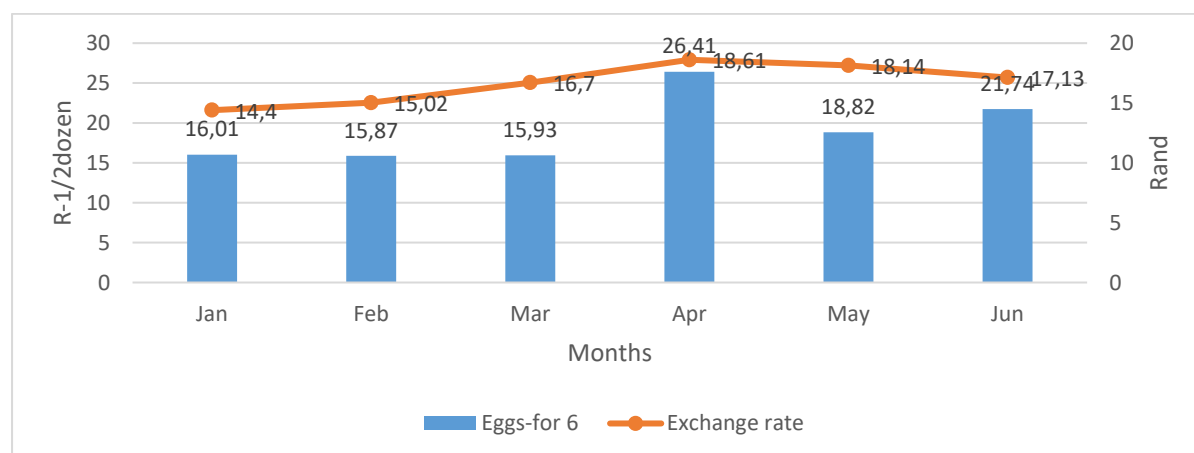
**Figure 150. Fresh whole bird prices**



Source: Absa 2020

Figure 150 shows that the poultry industry struggled to recover from the decline in fresh whole bird price 5.80% from R27.55 in March to R25.94 in April 2020. This constant decline in the price of fresh whole bird could be attributed to a lack of demand and oversupply of fresh whole birds. Year to year comparison shows that the fresh whole bird price declined significantly 10.03% in July 2020 compared with the previous year.

**Figure 151. Eggs price vs exchange rate**



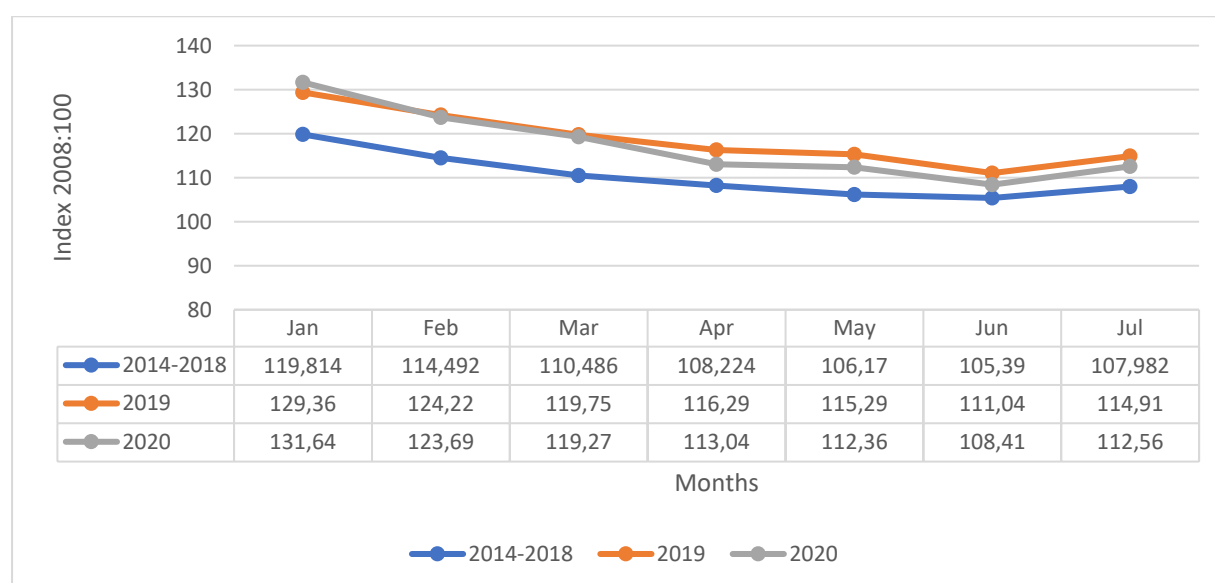
Source: StatsSA 2020



Figure 151 shows the relationship between the price of half-dozen eggs and the exchange rate. It can be observed that the price of eggs significantly increased by 65.78% during the first month of level 5 lockdown, followed by a decline of 28.73% in May. The significant increase in the price of half-dozen eggs during the first month of the lockdown in April could be attributed to the weak value of the rand.

#### 4.7.6 Dairy products

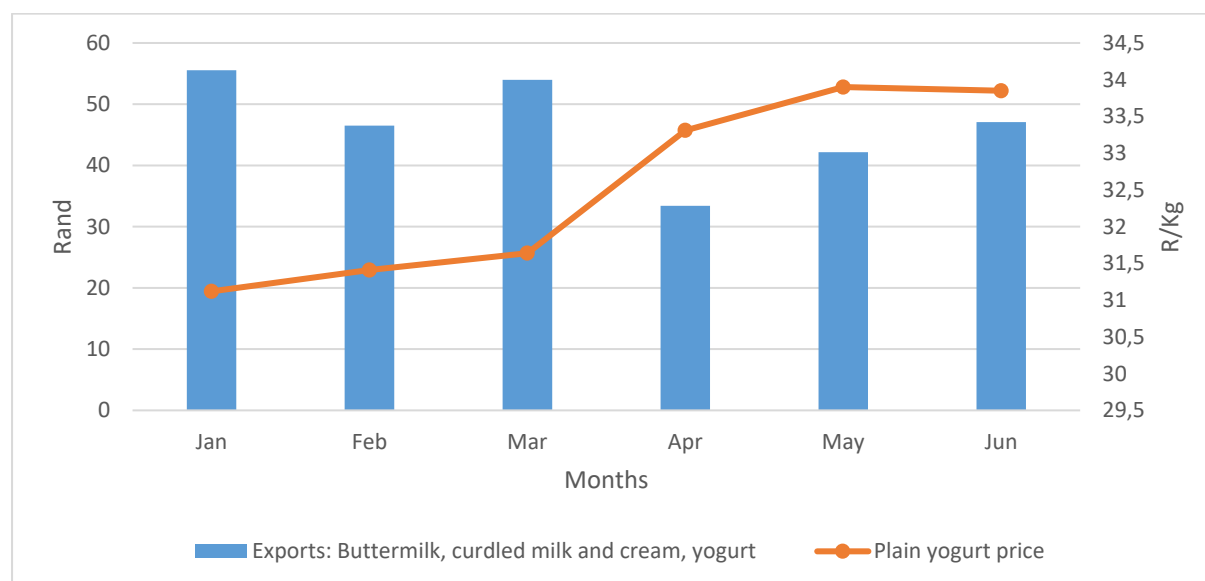
**Figure 152. Trend of raw milk purchased**



Source: Sampro 2020

Figure 152 shows the total raw milk purchased from 2014 to 2020 during the period from January to July. It can be observed from the graph that the mass purchased per day in January 2020, is higher than in the same month of 2019, while figures for February, March, April, and May 2020 and the estimated figures for June and July 2020, are lower than in the same months of 2019 (Sampro 2020). Year to year comparison shows that the average mass of raw milk purchased declined by 1.18% in 2020 compare to the previous year.

**Figure 153. Exports value of buttermilk and plain yogurt price**



Source: StatsSA & Quantec 2020

Figure 153 shows the mass of buttermilk, curdled milk and cream, yogurt exports and plain yogurt price during the period from January to June 2020. The graph indicates that there was a significant decline in 38.10% in April in the mass of buttermilk, curdled milk and cream, yogurt imports, followed by a recovery in May and June 26.19% and 11.66% respectively. The recovery in May and June and be attributed to the fact that most countries continue to ease the trade restriction due to low numbers of Covid-19 infections in their countries. However, low supply buttermilk, curdled milk and cream, yogurt during lockdown has resulted in the increase in the price of plain yogurt in April and May 5.27% and 1.77%, respectively

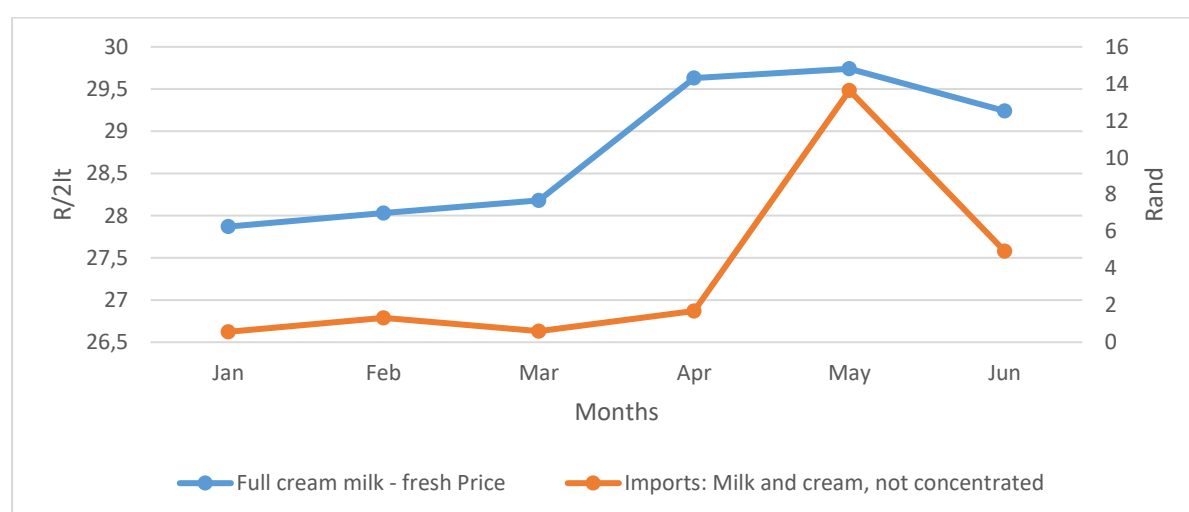
**Figure 154. Feta cheese price vs value of cheese and curd**



Source: StatsSA & Quantec 2020

Figure 154 shows the total mass of cheese and curd exports for the period from January to June 2020. The estimated average mass of cheese and curd imports in 2020 decline by 12.65% compared to the previous year. Month on month comparison shows that the estimated exports significantly declined by 44.35% in May 2020 compared to the previous month. It can also be observed that the price of feta cheese declined by 2.34% during the same month. This decline can be attributed to lockdown measures and export restrictions imposed by other countries to curb the spread of the Covid-19 pandemic.

**Figure 155. Full cream milk price vs import value of milk and cream**

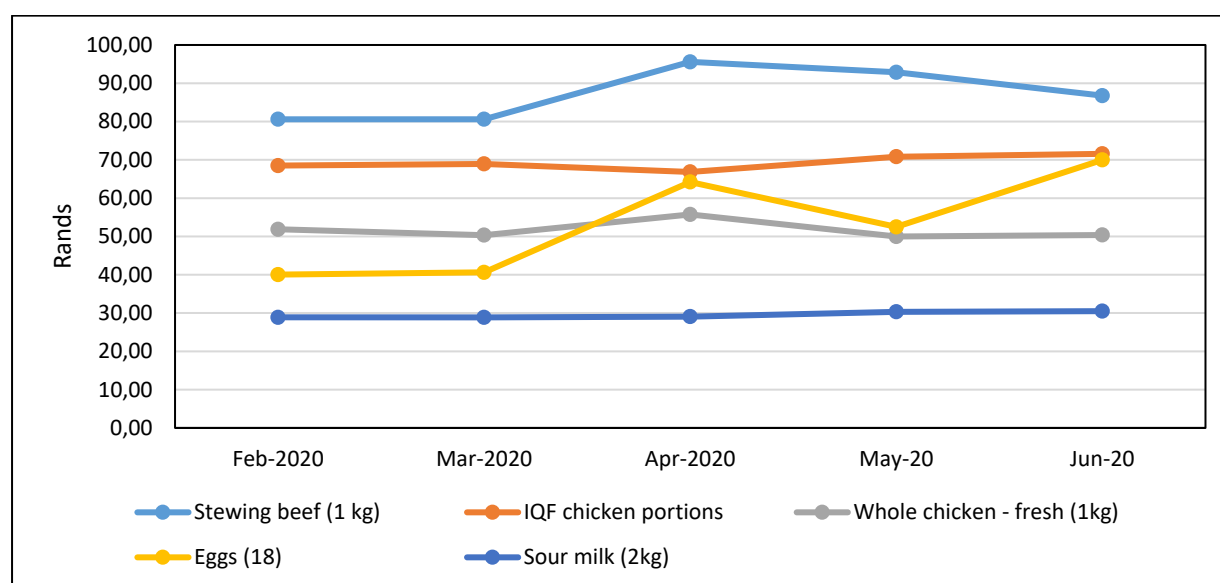


Source: StatsSA & Quantec 2020

Figure 155 shows the import value of milk and cream and the price of fresh full cream milk. The graph shows that the price of fresh full cream milk increased in April and May 5.14% and 0.37%, respectively. It can be observed that when the value of imports increased in May, the price of fresh full cream milk declined by 1.68% to R29,24 per 2litre in June.

Figure 156 shows the prices of beef, chicken, sour milk and eggs for the February – June period. The graph shows that the price of stewing beef increased significantly (20%) in April. The price increase was followed by a decrease in beef prices in May (3%) and June (7%), albeit in small amounts. The price of eggs experienced high fluctuations and increases. In April, the price of eggs increased by 58%, followed by a decrease in May of 18%, and then a 33% increase. The price of sour milk remained constant through the months, while that of chicken decreased (10.3%) in May by almost a similar margin it had increased in April (10.7%).

**Figure 156. Prices of meat, eggs and sour milk**



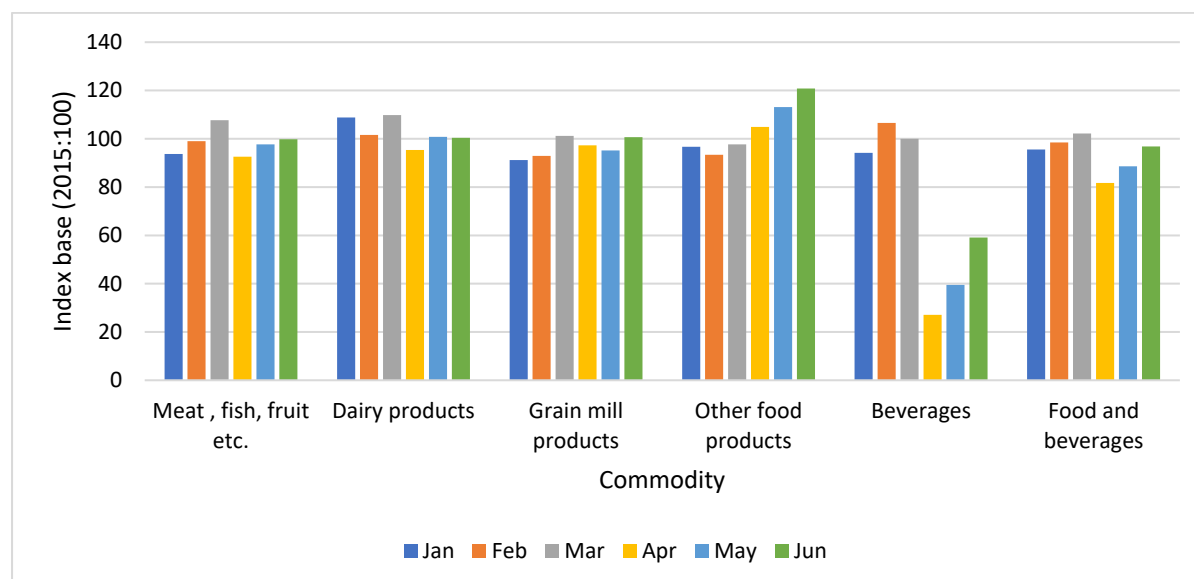
Source: Stats SA 2020

#### 4.8. Overall levels of food manufacturing capacity utilisation

Agri-food processing activities were temporarily disrupted, particularly in the early period of the pandemic. According to some reports (e.g., Business Insider, 2020), the disruptions resulted in short term shortages of cereal products (e.g., pasta, maize meal, etc.) in the shops in certain areas. This subsection presents statistics from various sources highlighting the extent to which agri-food processing and manufacturing was affected by the Covid-19 pandemic and lockdown measures.

Figure 157 shows the levels of manufacturing production of different food and beverage commodities in 2020, using 2015 as the base. In sum, the graph shows that the food and beverages industry experienced a huge decline in manufacturing volumes during the hard lockdown in April. The figure indicates that the production volume was just below 82% of the 2015 level in April and had increased progressively to just below the 2015 level by June. The overall pattern for all the commodities is that there was a big jump upwards in March, followed by a decline in April, and an increase in May and June. The exception is other food products category, which has been growing since March.

**Figure 157. Seasonally adjusted index of the volume of food & beverage manufacturing production**

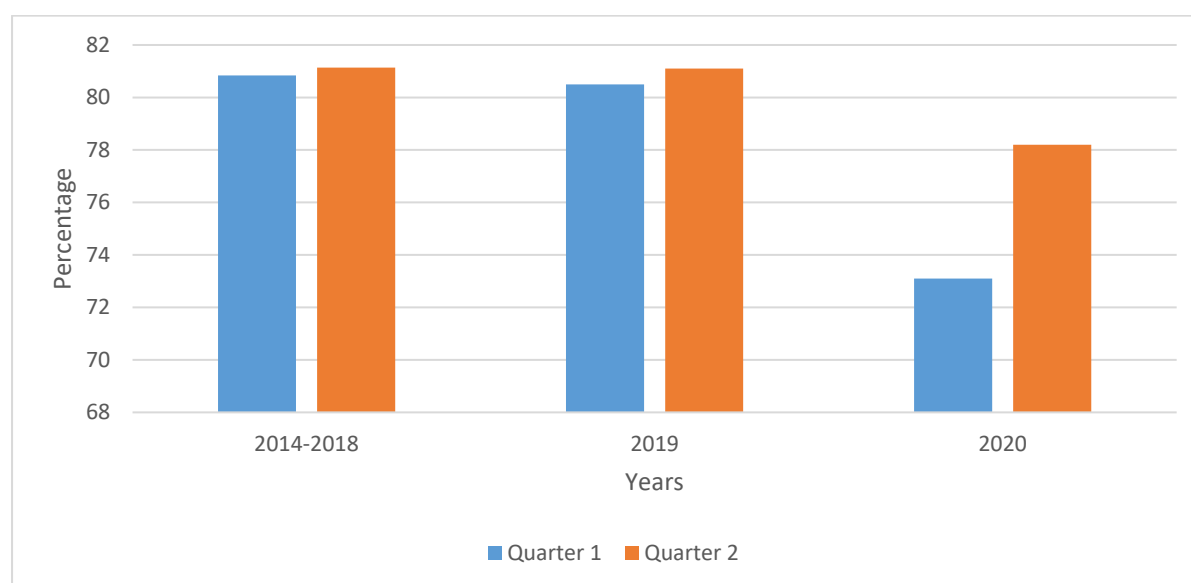


Source: Stats SA, 2020

Beverages suffered the worst decline, as the lockdown measures restricted the sale of several beverages (e.g., hot beverages, wines, etc). Compared to the March production level, which was at par with the 2015 level, the graph shows that the beverages index dropped by more than 73%. While it started increasing in May, the level of manufacturing levels remained more than 30% below the 2015 level. The perishable food groups, such as meat, fish, dairy, fruits, also experienced significant declines during the lockdown period in April. The first phase of lockdown was disruptive because most of the business activities, including the food sector, were not fully operational. Consequently, most firms and food processors were unable to produce the volume of commodities that they produce under normal circumstances. However, for most of the food groups, production levels had risen back to the 2015 level by June, except for beverages.

Figure 158 shows the extent of utilisation of production capacity in the food industry during the first two quarters of 2020. The figure indicates that the utilisation of production capacity increased in quarter 2 of 2020, compared to quarter 1 of the same year. However, the utilisation levels remain just below the average levels when compared to the previous years. Among many reasons, insufficient demand was the main reason for low capacity utilisation, explaining 13% of the 21% underutilisation in 2020.

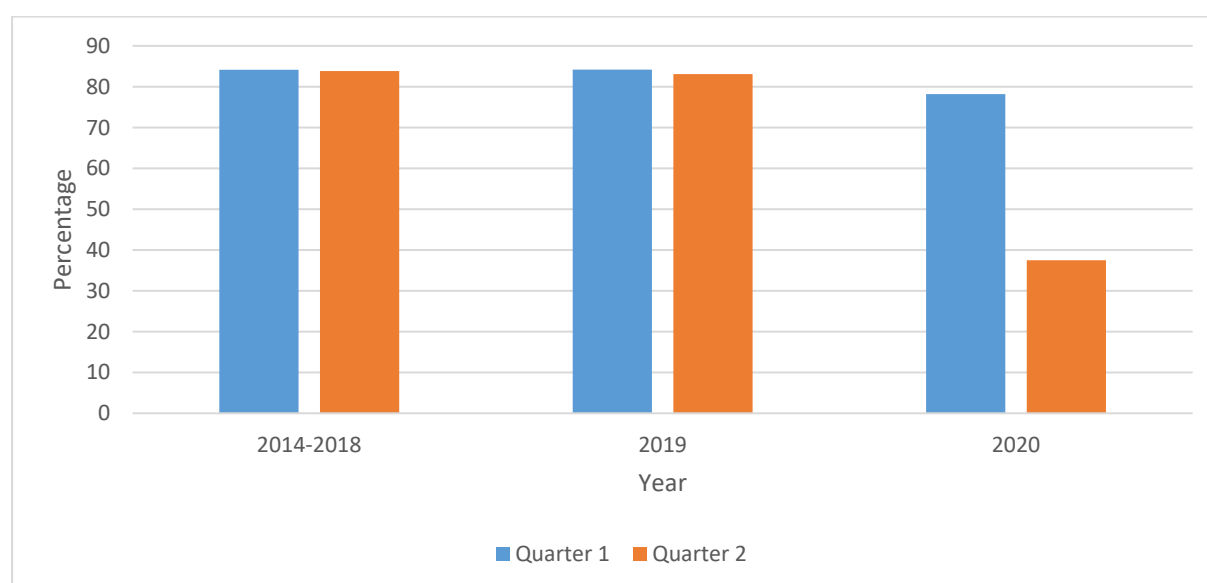
**Figure 158. Utilisation production capacity for food and food products producers**



Source: Stats SA 2020

For beverages producers, Figure 159 shows that the production capacity was significantly underutilised in quarter 2 of 2020. The graph shows that less than 38% of its production capacity was used. Among the listed reasons, insufficient demand explained 26% of the 62% underutilisation of production capacity in the beverage sector. The demand for non-alcoholic drinks declined mainly because the hospitality industry was restricted from trading, while the second reason (also explaining 26% of the underutilisation) was because the sector was not allowed to sell alcoholic drinks until only recently.

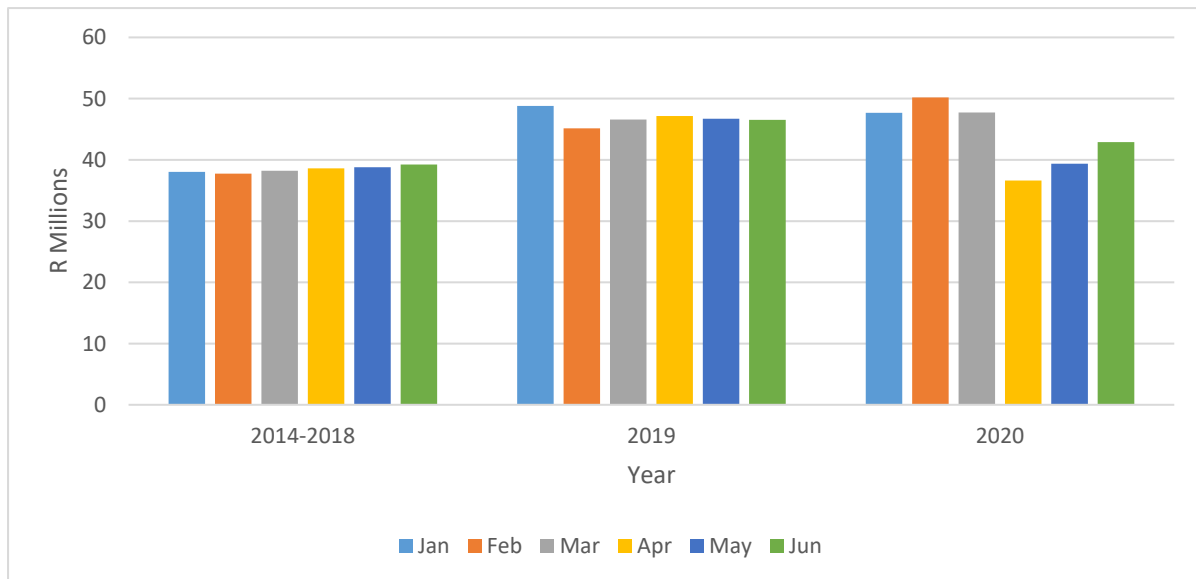
**Figure 159. Utilization of production capacity in beverages**



Source: Stats SA 2020

Figure 160 shows that the monthly value of manufacturing sales (using seasonally adjusted prices) for different commodities across the different months under consideration. The Figure shows that the pandemic and lockdown measures significantly disrupted sales volumes during the months of April and May. While there is recovery in sales, they remained significantly below the pre-Covid-19 or 2019 levels in June.

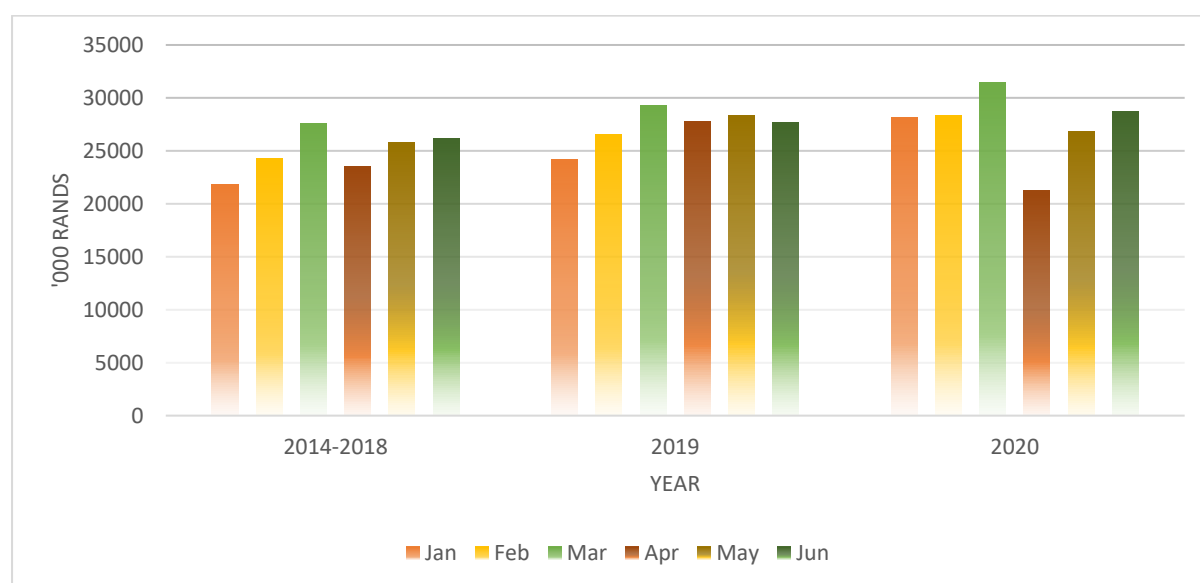
**Figure 160. Value of manufacturing sales for food and beverages sales**



Source: Stats SA, 2020

Deliotte (2020: 1) states that “in the days leading to the start of the lockdown, South African wholesalers and retailers recorded an increased volume of shoppers looking to stock up on essentials”. This led to short term disruptions of food trade as some of the commodities were not available on the shelves. Month to month comparison shows a positive growth of 11% in March 2020 compared to the previous month. Comparing April 2019 to April 2020, it is evident that the pandemic and lockdown measures led to a significant decrease on wholesale trade, as there was a sharp decline of 25%. Most wholesales were forced to shut down due to escalating fears of Covid-19, dwindling customers and some employees testing positive. For example, in the first month of the lockdown retails such as Shoprite had to close one of its stores in Bothasig Cape Town due to the Covid-19 case, the closure of this shop has implications of quantities traded from wholesalers.

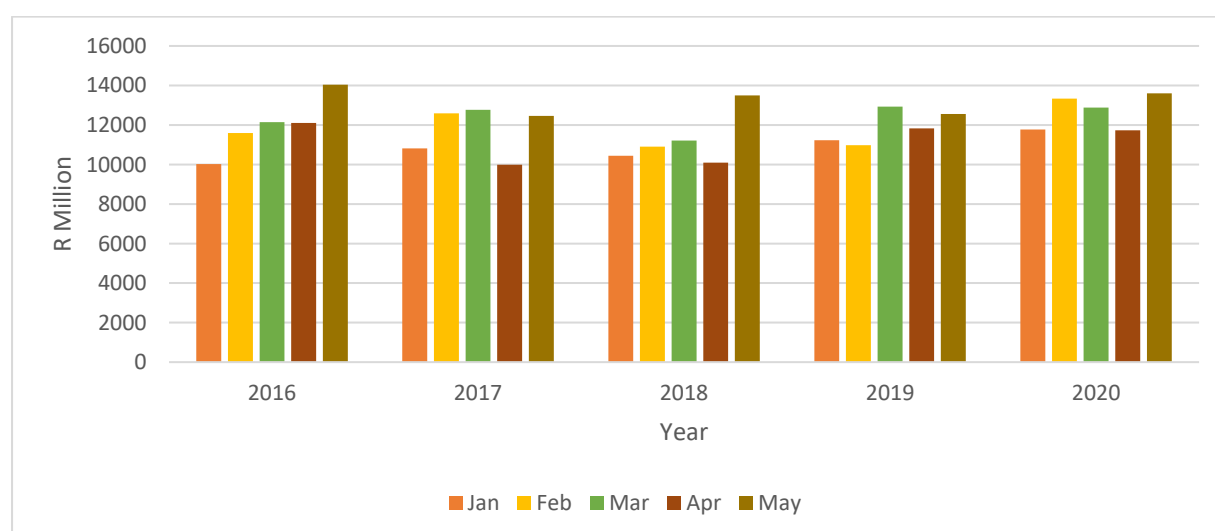
**Figure 161. Value of wholesale trade in food, beverages and tobacco**



Source: Stats SA, 2020

Figure 162 shows the value of agricultural raw materials and livestock traded before and during the Covid-19 pandemic. The figure shows that agricultural raw materials and livestock sales decreased by 9% in April 2020 compared with March 2020. These decline in agricultural raw materials and livestock sales cannot easily be attributed to Covid-19 pandemic and lockdown measures, because they show similar trends when compared to previous years.

**Figure 162. Value of trade in agricultural raw materials and livestock**



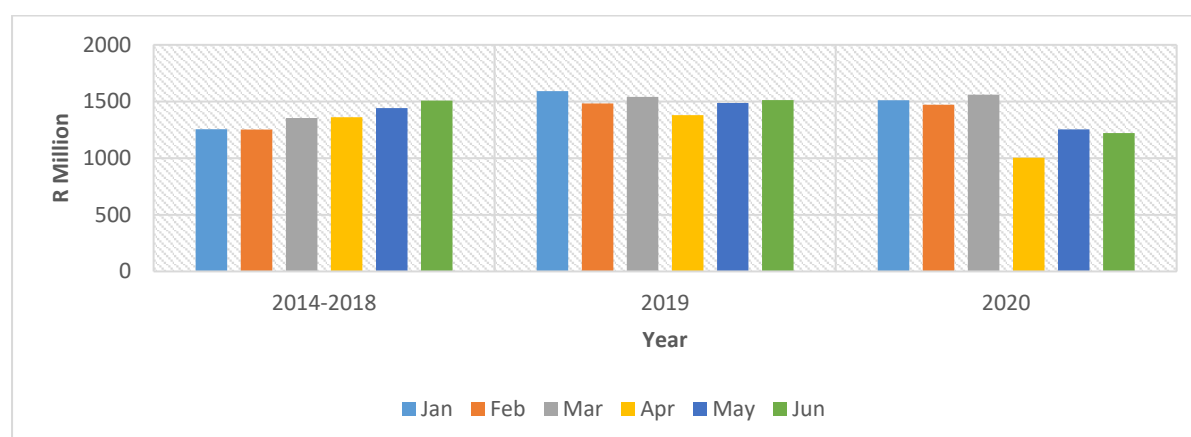
Source: Stats SA, 2020

Figure 163 shows that the distribution of manufactured food, beverages, and tobacco productions was severely affected by the lockdown measures and Covid-19 pandemic in 2020.



The sector contracted by 27.10% in April 2020 compared with the previous year. This is a huge disruption because under normal conditions the manufactured food, beverages, and tobacco productions contracted by not more than 7.00% in April 2019 compared with April 2018. The sharp decline in April (-35.10) was followed by recovery in May (22.96%). Different incidences of distributing trucks being looted were reported in Cape Town, which might have contributed to the low business in April. However, the gradual lifting of lockdown measures in May has assisted the industry to do business again without disruptions.

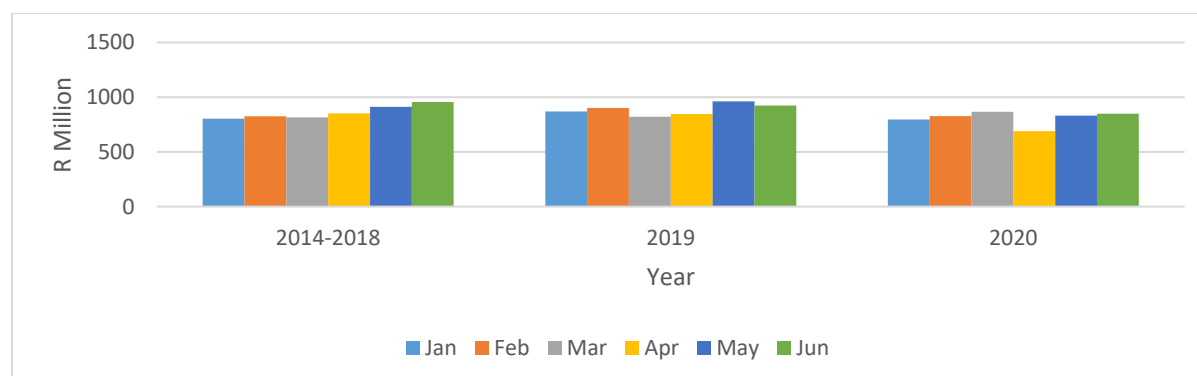
**Figure 163. Transportation of manufactured food, beverages and tobacco products**



Source: Stats SA, 2020

The distribution of agricultural and forestry primary products was also affected during the period of the Covid-19 pandemic and the national lockdown. According to Figure 164, in March 2020 there was a positive growth of 5.48% compared to the previous year as people were preparing to enter into the hard lockdown. However, the growth was followed by a sharp decline in April, indicating that the lockdown measures significantly disrupted the transportation of agricultural and forestry primary products.

**Figure 164. Transportation of agriculture and forestry primary products**

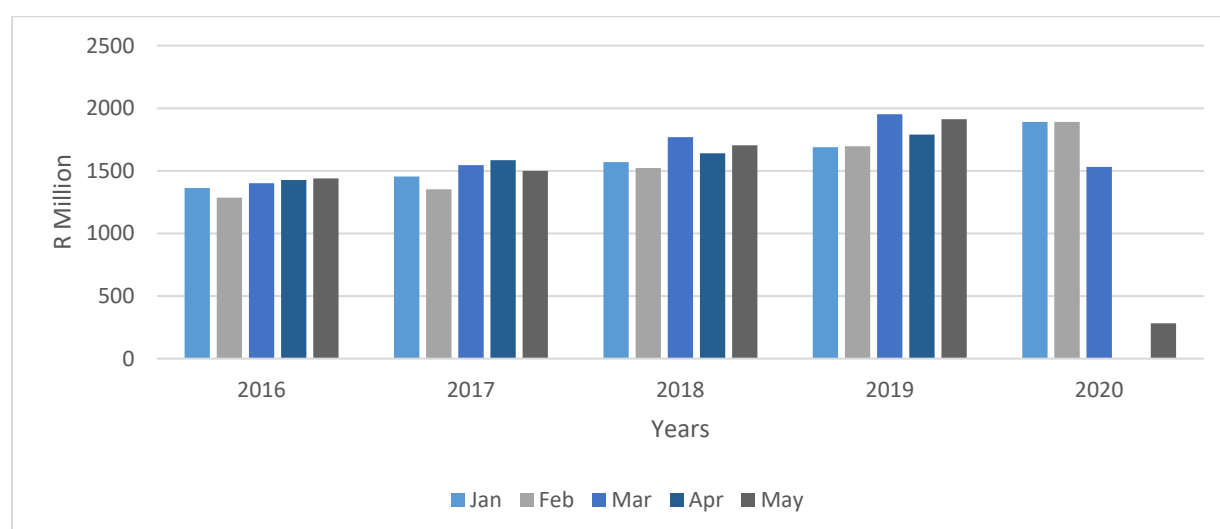


Source: Stats SA 2020

#### 4.9. Income sales from food traders

The takeaway and fast food outlets industry was significantly and negatively affected by the Covid-19 pandemic and the national lockdown (Figure 165). The sector generally experiences growth during the March and May period. However, the lockdown measures, which restricted the industry from operating, resulted in a severe disruption, and zero income was generated from the sector in April 2020. The lifting of some of the lockdown restrictions brought some relief to takeaway and fast food outlets in May as they could operate. However, this was a negative growth (-85.26%) compared to May 2019.

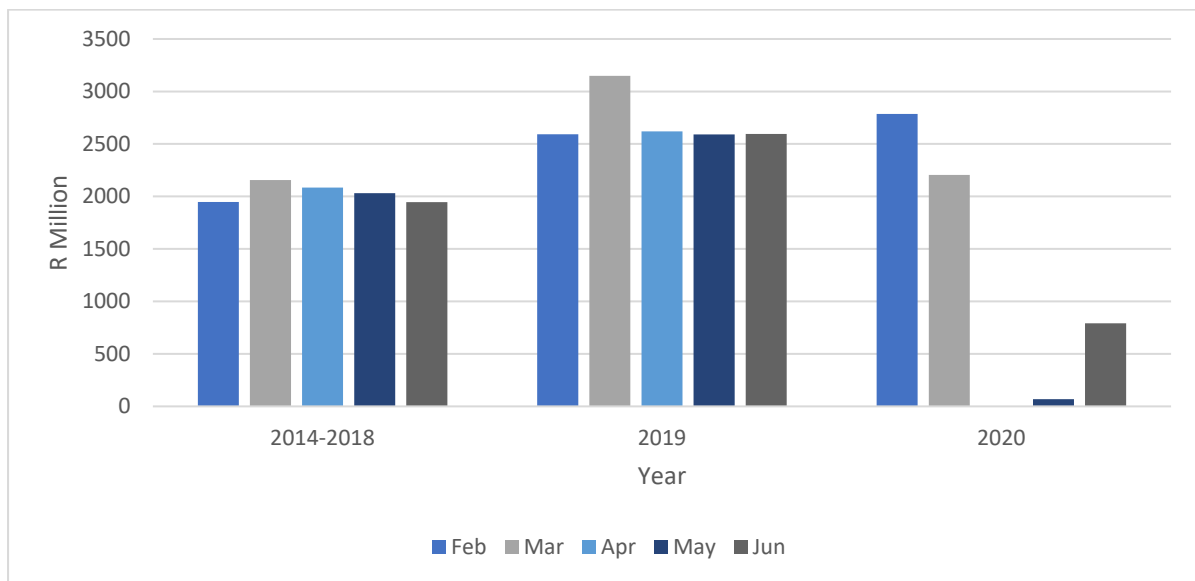
**Figure 165. Take-away and fast food outlet income sales**



Source: Stats SA 2020

The restaurants and coffee shops industry experienced a huge shock during the first month of the lockdown (Figure 166). No trading activity was happening, resulting in zero income generated. This was a huge blow to the industry as it also struggled to recover even after the gradual easing of the lockdown measures. The relaxed measures only allowed restaurants and coffee shops to do take away and home delivery which makes their business recover gradually.

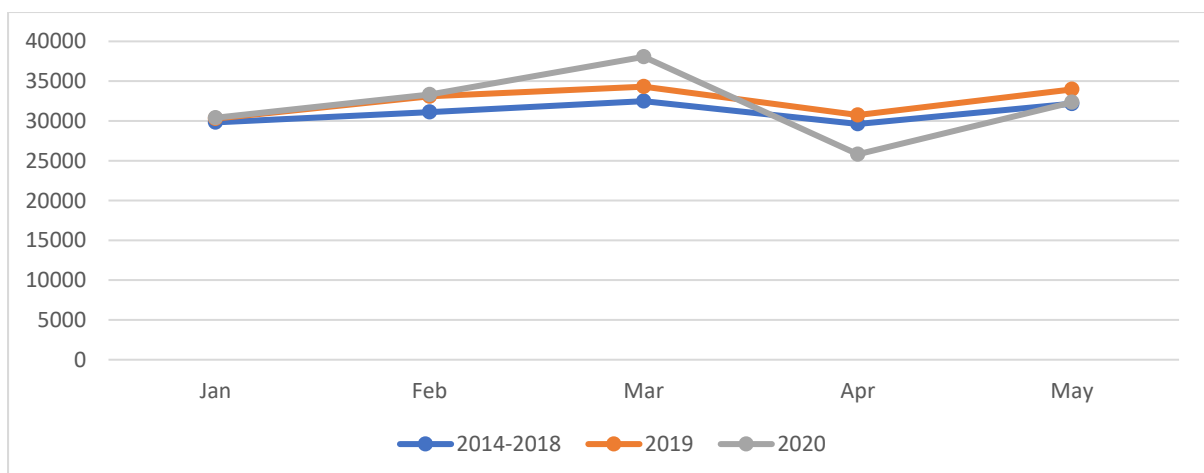
**Figure 166. Restaurants and coffee shops income sales**



Source: Stats-SA 2020

Figure 167 shows the retail sales of general dealers, who predominantly sell food. The graph shows that the general dealers experienced a brisk of sales in March 2020, followed by a huge decline in April during lockdown level 5. While the trend is like that of previous years, the magnitude of the increase in March and decrease in April was higher compared to previous years. The graph shows the pandemic and lockdown measures significantly reduced the retail sales for general dealers. However, there is evidence of recovery, with the May figure back to the pre-Covid-19 levels.

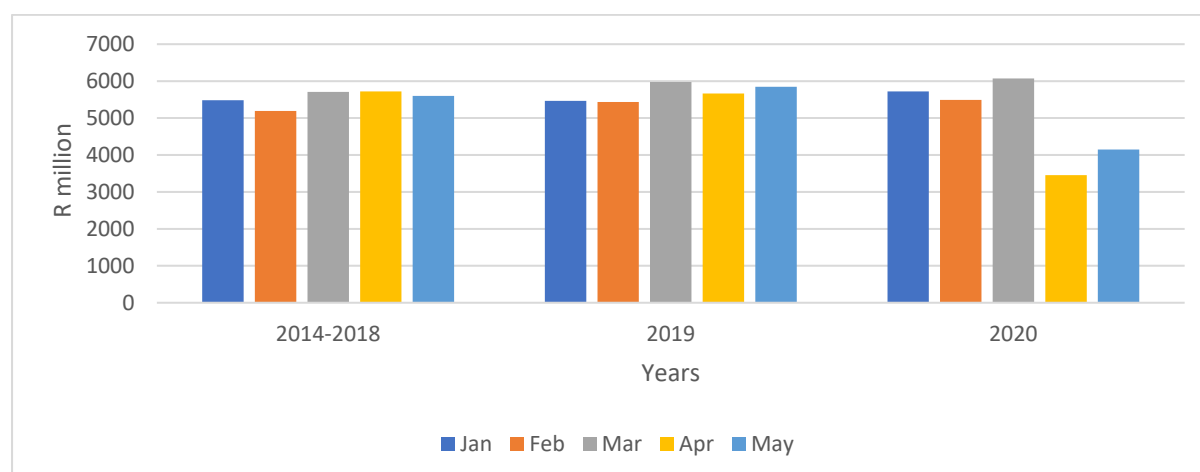
**Figure 167. Retail trade sales of general dealers**



Source: Stats SA 2020

Figure 168 shows sales by retailers of food, beverages and tobacco in specialised stores from 2014 to 2020. The graph indicates that the retail sales of these specialised stores declined significantly in April and May compared to previous years. This indicates that the pandemic and lockdown measures had devastating effects on the sales levels of these food shops.

**Figure 168. Retailers of food, beverages, and tobacco in specialised stores**



Source: Stats SA 2020

#### 4.10. Employment, incomes and access to food

The pandemic and the lockdown measures significantly disrupted economic activities, resulting in many people losing their jobs or livelihoods, or being paid only a portion of their salaries (either by the company or through UIF). Stats SA (2020) indicated that unemployment rate had increased to 30.1% during the first quarter of 2020 from 29.6% in quarter 4 of 2019. Unfortunately, Stats SA was unable to release the quarter 2 labour survey results (that were expected on the 11th August 2020) due to some technical challenges, but available evidence suggests that the situation in the second quarter was worse, as the lockdown measures resulted in many businesses closing or operating at low capacity, leading to many losing their jobs.

Several surveys were done by different actors that were aimed at highlighting the income losses, as well as the food security situation in South Africa. According to Stats SA (2020), the percentage of respondents who reported receiving no income increased from 5.2% before the lockdown to 15.4% by the sixth week of the national lockdown. The percentage of respondents who reported salaries/wages as their primary source of income decreased from 76.6% before the national lockdown to 66.7% by the sixth week of national lockdown. A survey conducted by the Statistics South Africa (2020) (Wave 2 survey) indicated that 8.1% of the respondents lost their jobs or had to close their businesses and 1.4% became unemployed. An online survey

for consumers conducted by TransUnion (2020) indicated that 84% of the interviewed consumers reported that they were negatively impacted financially due to national lockdown. Recent evidence from the National Income Dynamics Study (NIDS)-Coronavirus Rapid Mobile Survey (CRAM) indicated that 40% adults reported that their household had lost its main source of income since lockdown started (Wills et al., 2020). According to BFAP (2020), the South African national payment system showed a 20 percent decline in monthly take home pay in June compared to a year ago.

Analysing the NIDS-CRAM wave 1 data, Rogan & Skinner (2020) found that those who operate in the informal economy (those self-employed in the informal sector, informal employees (both inside and outside of the informal sector) and casual workers were affected more than those in the formal sector. For example, it was found that the hours worked within the informal economy among those self-employed decreased by a third and typical hours decreased by more than 50%. Rogan & Skinner (2020) reported that among the informal self-employed who were working in February (before the pandemic) and April (during lockdown), their average earnings decreased by 27% and typical earnings by 60%. About 37% of the informally self-employed reported zero earnings in April. There were gender differences in this loss of income in the informal sector, with women more affected than men. For example, the typical hours worked by women in the informal economy decreased by 49% in April, while men saw a decrease of only 25% (Rogan & Skinner, 2020). According to Rogan & Skinner (2020), the gender gap in earnings in the informal economy widened significantly between February and April.

Loss of jobs by many has led to decreased disposable income among consumers, and consequently, decreased demand for food and non-food products. Food spending and affordability tracking highlighted that a large proportion of South Africans were struggling to afford a basic healthy food basket (BFAP, 2020c). Poorer households dedicate a significant proportion of total spending to buying food, which has wide-ranging implications, given that income dropped suddenly for some households, and food prices increase unexpectedly for some food products. Considering the absence of school feeding scheme due to the national Covid-19 lockdown, an affected family had to spend approximately 32% more to be able to afford basic healthy eating (BFAP, 2020d).

#### **4.11. Secondary data analysis summary**

The analysis of the secondary data indicates that the Covid-19 pandemic and the lockdown significantly disrupted agrofood supply chains. While the data analysed does not allow us to engage in a comprehensive assessment to the food supply chain processes and actors, the partial picture painted indicates that the pandemic has led to negative impacts across the food supply chain. In particular, the negative impacts were more pronounced at the agro-processing, distribution, retailing and consumption/food security levels of the food supply chain. The production activities of the commercial agricultural producers were not significantly affected as these are largely mechanised and the pandemic outbreak occurred when key production activities were at an advanced stage. However, the extent to which the smallholder producers were affected is not clear and should be thoroughly investigated. Their experiences are most likely different, given that they did not always get access to their fields during lockdown level 5. The evidence has shown that the food processing or manufacturing activities were significantly disrupted, with many of the food manufacturing operating below capacity. However, the disruptions were largely temporary, as many food processing activities were on the rise in June, with some specific activities back to their pre-Covid-19 levels (February 2020).

Food retailers also faced decreased food sales, particularly those who mainly trade in hot foods and beverages, as well as fast foods outlets, who were restricted from trading during the hard lockdown levels. Again, it should also be noted that this secondary data analysis did not include informal food processors traders, and we anticipate that they experienced most of the disruptions, given what seemed to be an obvious bias towards formal and big businesses in at least the initial government regulations. The prices of most of the basic food items increased during the early lockdown periods as a result of increased anxiety due to panic buying amid uncertainty among consumers. While most of the food items had declined in June, prices of some basic food items such as rice, eggs, beef, etc., however, increased. For some food items, the prices are reverting to their pre-Covid-19 levels, and as of June, were at levels that are a few Rands more than the February price levels. While some food items experienced declines between February and June, they were characterised by huge price fluctuations in between, which made it difficult for households to budget accordingly. The loss of incomes by households on one hand, and an increase in food prices on the other, has resulted in high levels of food insecurity in the country.

## **5. INSIGHTS FROM KEY INFORMANT INTERVIEWS**

### **5.1. Introduction**

This chapter provides results emerging from interviews conducted with key informants at the national and the subnational levels. As already highlighted in the methodology chapter, national-level key informant interviews were conducted with officials in government entities, international UN organisations, commodity associations, farmer associations, non-governmental organisations and academics. Subnational level interviews were conducted with state and non-state entity officials at provincial, district and local municipality levels across 9 different sectors to include selected provincial and local government departments, NGOs, informal trader associations, and fresh produce marketers. The interviews mainly focused on 3 key issues: a) impacts of the pandemic on the agrofood system, b) response measures by both state and non-state actors – including gaps in and challenges encountered vis-à-vis these responses, and c) proposals to mitigate the impacts of the pandemic and future similar shocks. The chapter is organised around 3 main subsections. The first one expands on results around the impacts of the pandemic on different aspects of the agrofood system. The second subsection explores issues around response measures to the pandemic. The last subsection outlines proposal raised to mitigate the impacts of the pandemic and similar shocks in the future.

### **5.2. Impacts on the agrofood system**

It was clear from interviews at both the national and subnational levels that the Covid-19 pandemic has had far-reaching impacts on the agrofood system in South Africa. Areas emphasised by interviewed officials include disruptions on farming operations, disruptions on local markets – particularly for smallholder farmers, disruptions on food import and export flows, and temporary increased demand in and shortage of certain key food items particularly in the first few weeks before and during alert level 5 lockdown. There are also exogenous challenges highlighted by interviewed officials, which happened during the pandemic period, and which may have exacerbated the impacts of the pandemic on the agrofood system.

#### **5.2.1. Disruptions on farming operations**

Not much disruptions were reported vis-à-vis harvesting of the summer crop as it was noted across all provinces that when the pandemic and the lockdown started, many farmers had almost finished harvesting. Much of the disruption on farming operations therefore was on the cultivation of the winter crop. Three main issues were highlighted with respect to these disruptions. Firstly, was the issue of compromised extension services particularly during levels

5 and 4 of lockdown. It was noted that only from level 3 onward did extension workers in most provinces start providing services to farmers, mostly telephonically, which, in many respects, was not convenient in as far as farming operations were concerned.

A second issue related to challenges around securing production inputs. This was mainly due to closure of input dealerships particularly in the first month of lockdown; a temporary hike in input prices when most dealerships started reopening in lockdown level 4; and challenges in travelling to purchase inputs during lockdown levels 5 and 4 due to strict movement restrictions which were in place in the country. In some local municipalities, such as in North West province for example, several agricultural extension officers interviewed reported of vast swathes of land, normally used for winter crop cultivation, that were left fallow because inputs could not be obtained on time.

The last issue under disturbances on farming operations was disruptions to labour availability. This was said to be mainly due to four factors. The first factor was the general fear of contracting the virus by farmworkers in the first months of the outbreak of the pandemic in the country. This ‘basic aversion behaviour’ meant that operations in farms temporarily scaled down in the period just before and immediately after alert level 5 lockdown in late March/early April. The situation however normalised over the months as information on the virus became available and as public protective equipment (PPE) was made available to workers. The second factor related to the wrong interpretation and overzealous implementation of lockdown rules by law enforcement agencies, particularly during alert level 5 of lockdown. It was noted that, for example, seasonal agricultural workers were, in many cases in most provinces, prevented from travelling to their places of work despite agriculture being declared an essential services sector and despite them having the right documentation.

*We had several reported cases of farmworkers being harassed by overzealous law enforcement agencies and being told to go back home particularly during the hard lockdown level 5 even though they had the correct documentation...” (Farmer association official)*

The third factor under disruptions to labour availability related to the unavailability of usual seasonal foreign farmworkers, particularly in international border provinces like Limpopo, Mpumalanga and the Free State. It was noted that, in Limpopo and Mpumalanga for example, a sizeable number of seasonal farmworkers come from neighbouring Zimbabwe and Mozambique respectively. When the lockdown and restriction of movement regulations were



pronounced, the seasonal workers could not come into the country to work as they normally do. The fourth factor had to do with the provision of mandatory PPEs to farmworkers as required by government regulations, which placed additional unplanned costs on farmers. This resulted in most farmers being forced to reduce the labour force altogether to avoid incurring these (additional) PPE costs.

*“Most of our smallholder farmers use manual labour and they do so by getting people from neighbouring villages on a temporary basis, so given that they had to provide PPEs as a matter of compliance, this impacted on them in terms of unbudgeted for additions to the usual costs and they were subsequently forced to reduce labour” – Agricultural officer in a North West local municipality*

### **5.2.2. Disruptions on local markets**

On disruptions of local markets, it was noted that during levels 5 and 4 of lockdown, almost all types of informal markets where smallholder farmers particularly supply their farm produce were closed. These markets include informal retailers, small to medium sized restaurants, lodges, and hawkers. Similarly, cultural ritual activities, weddings, and funeral gatherings, which form some of the usually reliable markets for both crop and livestock smallholder farmers, became non-viable during levels 5 and 4 of lockdown as some of these gatherings were disallowed altogether (in the case of weddings and cultural ritual activities) or were allowed but with very limited numbers of people (in the case of funerals). Smallholder farmer markets were therefore seriously curtailed by the pandemic. Because of lack of markets for farmers, it was noted that there was a significant drop in the prices of such crops as tomatoes in provinces like Limpopo particularly during lockdown levels 5, 4 and 3 – with many farmers leaving the crop to rot in the fields.

*“A box of tomatoes that should normally go for R150 was now being sold for R80” – Agricultural officer in a local municipality in Limpopo province*

The pandemic and the lockdown also disrupted informal food trader markets. To begin with, informal food traders were not allowed to operate during the hard lockdown level 5. Even when they were eventually allowed to operate starting from level 4 and, for many in most provinces, level 3 onward; their customer base was significantly reduced because most of them trade in and around transport interchanges. These areas of operation (i.e. transport interchanges) were not viable because of movement restrictions on public transport particularly from level 5 to level 3 of lockdown. Elderly traders and those with co-morbidities were not able to resume

even under the relaxed level 2 of lockdown because of their vulnerable disposition vis-à-vis the virus.

For fresh produce marketers, because of interprovincial and international cross-border movement restrictions during the period of the pandemic, their usual market spread was severely disrupted. This was vividly captured by a fresh produce marketer based in the Free State province who noted that:

*“There was a tricky scenario for most of our buyers who live in Colesburg (which is in the Western Cape Province) and whose nearest fresh produce markets are in Bloemfontein (which is in Free State province) - just about 200km away. Their only option was to go and buy in Cape Town which is about 800km away. It was very difficult to serve such a clientele and we could not do anything about it because of restrictions on interprovincial cross-border movements”*

### **5.2.3. Disruptions on imports and exports**

In as far as imports and exports are concerned, it was noted that international border restrictions in other countries (and closures in some cases), temporarily disrupted the flow of key food imports such as that of rice, particularly around March/April 2020. It was noted that such countries as Vietnam, where South Africa traditionally imports its rice from, temporarily halted rice exports as uncertainty on the nature of the impact and gravity of the pandemic took hold internationally, however the situation was said to have improved after April as imports resumed to normal. Key agricultural export flows for such products as citrus fruits were also said to have been disrupted particularly due to backlogs at South African ports. Extra thorough checks of products before they left the country to comply with international Covid-19 regulations is one reason which caused such backlogs. It was also noted that from April to around end of May/early June 2020, several shipping lines were refusing to call at the Cape Town port as the city was considered the epicentre of the pandemic not only in the country, but on the continent. This resulted in massive congestion at the Durban port and, subsequently, backlogs in clearing key food imports and exports.

### **5.2.4. Temporary increased demand on certain food products**

On increased food demand, it was noted that there was marked panic buying of specific food products especially just before and during the first weeks of alert level 5 lockdown at the end of March and early April. There was said to be an increased demand of particularly non-

perishables as people went for such products as canned foods, flour, rice and maize meal in bulk due to the uncertainty that came with the unprecedented country lockdown announcement.

Interviewed fresh produce marketers particularly in the Western Cape and Free State provinces also noted that there was a huge demand in citrus fruits and other fresh produce such as vegetables, garlic and ginger. This was mainly attributed to two reasons: firstly, the fact that takeaways and restaurants were closed, and that people had to make their own food at home, and, secondly, the fact that such products as oranges, lemons and ginger are viewed as a remedy for Covid-19 symptoms and immune boosters against the virus.

#### **5.2.5. Exogenous challenges in the context of the pandemic**

There were other exogenous challenges highlighted by interviewed officials, which occurred just before and during the pandemic period, which most certainly exerted further pressures on the agrofood system. Four key exogenous challenges came up during interviews and these are discussed below:

The first one was the outbreak of foot and mouth disease for livestock in the country from around November 2019. This led to the cessation of many public livestock auctions. When the Covid-19 pandemic hit, livestock sales were therefore already under strain and compromised by foot and mouth disease. With the start of the pandemic period in the country in March 2020, livestock movement was then effectively banned, and all public auctions closed across all provinces especially in lockdown alert levels 5 and 4.

A second challenge was the general poor performance of the local currency (the rand) on the exchange rate market from March to around May 2020 – coinciding with alert levels 5 and 4 of lockdown. This somehow raised the procurement prices of farming inputs from abroad. Thirdly, the pandemic coincided with truck driver strikes, which took place in July and August 2020 – where South African truck drivers were protesting the employment of foreign nationals in the industry. The strike led to the closing down of major routes in the country, and, in some cases, the burning of trucks. This temporarily disrupted the transportation of food products during the peak period of the pandemic. As noted by one interviewed official, many transporters virtually stopped operations during this period in such high-risk areas as Gauteng, the Western Cape and KwaZulu-Natal.

The last exogenous challenge raised relates to increases in stock theft cases since March 2020. It was noted that there seemed to be an increase in livestock theft in such areas as the Eastern Cape and the Free State, with thieves even raiding from across the Lesotho border. A farmer

association official interviewed was of the opinion that this surge in livestock theft is partly a direct result of people losing their employment in the metros due to closures of many businesses because of Covid-19 lockdown restrictions hence the emerging of stock theft syndicates operating in remote rural communities of the country.

*“We (are) getting information that the people (who) have been retrenched in places like Cape Town and Gauteng because of the Covid-19 pandemic when they went back home to areas like the Eastern Cape, they now have got no income, and they start to form and to be linked to these syndicates of stock theft...” (Farmer association official)*

### **5.3. Response measures**

#### **5.3.1. State actor responses**

Four main response measures were noted as coming from state actors from the interviews conducted with key informants at both the national and the subnational levels. Firstly, was the release of the R1,6 billion relief fund made available to smallholder farmers through the national Department of Agriculture, Land Reform and Rural Development for the purchase of input vouchers in the provinces.

Secondly, was food parcel distribution conducted mainly through the national and provincial Departments of Social Development. Thirdly, some provincial governments were involved in the provision of funds for feeding schemes as well as PPEs to informal traders. This was prominently reported in the Western Cape province, with informal trader association leaders noting that the provincial government released PPEs to their members during level 2 of the national lockdown.

Lastly, the national government made sure that food products had free passage into and out of the country despite international border restrictions. The Government of South Africa, as the chair of the African Union in 2020, actively led and contributed to discussions around this issue at various regional and international intergovernmental platforms such as the Southern Africa Development Community (SADC), African Union (AU) and G20 levels.

#### **5.3.2. Non-state actor responses**

Several interventions were mentioned as having been implemented by different non-state actors during the interviews conducted. These interventions include food parcel donation and distribution to vulnerable individuals and households; establishment of soup kitchens in

communities; dissemination of Covid-19 awareness information; as well as provision of technical support to government departments.

Regarding food parcel donation and distribution, officials from all non-governmental NGOs interviewed at both the national and subnational levels noted that they were involved in donating and distributing food to an increasing number of vulnerable individuals and households since the beginning of alert level 5 lockdown. The interviewed NGO officials noted that there were increasingly new vulnerable beneficiaries (different from those whom they have traditionally worked with) whose livelihoods had been seriously compromised by the pandemic and the lockdown. These new beneficiaries include sex workers, street vendors, car guards, taxi marshals, hairdressers, restaurant waiters, domestic workers, and undocumented foreign nationals who were being excluded in formal government-led assistance channels. The NGOs were coordinating with other non-state entities, churches, and local CBOs to identify beneficiaries, create databases for those in need in different communities, and to boost food parcel distribution teams.

Interviewed NGO officials also noted that they sought to support local smallholder farmers during the pandemic by sourcing fresh farm products from them (for inclusion into the food parcels) rather than from their traditional commercial farmer sources. They also stated that they supported local bakkie traders by hiring them to transport the food, hence endeavouring to promote the businesses of local players in the agrofood system whose work had been compromised by the pandemic.

Informal food trader associations assisted with engaging national and provincial governments as well as corporates to assist their members with food subsidies during the time they were not allowed to work. They were also involved in releasing and disseminating Covid-19 awareness information to their membership once they resumed trading.

In as far as international organisations such as UNICEF were concerned, these provided technical support to government entities, particularly to DSD and the South African Security Agency (SASSA) through (a) lobbying for the Covid-19 relief grant to be increased, and (b) lobbying that food parcels which were being provided should have adequate nutritional components, especially for children.

### **5.3.3. Gaps and challenges**

Several gaps and challenges vis-à-vis response measures were highlighted. The first major challenge noted by most interviewed officials at both the national and subnational levels was

the lack of coordination between and among state and non-state actors in responding to the pandemic. An official working in one non-state entity at the national level mentioned that existing bodies such as the national and provincial South African Vulnerability Assessment Committees (SAVAC), which potentially could have played the crucial role of coordinating the activities of different players, for example, in food parcel distribution, were not active at all.

*“A major gap that has been heavily exposed by this pandemic in the South African food system is one of coordination mechanisms that are seriously lacking in terms of responding to emergencies. We have seen various stakeholders be it government departments, NGOs, community-based organisations, civil society organisations, churches etc coming up with various initiatives...but there has not really been coordination of activities/responses – (Non-state entity official)*

The coordination challenge was also exposed through difficulties in agreeing to the criteria for identifying the most vulnerable and needy individuals and households in the context of increasing numbers of people in need and limited resources, among those players which had pooled efforts and resources in responding to the pandemic. This challenge was specifically reported by NGO and CBO officials interviewed. As one NGO official in the Free State province noted:

*“Every organization had a different index of vulnerability, so...it was very difficult to reach an agreement on which vulnerability criteria to prioritize”*

Another challenge mentioned particularly by non-state actors was that bureaucratic processes on the part of government compromised quicker responses to the pandemic. This was said to have been evident in four main areas. The first area was in the processes involved in obtaining permits to allow for non-state entities to distribute food parcels to vulnerable individuals and households. It was noted that during the second month of lockdown, as the numbers of people in need of food aid started to rise exponentially, the process of issuing permits to non-state entities was still centralised at the Department of Cooperative Governance and Traditional Affairs (COGTA), which seemed to be overwhelmed by the numbers of organisations seeking permits and, hence, ended up issuing permits to a limited number of organisations due to capacity constraints.

*COGTA had a very limited way of issuing permits where you had to apply in person, and they would only give three permits per organization. We were trying to deliver*

*7000 food parcels with multiple partners in multiple districts, and it took weeks of going back and forth to get those permits. Meanwhile, families were going hungry, and the number of people in need of assistance was increasing by the day, which was incredibly frustrating... (Non-state entity official)*

Once the permits were secured, it was noted that another delay was experienced as the Department of Health sought to inspect the food parcels before they were distributed in local communities, yet the department had very minimal staff particularly during the hard lockdown alert levels 5 and 4.

Secondly was the cumbersome process which was said to be involved in accessing input vouchers by smallholder farmers under the Covid-19 relief grant. It was noted particularly by many interviewed agricultural extension workers and farmer association officials in the provinces that farmers faced difficulties in accessing the form, filling the form and submitting it. An example given by one farmer association official was on some of the difficult questions which were being asked on the form.

*“Farmers were being asked difficult questions such as, what is your field conversion rate. How was an ordinary rural farmer from the village expected to know field conversion? This is for someone who has gone to school” (Farmer association official)*

Because of this, many farmers missed out on accessing the input vouchers altogether, with agricultural officers in some local municipalities particularly in provinces such as Gauteng and Limpopo noting that not even a single farmer benefitted.

A third area where bureaucratic processes compromised response measures was around confusion on where farmers could obtain permits to allow them to continue working and conduct their business as usual since the agricultural sector had been declared an essential services sector not to be affected by lockdown measures. This was said to have been a huge challenge during level 5 of lockdown, with even the police being said not to be sure on where the permits were supposed to be obtained.

Fourthly, was the slow granting of permission by the national government to redirect money earmarked for other social development programs to Covid-19 food aid in the provinces. In one province for example, it was noted that permission for the redirection of funds had been sought at the end of April 2020, but it was only granted at the end of July thereby slowing down food aid processes in that province.

There were also reports of violence in some provinces during the process of food aid delivery, with reports of cases of attacks on food distribution trucks. This was mainly reported in Gauteng and Western Cape provinces and it resulted in the temporary halting of food distribution in affected areas.

The last challenge related to the contraction of the virus by workers and volunteers in some food banks in the provinces which, again, resulted in the temporary cessation of operations in the affected areas.

#### **5.4. Key informant interviews insights summary**

Insights from interviews with officials from selected relevant entities at both the national and subnational levels largely confirmed and built on findings from other research activities undertaken on this study. The interviews confirmed that the pandemic and the lockdown had huge negative impacts across the agri-food value chain. The interviews also shed light on several other exogenous challenges which coincided with the Covid-19 pandemic to put further pressures on the country's agri-food system, key among which are the poor performance of the Rand on the exchange market particularly during the hard lockdown levels 5 and 4 period, the outbreak of foot and mouth disease for livestock just before the pandemic, industrial action by truck drivers in the months of July and August 2020, and a marked increase in stock theft particularly in the Eastern Cape and Free State provinces from March 2020 onward. The key informant interviews also confirmed the several response measures instituted by both state and non-state actors as reported in the literature review chapter – ranging from the release of the Covid-19 relief fund by the government targeted at smallholder farmers, to food parcel and PPE donation and distribution, dissemination of Covid-19 awareness information, and the provision of technical support by international organizations to relevant government departments. Various challenges were also, however, noted as having hampered the effective implementation of response measures. Challenges noted include the lack of coordination between and among state and non-state players, cumbersome government bureaucratic processes which slowed down response measures, violence in some provinces during the process of food aid delivery and distribution, as well as the contraction of the coronavirus by workers and volunteers who were operating food banks in some provinces.



## 6. INSIGHTS FROM INFORMAL FOOD TRADER SURVEY

### 6.1. Introduction – Characteristics of the sampled traders

As noted earlier in the methodology chapter of this report, a sample of 804 informal traders was collected across all the nine provinces in South Africa. Table 12 shows that most of the interviewed informal traders were from Limpopo, Free State, North West, Gauteng & Eastern Cape provinces, respectively. Few informal traders were interviewed in Mpumalanga and KwaZulu-Natal provinces.

**Table 12. Number of informal traders interviewed per province**

Province	Freq.	Percent (%)
Eastern Cape	92	11
Free State	132	16
Gauteng	113	14
KwaZulu-Natal	11	1
Limpopo	247	31
Mpumalanga	8	1
North West	120	15
Northern Cape	51	6
Western Cape	30	4
<b>Total</b>	<b>804</b>	<b>100</b>

Figure 169 presents the proportions of sampled informal traders by province, indicating that Limpopo province contributed almost a third of the total sample, followed by Free State, which contributed over 16%. The top six provinces (LP, FS, NW, GP & EC), in terms of their proportion of the sample, accounted for 87% of the total number of informal traders interviewed.

**Figure 169. Proportion of informal traders interviewed by province**

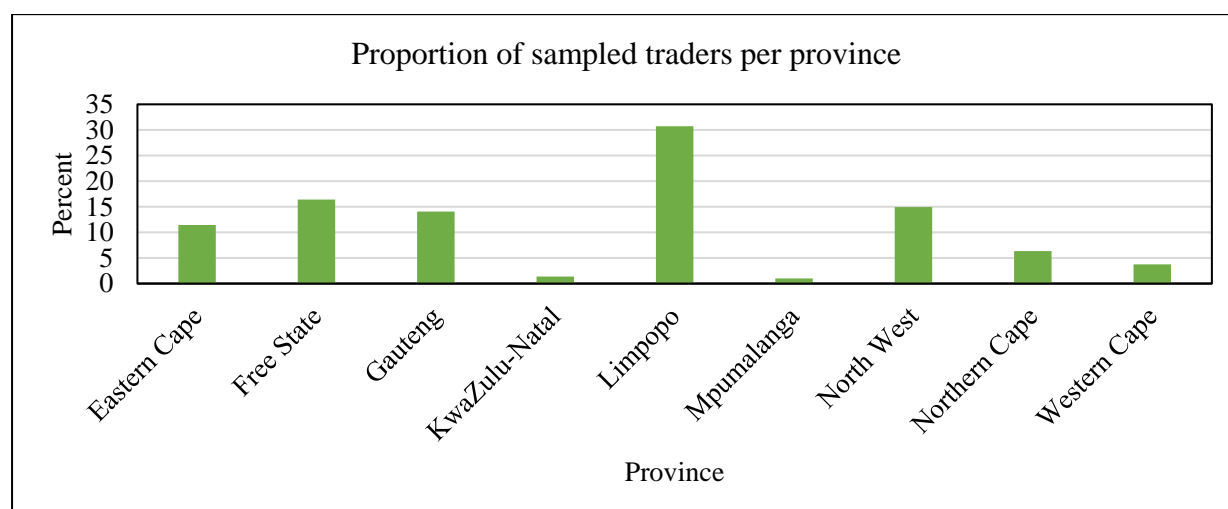


Table 13 indicates that the interviewed informal traders were from 28 districts/ metros out of 52 districts/ metros (i.e., 54%). In Limpopo, all the five districts were represented in the sample, while only 1 district each were outstanding in Free State and North West provinces. The KwaZulu-Natal province only had 2 districts in the sample, with 9 not covered.

**Table 13. Number of districts per province contributing to sample**

Prov	No. of districts	No. of districts covered	No. of districts outstanding
Eastern Cape	8	5	3
Free State	5	4	1
Gauteng	5	3	2
KwaZulu-Natal	11	2	9
Limpopo	5	5	0
Mpumalanga	3	1	2
North West	4	3	1
Northern Cape	5	2	3
Western Cape	6	3	3
Total	52	28	24

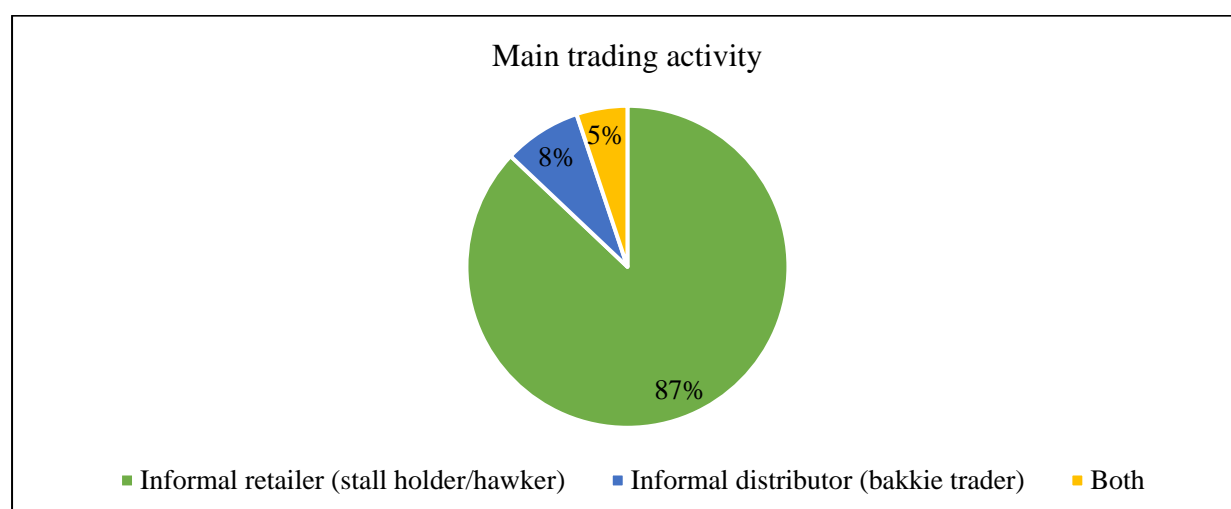
Table 14 presents the number of informal food traders that were interviewed per district and province. The table indicates that all districts in Limpopo had at least 20 respondents each, and good numbers for the three districts in the North West. However, given that most districts had few respondents, this report will conduct inter-district comparisons. Instead, it will focus on inter-provincial comparisons.

**Table 14. Number of informal food trader interviewed per district**

	Freq.	Percent		Freq.	Percent
<b><i>Eastern Cape</i></b>			<b><i>Limpopo</i></b>		
Alfred Nzo	22	23.91	Capricorn	46	18.62
Amathole	34	36.96	Mopani	71	28.74
Buffalo City Metro	10	10.87	Sekhukhune	23	9.31
Chris Hani	15	16.3	Vhembe	34	13.77
OR Tambo	11	11.96	Waterberg	73	29.55
<b>Total</b>	<b>92</b>	<b>100</b>	<b>Total</b>	<b>247</b>	<b>100</b>
<b><i>Free State</i></b>			<b><i>North West</i></b>		
Fezile Dabi	55	41.67	Ngaka Modiri Molema	40	33.33
Lejweleputswa	49	37.12	Bojanala	45	37.5
Thabo Mofutsanyana	21	15.91	Ruth Segomotsi Mompati	35	29.17
Xhariep	7	5.3	<b>Total</b>	<b>120</b>	<b>100</b>
<b>Total</b>	<b>132</b>	<b>100</b>			
			<b><i>Northern Cape</i></b>		
<b><i>Gauteng</i></b>			Frances Baard	47	92.16
Tshwane Metro	67	59.29	Namakwa	4	7.84
Sedibeng	20	17.7	<b>Total</b>	<b>51</b>	<b>100</b>
West Rand	26	23.01			
<b>Total</b>	<b>113</b>	<b>100</b>			
			<b><i>Western Cape</i></b>		
<b><i>KZN</i></b>			Cape Town Metro	5	16.67
King Cetshwayo	10	90.91	West Coast	21	70
uMgungundlovu	1	9.09	Overberg	4	13.33
<b>Total</b>	<b>11</b>	<b>100</b>	<b>Total</b>	<b>30</b>	<b>100</b>
<b><i>Mpumalanga</i></b>					
Nkangala	8	100			
<b>Total</b>	<b>8</b>	<b>100</b>			

Figure 170 shows that an overwhelming majority (87%) of the interviewed informal food traders were engaged in mainly retailing activities (as stall holders or hawkers), while a few (8%) were mainly informal distributors (commonly referred to as bakkie traders). The remainder (5%) were equally involved in both distribution and retailing activities, considering both to be their main trading activities.

**Figure 170. Main trading activity (n=781)**



Further analysis was done to investigate the extent to which these distribution patterns differ according to provinces. For inter-provincial variation analysis, only those provinces with at least 30 respondents were included. KwaZulu-Natal and Mpumalanga were excluded in the inter-provincial analysis because they have very few respondents. The provinces were categorised into urban or rural provinces, based on the proportion of their population residing in urban areas in 2019 (Table 15). Those provinces with a more than 50% urban population rate were categorised as urban provinces, while those with less than 50% of their population in urban areas (i.e., more than 50% of their population residing in rural or non-urban areas) were classified as rural provinces.

**Table 15. Urbanisation rates by province, 2019**

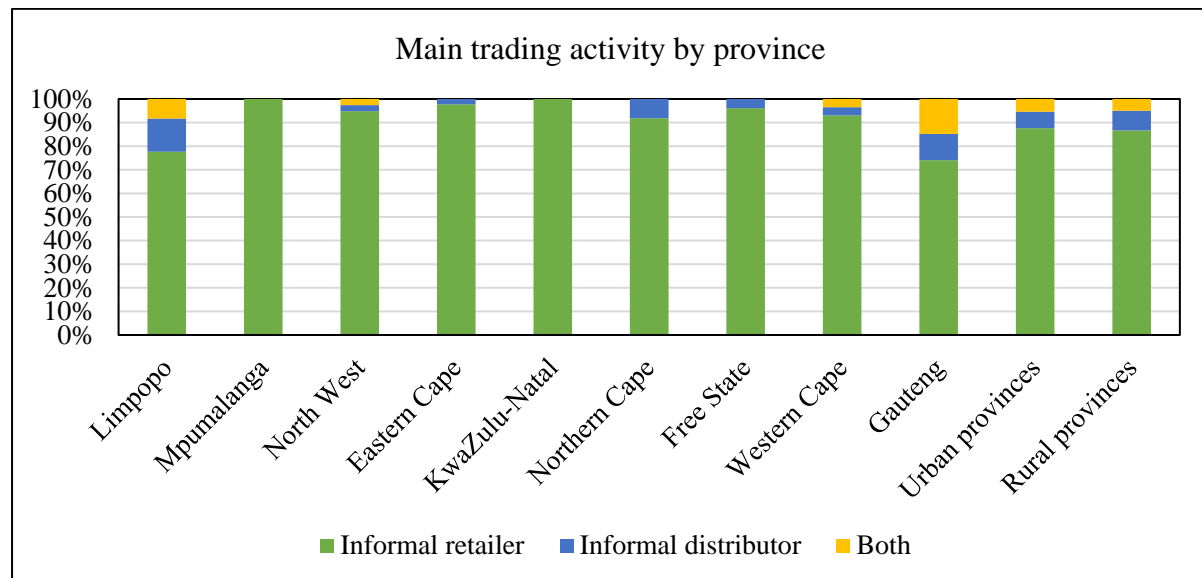
Province	% urban population	Urban or rural province
Limpopo	19%	Rural
Mpumalanga	45%	
North-West	47%	
Eastern Cape	48%	
KwaZulu-Natal	48%	
Northern Cape	78%	Urban
Free State	86%	
Western Cape	95%	
Gauteng	97%	

Source: IHS

The inter-provincial analysis did not indicate significant variations of the main trading activities of interviewed informal traders across provinces. Figure 171 shows that informal retailers dominate across all provinces. The figure shows that Limpopo had the highest

proportion of informal traders who mainly engaged in distribution activities (bakkie trading), while Gauteng had the highest proportion of those who indicated that they participated in both retailing and distribution activities equally. Overall, the distribution of the informal traders according to their main trading activity is similar in both rural and urban provinces.

**Figure 171. Main trading activity by province (n=781)**



Most of the respondents (57%) traded mainly in cooked/ processed/ prepared foods, while a significant proportion (40%) mainly traded in fruits and vegetables (Figure 172). A few of the respondents (2%) indicated that they mainly traded in other food items, such as live chickens, fresh fish or cool drinks.

**Figure 172. Main food traded**

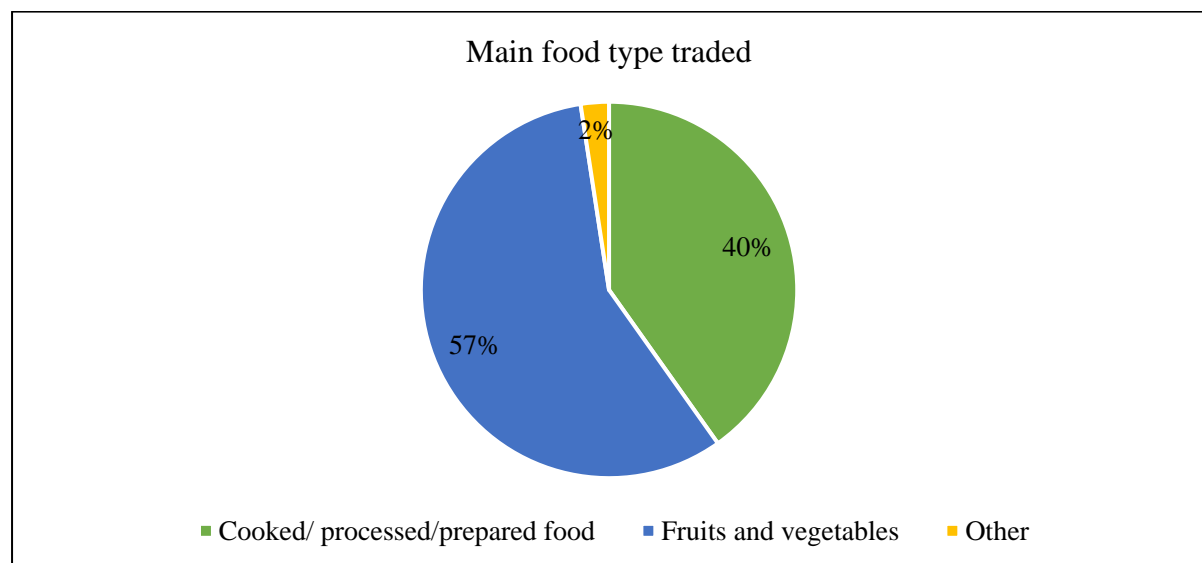


Figure 173 shows that the distribution of informal traders by main food type traded follows a similar trend in both rural and urban provinces, with fruits and vegetable traders dominating. While there are some specific provinces where cooked food traders seem to dominate, such as the Western Cape or KwaZulu-Natal, these trends should be taken with a pinch of salt, because of few respondents in these two provinces.

**Figure 173. Main food type traded by province**

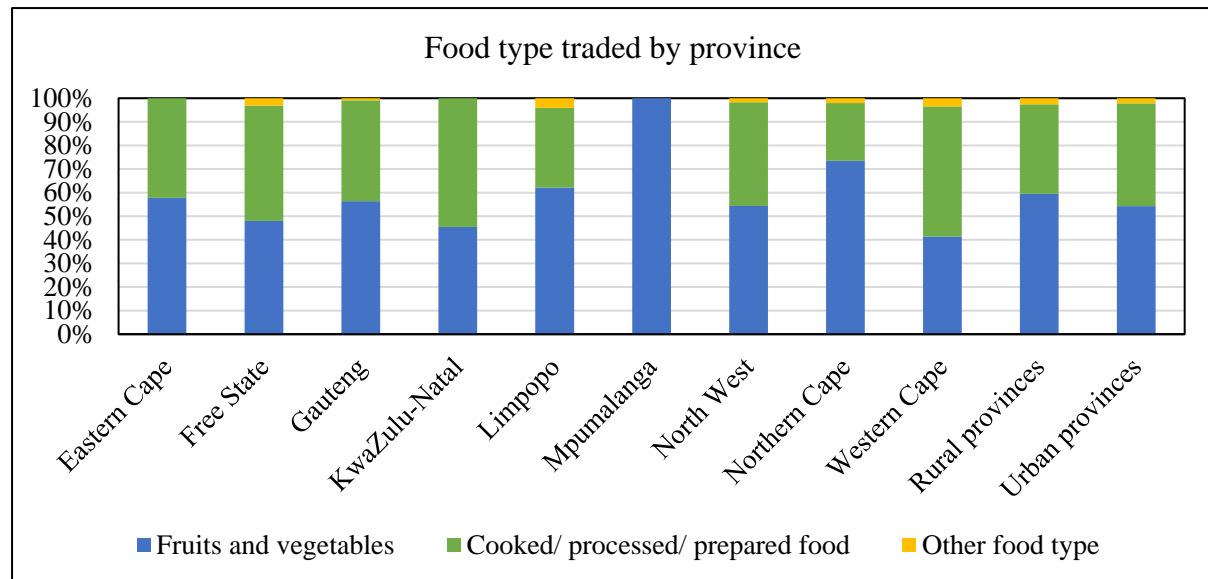
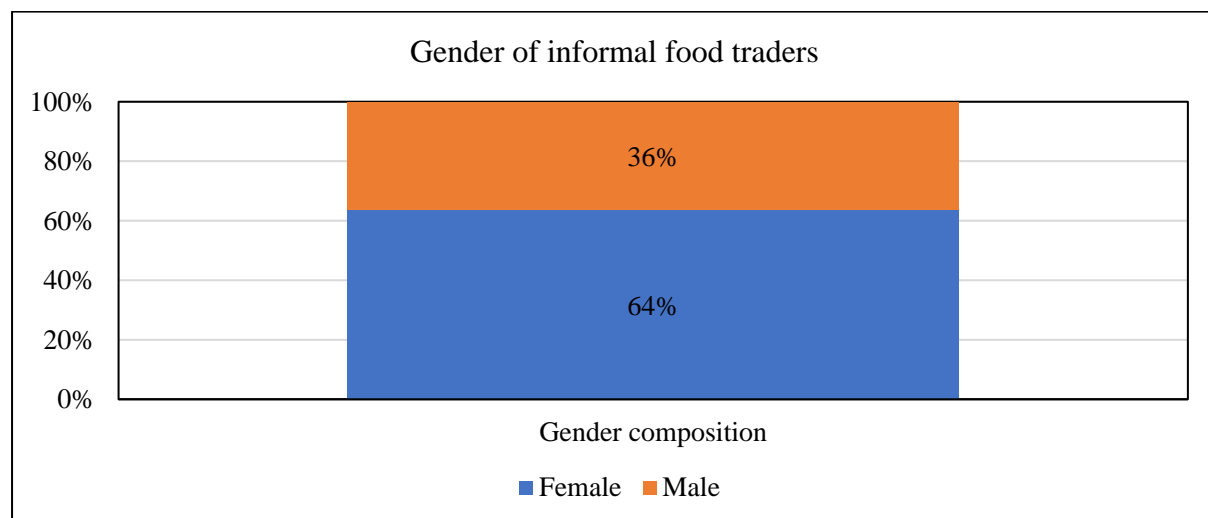


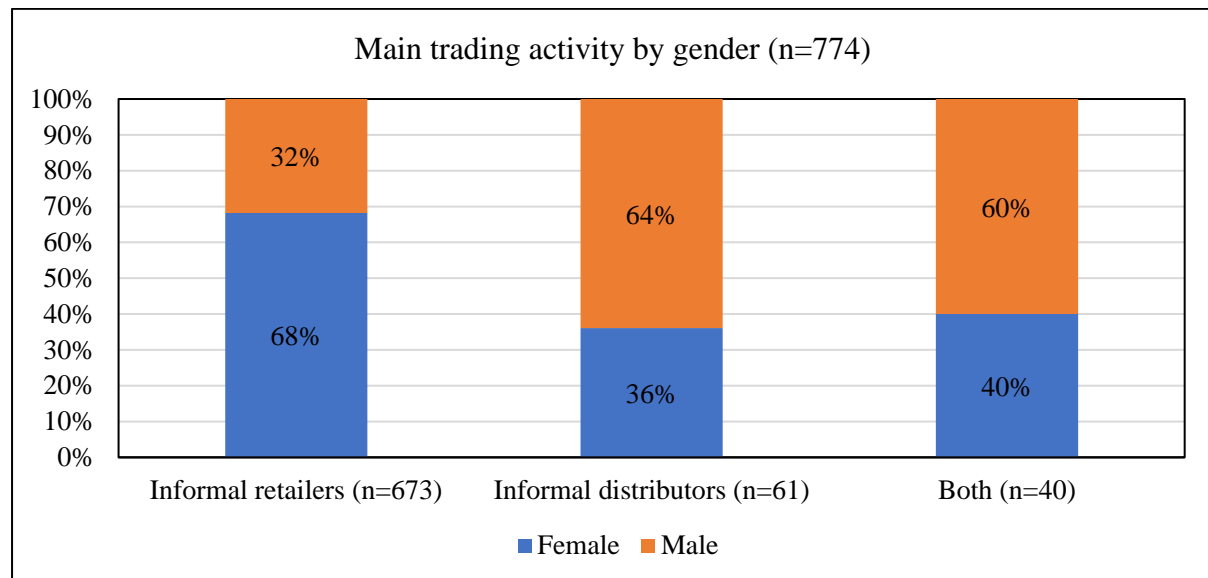
Figure 174 indicates that most of the food traders were women, who constituted about two thirds of the informal food traders that were interviewed. This is in line with expectation, since women generally dominate informal activities in South Africa.

**Figure 174. Gender of the informal food traders interviewed**



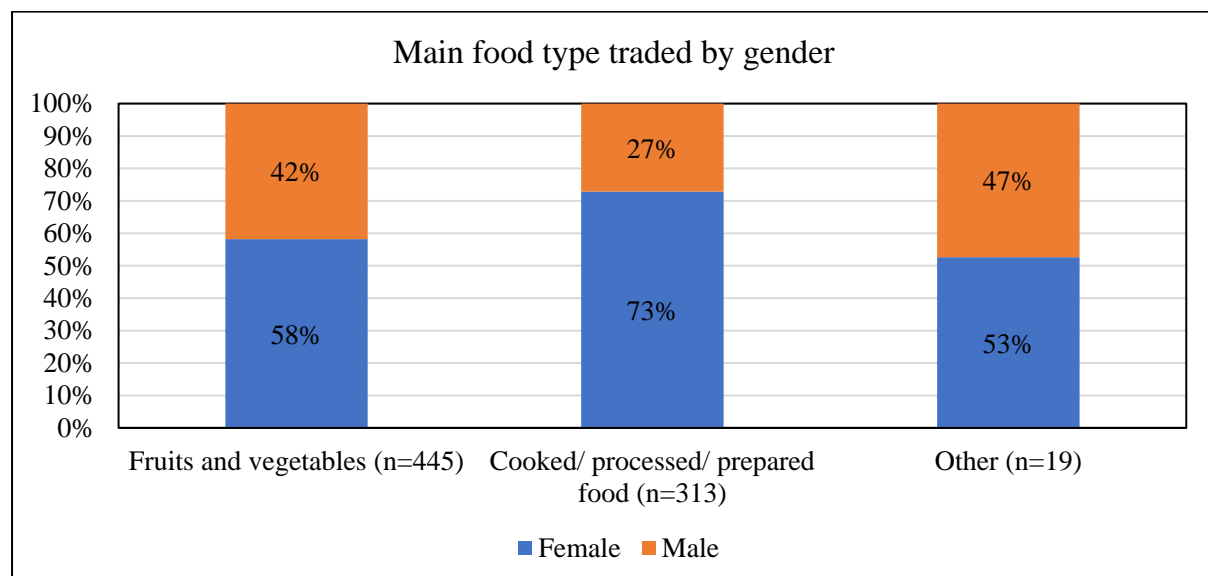
There was a statistically significant correlation between gender and main trading activity ( $\chi^2 = 35.90$ ,  $p = 0.000$ ). Figure 175 indicates that women dominated the informal retailer category, while men dominate the bakkie trader group. Further, most of those who traded equally as retailers and distributors were men.

**Figure 175. Main trading activity by gender**



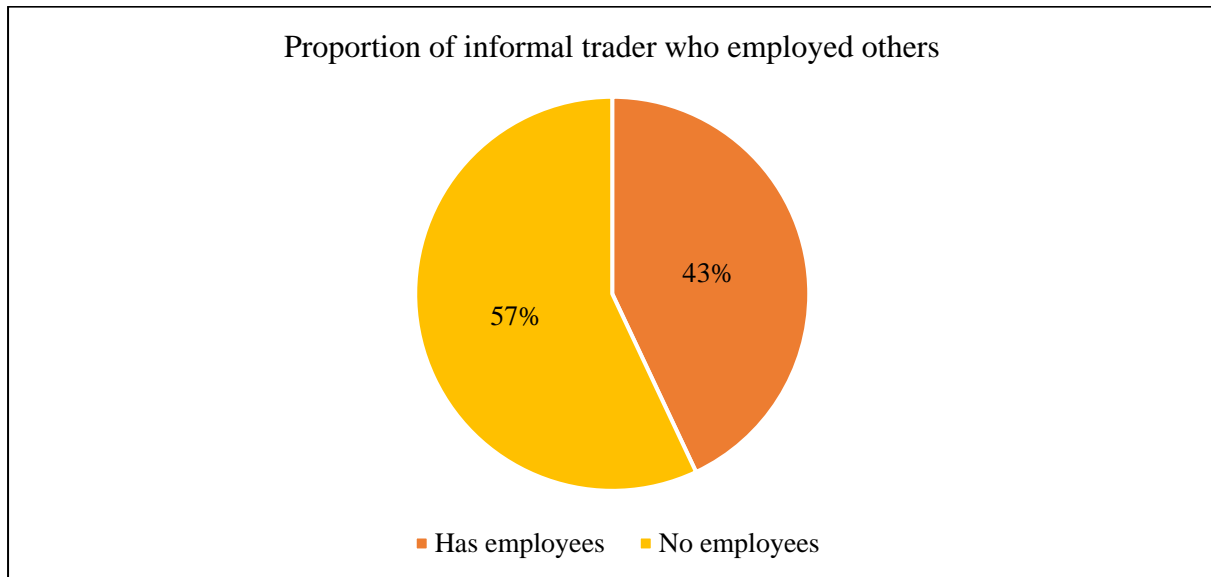
Women and men also traded in significantly different food types. Figure 176 shows that those who mainly traded in fruit and vegetable traders were mostly men, while those who main traded in cooked food were mostly women. This correlation was statistically significant ( $\chi^2 = 18.17$ ,  $p = 0.000$ ).

**Figure 176. Main food type traded by gender**



A significant proportion (43%) of informal traders indicated that they employed hired labour, while the majority (57%) relied on only family labour (Figure 177). This suggests that informal traders have potential to create employment beyond that of the owners themselves.

**Figure 177. Proportion of informal food traders who hired labour**



As shown in Figure 178, those who trade in cooked food were more likely to employ hired labour than those who trade mainly in fruits and vegetables. This association between food type traded and likelihood of using hired labour was statistically significant ( $\chi^2 = 18.12$ ,  $p = 0.000$ ).

**Figure 178. Proportion of food traders who employ others by food type (n=730)**

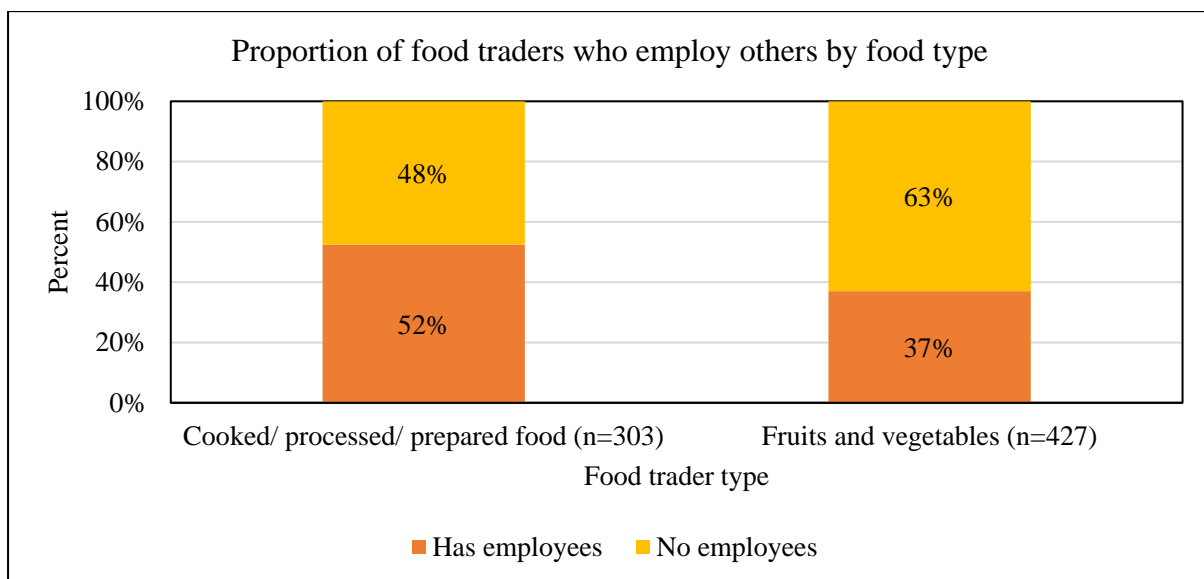
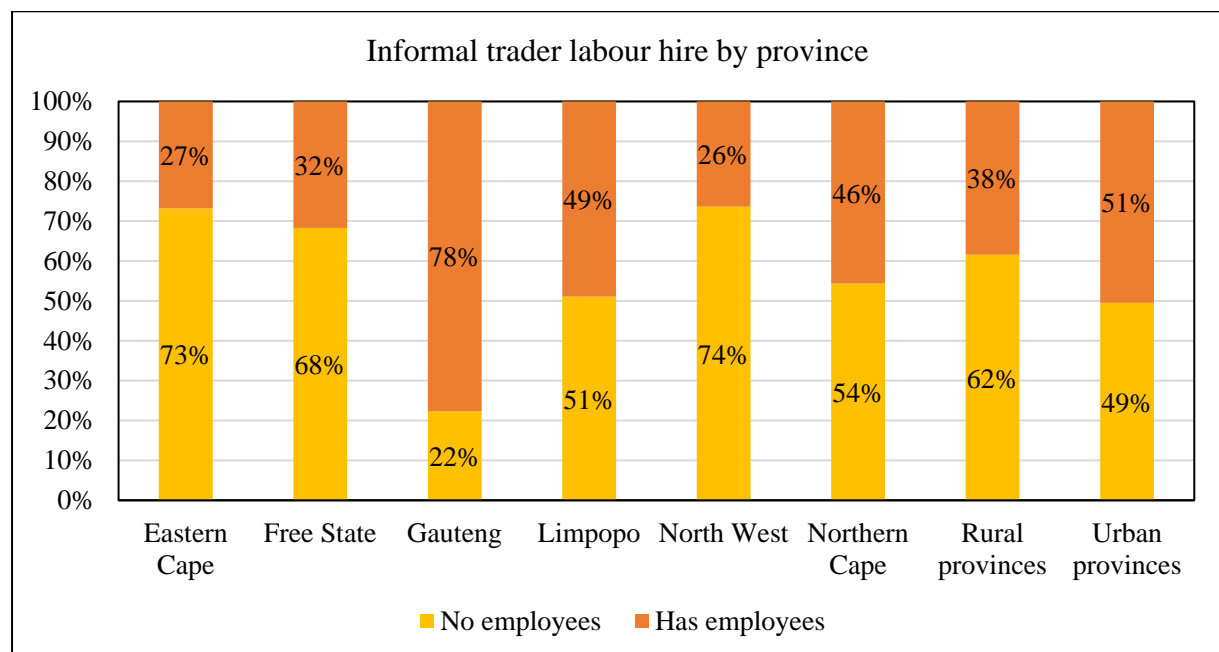




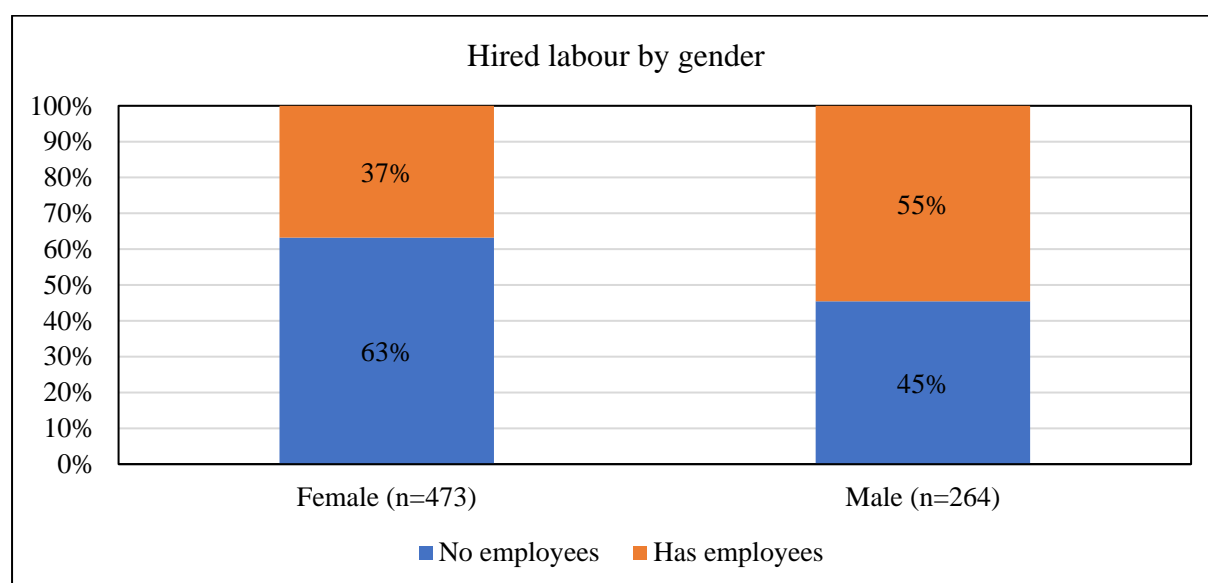
Figure 179 shows that the likelihood of hiring labour varied across different provinces. For example, more than half (51%) of informal traders located in urban provinces hired labour, while only 38% of informal traders located in rural provinces hired labour. Specifically, an overwhelming majority of informal traders (78%) operating in Gauteng, the most urbanised province, hired labour. In contrast, a small percentage of informal traders employed hired labour in rural provinces such as the Eastern Cape (27%) and North West (26%).

**Figure 179. Proportion of informal traders who hire labour, by province (n=744)**



Women are informal traders mainly relied on family labour, while men mostly relied on hired labour. As Figure 180 indicates, 55% of male-owned informal trading firms hired labour, while only 37% of female-owned firms hired labour. The chi-square test indicated that there was a significant association between gender of the informal trader and their likelihood to hire labour ( $\chi^2 = 21.78$ ,  $p = 0.000$ ).

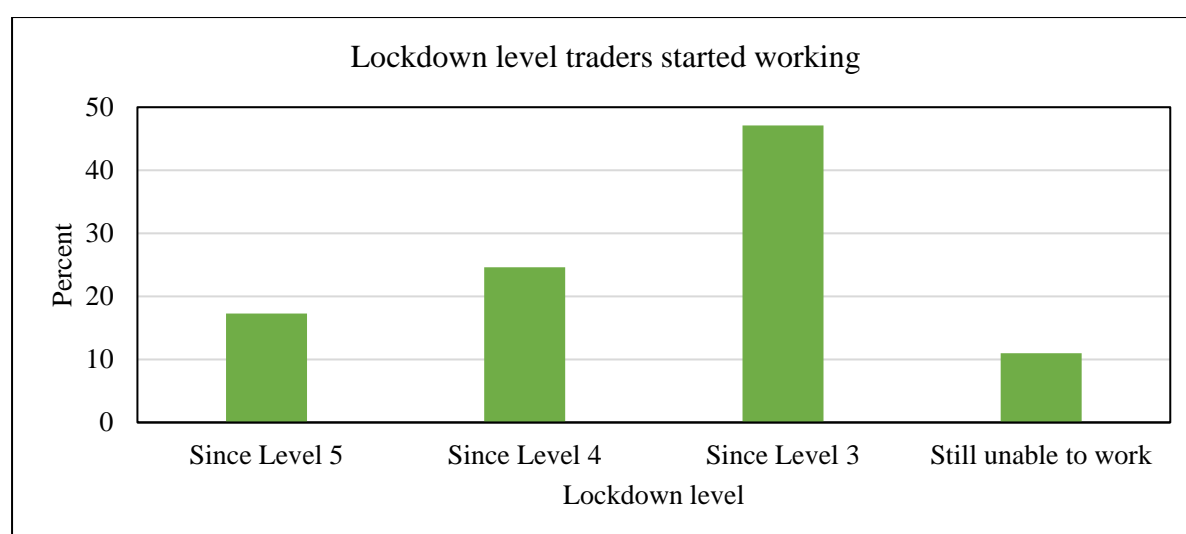
**Figure 180. Proportion of food traders who employ others, by gender (n=737)**



## 6.2. Covid-19 and lockdown impacts

Despite the food sector considered essential, many of the informal traders were unable to operate during lockdown levels 5 and 4, with most only able to operate since Level 3. Figure 181 shows that during the hard lockdown (Level 5), only about 17% of the informal food traders were operational. The easing of the lockdown measures resulted in a further 25% being able to operate during level 4. However, the figure shows that less than half (42%) of the informal traders interviewed were still unable to trade during level 4. Most of the informal food traders were able to start trading during lockdown level 3, with an addition 47%, such that 89% of the traders in total were operational during lockdown level 3.

**Figure 181. Lockdown levels informal food traders were able to start operating**



However, 11% of the informal traders indicated that they were unable to operate even at level 3. As presented in Figure 182, the two main reasons why the informal food traders were unable to trade during lockdown level 3 were lack of clients and lack of product to sell. For others, sickness (of the trader or family member) was the reason why they were unable to operate. In the category of other, informal traders highlighted varied reasons such as bakkies being stolen or broken down, fear of the virus, construction activity on their stalls' sites, etc.

**Figure 182. Main reason informal unable to trade during lockdown level 3**

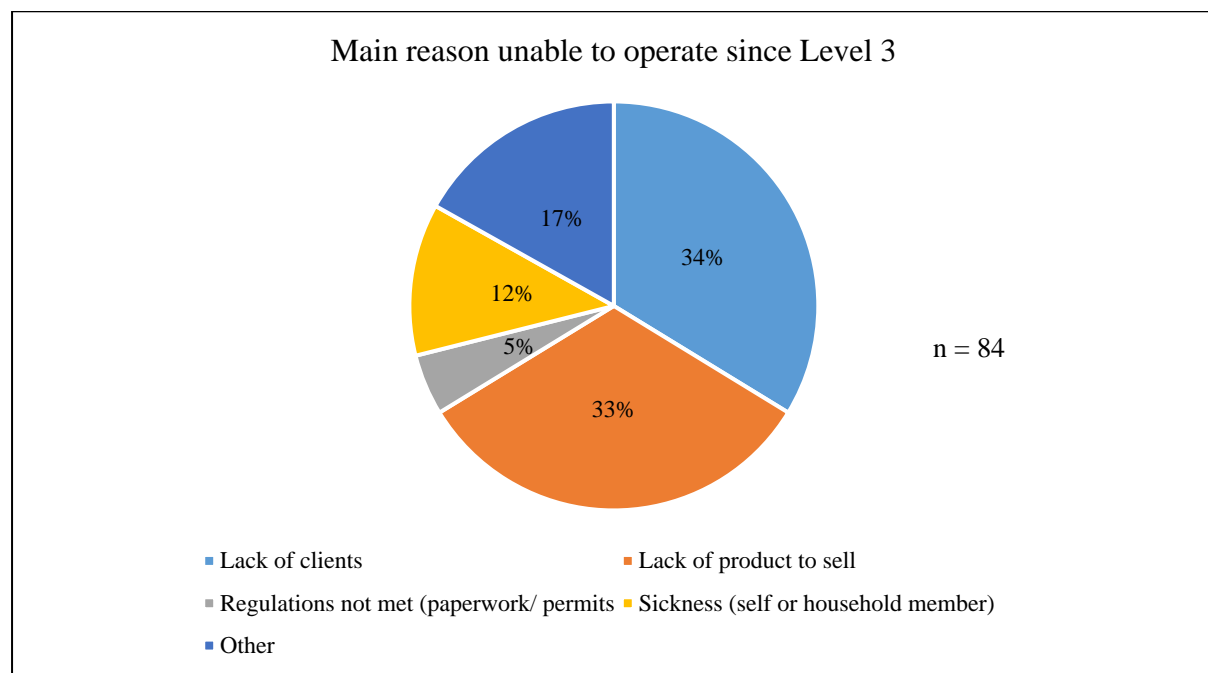


Figure 183 shows that, among the 6 provinces with most respondents, the North West province had the highest proportion (27%) of informal traders who were unable to trade even at Level 3, while Gauteng had the lowest (3%) proportion. The Gauteng had the highest proportion (29%) of traders who were able to trade during Level 5, while Eastern Cape had the lowest proportion of those who traded during level 5.

**Figure 183. Level informal food trader able to trade, by province**

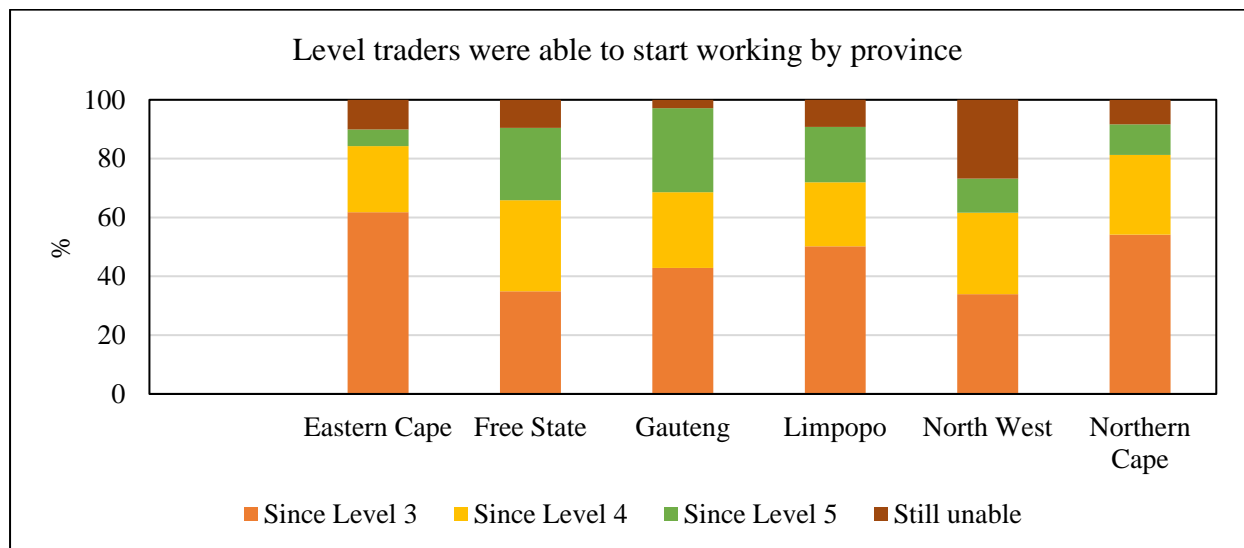


Figure 184 shows the proportions of informal traders who were able to operate at different lockdown levels by province type. The figure shows that the rural provinces have a higher proportion (14%) of informal traders still unable to operate, compared to just 7% in urban provinces. While only 14% of informal traders in rural provinces were able to operate during level 5, 23% were able to trade in urban provinces. This result is not surprising, as informal traders operating in more urban provinces (e.g., Gauteng) more likely had better access to information; or to their municipal offices, than those in more rural provinces (e.g., Eastern Cape)

**Figure 184. Level informal food trader able to trade, by province type**

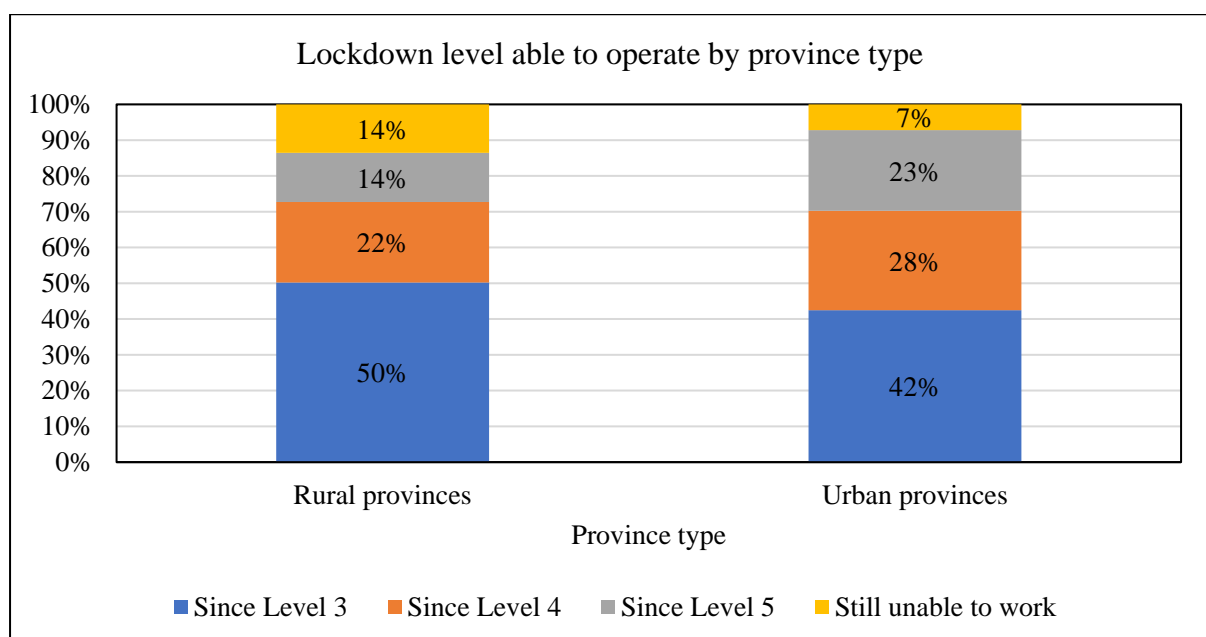


Figure 185 shows the main sources of food items for trade for informal traders before and during the Covid-19 pandemic and lockdown periods. The graph shows that retailers were the main source of food items sold by informal traders both before and during the pandemic/ lockdown period. The second most important source of food items for trade by informal traders were fresh produce markets before and during the lockdown period. The third important source of food items are wholesalers, followed by farmers, where informal traders (particularly bakkie traders) buy farming produce directly from the farmers. Figure 185 indicates that informal traders increased their purchases from retailers and fresh produce markets, and reduced their purchases from farmers, other informal traders and international sources. The proportions of those who acquire food items from wholesalers and other informal traders remained constant before and during the pandemic/ lockdown period. While the proportion changes are minimal, there is evidence that informal traders increased their reliance on formal sources such as retailers or fresh produce markets during lockdown period, while reducing reliance on informal sources such as farmers or other informal traders. Due to closed borders, international sourcing of food items was disrupted.

**Figure 185. Main source of food items sold before and during pandemic**

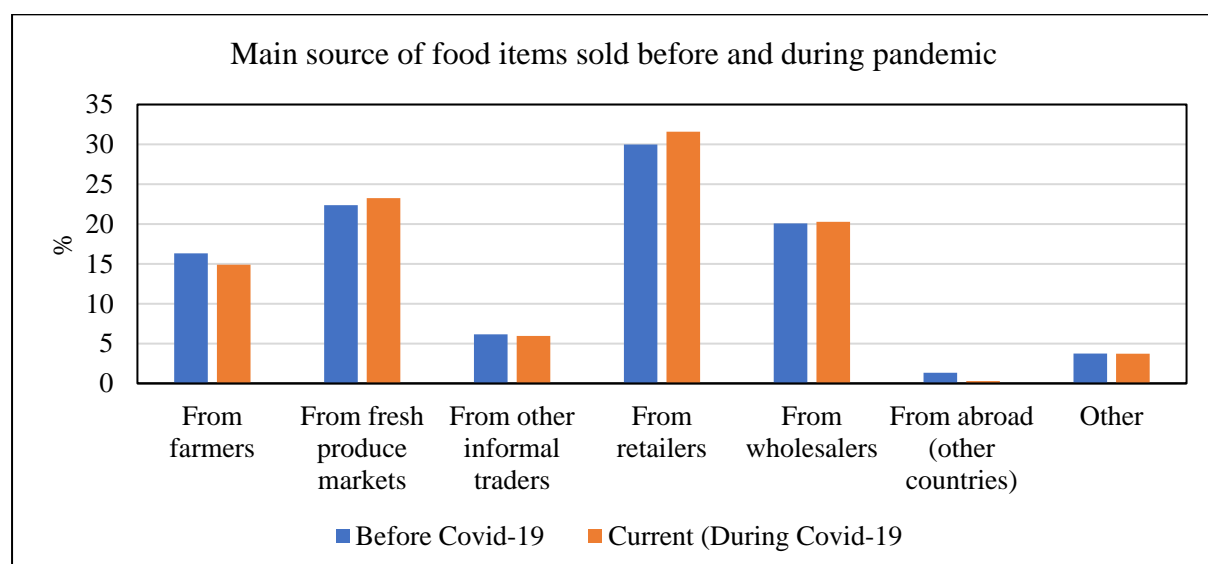


Table 16 shows that the average number of times food items are procured per month declined during the lockdown period. On average, the informal food traders procured food more than 12 times a month before the pandemic, which decline to about 8 times on average since the

pandemic and lockdown measures. Also shown on the table is that some traders did rely on their own farm supplies for the food items they sold, while others procured small quantities from nearby sources, some at least three times a day.

**Table 16. Frequency of food item sourcing before and during the pandemic**

	Obs	Mean	Std. Dev.	Min	Max
Number of times per month food sourced pre-Covid	741	12.02	11.09	0	90
Number of times per month food sourced currently	737	8.02	10.31	0	120

Figure 186 shows that for most of the informal traders interviewed (51%), the frequency of food item sourcing decreased. Only 6% of the informal traders increased the frequency by which food items were sourced, while 43% reported to change in the frequency.

**Figure 186. Changes in the frequency of items sourcing by informal traders**

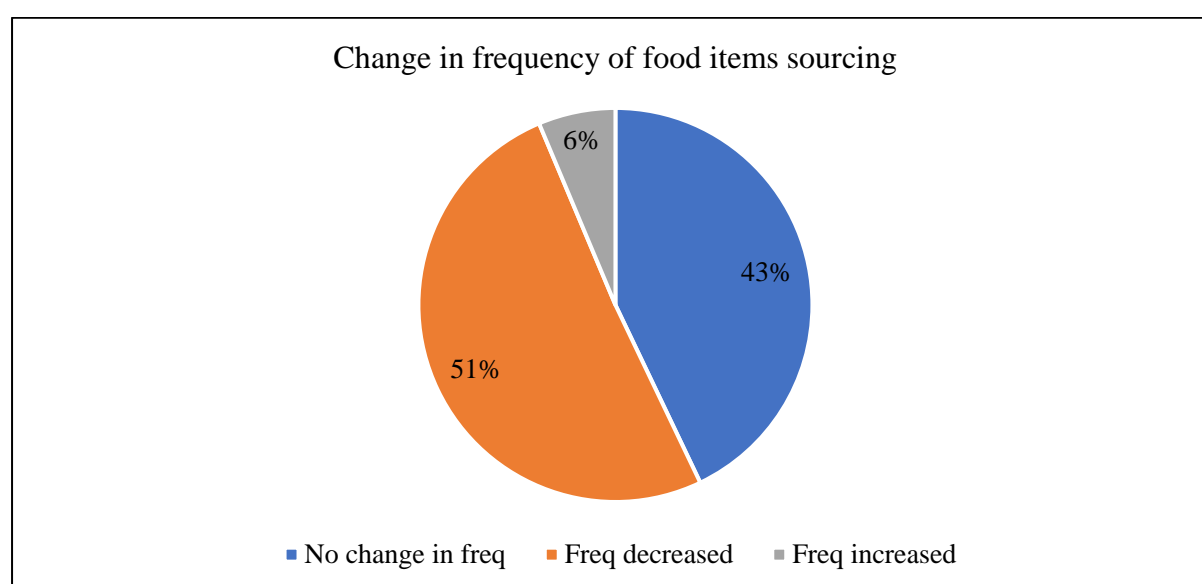


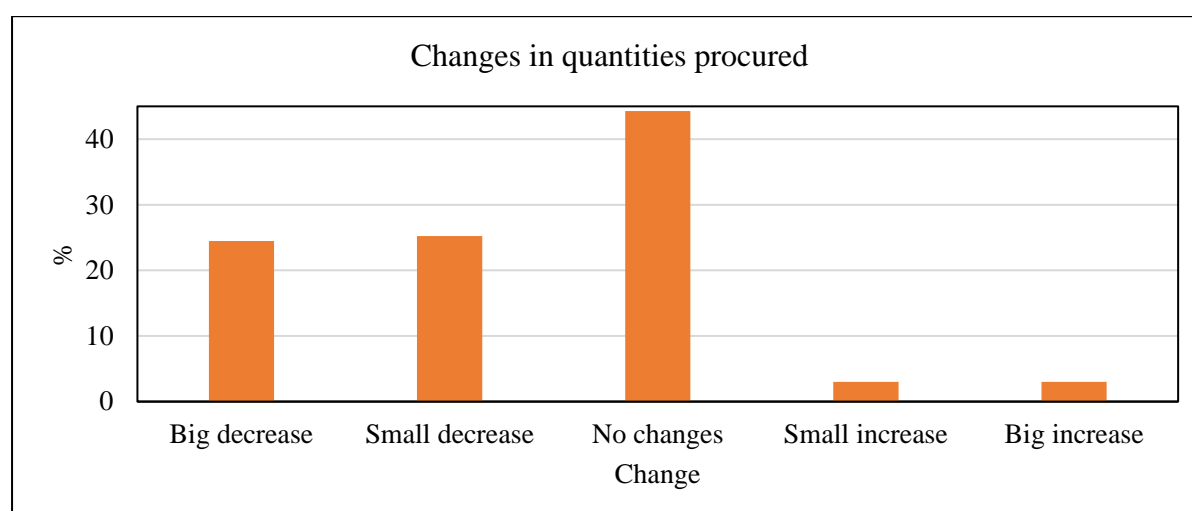
Table 17 shows that informal traders who mainly traded in cooked foods experienced higher decreases in the frequency of food items procurement (41% decrease in frequency) than those who traded in fruits and vegetables (25%). On average, the number of times food items were procured per month declined by 33%.

**Table 17. Frequency of food item sourcing before and during the pandemic, by food type traded**

Food type traded	Monthly freq pre-Covid	Current monthly freq	% change
Fruits and vegetables	14.26	10.66	-25%
Cooked/ processed/ prepared food	10.56	6.18	-41%
Other	7.62	5.92	-22%
Average	12.02	8.02	-33%

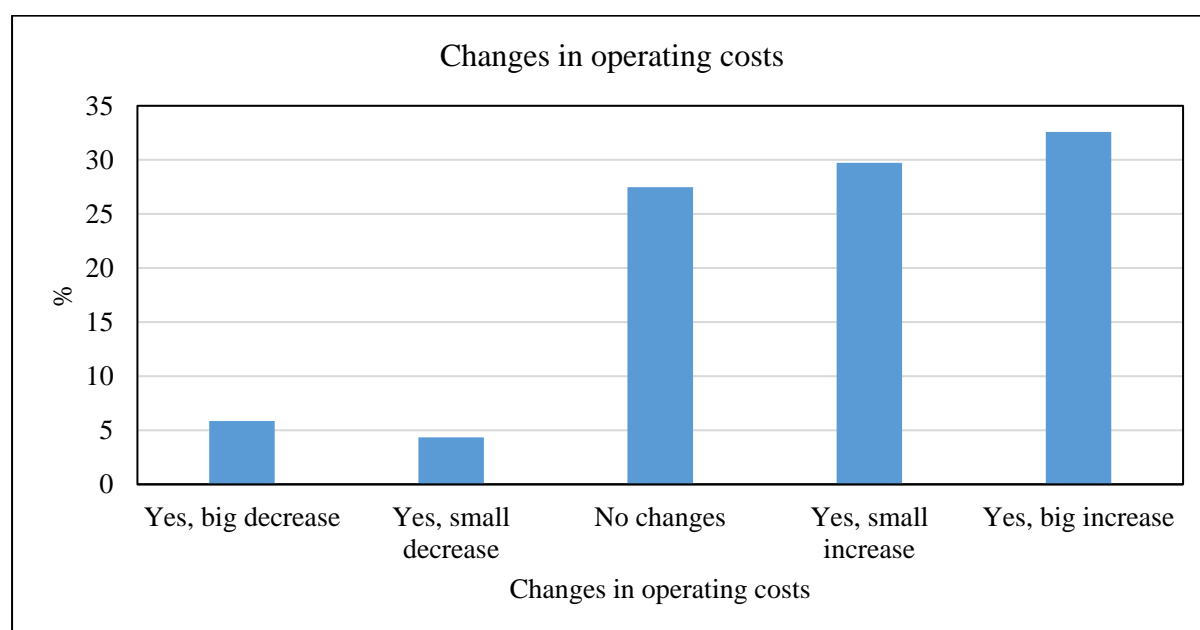
Further to reducing the frequency of food items sourcing, Figure 187 indicates that about half of the informal traders reduced the volumes procured per trip during the pandemic. While 44% of the informal traders reported no changes in volume procured, very few reported increases in volumes sourced.

**Figure 187. Changes in quantities procured since Covid-19**



As presented in Figure 188, most of the informal traders (62%) experienced increased operating costs, with 33% reporting a big increase in operating costs.

**Figure 188. Changes in operating costs since Covid-19**



Despite increased operating costs, most of the informal food traders (68%) reported that they did not increase prices of their products (Figure 189). Just over a quarter were able to increase the prices of their traded food items.

**Figure 189. Changes in prices of food items traded since Covid-19**

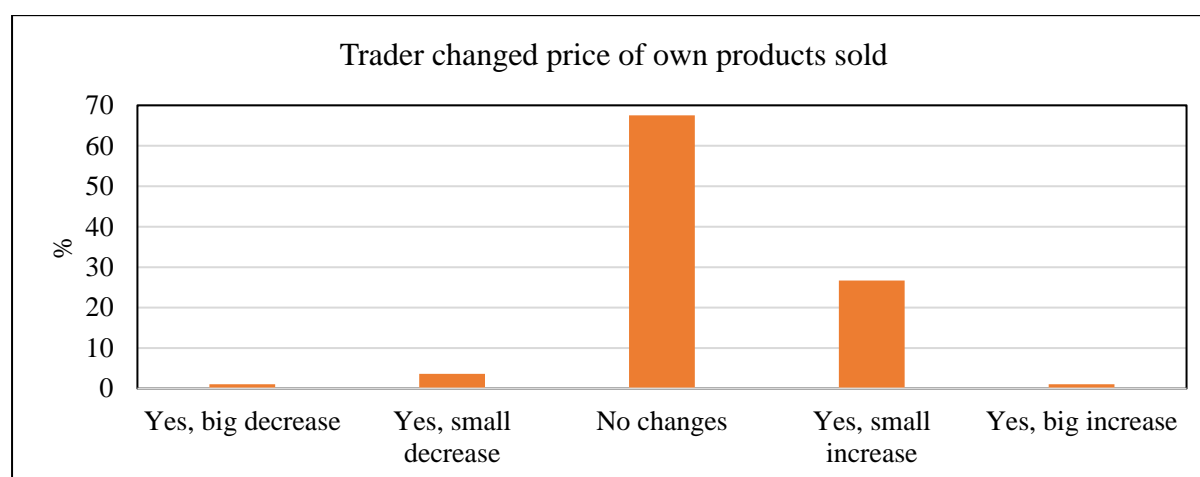
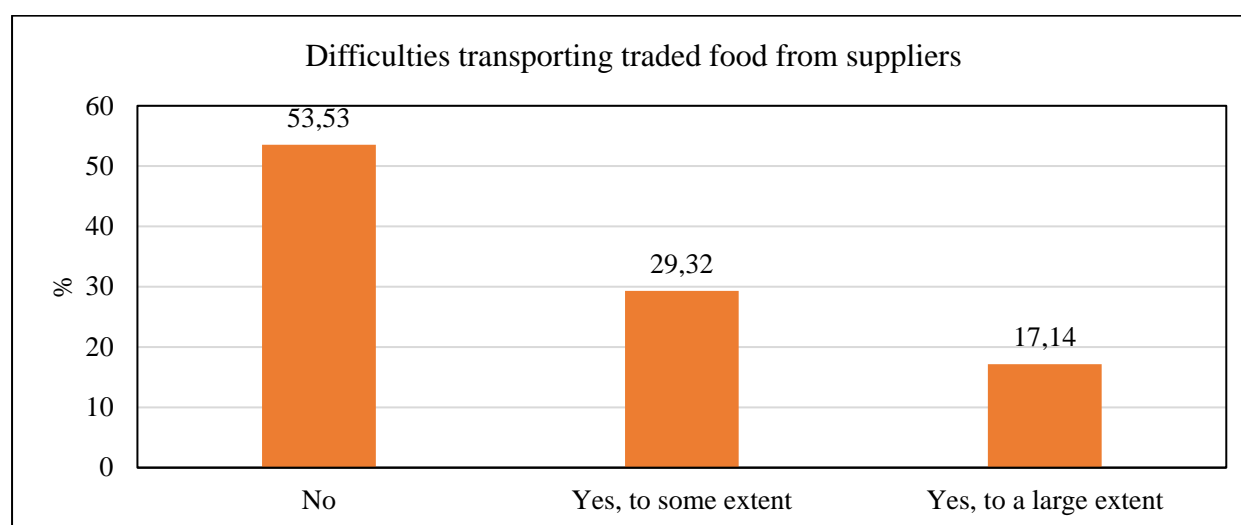


Figure 190 shows that just below half (47%) reported facing transport challenges, most of which were to some extent. Most of the food traders did not experience difficulties in transporting traded food items from suppliers.

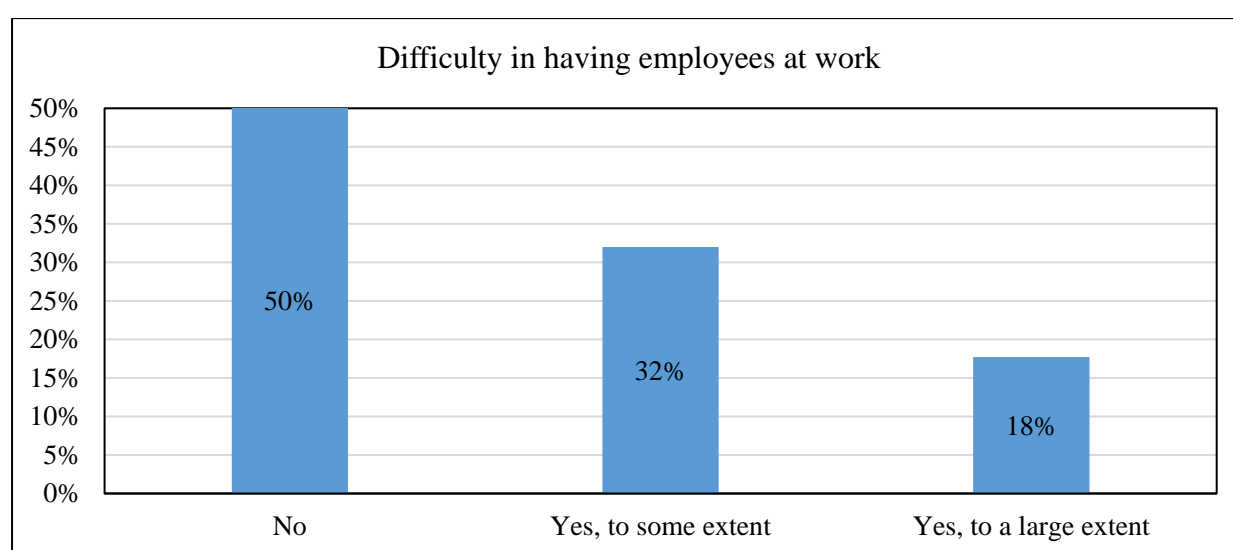


**Figure 190. Difficulties transporting traded food from suppliers since pandemic**



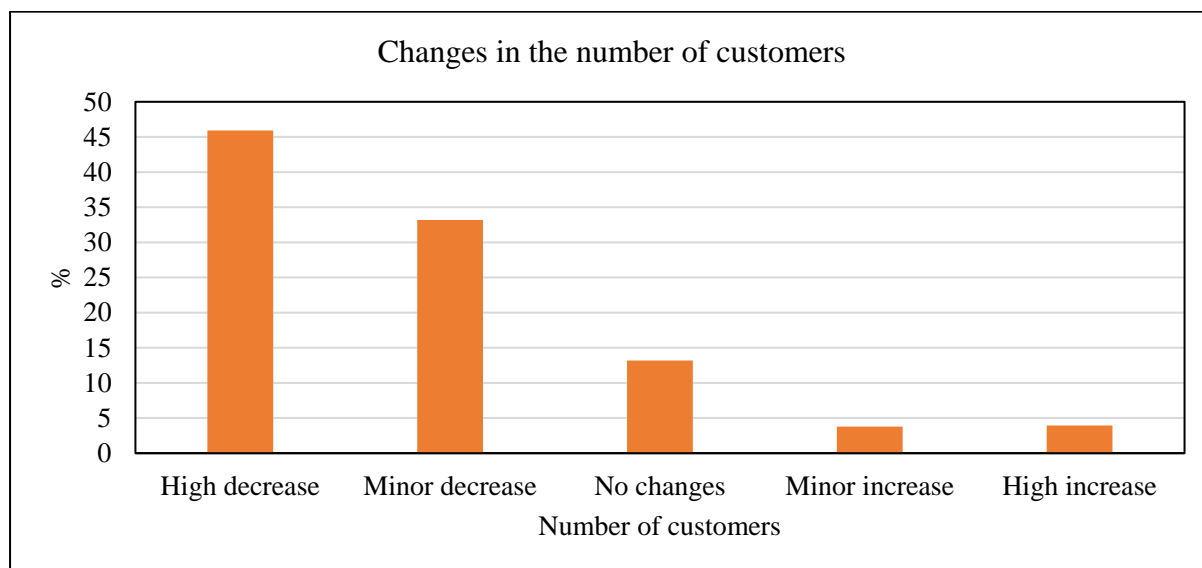
There were some challenges in transporting employees, for those who employed hired labour. As shown in Figure 191, half of employers reported experiencing difficulties with having employees at work, with 18% reporting that they experienced this challenge to a large extent.

**Figure 191. Difficulties in having employees at work since pandemic**



The informal traders were hard hit by a decrease in the number of customers. Figure 192 indicates that 46% of the informal traders experienced a high decrease in customer numbers, while 33% experienced a minor decrease. Overall, 79% of the informal traders experienced decreased customer numbers.

**Figure 192. Changes in the number of customers since pandemic**



Further to decreases in the number of customers, the informal food traders reported that the customers decreased the quantities they bought per shopping trip (Figure 193). Over a quarter of the informal traders reported a high decrease in the volume customers bought per trip, while 40% indicated a low decrease.

**Figure 193. Changes in the volume customers buy per trip since pandemic**

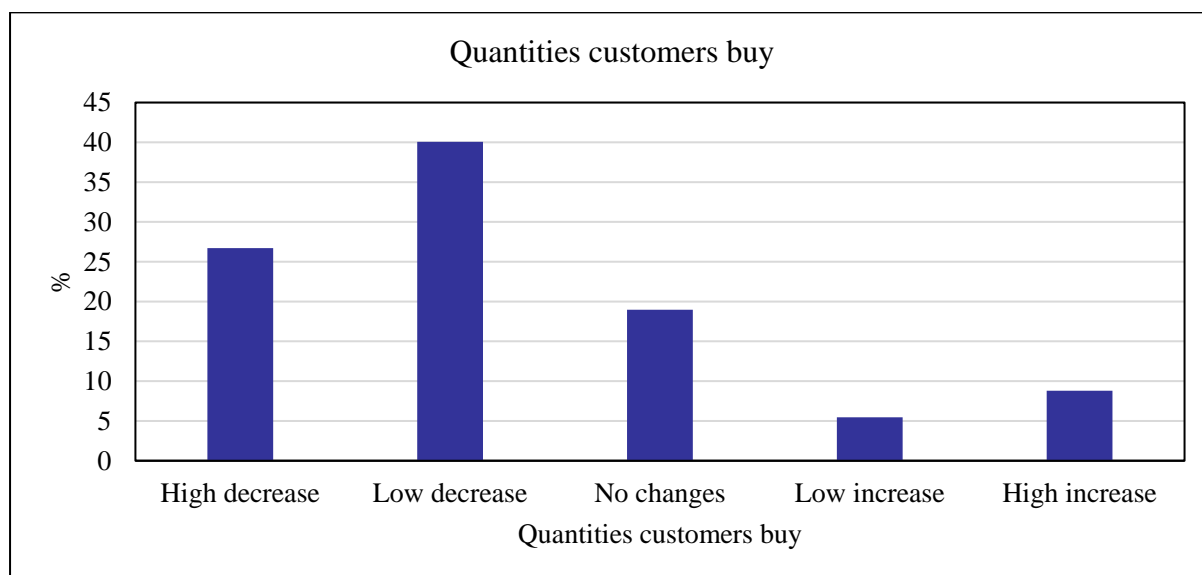


Figure 194 shows that a huge proportion (71%) of the informal food traders had to give away stock due to lack of customers/ failing to trade, with more than a quarter reporting a dramatic level of stocks given away.

**Figure 194. Proportion of informal traders who gave away stock since pandemic**

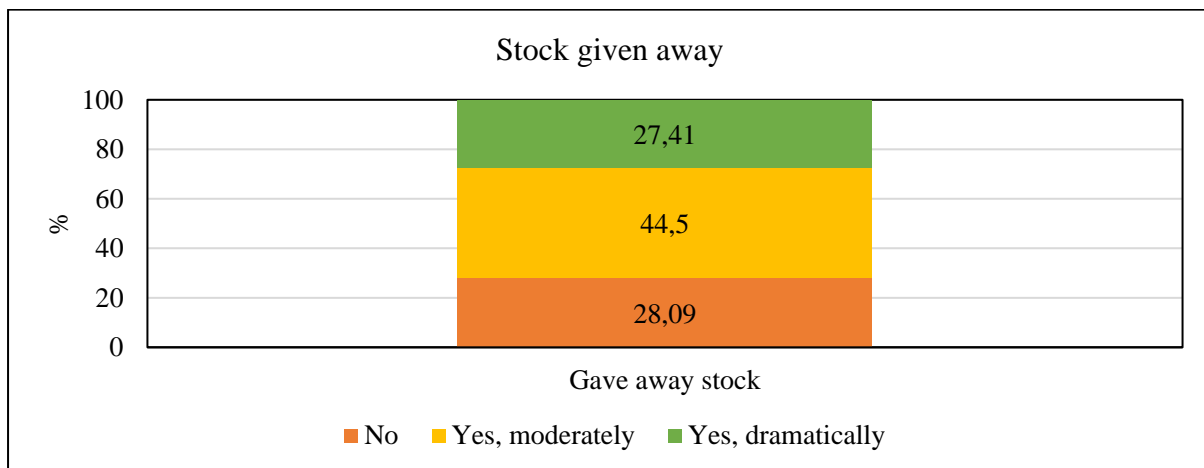
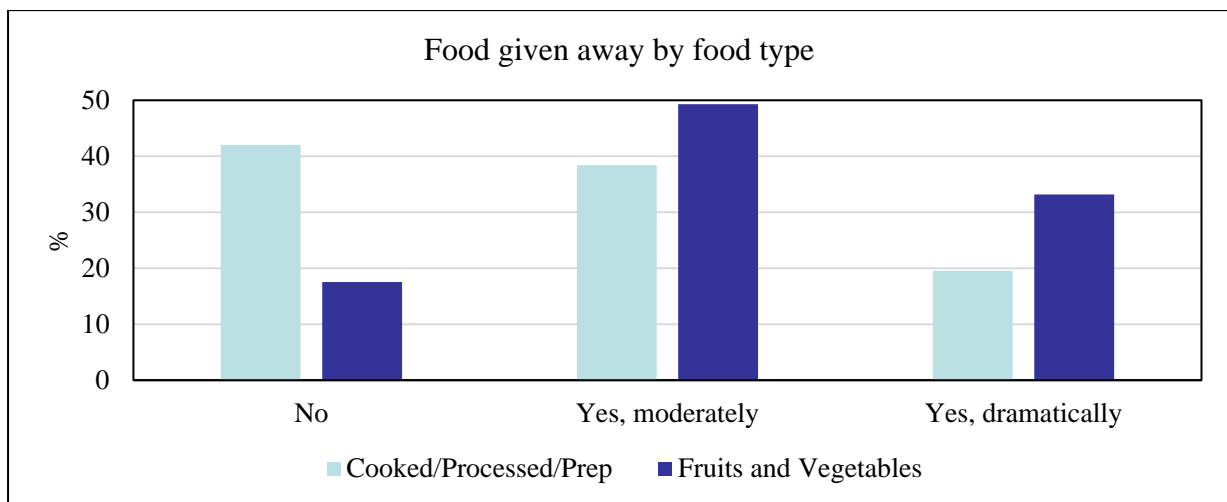


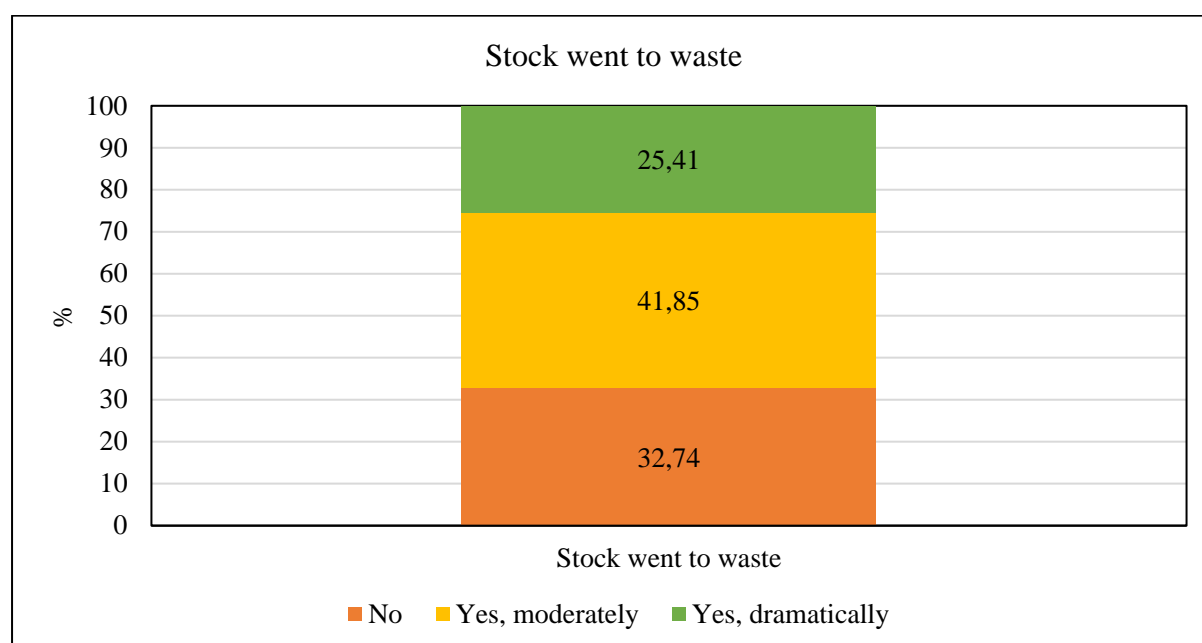
Figure 195 indicates that informal traders who sold mainly fruits and vegetables were more likely to give away their stock than traders in cooked food.

**Figure 195. Proportion of informal traders who gave away stock since pandemic by food type**



Most informal food traders reported that their stock went to waste due to lack of customers/ failing to trade, as shown in Figure 196.

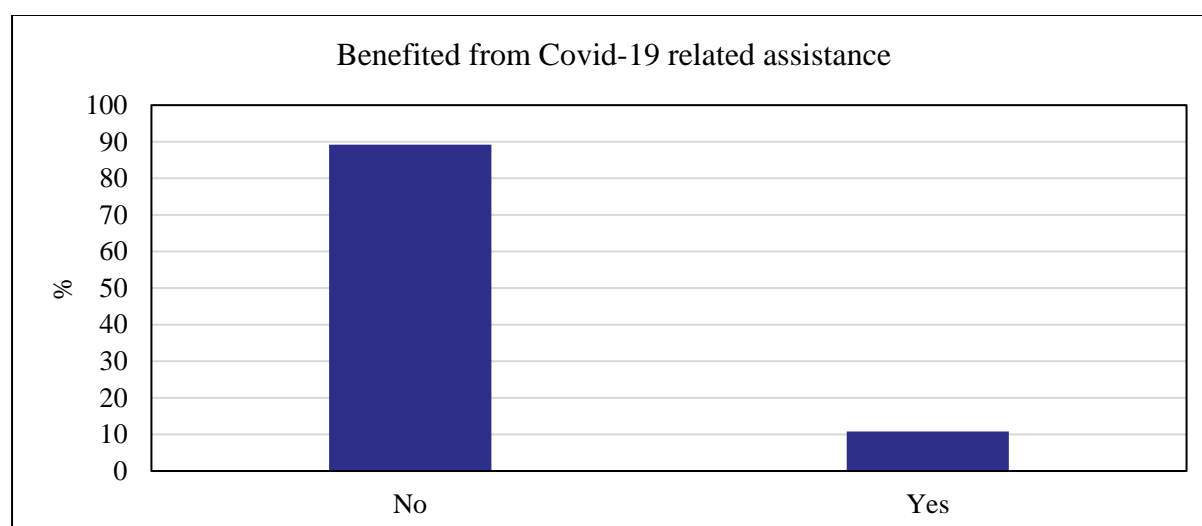
**Figure 196. Proportion of informal traders whose stock went to waste by food type**



### 6.3. Covid-19 related assistance

Figure 197 shows that a very small proportion of informal traders (11%) received any Covid-19 related support. Instead, the majority of the informal traders (79%) did not benefit from any Covid-19 related assistance.

**Figure 197. Informal food traders who benefited from Covid-19 related support**



For those who received Covid-19 related assistance, most reported receiving social grants and food assistance. (Figure 198).

**Figure 198. Type of Covid-19 related assistance received by informal traders**

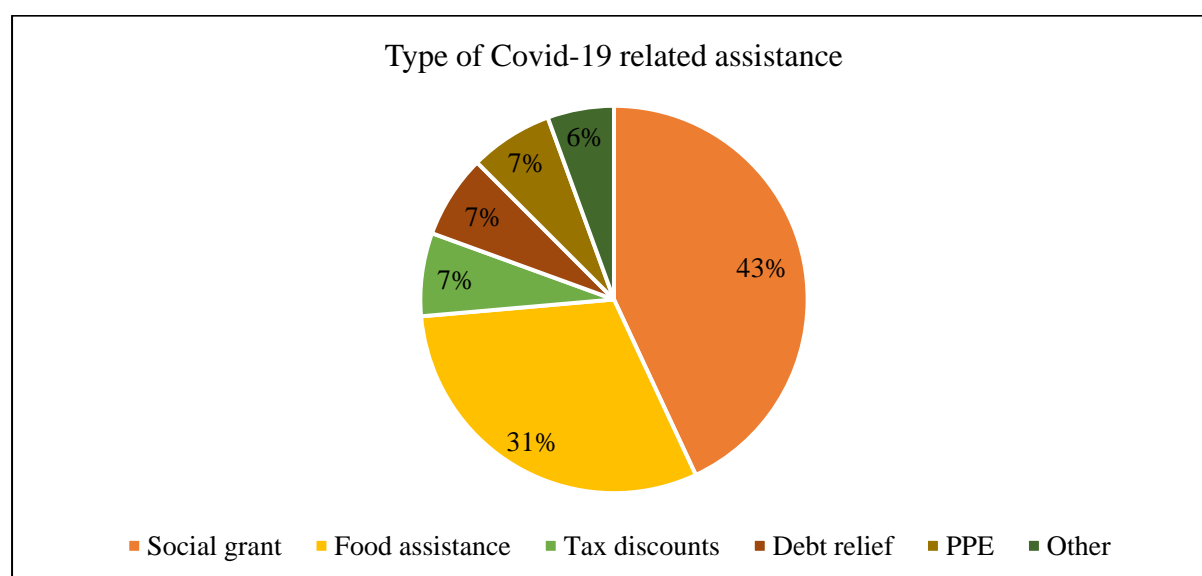
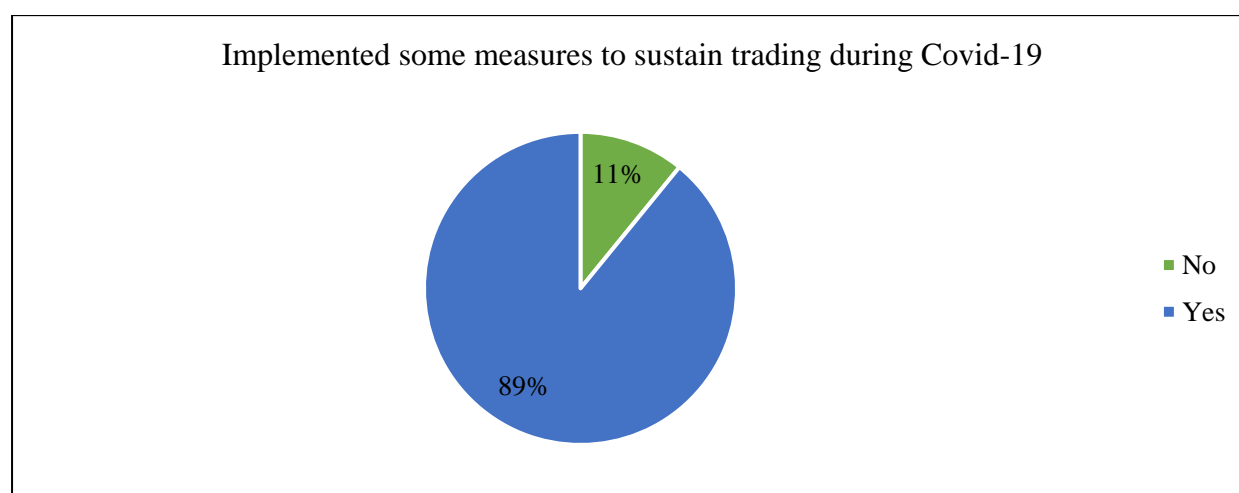


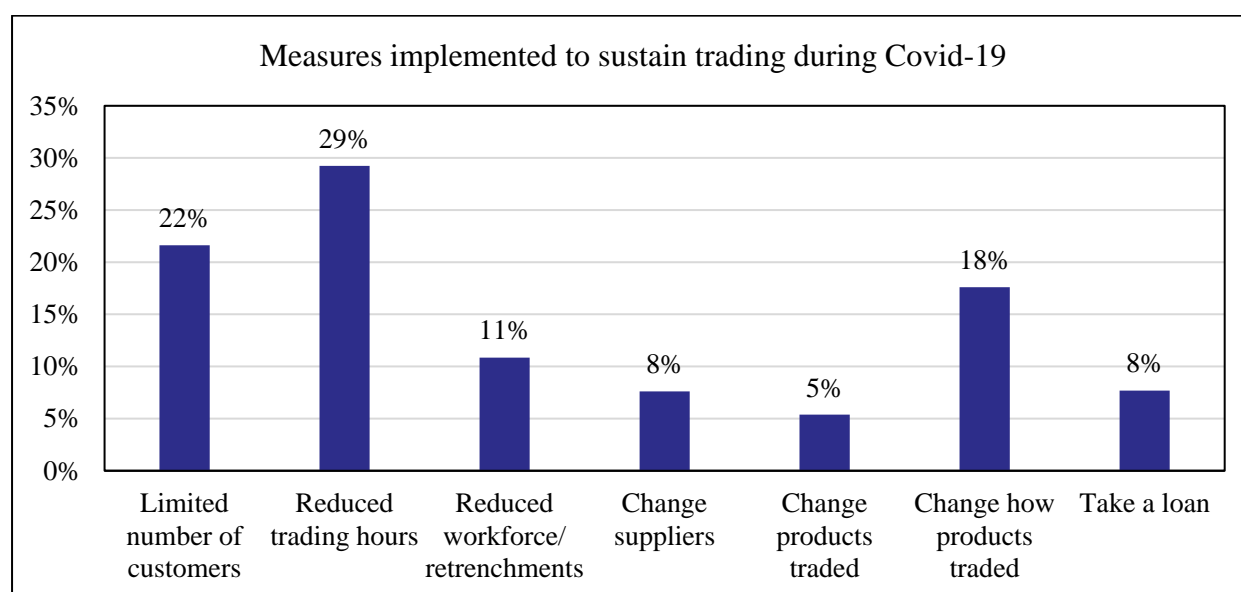
Figure 199 indicates that 89% of the informal traders implemented some measures to sustain trading during Covid-19. Only 11% indicated that they did not implement any measures.

**Figure 199. Proportion of informal food traders implemented some measures to sustain trading during Covid-19**



Among the measures implemented, reducing trading hours (29%) and limiting the number of customers inside shop (22%) were the two most popular. Some traders reported changing how products are traded, reducing the number of workers, changing suppliers, while others indicated that they took loans or had to switch to different products.

**Figure 200. Measures implemented to sustain trading during Covid-19**



#### **6.4. Informal food trader survey data analysis summary**

Informal food traders who operate mainly as stall owners/hawkers, are a key player in South Africa's food system. From the survey data collected, informal food traders were unable to trade particularly during hard lockdown levels 5 and 4, despite being belatedly considered essential. Most started trading after level 3, while others were still unable to trade even at the relaxed level 2 for various reasons – ranging from the inability to recover from the effects of not having other streams of income during the period they were not trading, to volatile price movements and cost of supplies. Impact and response dynamics varied across provinces and food type traded; however, most traders face largely similar challenges.

### **7. OVERALL SUMMARY AND RECOMMENDATIONS**

#### **7.1. Summary**

This report is a consolidation of individual reports emanating from 4 different research activities which sought to understand the impacts of the Covid 19 pandemic on agriculture and the food system in South Africa, and to explore solutions to minimise the impacts of the pandemic and similar future shocks. Research activities undertaken included reviews of literature and relevant documents, secondary data analysis, key informant interviews at the national and subnational levels, and an informal food trader survey. Whilst several challenges were encountered during data and information collection across all the techniques used, the study was able to draw comprehensive insights on the impacts of the pandemic vis-à-vis

different aspects of agriculture and the food system, and to come up with concrete recommendations towards addressing the impacts of the pandemic and future similar shocks.

Main conclusions following from this study are as follows:

1. The Covid-19 pandemic, and the lockdown, which was the major tool used to mitigate the spread of the pandemic, have resulted in a huge strain on and closure of businesses, job losses, loss of earnings, and a fall in household incomes.
2. Whilst agriculture was declared a critical industry at the onset of the pandemic and therefore exempt from the strictest lockdown regulations, its backward and forward linkages with other sectors of the economy and its strong international interface meant that there have been huge knock-on effects on the sector.
3. The pandemic had far-reaching impacts on various aspects of the agrofood system in South Africa, including disruptions on: farming operations, local markets especially for smallholder farmers, food import and export flows, and temporary increased demand in and shortage of certain food products, especially non-perishables, particularly in the period just before and during the first weeks of alert level 5 lockdown.
4. The pandemic significantly disrupted agri-food supply chains. While the data analysed does not allow us to engage in a comprehensive assessment of the food supply chain processes and actors, as the existing datasets largely exclude smallholder producers, processors and informal food traders, the partial picture painted indicates that the pandemic has led to negative impacts across the food supply chain. In particular, the negative impacts were more pronounced at the food processing/manufacturing, distribution, retailing and consumption/food security stages of the food supply chain.
5. Production activities of commercial agricultural producers were not significantly affected, as these are mainly mechanised, and the pandemic outbreak occurred when key production activities were at an advanced stage. As such, the agricultural sector is expected to grow this year (2020), with some projections indicating that the sector will grow by 13%, riding on the wave of a bumper maize crop.
6. Evidence engaged showed that food processing and manufacturing activities were significantly disrupted, with many of the food manufacturing players operating below capacity. However, the disruptions were largely temporary, as many food processing activities were on the rise in June, with some specific activities back to their pre-Covid-19 levels (February 2020).

7. Food retailers faced significantly decreased food sales and incomes, particularly those who mainly trade in hot foods and beverages, as well as fast foods outlets, as they were restricted from trading during levels of hard lockdown (i.e. mostly levels 5 and 4).
8. Prices of most basic food items increased during the early lockdown period (i.e. level 5) as a result of increased demand due to panic buying amidst uncertainty among consumers. While most of the prices of food items had declined in June however, prices of some basic food items such as rice, eggs, beef, etc., remained on the increased levels.
9. Informal food traders were unable to trade, despite being belatedly considered essential. Most traded after level 3, while others were still unable to trade even during the relaxed level 2. Challenges faced by informal food traders include high cost of supplies, transport restrictions, volatile price movements, and limited support from both state and non-state entities to enable them to go back to business.
10. The Covid-19 pandemic coincided with several exogenous challenges. These exogenous challenges further compromised and exerted additional pressure on the already strained South African agrofood system. Key among exogenous challenges include the outbreak of foot and mouth disease for livestock since November 2019, the general poor performance of the local currency (the rand) on the exchange rate market from March to around May 2020, industrial action by truck drivers in July and August 2020, and a marked increase in stock theft in some provinces from March 2020.
11. Several measures involving state and non-state actors were implemented to cushion the citizenry from the effects of the pandemic. These included social protection measures, farmer support measures, food safety and food processing measures, food supply chain responses, and trade measure. However, major challenges hampered the smooth implementation, and, ultimately, the effectiveness of some of the measures. Challenges included the bureaucracy involved in implementing the measures, exclusion of some social groups, lack of data on who needed support, and lack of coordination and communication among state and non-state actors.

## **7.2. Recommendations**

Subsequent recommendations following from the above conclusions towards functionality of the agrofood system in the context of the Covid-19 pandemic are as follows:

1. There is need for a stronger coordinated approach between and among state and non-state players in deploying efforts and resources vis-à-vis responding to similar shocks in the future



2. The disruptions in the agrofood system should be used as an opportunity by policy makers to influence the food system so that it delivers food that is not only nutritious, but also affordable to most of the people. The focus of policy makers should not be in trying to restore the agrofood system to its previous levels, which largely excluded most people, but to intervene in ways that orient the food system towards nutritious and affordable foods.
3. There should be deliberate efforts by both state and non-state actors involved in implementing such response measures as distribution of food parcels in the context of shocks like Covid-19 to promote and involve local players in the agrofood system whose operations would have been compromised. This may include deliberately sourcing food products from smallholder farmers and promoting other local players such as bakkie traders in transporting the food thereby assisting them to make up for losses
4. The role of informal traders and smallholders in the agrofood system should be acknowledged and harnessed to produce inclusive food system outcomes. There is a need to increase the support targeted at smallholders and informal traders, both in terms of amounts per beneficiary and the number of beneficiaries. Particular focus should be on enterprises owned by women, who were the worst affected. There is a need for targeted support for informal food traders particularly: reviving those that are no longer operational, and increasing capacity for those operating below their normal levels
5. Similarly, interventions that are targeted at supporting agrofood processors and distributors who were significantly affected by the pandemic to increase production capacity and reduce further job losses in the food and beverage industry should be increased
6. Government should provide salary relief for smallholder farmers to pay their workers in the context of such unexpected shocks as Covid-19
7. Given the dire food insecurity situation in the country due to the pandemic, we encourage, like many food system players have done, that social protection measures be expanded to reach a huge proportion of population. This should include those who are still technically employed, but whose remuneration has drastically decreased. We encourage that the discussions, processes and modalities around the basic income grant (BIG) be accelerated, so that it be introduced as soon as possible.
8. Given that prices of some basic food items have increased, there is a case for subsidising certain food items to ensure that poor communities also eat diverse diets.
9. Government should ensure stability of prices with respect to input supplies and make sure that input supply support processes to smallholder farmers have fewer bureaucratic hurdles

10. There is an urgent need for a comprehensive information management system at every stage of the food supply chain, inclusive of small and/or informal as well as big formal players. The lack of reliable and accurate information curtails planners and decision-makers from making effective and well-informed interventions

## REFERENCES

ABSA, 2020. Agri Trends: Livestock and Hide Report Germany ASF Outbreak: SA Bans Pork Imports Agri Trends.

AFRA (Association for Rural Advancement), 2020. Food security priority actions in the context of Covid-19 in South Africa: a civil society perspective. Available at: <https://afra.co.za/2020/04/02/food-security-priority-actions-in-the-context-of-covid-19-in-south-africa-a-civil-society-perspective/> (Accessed: 13 July 2020).

ANA Reporter, 2020. 'Covid-19: lockdown: Looting, property damage in Western Cape strongly condemned'. IOL. Apr 21, 2020. <https://www.iol.co.za/news/south-africa/western-cape/covid-19-lockdown-looting-property-damage-in-western-cape-strongly-condemned-46992744> / (Accessed on: July 2, 2020)

Arndt, C., Gabriel, S. & Robinson, S., 2020. 'Assessing the toll of Covid-19 lockdown measures on the South African economy'. IFPRI. May 6, 2020. <https://www.ifpri.org/blog/assessing-toll-covid-19-lockdown-measures-south-african-economy> (Accessed on: June 19, 2020)

Arndt, Channing; Davies, Rob; Gabriel, Sherwin; Harris, Laurence; Makrelov, Konstantin; Modise, Boipuso; Robinson, Sherman; Simbanegavi, Witness; van Seventer, Dirk; and Anderson, Lillian, 2020. Impact of Covid-19 on the South African economy: An initial analysis. SA-TIED Working Paper 111.

BankServAfrica, 2020. What our data tells us about consumer spend during the coronavirus era. Available at: <https://www.bankservafrika.com/blog/post/what-our-data-tells-us-about-consumer-spend-during-the-coronavirus-era1> (Accessed: 14 July 2020).

Baird, F., 2020. 'Covid-19 exposes SA to accelerated food-security threat, says FairPlay'. IOL. Jun 25, 2020. <https://www.iol.co.za/business-report/covid-19-exposes-sa-to-accelerated-food-security-threat-says-fairplay-49843929> (Accessed on: July 1, 2020)

BFAP (Bureau for Food and Agricultural Policy), 2020a. Monthly Food Affordability Tracker June 2020 #1. Pretoria, South Africa: BFAP.

BFAP (Bureau for Food and Agricultural Policy), 2020b. Bi-Weekly Trade Tracker June 2020. Pretoria, South Africa: BFAP.

BFAP (Bureau for Food and Agricultural Policy), 2020c. Bi-Weekly Trade Tracker June 2020 #1. Pretoria, South Africa: BFAP.

BFAP (Bureau for Food and Agricultural Policy), 2020e. How South Africans spend their food budgets. Pretoria, South Africa: BFAP.

Bhengu, C., 2020. 'From fraud allegations to faulty systems - how the UIF Covid-19 relief fund made headlines'. June 30, 2020. <https://www.timeslive.co.za/news/south-africa/2020-06-30-from-fraud-allegations-to-faulty-systems-how-the-uif-covid-19-relief-fund-made-headlines/> (Accessed on: July 4, 2020)

Battersby, J. a. W. V., 2018. Addressing food security in African cities. *Nature Sustainability*, 1(4), pp. 153 - 155.

Broughton, T., 'Coronavirus: Motshekga urged to restore school feeding schemes during lockdown'. News 24. April 14, 2020. <https://www.news24.com/news24/southafrica/news/coronavirus-motshekga-urged-to-restore-school-feeding-schemes-during-lockdown-20200414> (Accessed on: July 13, 2020)

Business Insider, 2020. The SA coronavirus shopping list: here's what sold out when Covid-19 hit elsewhere. Available at: <https://www.businessinsider.co.za/coronavirus-shopping-list-for-south-africa-2020-3> (Accessed: 13 July 2020).

BusinessTech, 2020. Here's how many South Africans are taking pay cuts during lockdown. Available at: <https://businesstech.co.za/news/finance/400053/heres-how-many-south-africans-are-taking-pay-cuts-during-lockdown/> (Accessed: 14 July 2020).

C19 People's Coalition, 2020. Experience of Food Vendors during Lockdown: A Snapshot of the Cape Town, Johannesburg and eThekwin Municipality. 1–10.

Caesar, M., 2020. Urban household food security and Covid-19 governance responses in South Africa'. *Hungry Cities Partnership*. April 16, 2020.

Cape Times, 2020. Confusion over informal traders after amended regulations. *Cape Times*, 6 April.

Cockx, L., Colen, L., De Weerd, J., Gomez, Y., & Paloma, S, 2019. Urbanization as a driver of changing food demand in Africa: Evidence from rural-urban migration in Tanzania. Office of the European Union, Luxembourg. doi:10.2760/515064.

COGTA, 2020. 'Draft framework for consultation: A schedule of services to be phased in as per the Covid-19 Risk Adjusted strategy'. 25 April 2020

Comins, L., 2020. 'No link between food and spread of virus'. CGCSA. 21 April 2020. <https://www.cgcsa.co.za/no-link-between-food-and-spread-of-virus-21-april-2020/> (Accessed on: July 1, 2020)

Competition Commission (CC), 2020a. Covid-19 update: Competition Commission flooded with over 500 complaints of excessive pricing. March 31, 2020.

Competition Commission (CC), 2020b. Press statement: Competition Commission's response to the Covid-19 pandemic. May 29, 2020

Consumer Goods Council of South Africa (CGCSA), 2020a. Advice for food businesses: Covid-19 Pandemic. April 8, 2020.

Consumer Goods Council of South Africa (CGCSA), 2020b. Covid-19 preparedness and response guidelines for food retail and manufacturing businesses. May 25, 2020.

Consumer Goods Council of South Africa (CGCSA) & SACCI, 2020. Standard operating procedures for fast food outlets (FFOs) following Covid -19 lockdown. 30 April 2020.

Crush, J. & Frayne, B, 2011. Supermarket expansion and the informal food economy in Southern African cities: Implications for urban food security. *Journal of Southern African Studies* 37: 781–807.

Department of Agriculture, Forestry and Fisheries (DAFF), 2018. Self-Sufficiency Index. Pretoria: DAFF

Department of Agriculture, Forestry and Fisheries (DAFF), 2019. What is a Self-sufficiency Index? Pretoria: DAFF.

Department of Agriculture, Land Reform and Rural Development (DALRRD), 2020. Abstract of Agricultural Statistics 2020. Pretoria. South Africa

Davis R, 2020. The biggest lockdown threat: Hunger, hunger, everywhere, *Daily Maverick*, <https://www.dailymaverick.co.za/article/2020-04-17-the-biggest-lockdown-threat-hunger-hunger-everywhere/#gsc.tab=0>

Deloitte., 2020. How COVID-19 has affected South African Grocery Retail Consumer Sentiment. Pretoria. Deloitte.

Department of Agriculture, Land Reform and Rural Development (DALRRD), 2020. Call for Applications: Covid-19 agricultural disaster support fund for smallholder and communal farmers. April, 2020.

Department of Labour (DoL), 2020. Covid-19 occupational health and safety measures in workplaces Covid-19. April 29, 2020. Government Notices No. 479. Available at: <http://www.labour.gov.za/DocumentCenter/Publications/Occupational%20Health%20and%20Safety/COVID-19%20Guideline%20Mar2020.pdf>

Department of Small Businesses (DoSB), 2020a. Small Business Development on implementation of provisions relating to essential services. April 6, 2020. Government Notices No. R450. Available

Department of Small Businesses (DoSB), 2020b. Small Business Development announces guidelines for participation in spazashops and general dealers Coronavirus Covid-19 support scheme. CGCSA. April 18, 2020

Department of Trade, Industry and Competition (DTIC), 2020a. Media Briefing – Remarks by Minister of Trade, Industry and Competition Ebrahim Patel on Tuesday 24 March 2020. Available at: <http://www.thedtic.gov.za/media-briefing-remarks-by-minister-of-trade-industry-and-competition-ebrahim-patel-ontuesday-24-march-2020/>

Devereaux, S., 2020. ‘Social protection responses to the Covid-19 lockdown in South Africa’. The Conversation. April 6, 2020. <https://theconversation.com/social-protection-responses-to-the-covid-19-lockdown-in-south-africa-134817> (Accessed on: July 2, 2020)

D’Haese, M., & Van Huylenbroeck, G, 2005. The rise of supermarkets and changing expenditure patterns of poor rural households case study in the Transkei area, South Africa. Food Policy 30(1): 97-113.

DHL Resilience360, 2019. Go-Slow Strike Causes Severe Disruptions at Transnet Port Terminals in South Africa (16 July 2019)

Dlamini, S., 2020. ‘Premier Fishing donates food parcels to workers impacted by Covid-19’. IOL. May 5, 2020. <https://www.iol.co.za/business-report/companies/premier-fishing-donates-food-parcels-to-workers-impacted-by-covid-19-47561041> (Accessed on: July 1, 2020)

DSD-WC, 2020. Western Cape Department of Social Development (DSD) food parcels; Social relief of distress (SRD) grants. <https://coronavirus.westerncape.gov.za/food-relief> (Accessed on June 29, 2020)

Evans, J., 2020. 'Trade Secrets Supply chains: Covid-19 crisis highlights supply chain vulnerability' Financial Times. May 28, 2020. <https://www.ft.com/content/d7a12d18-8313-11ea-b6e9-a94cfd1d9bf> (Accessed on: July 1, 2020)

FACAGRO, 2020. In the face of a pandemic: The agrifood ecosystem in South Africa: Future Agro Challenge. Available at: <https://facagro.com/2020/06/02/in-the-face-of-a-pandemic-the-agrifood-ecosystem-in-south-africa/> (Accessed: 14 July 2020).

FAO, 2020a. 'Covid-19 and the risk to food supply chains: How to respond?' Rome. March 29, 2020. <https://doi.org/10.4060/ca8388en>

FAO, 2020b. 'Food Outlook - Biannual Report on Global Food Markets: June 2020'. Food Outlook, 1. Rome. <https://doi.org/10.4060/ca9509e>

FAO, 2017. The future of food and agriculture - trends and challenges. Rome: FAO.

FAO, 2020. Covid-19 and smallholder producers' access to markets. Rome: FAO

FAO, 2020. Responding to the impact of the Covid-19 outbreak on food value chains through efficient logistics. Rome: FAO.

FAO, 2020. Forecasting threats to the food chain affecting food security in countries and regions. Food Chain Crisis Early Warning Bulletin. No. 36, July–September 2020. Rome.

FAO. 2020. Guidelines to mitigate the impact of the COVID-19 pandemic on livestock production and animal health. Rome: FAO

FAO, IFAD, UNICEF, WFP and WHO, 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO.

Farmers Weekly, 2020. Lack of informal trading during lockdown worry farmers. Farmers Weekly, 1 April.

Farrelly, P.B., 2020. 'Six ways Covid-19 is challenging the food processing sector'. *Farmers Review Africa*. May 5, 2020. Available at: <http://www.farmersreviewafrica.com/covid-19/2020/05/05/six-ways-covid-19-is-challenging-the-food-processing-sector/> (Accessed on: July 3, 2020)

Food and Environment Reporting Network, 2020. Mapping Covid-19 outbreaks in the food system. <https://thefern.org/2020/04/mapping-covid-19-in-meat-and-food-processing-plants/>

Food Forward, 2020. <https://foodforwardsa.org>

Food Security Information Network (FSIN), 2020. 2020 Global report on food crises: Joint analysis for better decisions. Rome, Italy and Washington, DC: Food and Agriculture Organization (FAO); World Food Programme (WFP); and International Food Policy Research Institute (IFPRI). <https://www.fsinplatform.org/report/global-report-food-crisis-2020/>

Freight News, 2020. Feature: Durban. June 2020.

French, S.A., Tangney, C.C., Crane, M.M., Wang, Y., & Appelhans, B.M, 2019. Nutrition quality of food purchases varies by household income: The SHoPPER study. BMC Public Health 19: 231.

Fresh Plaza, 2020a. Citrus fruits become more popular every year, even in summer. <http://c850371fda6892fbfd1c5a5b457e5777.cdn.ilink247.com/ClientFiles/cga/CitrusGowersAssociation/Company/Documents/Fresh%20Plaza%20-%20SA%20Citrus%20fruit%20more%20popular%20-%2022%20September%202020.docx>

Fresh Plaza, 2020b. South Africa: extremely low domestic apple price the result of inaccurate data. <https://www.freshplaza.com/article/9213984/south-africa-extremely-low-domestic-apple-price-the-result-of-inaccurate-data/>.

GCRF-AFRICAP, 2018. South Africa's Agriculture and Food System: A Scenarios Analysis. Pretoria, South Africa. Available at: <https://www.worldatlas.com/articles/ecologically->

Gift of the Givers. 'Hunger Alleviation'. <https://giftofthegivers.org/hunger-alleviation/>

Global Alliance for Improved Nutrition (GAIN) et al. (2020). About the Food Systems Dashboard. Available at: <https://foodsystemsdashboard.org/about-food-system>, Accessed 30 August 2020.

Goldblatt A, n.d, Agriculture: Facts & Trends South Africa, WWF, [http://awsassets.wwf.org.za/downloads/facts\\_brochure\\_mockup\\_04\\_b.pdf](http://awsassets.wwf.org.za/downloads/facts_brochure_mockup_04_b.pdf)

Gontsana, M., 2020. 'Covid-19: School feeding reopens in Western Cape'. Ground Up. April 9, 2020 <https://www.groundup.org.za/article/covid-19-sadtu-raises-concerns-school-feeding-opens-western-cape/>



- Hartzenberg, L., 2020. 'CEO Luc-Olivier Marquet on Unilever's response to Covid-19'. Biz Community. June 15, 2020. Available at: <https://www.bizcommunity.com/Article/196/162/205147.html> (Accessed on July 1, 2020)
- Hawkes, C., 2009. Identifying innovative interventions to promote healthy eating using consumption-oriented food supply chain analysis. *Journal of Hunger & Environmental Nutrition* 4(3-4): 336-356.
- Hendriks, S.L. & Olivier, N.J.J., 2020. 'How South Africa can feed its hungry children during the lockdown'. April 22, 2020. [https://www.dailymaverick.co.za/article/2020-04-22-how-south-africa-can-feed-its-hungry-children-during-the-lockdown/?utm\\_source=MaMo+Pan%E2%80%A6](https://www.dailymaverick.co.za/article/2020-04-22-how-south-africa-can-feed-its-hungry-children-during-the-lockdown/?utm_source=MaMo+Pan%E2%80%A6) (Accessed on July 2, 2020)
- HLPE. 2017. Nutrition and food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.
- HORTGRO, 2019. Industry perspectives and economic indicators. <https://www.hortgro.co.za/wp-content/uploads/docs/2020/07/industry-perspectives-and-economic-indicators-2019.pdf>
- Human Rights Watch, 2020. 'South Africa: End Bias in Covid-19 Food Aid - Refugees, Asylum Seekers Excluded; Face Starvation' May 20, 2020. <https://www.hrw.org/news/2020/05/20/south-africa-end-bias-covid-19-food-aid> (Accessed on: July 2, 2020)
- International Labour Organisation, 2020. Covid-19 crisis and the informal economy. (204). 1–8.
- Joffe H, 2020. Covid-19 pandemic: 'catastrophic' economic impact looming in SA, The Sunday Times, <https://www.timeslive.co.za/sunday-times/news/2020-05-03-covid-19-pandemic-catastrophic-economic-impact-looming-in-sa/>
- Kiewit, L., 2020. 'Not enough Covid-19 food parcels'. Mail & Guardian. 16 Apr 2020. <https://mg.co.za/article/2020-04-16-not-enough-covid-19-food-parcels/> (Accessed on: July 1, 2020)
- Makhitha, K.M & Khumalo, N.M, 2019. The influence of supermarket attributes on consumer selection of a supermarket: A South African perspective. *Journal of Consumer Sciences* 47: 14 – 27.

Masaubi, Q., 2020. 'What you need to know about SA's R500bn Covid-19 support package'. City Press. April 21, 2020. <https://www.news24.com/citypress/news/what-you-need-to-know-about-sas-r500bn-covid-19-support-package-20200421> (Accessed on: July 4, 2020)

Masiwa, D., 2020. 'Covid-19: Farmers are godsend during this pandemic'. Food for Mzansi VKB News. April 24, 2020. <https://www.foodformzansi.co.za/covid-19-farmers-are-godsent-during-this-pandemic/>

McKinsey and Company, 2020. Survey: South African consumer sentiment during the coronavirus crisis. Available at: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/survey-south-african-consumer-sentiment-during-the-coronavirus-crisis> (Accessed: 14 July 2020).

Milk Producer Organisation, 2020. Cost price squeeze still throttles the primary dairy sector in January 2020. Available at: <https://www.mpo.co.za/cost-clutch-keep-on-the-primary-dairy-sector-in-january-2020/> (Accessed: 14 July 2020).

Meintjes F, 2020a. RSA adjusts to Covid-19 measures, 17 March 2020, (<http://www.fruitnet.com/eurofruit/article/181183/rsa-adjusts-to-covid-19-measures>)

Meintjes F, 2020b. South Africa trims avocado export forecast, 6 May 2020, <http://www.fruitnet.com/eurofruit/article/181719/south-african-trims-avocado-export-forecast>

Mkhabela, T., 2020. 'OPINION: Addressing the impacts of Covid-19 on food security'. IOL. April 30, 2020. <https://www.iol.co.za/business-report/opinion-addressing-the-impacts-of-covid-19-on-food-security-47334587> (Accessed on: July 2, 2020)

Mkhawani, K., Motadi, S. A., Mabapa, N. S., Mbhenyane, X. G., & Blaauw, R, 2016. Effects of rising food prices on household food security on female-headed households in Runnymede Village, Mopani District, South Africa. *South African Journal of Clinical Nutrition*, 29(2), 69-74.

Mokhoali, V., 2020. 'Consumers fear contracting Covid-19 through food, CGCSA says 'don't panic''. EWN. April 17, 2020.

Moneyweb, 2018. [www.moneyweb.co.za](http://www.moneyweb.co.za). [Online]Available at: <https://www.moneyweb.co.za/news/economy/the-flourishing-informal-food-sector/>

Montalvao, J. and Van de Velde, P., 2020. Covid-19 and Food Security: Gendered Dimensions

Mosane F, 2020, In the face of a pandemic: The Agrifood ecosystem in South Africa, <https://facagro.com/2020/06/02/in-the-face-of-a-pandemic-the-agrifood-ecosystem-in-south-africa/>

Msimang, T., 2020. 'KZN churches distribute food vouchers to foreign nationals'. SABC News. May 8, 2020. <https://www.sabcnews.com/sabcnews/kzn-churches-distribute-food-vouchers-to-foreign-nationals/>

Mvumvu, Z., 2020. 'Lindiwe Zulu speaks about Covid-19 food parcel controversy'. Sowetan Live. May 11, 2020 <https://www.sowetanlive.co.za/news/south-africa/2020-05-11-lindiwe-zulu-speaks-about-covid-19-food-parcel-controversy/> (Accessed on: July 1, 2020)

National Agricultural Marketing Council, 2020a. Food basket price monthly (June). Pretoria, South Africa: NAMC.

National Agricultural Marketing Council, 2020b. South African Supply and Demand Estimates Report (June). Pretoria, South Africa: NAMC.

National Consumer Commission (NCC), 2020. Joint briefing to the portfolio committee on trade and industry and the select committee on trade and industry, economic development, small business development, tourism, employment and labour. May 19, 2020.

Nielsen, 2020. Overcoming online shopping obstacles amid lockdowns in africa and the middle east is not only retailer driven. Available at: <https://www.nielsen.com/ssa/en/insights/article/2020/overcoming-online-shopping-obstacles-amid-lockdowns-in-africa-and-the-middle-east-is-not-only-retailer-driven/> (Accessed: 14 July 2020).

Njini F, 2020. Cape Town Port Delays Hit South African Fruit, Wine Exports, Bloomberg.com, 1 July 2020. <https://www.bloomberg.com/news/articles/2020-07-01/transnet-sends-staff-to-cape-town-port-to-help-clear-backlogs>

OECD, 2020a. Food Supply Chains and Covid-19: Impacts and Policy Lessons. Available at: <http://www.oecd.org/coronavirus/policy-responses/food-supply-chains-and-covid-19-impacts-and-policy-lessons-71b57aea/#endnotea0z3> (Accessed: 14 July 2020).

OECD, 2020b. Evaluation of the Impact of the Coronavirus (Covid-19) on Fruit and Vegetables Trade. Paris, France. pp. 1–14.

Oettle L, 2020. Food and Nutrition Security in the context of Covid-19 in South Africa: Civil Society Action Planning, Land Network National Engagement Strategy for South African (LandNNEs)

Omarjee L, 2020. Beyond the numbers: The social impact of Covid-19, Fin24, <https://www.news24.com/fin24/economy/beyond-the-numbers-the-social-impact-of-covid-19-20200612>

Parliamentary Monitoring Group (PMG), 2020. Department of Agriculture, Land Reform & Rural Development 2020/21 Annual Performance Plan; with Ministry. Meeting Report. <https://pmg.org.za/committee-meeting/30139/>

Parsons, K., Hawkes, C., & Wells, R., 2019. Brief 2. What is the food system? A food policy perspective. In: Rethinking Food Policy: A Fresh Approach to Policy and Practice. London: Centre for Food Policy.

Payne, S., 2020. 'Food parcel discrimination under scrutiny as Western Cape becomes Covid-19 epicentre'. The Daily Maverick. April 24, 2020. <https://www.dailymaverick.co.za/article/2020-04-24-food-parcel-discrimination-under-scrutiny-as-western-cape-becomes-covid-19-epicentre/#gs%E2%80%A6> (Accessed on: July 1, 2020)

Pérez-Escamilla, R., Cunningham, K. and Moran, V.H., 2020. Covid-19, food and nutrition insecurity and the wellbeing of children, pregnant and lactating women: A complex syndemic. Maternal & Child Nutrition, p.e13036.

Peyton, S., Moseley, W. & Battersby, J, 2015. Implications of supermarket expansion on urban food security in Cape Town, South Africa. African Geographical Review 34(1): 36-54

Phakathi, B, 2020. Cape Town's worsening port operations put further stress on SA economy. 6 July 2020. Business Live

PLAAS, 2020. 'Food in the time of coronavirus: Why we should be very, very afraid' – Policy Brief 55. March 31, 2020

Produce Marketing Association, 2020. PMA talks: Southern Africa on Covid-19 (May). United States: PMA.

Qukula, Q., 2020. 'Basic Education Dept to appear in court over school feeding programme'. Cape Talk. July 1, 2020. <https://www.capetalk.co.za/articles/388521/basic-education-to-appear-in-court-over-school-feeding-programme> (Accessed on: July 1, 2020)

Red Meat Producers Organisation, 2019. National South African price information for week 49. Pretoria, South Africa: RPO.

Red Meat Producers Organisation, 2020. National South African price information for week 22. Pretoria: RPO.

Roelf, W., 2020a. Crowds loot trucks in Cape Town a month into Covid-19 lockdown'. Reuters. April 23, 2020. <https://www.reuters.com/article/us-health-coronavirus-safrica-looting/crowds-loot-trucks-in-cape-town-a-month-into-covid-19-lockdown-idUSKCN22526W> (Accessed on: July 2, 2020)

Roelf, W., 2020b. 'South African children face hunger as school closure halts free meals'. Reuters. May 7, 2020. <https://www.reuters.com/article/us-health-coronavirus-safrica-hunger/south-african-children-face-hunger-as-school-closure-halts-free-meals-idUSKBN22J1UL> (Accessed on: July 2, 2020)

Rogan, M. & Skinner, C, 2020. 'The Covid-19 crisis and the South African informal economy: 'Locked out' of livelihoods and employment' Cape Town: SALDRU

Rosario, I, 2020. Congestion at Durban – A technical evaluation. Freight News (28 January 2020).

SAGIS, 2020. Pan baked products per month manufactured. Pretoria. South African Grain information Service.

SA Government, 2020a. 'Environment, Forestry and Fisheries distribution of food parcels to small-scale and interim relief fishers during Coronavirus Covid-19'. 3 May 2020. <https://www.gov.za/speeches/environment-forestry-and-fisheries-distribution-food-parcels-small-scale-and-interim-relief> (Accessed on: July 5, 2020)

SA Government, 2020b. 'Western Cape Agriculture on deciduous fruit producers donation of 10 000 fruit parcels to assist during Coronavirus Covid-19 pandemic'. 23 Apr 2020. <https://www.gov.za/speeches/western-cape-department-agriculture-deciduous-fruit-producers-donate-10-000-fruit-parcels> (Accessed on: July 5, 2020)

SA Government, 2020c. 'Western Cape Education on implementing school feeding of vulnerable learners during Coronavirus Covid-19 lockdown'. April 6 2020. <https://www.gov.za/speeches/western-cape-education-implementing-school-feeding-vulnerable-learners-during-coronavirus> (Accessed on: July 2, 2020)

SAIRR, 2020. 'Friends in Need – Covid-19: How South African can save #LivesAndLivelihoods'. South African Institute of Race Relations. March 2020.

SAMPRO, 2020. Trends in respect of raw milk purchases in the years 2008 to 2020. Pretoria. South Africa.

Seguin, R.A., Aggarwal, A., Vermeulen, F., & Drewnowski, A, 2016. Consumption frequency of foods away from home linked with higher body mass index and lower fruit and vegetable intake among adults: A cross-sectional study. *Journal of Environmental and Public Health* 2016: 3074241.

Seleka, N., 2020. 'Lockdown: The number of people going hungry in Gauteng has doubled'. News 24. April 14, 2020. <https://www.news24.com/news24/southafrica/news/lockdown-the-number-of-people-going-hungry-in-gauteng-has-doubled-20200414> (Accessed on July 13, 2020).

Siche, R., 2020. What is the impact of Covid-19 disease on agriculture?. *Scientia Agropecuaria*, 11(1), pp.3-6.

Sinyolo, S., Ndinda, C., Murendo, C., Sinyolo, S.A. & Neluheni, M, 2020. Access to information technologies and consumption of fruits and vegetables in South Africa: Evidence from nationally representative data. *International Journal of Environmental Research and Public Health* 17: 4880.

Sishuba S., 2020. No justification for vegetable pricing structure in SA, *Farmers' Weekly*. <https://www.farmersweekly.co.za/agri-news/south-africa/no-justification-for-vegetable-pricing-structure-in-sa/> (Accessed on July 10, 2020)

Sokupa, T., 2020. 'Covid-19 Social Relief Stimulus Package could be SA's window of opportunity'. IOL. April 22, 2020. <https://www.iol.co.za/news/opinion/covid-19-social-relief-stimulus-package-could-be-sas-window-of-opportunity-47042391> (Accessed on: July 4, 2020)

South African Government News Agency, 2020. Fisheries allowed to catch snoek. SA news.gov.za, 3 April.

Stats SA (Statistics South Africa), 2019. Towards measuring food security in South Africa: An examination of hunger and food inadequacy. Pretoria: Statistics South Africa.

Stats SA, 2020. Food and beverages. Statistical Release P6420. Pretoria: Statistics South Africa.

Stats SA, 2020. Land transport. Statistical Release P7162. Pretoria: Statistics South Africa.

Stats SA, 2020. Manufacturing: Production and sales. Statistical Release P3041.2. Pretoria: Statistics South Africa.

Stats SA, 2020. Retail Trade Sales. Statistical Release P6242.1. Pretoria: Statistics South Africa.

Stats SA, 2020. Wholesale trade sales. Statistical Release P6141.2. Pretoria: Statistics South Africa.

Stats SA, 2020. Covid-19: Deflation of essential product prices during Level 5 lockdown. Pretoria: Statistics South Africa.

Stats SA, 2020. Results from wave 2 survey on the impact of the Covid-19 pandemic on employment and income in South Africa. Pretoria: Statistics South Africa.

Stephens, E.C., Martin, G., Wijk, M., Timsina, J., & Snowe, V, 2020. Impacts of Covid-19 on agricultural and food systems worldwide and on progress to the sustainable development goals. *Agricultural Systems* 183: 102873.

Sunday Independent, 2020. Informal traders tell of the battle to get lockdown trading permits. Sunday Independent, 26 April.

Surulivel, L., & Rao, K. R, 2010. Understanding Right to Food and Social Exclusion.

The Presidency, 2020a. Statement by President Cyril Ramaphosa on escalation of measures to combat the Covid-19 epidemic. March 24, 2020.

The Presidency, 2020b. Address by President Cyril Ramaphosa on South Africa's response to the coronavirus pandemic. June 17, 2020.

The Presidency, 2020c. Statement by President Cyril Ramaphosa on progress in the national effort to contain the Covid-19 pandemic. July 23, 2020

Transnet, 2020. Covid19 Lockdown – Proactive Measures to Ensure Throughput of Essential Services 26 March – 16 April 2020. Transnet SOC Limited, Group Chief Executive Circular (26 March 2020)

UN, 2020. Policy Brief: The Impact of Covid-19 on Food Security and Nutrition. June 2020.

UN-HABITAT, UNCDF, UCLG-Africa, UNECA, 2020. Covid-19 in African cities: Impacts, Responses and Policies. June 2020.

United Nations Economic Commission for Africa (UNECA), 2020. Covid-19 in African Cities: Impacts, Responses and Policies.

USDA Foreign Agricultural Service, 2020. The Impact of the Covid-19 Pandemic on Imports of Livestock and on Port Productivity. Voluntary Report (Report Number: SF2020-0014), April 07, 2020

USDA (United States Department of Agriculture), 2020a. Citrus semi-annual 21 (01 June). Washington, D.C.: USDA

USDA, 2020b Fresh deciduous fruit annual report highlights (11 May). Washington, D.C.: USDA.

USDA, 2020c. Possible trade interruptions for south africa's rice supply chain due to Covid-19 impact. Washington, D.C., United States. USDA.

USDA, 2020d. Grain and feed annual. Washington, D.C.: USDA.

USDA, 2020e. The impact of the Covid-19 pandemic on imports of livestock and on port productivity. Washington, D.C.: USDA.

USDA & GAIN, 2020. Possible Trade Interruptions for South Africa's Rice Supply Chain due to Covid-19 Impact. April 17, 2020. Pretoria.

van Cutsem, G., 2020. 'South Africa: Covid-19 Pandemic Lockdown Demands Safer Temporary Shelters'. Médecins sans frontières (MSF) /Doctors without Borders. April 15, 2020. <https://www.msf.org.za/stories-news/press-releases/south-africa-covid-19-pandemic-lockdown-demands-safer-temporary-shelters>

van der Walt, J., 2020. 'More Covid-19 support for farmers, but only for smallholders'. Farmer's Weekly. May 6, 2020. <https://www.farmersweekly.co.za/agri-news/south-africa/more-covid-19-support-for-farmers-but-only-for-smallholders/>



Vermeulen, H., Muller, C. & Schonfeldt, H.C., 2020. 'Food aid parcels in South Africa could do with a better nutritional balance'. The Conversation. April 22, 2020. <https://theconversation.com/food-aid-parcels-in-south-africa-could-do-with-a-better-nutritional-balance-136417> (Accessed on: July 2, 2020)

Von Bormann, T. 2019. Agri-food systems: Facts and futures: How South Africa can produce 50% more by 2050. WWF South Africa: Cape Town.

Webster, D., 2020. 'Not all of Jo'burg's street traders can sell their wares under lockdown'. Mail & Guardian. May 18, 2020. <https://mg.co.za/coronavirus-essentials/2020-05-18-not-all-of-joburgs-street-traders-can-sell-their-wares-under-lockdown/>

Weatherspoon, D. D. & Reardon, T. 2003. The rise of supermarkets in Africa: Implications for Agrifood systems and the rural poor. Development Policy Review 21: 333–355.

Wills, G., Patel, L., Van der Berg, S., & Mpeta, B. 2020. Household resource flows and food poverty during South Africa's lockdown: Short-term policy implications for three channels of social protection. Cape Town: SALDRU

Workman-Davies, B., van Heerden, A., van Wyk, J. & Yantolo, T., 2020. Update to Covid-19 Temporary Employer / Employee Relief Scheme (TERS) benefits'. Werksmans. May 27, 2020. <https://www.werksmans.com/legal-updates-and-opinions/urgent-update-to-unemployment-insurance-fund-temporary-employee-relief-scheme-TERS-benefits/>

World Bank, 2020. 'Food Security and Covid-19'. May 28, 2020. <https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19> (Accessed on: July 1, 2020)