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# DROUGHT POLICY BRIEF

## WESTERN CAPE AGRICULTURE

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## Executive Summary

This policy brief highlights the adverse economic consequences of the current drought in the Western Cape on the agricultural sector in order to provide guidance to decision makers in dealing responsibly with this disaster.

As is well known by now, the Western Cape is currently experiencing the worst drought in recorded history. The impact of this catastrophe on the provincial economy is exacerbated by the fact that the agricultural and agri-processing sectors combined contribute more than 10% of the Province's GDP and employ around 340 000 workers whose jobs have now become even more vulnerable. These sectors also produce more than half of the net agricultural exports of South Africa at a time when the Rand has been appreciating against almost all of the leading currencies in the world.

The analysis shows significant declines in farm output, but also additional income losses as export volumes also decline (currently they are significantly lower (19%) than last year). These export industries are heavily reliant on higher margins and producers have therefore prioritised fruit exports with the available water, whilst in many cases abandoning large areas of vegetable production and other crops with less favourable profitability projections.

The macro-level impact assessment shows that the Western Cape agricultural sector is set to lose an estimated R5.9 billion in the 2017/18 season as a result of the drought. The impact of this dramatic drop in production, especially in highly labour intensive industries, has resulted in around 30 000 jobs being lost in the process. Anecdotal evidence from the labour force surveys confirms this decline. The findings suggest a severely negative impact on the agricultural sector and the financial losses estimated here suggest that many producers will come under extreme pressure and may not be able to remain on their farms.

### **DISCLAIMER:**

*This document and its contents have been compiled by the Western Cape Department of Agriculture (WCDoA) and the Bureau for Food and Agricultural Policy (BFAP), for the purpose of analysing the economic impact of the 2017/18 drought. The views expressed in this document are those of the WCDoA and BFAP. Anyone who uses this information does so at his/her own risk. The WCDoA, BFAP and the author(s) therefore, accepts no liability for losses incurred resulting from the use of this information.*

# 1. Introduction

This policy brief evaluates the impact of the 2017/18 drought on the Western Cape's agricultural sector. The aim is to assess the economic and financial impact of the drought based on the most recent information available and on the most realistic assumptions. The agricultural sector remains particularly vulnerable to external risks such as extreme weather events as well as pest and diseases. The Western Cape Department of Agriculture (WCDa) and the Bureau for Food and Agricultural Policy (BFAP) have over the past three years routinely analysed such impacts to inform robust decision making (BFAP, 2016; Pienaar, 2017a; WCDa & BFAP, 2017; WCDa, 2017a; WCDa, 2017b; BFAP, 2017).

In October 2017, the authors projected the impact of the drought based on a scenario where Western Cape farmers only receive 40% of their normal water allocation. The results showed that total agricultural output under these circumstances would drop by around 35%, which translates into R4.96 billion<sup>1</sup> of Gross Value Added (GVA), a shock to the economy that results in the shedding of around 35 000 agricultural jobs<sup>2</sup> in the process. These findings have been disseminated to various stakeholders in the agricultural sector, but this report now moves from scenario analysis towards impact assessment as the drought has now developed to a point where this becomes possible. Although still too early to make a final estimate of the economic and financial impact of the drought, the findings presented here are sufficient to drive key decisions on how to deal with the current situation and will provide key insights on how to mitigate its impact if/or when normal rainfall returns.

## 2. Drought

After three years of significantly lower rainfall, the Province's average dam levels are currently at some 22.6%, compared to 34.7% at the same time last year - already an extremely dry season (Elsenburg.com, 2018). The critically low supply of water in key agricultural production regions is even more pronounced because agriculture has to compete with urban (industrial and residential) water use: as a result water allocation to the sector has been cut more than 60%, and in some cases such as the Lower Olifants River up to 86%.

This comes at a time when the agricultural sector has also been facing a range of external risks such as the outbreak of the Highly Pathogenic Avian Influenza (HPAI) amongst laying hens, costing the economy around R800 million (Pienaar, 2017b),

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<sup>1</sup> This was measured using average 2015/16 market prices for products and based on average yields across the Western Cape.

<sup>2</sup> Employment number were estimated using employment multipliers gathered from industry representatives, BFAP (2015) and GreenCape (2016)

and more recently the impact of a thunderstorm bringing wind, hail and heavy rains, which ruined around 200 000 cartons of late season plums (Hortgro, 2018).

In addition, the drought will also have medium to longer term adverse effects on perennial crops (i.e. on the orchards and vineyards of the Province), placing agricultural businesses at risk of bankruptcy even after the expected end of the drought. Indeed, a survey done in 2017 confirmed that 6% of all farmers indicated that they will not be able to continue farming if water allocations were cut by 60% (BFAP, 2017). Of course, farmers are doing their best to mitigate these effects by prioritising their best orchards, starting the process of orchard replacement earlier and allocating water only to those crops that produce the best margins. In many parts of the Province, this means that farmers have abandoned vegetable production and/or decided to preserve their long-term crops by not harvesting anything this season.

It is clear from these reoccurring events that both the frequency and severity of climate-induced disasters are increasing. Scientists have warned that the Western Cape is set to become relatively drier and will experience moderate to strong warming in the next 100 years (WCDoA, 2017b). These realities are increasingly putting pressure on the agricultural sector to continue to grow and to create much needed jobs, especially in rural areas where limited other forms of employment exist.

### **3. Agricultural Context**

In order to understand the impact of the current drought it is essential to start off with a clear assessment of the importance of agriculture to the regional economy of the Western Cape, and more broadly the rest of South Africa. Table 1 gives this context.

Starting with the contribution to the economy, the agricultural and agri processing sectors added R21 billion and R33 billion respectively to the value added in the Western Cape. This contributed to more than 10% of the entire regional economy, which is mainly driven by labour intensive cultivation of fruits destined for export markets (Vink & Tregurtha, 2001). This is clearly indicated by the fact that 52% of all of the Western Cape's exported goods were from these two sectors, with exports valued at R121 billion in 2016 (Quantec, 2018a).

Indeed, when one compares the relative contribution of the agricultural sector in the Western Cape (3.93%) relative to its contribution to the entire country (2.4%), the importance of the sector and the potential impact of the drought become even more significant.

**Table 1: Macro-economic indicators for the Western Cape and South Africa**

Item	Western Cape	% Contribution	South Africa	% Contribution
Population				
Individuals	6.4 million	100	55.6 million	100
Households	1.8 million	100	15.4 million	100
Economy*				
Total GVA	R529 billion	100	R3 870 billion	100
Agriculture	R21 billion	3.93	R94 billion	2.44
Agri Processing	R33 billion	6.17	R175 billion	4.54
Agri + Processing	R54 billion	10.10	R270 billion	6.98
Employment				
Total Employed	2.4 million	100	16 million	100
Agriculture	217 919	9.21	890 816	5.58
Agri Processing**	126 089	5.32	601 728	3.77
Agri + Processing	344 008	14.53	149 2544	9.35
Exports				
All Products	R121 billion	100	R1081 billion	100
Agri + Processing	R63 billion	51.91	R130 billion	12.07

\*All values are for 2016 and GVA is given in 2016-prices using StatsSA deflator

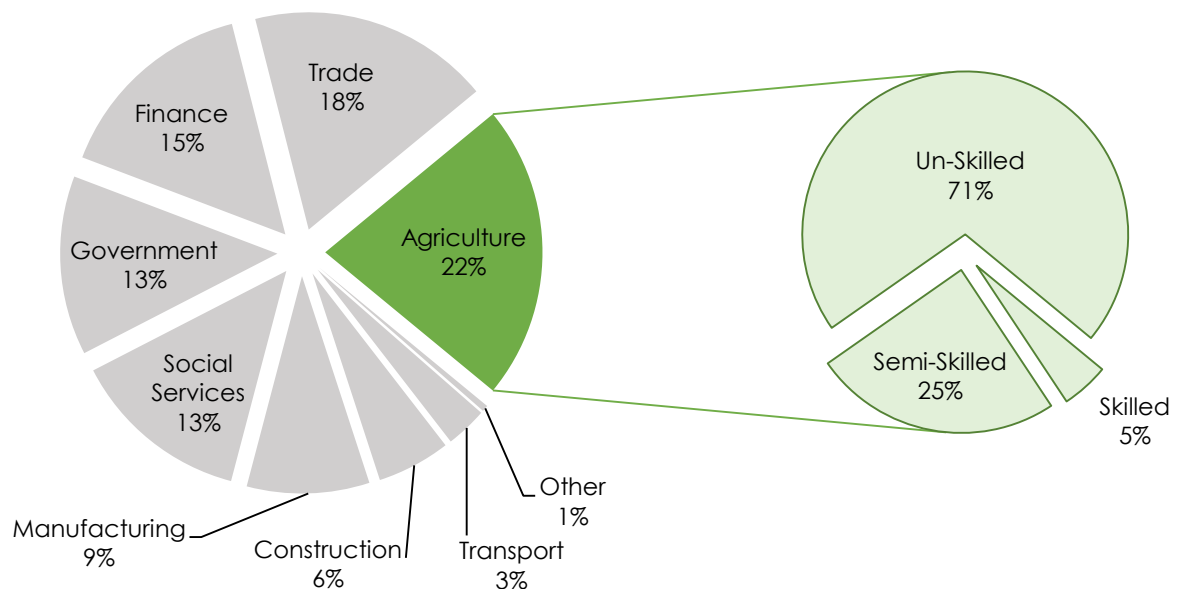
\*\*Agri Processing includes all occupations that do direct agricultural processing work

Source: Own Compilation from ITC (2018), Quantec (2018), QLFS (2018)

The agricultural sector in the Western Cape is made up of around 6 653 large-scale commercial producers and 9 480 emerging farmers, whilst another 50 000 poorer families are dependent on irrigated backyard gardening for their subsistence (StatsSA, 2007; Geostratics, 2010; StatsSA, 2016). The latter are often dependant on municipal water and it is expected that the majority of these households will not be able to produce any food during the drought, which will impact negatively on their food security. This is of major importance as most of these poor families will now have to buy food at markets to feed themselves, much of it at relatively higher prices.

The Western Cape has a population of around 6.4 million people, who live in 1.8 million households (Quantec, 2018b). Of these individuals, only 2.4 million are employed, setting the current narrow unemployment rate for the Province at 22%. The agricultural sector employs around 180 000 workers, whilst the agri processing sector adds another 126 000 jobs to the economy (QLFS, 2018). These two sectors therefore employ 15% of the entire participating labour force in the Province, and make up an even more significant proportion of un-skilled and semi-skilled employment, the demographic with the highest unemployment rate. The jobs created by these sectors are also geographically concentrated in rural areas where limited other employment opportunities exist. This is highlighted in Figure 1 below, which gives the employment share per industry of all jobs outside of the City of Cape Town (Metro) and then further disaggregates the agricultural jobs according to the skill levels of those jobs. This clearly shows the importance of the agricultural sector as

the main employer (22%) in the Western Cape's more rural regions, while these jobs are essentially un-skilled (71%) and semi-skilled (25%) occupations (Quantec, 2018c).



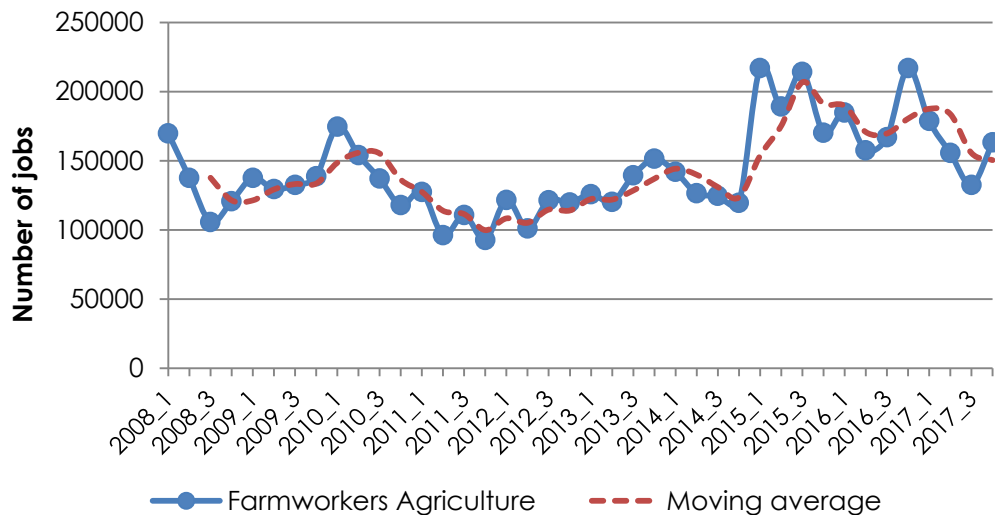
**Figure 1: Western Cape employment per industry (excluding the City of Cape Town Municipal area)**

Source: Own Compilation from Quantec (2018c)

Not specifically shown in this figure, but put in another way to emphasise its importance, the agricultural sector employs 38% of all of the unskilled workers outside of the Cape Town Metro in the Province. No other industry has the ability to employ such a large proportion of these workers.

### 3.1 Employment

The most recent job numbers from Statistics South Africa (StatsSA), released in mid-February, show employment numbers for the fourth quarter of 2017. It was quite surprising that agricultural employment did not decline further from the third to the fourth quarter of 2017, although one would expect further declines in the coming months. Regardless, Figure 2 clearly shows the major impact of the drought on farmworker employment in the Western Cape. The big jump shown in the 1<sup>st</sup> quarter of 2015 was due to a technical change in the sample weightings by StatsSA, and does not imply any structural changes in employment. However, of more importance is the declining trend since then. Applying a moving average for every three quarters to control for seasonality, the combined average agricultural employment for the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2016 compared to that of 2017 was a decline of 31 000 jobs (QLFS, 2018). Looking at actual employment numbers and comparing the average employment numbers per quarter of 2015 and 2016, to that of 2017, the drop is even more severe at 32 047 jobs lost (QLFS, 2018).



**Figure 2: Farmworker employment in the Western Cape**

Source: Own Compilation from Quantec (2018)

No matter how one analyses these employment numbers, it is clear that farmworker employment has declined significantly since the onset of the drought, and that employment losses currently range from anything between 28 000 to 35 000 jobs. This does not include employment losses downstream in the processing and food sectors.

### 3.2 Exports

In many instances it is too early in the 2017/18 season to make finalised projections of the decline on agricultural exports due to the drought. However, using the most recent industry estimates of export volumes for fruit grown in the Province, one can certainly get an early indication of the expected declines towards the end of the season. It should however be noted that it is not only the drop in volumes that impact these industries, but also the pricing, especially when the grading of the fruit quality drops due to sunburn and smaller fruits sizes. Thus, even though for instance export volumes drop by say 15% compared to that of the previous season, it is highly likely that the prices for those products exported might have declined by even more. In this regard, Table 2 gives both the estimated decline in export volumes and the actual year-to-date export declines for the major fruit crops in the Western Cape for week 7 of the current export season (AgriHub, 2018). One should also consider that some of the fruits are expected to be harvested around two weeks later than normal due to the current climatic conditions. Using these two metrics it is expected that this year's exports are set to decline by some 13% to 20% on average.

Not included in Table 2 is the possible impact on wine exports which are expected to only come into effect in the next few months. Due to the complexities and dynamics of this industry it is at this point unclear what the drought-impact on wine prices and volumes will be, and was therefore not included.

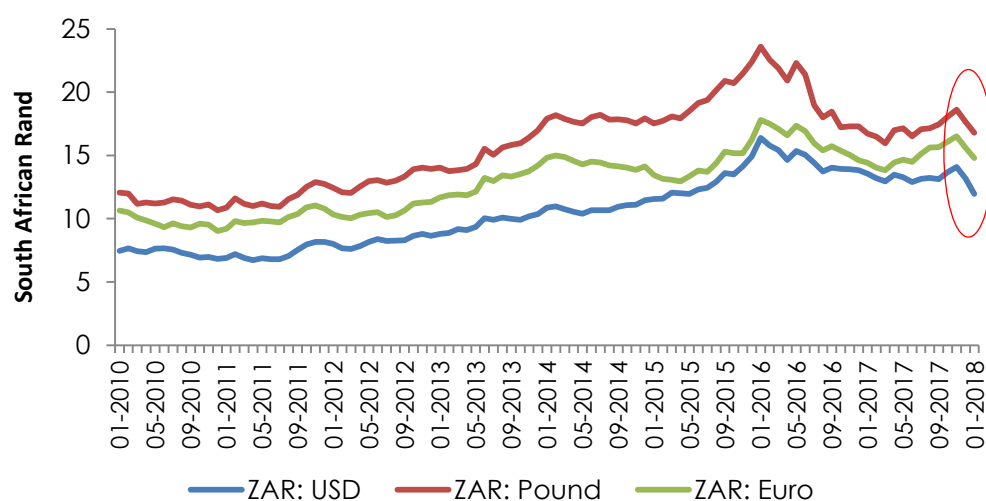


**Table 2: Fruit export volumes (tons) from the Western Cape**

Product	Structure of the Industry Export   Local   Processed	Export Volumes 2016/17 YTD ('000)	Estimated Export Volumes 2017/18 ('000)	Estimated Export Drop (Total)	YTD Drop in Export volumes (Week 7)	Estimate: % of harvest complete
Apples	68%   10%   15%	417.8	382.2	-9	-33	4%
Table grapes	93%   06%   01%	185.7	121.2	-35	-23	70%
Plums & Prunes	75%   23%   02%	64.8	53.9	-17	-24	60%
Pear	49%   13%   37%	218.4	202.0	-8	-23	17%
Oranges	72%   06%   15%	162.6	148.0	-9	-	-
Naartjies	75%   12%   14%	74.4	69.9	-6	-	-
Peach & Nectarines	06%   21%   73%	15.7	15.6	-1	-5	82%
Apricots	09%   04%   87%	3.7	3.4	-7	-8	92%
Lemons & Limes	67%   04%   29%	21.6	20.5	-5	-	-
<b>Total</b>	<b>-</b>	<b>1 164.7</b>	<b>1 016.7</b>	<b>-13</b>	<b>-19</b>	<b>-</b>

Source: Own Compilation from various sources

Another really important factor that is exacerbating the impact of the drought this season is the current and sudden strengthening of the South African Rand against most of the leading currencies since December 2017. Although welcomed by many, fruit exporters and farmers receive their income in foreign currency, and this sudden drop depicted in Figure 3 below will significantly impact agribusinesses this season. Since November 2017 the Rand has strengthened by 15% against the US dollar, 9.7% against the British Pound and 10.4% against the Euro (Quantec, 2018c; MoneyWeb, 2018).



**Figure 3: Exchange rates: South African Rand against major currencies**

Source: Quantec (2018b) & MoneyWeb (2018)

### 3.3 Bio-physical impact

A Geographic Information Systems (GIS) was used to estimate the impact of the drought on crop growth. The calculation is done using the Normalised Difference Vegetation Index (NDVI) for some of the major crops in the Province during the main vegetative growth period during the year. Using this remote sensing satellite imagery, the average NDVI indices was calculated comparing 2017/18 against 2016/17 (current drought impact) and also to 2015 which is considered a “normal” rainfall year. The results show remarkable consistency with the average drop in production expected of around 14%. What is clear from this Table is that these fruit trees have been under severe pressure in crucial growth periods, compared to 2015.

**Table 3: NDVI averages during vegetative grow periods in the Western Cape**

Crop	Average NDVI_2015	Average NDVI 2016/17	Average NDVI 2017/18	Change: 2016/17 vs 2017/18 (%)	Change: 2017/18 vs 2015 (%)	Estimated Production decline from industry (%)
Wine grapes	106545	100787	91952	-8.8	-13.7	-20
Apples	78601	74834	70953	-5.2	-9.7	-9
Table grapes	95156	89246	78878	-11.6	-17.1	-18
Plums & Prunes	95877	92166	85473	-7.3	-10.9	-16
Pear	92550	89174	83376	-6.5	-9.9	-8
Oranges	78165	79543	76001	-4.5	-2.8	-9
Naartjies	69225	68499	68605	0.2	-0.9	-6
Peach & Nectarines	97029	93628	84010	-10.3	-13.4	-5
Apricots	80250	75264	62954	-16.4	-21.6	-7
Lemons & Lime	66574	67076	65141	-2.9	-2.2	-5
<b>Total</b>	<b>859973</b>	<b>830217</b>	<b>767342</b>	<b>-7.6</b>	<b>-10.8</b>	<b>-14</b>

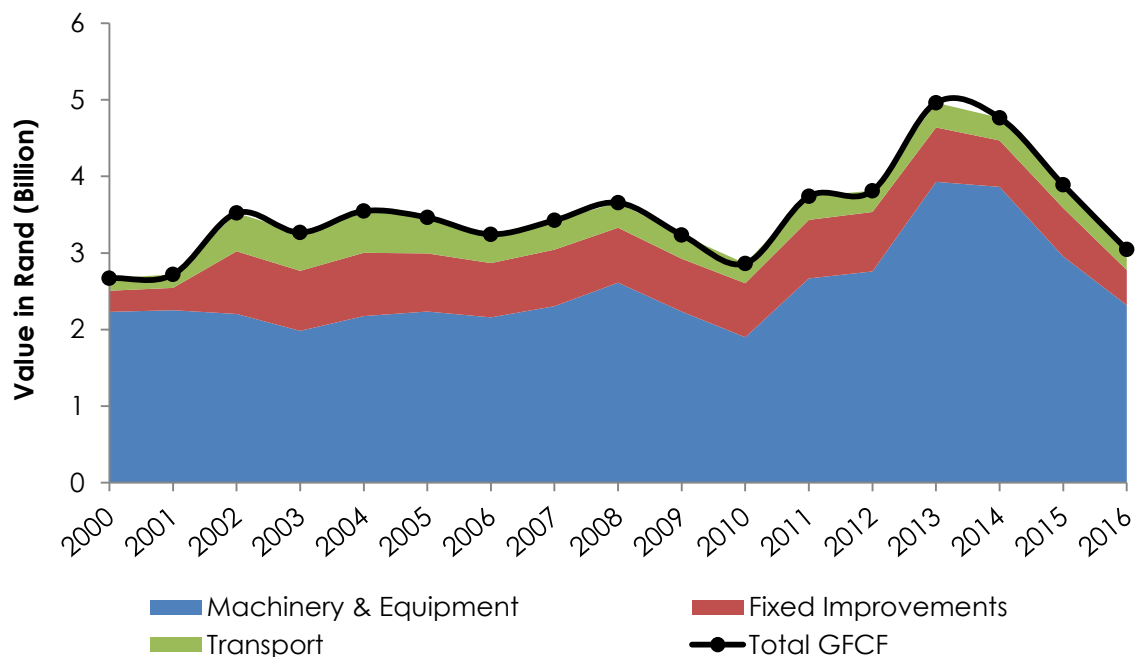
Source: Own compilation using MODIS<sup>3</sup> using ORNL DAAC (2018) and WCDoA (2013)

### 3.4 Investment in agriculture

Direct investment in agriculture is a key driver for development and is essential for the long-term sustainability and competitiveness of the sector. Figure 1 shows that the drought is also impacting on on-farm investment decisions. Gross Fixed Capital Formation (GFCF) in the Western Cape's agricultural sector has declined from its highest peak in 2013 of R4.8 billion, to around R3 billion in 2016 (Quantec, 2018d). Though the drought conditions were not the only determining factor in this decline, it is a significant one. When data for 2017 become available, it will no doubt confirm our suspicion that on-farm investment has continued this downward trend into the current year. This should be a cause for concern, as long-term productivity gains are dependent on capital formation to drive growth in the sector. This being said, it is also expected that once the sector moves on from the drought one could expect

<sup>3</sup> This refers to the Moderate Resolution Imaging Spectroradiometer (MODIS) which gathers discrete spectral bands of the surface which enable NDVI calculations.

significant increases in investment as lessons learnt during the drought will probably result in increased orchard replacement and in some cases expansion due to more efficient use of water.



**Figure 4: GFCF in the agricultural sector in the Western Cape**

Source: Quantec (2018d)

## 4. Economic Impact Assessment

### 4.1 Methodology

Measuring the economic impact the current drought is particularly challenging. First, the drought impact varies considerably between different regions in the Province, with different micro-climates, rainfall, catchment areas, water availability and types of agricultural production (dry-land vs irrigated; grains vs fruits vs vegetables vs livestock; intensive vs extensive systems). Second, sufficiently detailed and up-to-date data is mostly not available. Third, many industries are currently still in the process of harvesting or will soon be, hence the impact of the drought on production is based largely on initial crop estimates.

Due to these difficulties the authors use data from a wide range of primary and secondary sources, industry representatives, producers and agricultural specialists. Economic impacts at an industry-level are then aggregated to get an estimate of the Provincial impact. This approach highlights the fact that the last time that StatsSA conducted an agricultural census was back in 2007.

The analysis is therefore done by using industry norms and gross margin analyses based on the area planted for each crop (WCDofA; 2013). In some cases the

hectares planted were adjusted to reflect recent changes in land-use patterns (CGA, 2017; Hortgro, 2016; Vinpro, 2017; SATI, 2017; PotatoesSA, 2018). Production volumes for the current season were estimated using the latest industry information available, while various informal discussions with industry, farmers and experts provided additional information which gave the necessary context. In short, using costing averages for all the major crops grown in the Western Cape, an estimate is calculated for aggregate total costs per industry which producers would have incurred for both this season's produce (2016/17) and the one before (2015/16)<sup>4</sup>. These were based on average production costs per hectare for each of the crops (BFAP, 2018; Esuite, 2018; WCDa, 2018; Hortgro, 2016; Vinpro, 2017; CGA, 2017)

Next, the structure of these industries was determined by looking at the main marketing channels (exports; local fresh market and agri processing) and for each of these the average prices were calculated for 2016/17. Then, the average prices that farmers could expect to receive in the current 2017/18 season were also estimated. This allows for a relatively crude comparison between the agricultural GVA (excluding livestock) of the past two seasons, to get a GVA-impact as a result of the drought (and other adverse shocks). The way to interpret the findings is to compare the 2016/17 economic value added to that of 2017/18. This indicates sector-wide losses in net income. The estimates are considered to be conservative as in a "normal" year inflation drivers would have pushed agricultural GVA much higher than the previous year.

In this process of estimating the economic impact, various assumptions were made and findings were compared to actual numbers available at the time of writing. The analysis does not allow for capturing the impact of micro-level or management decisions on-farm, nor does it estimate micro-regional impacts. However, some overall trends were observed that will be explained in the next section and against this backdrop the initial impact of the drought is determined in a robust manner. Again, the findings are conservative as the relatively greater impact of lower exports and lower prices were not separately calculated. Furthermore, the increased supply of fruit in the local market will put further pressure on prices, driving income streams to farmers even lower. Finally, the analysis does not include all crops grown in the Western Cape as information on many of the alternative fruits and vegetables was not readily available.

## **4.2 Results**

The results from the analysis are presented in Table 3 and give the macro-economic impact of the drought per broad industry classification. Compared to the 2016/17 season, the cost to the Western Cape agricultural economy as a result of the

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<sup>4</sup> In cases where information on the inflation of production costs was not readily available, StatsSA's (2018) average Producer Price Index (PPI) for agriculture was used (i.e. a 6.4% increase in costs).

drought is estimated to be R5.9 billion in GVA and represents an average production decline of around 20%. This is considerably higher than the R4.9 billion projected by the analysis done back in 2017 for a number of reasons. Firstly, the impact of the record losses in wheat production from 1.1 million tons in 2017 to 586 800 tons in 2018 was much more than the 35% drop initially anticipated (Crop Estimates Committee, 2018). This 47% decline has erased around R2.4 billion in income to the grain sector, whilst both canola and barley producers were also under severe pressure. In aggregate, the grain industry in the Western Cape's GVA decline is valued at R2.8 billion.

Secondly, the strengthening of the Rand in the past weeks is putting pressure on export earnings for fruit exports. This implies that if the Rand was trading at average levels for 2017, fruit exports would have had considerably higher turnover when prices are converted to local currency: this would have softened the impact of the drought. Finally, all numbers given below reflect 2018 current prices, whilst that of the previous estimate was based on 2016 prices.

When looking at the fruit sectors, the grape industries will incur the greatest losses due to the drought. The Western Cape table grape industry is set to lose around R787 million, whilst the wine grape industry another R591 million at the primary level. As previously mentioned, these estimates are based on a range of assumptions and despite of a conscious effort, to include as many as possible of the complexities surrounding the true impact of the drought, it is impossible to make a clear distinction between each of the underlying drivers. One of these underlying drivers is the influence of long-term trends in the area under production. For example, in the case of wine grapes, the total area planted to wine grapes has decline from more than 99 000 ha in 2014 to 95 000 ha in 2016. This drop is obviously driving a decline in production. However, based on the survey and industry expert knowledge, the drop in production in the current season is anticipated to be well beyond the impact of the declining trend in area of wine grapes, although the impact on revenues should be smaller for a proportion of the harvest, because of higher quality, a phenomenon that can only hold in the short term. Similar dynamics are also present in the citrus industry, but in this case the rapid expansion in the area under production in recent years is mitigating the impact of the drought to some extent due to a larger area that is under production.

The pome fruit (apples & pears) industry's output will decline by an estimated 9%, which translates into R898 million lost, whilst the stone fruit industry (apricots, plums, peaches and nectarines) lose another R458 million. The impact on the citrus industry was more difficult to calculate as harvesting of these orchards has not yet started. The industry suggests that much can still change if good rains are forthcoming in the next two months. However, using a modest production decline of 7.7% in the Western Cape, the income losses are valued at around R259 million.

**Table 4: Economic impact of the drought on the Western Cape agricultural sector**

Industry	Total Production 2016/17	Estimated Total Production 2017/18	Drop in Production (%)	GVA Shock 2016/17 vs 2017/18 (R million)	Employment losses
Wine Grapes	1 599 728	1 279 782	-20.0	-591.21	-2 809
Table Grapes	186 772	153 000	-18.1	-787.36	-4 019
Pome Fruit	1 376 279	1 256 773	-8.7	-898.26	-9 635
Stone Fruit	319 424	293 288	-8.2	-458.26	-2 070
Citrus	311 955	287 887	-7.7	-259.24	-1 280
Alternative Fruit*	7 693	7 037	-8.5	-36.35	-220
Major Vegetables**	1 104 580	881 280	-20.2	-78.73	-2 716
Grains***	1 558 200	986 928	-36.7	-2 812.97	-7 482
Total	6 464 630	5 145 975	-20.4	-5 922.37	-30 230

Source: Own calculations

\*Figs; Pomegranates \*\*Potatoes, Onions, Butternut, Pumpkin, Carrots, Cabbage \*\*\*Wheat, Canola, Barley

The alternative crops included here were only pomegranates and figs, and their GVA declines was R36 million. However, we did not include berries, which have had another exceptional year despite the drought, whilst some other alternatives such as persimmons and guavas could not be considered because of a lack of data.

The drop in income from vegetable farming was mainly driven by declines in the area planted rather than production levels. The results given in Table 4 should however be interpreted with care. The industry is mainly self-sufficient in producing these annual crops and prices are therefore highly price sensitive due to short-term shortages. It is therefore no surprise that prices at the Cape Town Fresh Produce Market are currently trading at much higher levels than the averages for 2017, especially for potatoes and onions. At such high prices, some in the industry might have had net gains for their produce compared to last year, provided that they planted sufficient hectares. However, there were also many cases of farmers that did not plant any of these vegetables during the drought: they would obviously have incurred losses. The expectation is also that such immediate price hikes at the local market will not persist into the medium term as suppliers from the rest of the country moves product to the Western Cape to capture the higher prices. Thus, an average long-term price for the past four years was used which was marginally above current prices. Additional costs were also calculated for fixed costs for the lost hectares due to the drought. The major vegetables were potatoes and onions, with each of these losing more than a thousand hectares in area planted in the Western Cape. In total the current impact of the drought for the included vegetables is expected to be net negative in the region of R78 million at the industry level. More detailed analyses are however necessary to support these findings.

When applying employment multipliers to the losses indicated in Table 3, around 30 000 job-losses are expected due to the drought (GreenCape, 2015). In total, the macro-economic impact of the drought to the Western Cape described above does not include the spill-over impact into the next few years as the sector recovers from the drought. Even if the Province receives rainfall that is in line with average rainfall patterns, it could take between 2-3 years for dam levels to recover sufficiently to justify lifting water restrictions. Furthermore, the sector-wide impacts of increased demand for fruit trees, which are currently at very low stocks, are a big concern due to the many hectares of early removal: farmers will likely have to wait to be able to replant. The follow-on impact of no income generated for the newly established orchard of between 3 to 5 years from planting suggests that the sector will be adversely impacted for the foreseeable future and it could take up to 10 years before the agricultural value-added recovers to levels last seen in 2016.

## 5. Conclusion

The findings in this policy brief suggests a significant impact of the drought on the Western Cape's economy and will have severe implications for farm businesses and those employed in the sector. Compared to the previous season, aggregate income after costs is estimated to decline by up to R5.9 billion due to the lower output as a result of the drought, and is set to decimate around 30 000 jobs. Various factors at present are exacerbating the drought impact, such as the sudden strong Rand and additional adverse external impacts such as storms, hail and sun-burn. To mitigate the impact of the drought key decisions are needed to drive the sector through this difficult time. In light of the findings in this policy brief urgent and targeted interventions are needed to drive the sector through this disaster. Unfortunately no clear policy instruments currently exist which can guide the process of disaster relief to fruit and vegetable farmers. The Section 7 Drought Committee that has recently been re-convened by the National Agricultural Marketing Council (NAMC) to address some of these challenges will need to take note of the following considerations. Support to the agricultural sector by means of direct subsidies has a long history of adverse consequences and negative spill-overs. Support interventions should therefore be focussed on protecting the industry as a whole, especially emerging farmers which will not be able to continue farming due the losses incurred during the drought. Also, the livelihoods of thousands of farmworker families and the food security of poor households should also drive decisions in this regard. Indirect support to farmers to remain on-farm should therefore be prioritised in a way that supports the entire agricultural economy to get through the drought.

Additionally, the sustainability and competitiveness of the agricultural sector is dependent on the following realities. **First**, climate change has become the 'new normal', and it would seem as if the main impact on the Western Cape is going to

be the extent, duration and seasonal distribution of rainfall: less rain, more summer rains, and fewer rainy days. This means that a recalculation of the water needs on the part of those charged with responsibility to supply water to agriculture and other users, and of the realistic water availability on the part of the water users, is required as a matter of urgency.

**Second**, the current drought is already in its third year. The farmers of the Western Cape are not passive recipients of advice from the authorities and the 'experts': they are where they are because they are forward looking, and risk takers. Obviously not all to the same extent: there are leaders and there are followers, and there are those who are historically advantaged and those who are disadvantaged, etc. Notwithstanding, they have already started to adapt to the 'new normal', as has been shown in this analysis. Public policy should therefore lean more towards support to this process of adaptation, and less to invent new ways of adapting. This requires decisions about:

- How to go about engaging with all types of farmers to ascertain what support suits their needs the best;
- What are the real bottlenecks that discourage farmers from successfully adapt to the changes;
- Which farmers should be targeted first – geographically, population group, industry, etc.;
- How to separate the urgent from the important, and build priorities around the latter;
- How to approach the important issue of the timing and sequencing of reforms?
- How to synchronise the activities along the myriad of supply chains that operate in the province;
- Not least, how to protect farm worker interests in this initiative.

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