

Western Cape Agricultural Sector Profile 2019

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Western Cape Agricultural Sector Profile: 2019

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EXECUTIVE SUMMARY

The purpose of this report is to provide an annual update of the Western Cape Agricultural Sector. To show the trends shaping the sector and briefly analyse them in the context of the current economic and policy climate.

The Western Cape (WC) Province consists of twenty-five municipalities grouped into six districts and is the fourth largest province in South Africa in terms of the land area. It is home to almost 12% of the national population, with majority of them residing in the City of Cape Town Metropole (64%), followed by the Cape Winelands district (14%) and the West Coast (7%).

The agricultural sector in the province is still in recovery following a recent drought which had devastating impacts on agriculture in the WC. In 2018 there were real declines from the previous year in Gross Value Added (GVA) in agriculture (-7.9%), food (-4.2%), and beverage and tobacco (-1.0%). The fall in the food processing subsector is concerning as this sector had been performing very well in recent years. This could be a delayed impact of the drought affecting the subsector indirectly through the strain entered on the province's agricultural sector which supplies intermediate goods into food processing production.

Despite sector decline, exports in the WC agricultural sector have continued to grow strongly even in real terms. For the second consecutive year exports of food, beverages and tobacco fell in real terms after growing strongly in the years prior. In recent years there has been an observed shift in exports away from traditional markets, particularly in Europe, in favour of African and Asian destinations. However 2018 marked a slight recovery of these more traditional export markets, resulting in an increase in share of exports from the previous year, albeit still lower than the share of exports in 2008. Oranges, table grapes and bottled wine remain the provinces' main agricultural outputs, together accounting for 28% of all agricultural exports, broadly defined. Citrus products were generally observed to have performed particularly well in the past year from a trade perspective.

There were signs of recovery in terms of employment with an upturn in seasonally adjusted employment numbers in the agricultural sector. Between the last quarter of 2017 and the last quarter of 2018 there were 7 115 new jobs added in the sector once seasonality is accounted for. Employment in the food, beverages and tobacco sector fell slightly in the past year. Combined the two sectors analysed also exhibited an increase in terms of the share of employment made up of female and black workers, but a decrease in the youth employment share. The year 2018 was the third consecutive year where the number of household's participating in agricultural activities outside of paid employment fell after growing strongly up to that point.

Investment has been declining in both the agriculture and the food, beverages and tobacco sectors. This is another cause for concern as investment is needed in order to develop the sector and grow moving forward. A positive side note on investment was the real increase in investment in research and exploration in both sectors.

The growing population and decreasing average household size has also meant that the number of households has grown in the province providing a growing domestic market. Inflation in the WC was again lower than national inflation, and particularly so for food inflation. However inflation on alcoholic beverage products increased dramatically from 2017 to 2018, it is thought largely as a result of the correcting after very low international wine prices in 2017.

Overall the picture is still relatively gloomy, however there are increasingly pockets of light breaking through and a situation where the outlook for the WC agriculture sector is a bright and sunny one is more and more feeling like it could soon be a reality.

1. OVERVIEW OF THE WESTERN CAPE

The Western Cape (WC) is one of South Africa's nine provinces, situated on the South West coast of the country (Figure 1). The province is made up of 25 municipalities grouped into 6 Districts. The WC is markedly different from the rest of South Africa as far as agriculture is concerned. It is a winter rainfall region with well-developed production and processing infrastructure that allows for stable production of a unique mix of agricultural produce. The diversity of production reflects the diverse landscape of the province that features high mountain regions, lush valleys, coastal regions and semi-desert areas (Vink & Tregurtha, 2005).

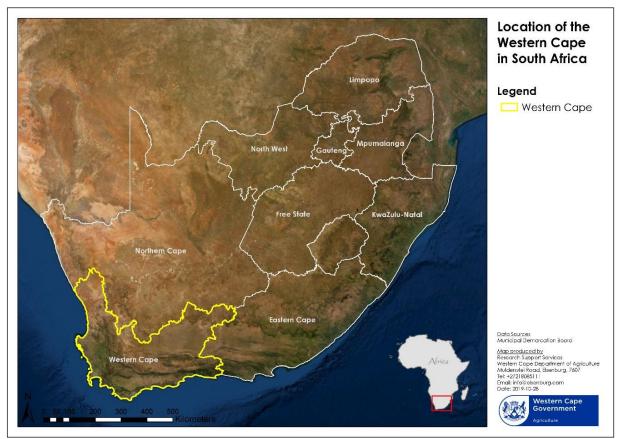


Figure 1: Area Map Showing the Western Cape Province of South Africa Source: (WCDoA, 2019a)

A total of 6.6 million people were reported to reside in the WC in 2018, almost 12% of the national population. Figure 2 shows how the provincial population has grown, both in absolute and relative terms compared to the national population. In 2008, the WC population was 5.3 million, which was then less than 11% of the national population. Additional to the need to provide more employment opportunities, the province's large and growing population also imposes a strong demand on the agricultural sector in order to be able to feed the population. Without an increase in agricultural production, the increase in the population will lead to growing food insecurity in the province.

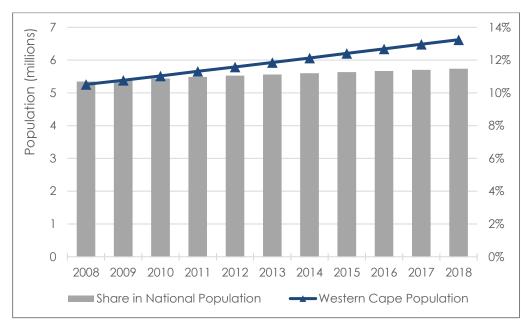


Figure 2: WC Absolute and Relative Population, 2008-2018 Source: (Quantec, 2019)

The majority of the province's population reside in the Cape Town metropole area (64%). As can be observed in Figure 3, the relative breakdown of the population has no changed significantly over the past decade, with the population of the West Coast growing slightly faster than the rest of the province and that of Eden slightly slower.

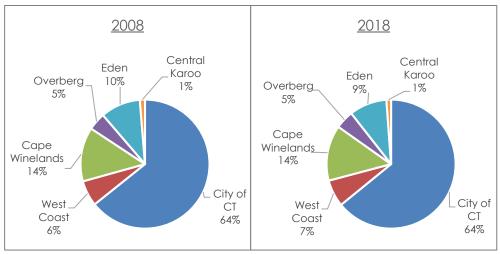


Figure 3: WC Population by District, 2008 vs 2018 Source: (Quantec, 2019)

Figure 4 breaks down the WC population in 2018 by age and gender. The province has slightly more females than males, with the female share of the population standing at 51%. In terms of age groups, a large portion of the population fall between the ages of 25 and 34, these two cohorts together accounting for almost one fifth (18.8%) of the total population.

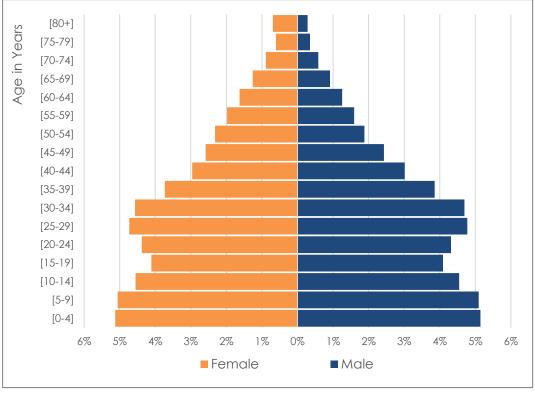


Figure 4: WC Population by Age & Gender, 2018 Source: (Quantec, 2019)

The WC economy has been growing in real terms over the past decade, albeit at a slow pace. As illustrated in Figure 5, in 2008 the Gross Value Added (GVA) in the WC economy was equivalent to R517 billion when converted to 2018 prices. Real economic growth of 1.3% per annum has resulted in this value increasing to R590 billion in 2018. This growth was slower than what was experienced in the rest of South Africa and as a result the province's share in the national economy fell from 14.1% to 13.5% over the ten year period.

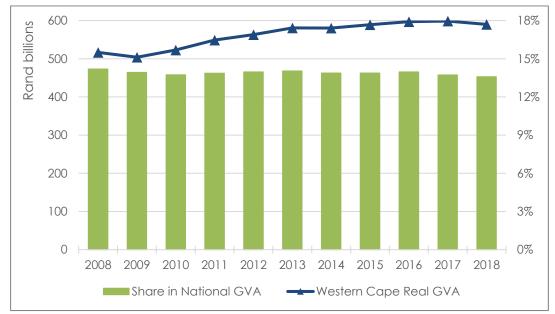


Figure 5: WC Real Gross Value Added (2018 prices), 2008-2018 Source: (Quantec, 2019)

Figure 6 shows the sectoral the breakdown of GVA in the WC economy. The largest sector continues to be business services, accounting for approximately a quarter of all economy activity. This is despite a significant drop in the share from 2007 when it stood at 31% (Partridge, Morokong & Sibulali, 2018). Agriculture, forestry and fisheries make up a smaller part of economic activity in the province, accounting for 3.9% in 2018, down from 4.2% in 2017. Taken together with agri processing from the food, beverages and tobacco sector (5.2%), this share rises to 9.1%.

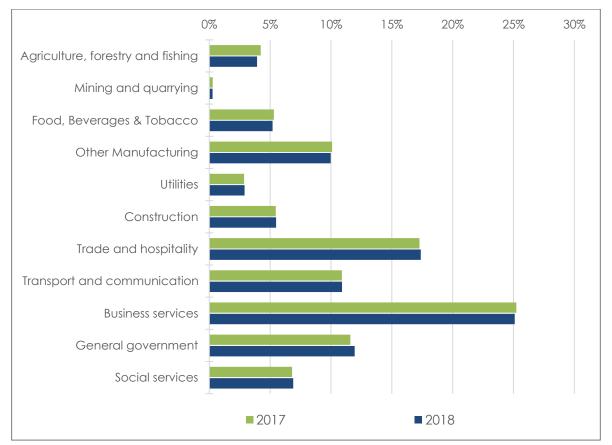


Figure 6: Sectoral Contributions to WC GVA, 2017 vs 2018 Source: (Quantec, 2019)

2. AGRICULTURAL PRODUCTION

In light of the recent drought spells in South Africa, the performance of the national agricultural sector has not managed to reach the levels required in order to achieve the country's development aspirations (BFAP, 2018). A recent report by the World Bank (World Bank, 2018) outlines the poor performance of the sector as one of the main contributing factors to the country slipping into a recession. The already poor performance was further exacerbated by the recent drought, although there appears to be some level of a recovery in the sector at the national level (RSA National Treasury, 2019). The delay in rains to the Western Cape has meant that performance of the provincial sector has remained poor (WC Provincial Treasury, 2019).

When looking specifically at agriculture in the Western Cape, excluding forestry and fisheries¹, the sector has been in a real contraction over the past decade falling at an average annual rate of 2.17% between 2008 and 2018. This can be observed in Figure 7 which shows real GVA in 2018 prices for agriculture as well as the food and beverages and tobacco agri processing subsectors between 2008 and 2018. Of the three sub sectors, agriculture was the largest in 2008 where it accounted for approximately 47% of total GVA across the subsectors. However, this share has fallen to only 36% in 2018. The food sector grew rapidly over this period, with real annual growth of 5.63%. The strong growth in the food subsector propelled it to becoming the largest sector across the three agriculture and agri processing sub sectors looked at. In 2018, the share in the food subsector accounted for 45% of the total gross value added, up from 28% in 2008.

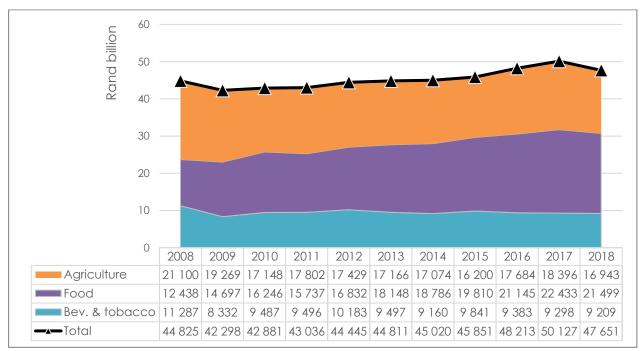


Figure 7: Real GVA in Agriculture and Agri Processing (2018 prices), 2008-2018 Source: (Quantec, 2019)

¹ This exclusion is to focus on agriculture but is also in line with the cabinet reshuffle which took place in national government in 2019, moving agriculture from being grouped with forestry and fisheries to now being grouped with rural development and land reform. The forestry and fisheries sub sectors of the Western Cape are also relatively small meaning the exclusion did not influence overall trends

The WC accounts for a large share of national output in both the agriculture and the food, beverages and tobacco (FBT) sector. The WC's share in the national GVA for these two sectors is shown in Figure 8. Both sectors show a gradual downward trend suggesting the province's output in these sectors moves in line with what is happening on a national scale, albeit it at a slightly lower growth rate. The decline in share was stronger in the agricultural sector compared with food, beverages and tobacco. In 2018 WC accounted for 18.4% of national agricultural GVA and 20% of national GVA from FBT.

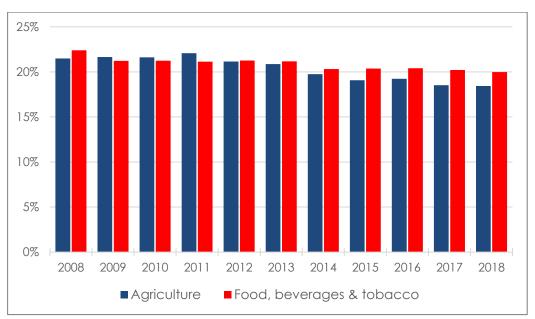


Figure 8: WC Share in Real National Agricultural and FBT GVA, 2008-2018 Source: (Quantec, 2019)

At the district level, WC agricultural activity is most concentrated in the Cape Winelands, accounting for 34% of all the provincial GVA. As the geographic breakdown of agricultural GVA in Table 1 shows, this 34% is quite evenly distributed over the five local municipalities. The West Coast is the next biggest contributor with 25%, followed by the City of Cape Town Metropole at 18%.

The share of activity within the Cape Metropole seems high given the perceived concentration of agricultural activities in rural areas where land cultivation is more readily available and less susceptible to the various pollutants which tend to result from urban commercial and residential activities. The high share is due to the important activities which take place in the peri-urban areas on the outskirts of the Cape Metropole, such as Phillipi Horticultural area. These areas have been facing increasing encroachment of the built up areas around them, and increasing competition for the land they utilise to be used for various non-agricultural uses. Despite these challenges, these areas have provided a critical source of food and nutrition security for local residents as well as being a significant source of fresh produce to the City of Cape Town (Battersby-Lennard & Haysom, 2012; City of Cape Town, 2012).

Moving away from primary agriculture to the activities less dependent on land, industries tend to have a higher concentration in the Cape Metropole, responsible for the largest share in both of the food (60%) and beverages and tobacco (64%) subsectors.

	Agriculture	Food	Beverages & Tobacco
City of Cape Town	17.7%	58.7%	64.2%
City of Cape Town	17.7%	58.7%	64.2%
West Coast	24.6%	16.4%	04.2% 11. 9%
Matzikama	24.6 % 5.8%	1.1%	1.3%
	3.7%		0.6%
Cederberg		2.4%	
Bergrivier	6.3%	3.3%	0.7%
Saldanha Bay	1.6%	3.9%	5.5%
Swartland	7.1%	5.7%	3.8%
Cape Winelands	33.7%	13.1%	16.6%
Witzenberg	7.6%	2.5%	1.4%
Drakenstein	8.1%	3.6%	6.6%
Stellenbosch	4.9%	2.6%	4.9%
Breede Valley	7.9%	2.3%	1.9%
Langeberg	5.3%	2.0%	1.9%
Overberg	10.6%	3.8%	2.5%
Theewaterskloof	6.9%	1.6%	1.1%
Overstrand	1.1%	1.3%	0.9%
Cape Agulhas	1.0%	0.5%	0.3%
Swellendam	1.6%	0.4%	0.3%
Eden	10.7%	7.8%	4.8%
Kannaland	1.2%	0.4%	0.2%
Hessequa	2.0%	0.6%	0.3%
Mossel Bay	1.0%	1.4%	0.6%
George	3.3%	3.4%	2.4%
Oudtshoorn	1.9%	1.3%	0.8%
Bitou	0.6%	0.3%	0.1%
Knysna	0.6%	0.6%	0.4%
Central Karoo	2.8%	0.2%	0.1%
Laingsburg	0.6%	0.0%	0.0%
Prince Albert	0.6%	0.0%	0.0%
Beaufort West	1.5%	0.1%	0.1%

Table 1: Geography of WC Agricultural GVA, 2018

Source: (Quantec, 2019)

3. AGRICULTURAL LAND

In 2017, there were approximately 2 million hectares of land recorded as being under crop production in the WC. Of this, 338 588 hectares (17%) was being used for wheat. The remaining areas was farmed with the following top 10 crops in the province in 2018, namely; wine grapes (91 221 ha), canola (90 523 ha), barely (86 670 ha), rooibos tea (58 996 ha), apples (21 512 ha), table grapes (13 095 ha), pears (10 711 ha), oranges (7 704 ha) and lupines (72 99 ha) respectively (Figure 9).

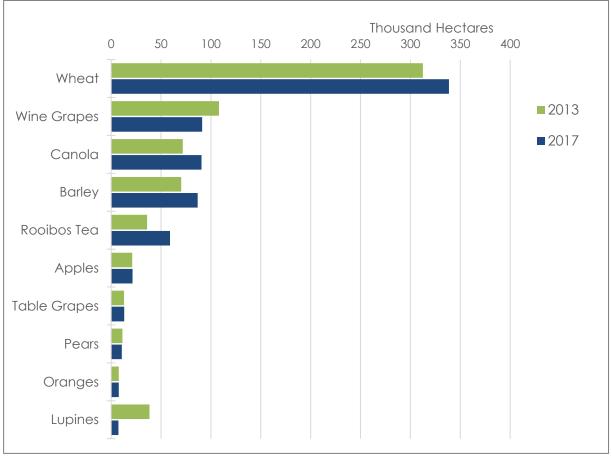


Figure 9: Top 10 WC Crops by Area Planted, 2013 vs 2017 Source: (WCDoA, 2018)

Most of the province's grain crops, oil seeds and lupines are widely grown in the West Coast (35%) and the Overberg account for 30%. The West Coast also has the largest recorded area used to grow vegetables (36%), while tobacco, teas and hops combined at 99% (mainly due to this being major rooibos growing regions). More than half of the province's orchards are located in the Cape Winelands district (57%). Table 2 below illustrate a broad crop categories grown in each WC municipality for the 2017-8 growing season.

There is evidence to suggest that agricultural land sales are very price responsive. Figure 10 bellow illustrate the amount land (ha) transferred through the private markets between 2008 and 2018, and the average price of the transactions (Rand per hectare, converted into real 2018 prices). Generally, the two series move reverse, with land transferred with the decrease in price and the opposite is true.

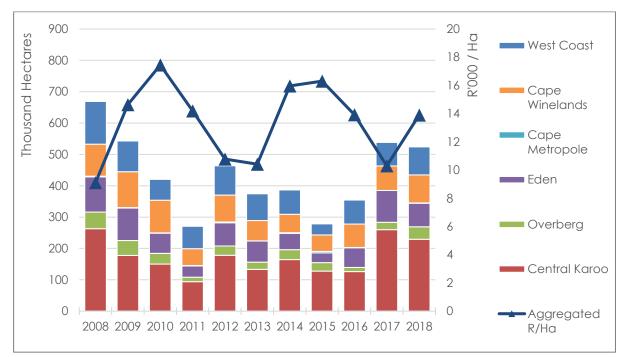
	Grains, Oil Seeds,			Tobacco, Teas &	
	Lupines	Vegetables	Orchards	Hops	Total
Cape Town	16 012	1 588	6 072	0	23 672
City of Cape Town	16 012	1 588	6 072	0	23 672
Cape Winelands	27 252	4 297	104 075	13	135 637
Breede Valley	105	472	24 124	0	24 702
Drakenstein	16 300	435	18 354	8	35 098
Langeberg	2 754	386	23 470	0	26 610
Stellenbosch	150	155	15 001	0	15 306
Witzenberg	7 943	2 849	23 125	5	33 921
Central Karoo	15	510	1 058	0	1 583
Beaufort West	15	33	187	0	235
Laingsburg	0	329	328	0	657
Prince Albert	0	148	543	0	691
Garden Route	78 284	2 594	7 540	633	89 052
Bitou	1	4	110	5	121
George	1 1 4 0	1 122	2 952	467	5 681
Hessequa	70 810	100	783	4	71 697
Kannaland	2	353	2 759	20	3 134
Knysna	255	67	38	0	36
Mossel Bay	6 056	282	473	6	6 817
Oudtshoorn	21	666	424	130	1 242
Overberg	199 002	401	20 814	97	220 315
Cape Agulhas	66 878	4	377	58	67 317
Overstrand	2 0 2 2	59	1 296	37	3 414
Swellendam	60 283	92	3 001	1	63 377
Theewaterskloof	69 819	246	16 141	1	86 207
West Coast	211 241	7 207	41 674	58 925	319 047
Bergrivier	72 188	2 349	5 793	15 790	96 120
Cederberg	6 152	3 424	11 345	33 972	54 892
Matzikama	47	962	10 812	8 336	20 157
Saldanha Bay	23 660	57	42	806	24 564
Swartland	109 194	416	13 682	21	123 313
Total Western Cape	531 792	16 087	180 175	59 668	787 722

Table 2: Geography of WC Crops Planted, 2017

* Note: Table excludes extensive grazing areas Source: (WCDoA, 2018)

In 2018, there was 524 133 hectares of land transferred in the land market, the second highest amount since 2009, when 542 874 hectares were transferred, almost half of the land traded in 2018 was in the Central Karoo (229 357 ha) down from 2017, with the significant amount of land also being traded in Eden (101 543 ha), Cape Winelands (89 620 ha) and the West Cost (89 412 ha).

Table 3 provides the number of transactions taking place per district over the past 10 years. Despite accounting for the largest amount of area transferred, the Central Karoo had significantly less transactions (79) than Eden (324), the Cape Winelands (224) and the West



Coast (150), just slightly higher than Overberg (174) and hence surpassing only the Cape Metropole (10).

Figure 10: Agricultural Land Transferred and Aggregate Value (2018 prices), 2008-2018 Source: (WCDoA, 2019b)

	Central			Cape	Cape	West	
	Karoo	Overberg	Eden	Metropole	Winelands	Coast	Total
2008	91	152	287	27	222	151	930
2009	100	144	361	28	277	159	1069
2010	84	114	256	20	254	153	881
2011	41	72	137	18	158	93	519
2012	101	117	284	29	213	155	899
2013	65	88	242	13	170	143	721
2014	65	118	249	33	174	127	766
2015	47	87	203	42	142	89	610
2016	50	87	325	24	211	143	840
2017	87	97	327	5	207	147	870
2018	79	147	324	10	224	150	934

Table 3: Number of Agricultural Land Transactions by District, 2008-2018

Source: (WCDoA, 2019b)

4. AGRICULTURAL TRADE

The value of exports from the WC agricultural sector has been increasing considerably faster than inflation resulting in strong real growth in the value of exports. In 2008, the real value of exports from the sector in 2018 prices was less than R19 billion. Average real growth of 6.4% per annum has pushed this up to R35 billion in 2018. Imports in this sector have not grown in real terms over the ten years, resulting in the trade balance growing strongly from R15.8 billion to R31 billion in 2018. This is illustrated graphically below in Figure 11

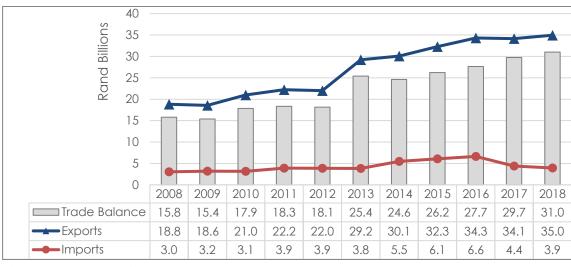


Figure 11: WC Agricultural Trade, 2008-2018 Source: (Quantec, 2019)

Food, Beverage and Tobacco (FBT) exports from the WC have shown significant growth, maintaining a 3% average real annual growth rate between 2008 and 2018, despite the sharp decline between 2016 and 2018. This trend is shown graphically in Figure 12 below. The key difference from the trade observed in the agricultural sector in Figure 11 above is that imports of FBT have also grown strongly in real terms, meaning that trade balance has not grown much over the period analysed, although it has remained positive.

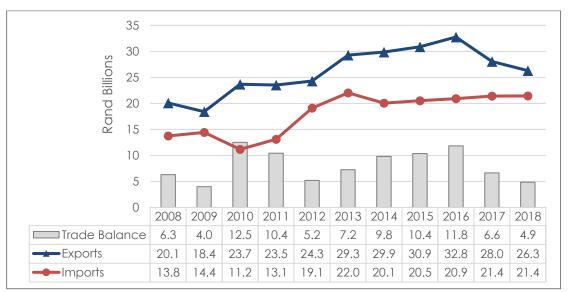


Figure 12: WC Food, Beverages & Tobacco (FBT) Trade, 2008-2018 Source: (Quantec, 2019)

The WC account for approximately half (50%) of all South African exports of agricultural products and (21%) of all imports. The share of the national exports is slightly higher than what it was in 2008 (48%), but has remained relatively constant over the 10 years. The share in imports has also remained relatively stable since 2008. Both series are plotted on the bar chart in Figure 13.

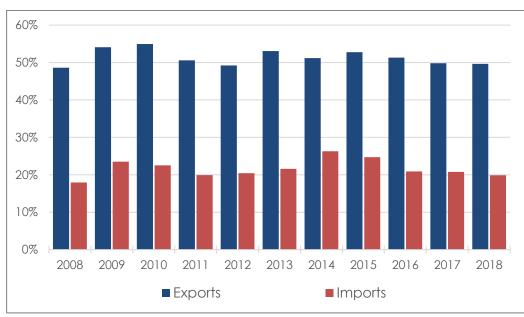


Figure 13: WC Share in National Agricultural Trade, 2008-2018 Source: (Quantec, 2019)

The WC's share in national FBT exports between 2008 and 2018, shown in Figure 14, was at its highest in 2008 (51%). In 2018, the WC's share in exports from the sector was just below 40%, with the province also responsible for 32% of South Africa's FBT imports.

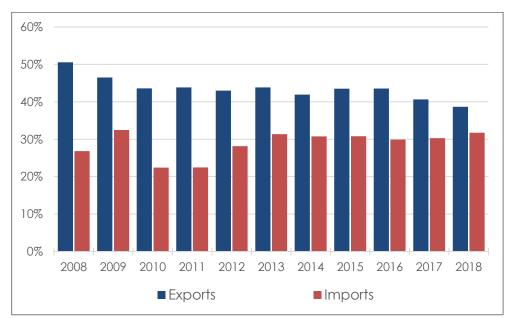


Figure 14: WC Share in National FBT Trade, 2008-2018 Source: (Quantec, 2019)

Figure 15 compares the main export destinations of agricultural products for 2017 and 2018 in terms of the value of exports. In the previous WC Agricultural Sector Profile (Partridge & Morokong, 2018), there was a definite shift observed in terms of the destination of WC agricultural exports. More specifically, a decline in the share of exports going to Europe was observed in favour of market destinations in Asia and Africa.

The main two destinations of the UK and Netherlands have retained a similar share in exports as was the case even from 2007. The UAE and Hong Kong showed strong growth between 2007 and 2017 but fell away slightly to 2018. Between 2017 and 2018 notable movers up in importance were China and Germany. The share in exports going to countries outside the top ten continued to grow as it has been in previous years indicating increasing diversification of export destinations.

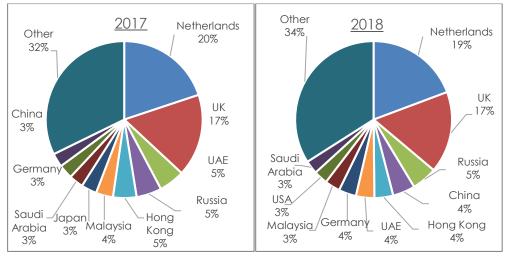


Figure 15: WC Agricultural Export Destinations - Countries, 2017 v 2018 Source: (Quantec, 2019)

Europe's importance for the sector is further illustrated through the regional breakdown of the WC's agricultural export destinations in Figure 16. In 2018, 54% of all exports from the sector went to Europe. This is up from 2017 (52%) after a significant decline over the preceding decade (Partridge & Morokong, 2018).

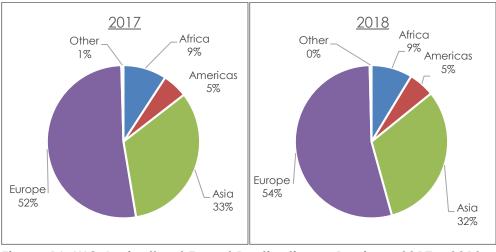


Figure 16: WC Agricultural Export Destinations - Regions, 2017 v 2018 Source: (Quantec, 2019)

Looking at the FBT sector, Namibia and China declined in importance among the biggest destinations. However Namibia remained the biggest export destination. Spain has also emerged as a key destination at a time when most other European destinations have experienced a decline in their relative importance to the WC's FBT exports.

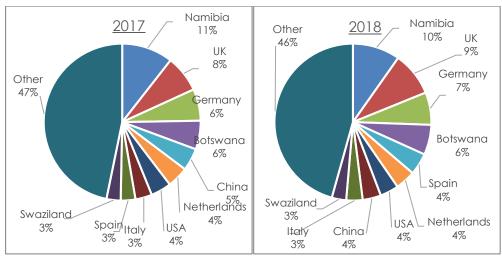


Figure 17: WC Top FBT Export Destinations - Countries, 2017 vs 2018 Source: (Quantec, 2019)

After a sharp rise to prominence between 2007 and 2017 (Partridge & Morokong, 2018), Africa's share in FBT exports from the WC fell from 37% in 2017 to 34% in 2018. After falling drastically over the ten year period leading up to 2017, Europe recovered some ground with an increase in share from 37% in 2017 to 41% in 2018, still significantly lower than the 56% share in 2007 when Africa's share was only 15%.

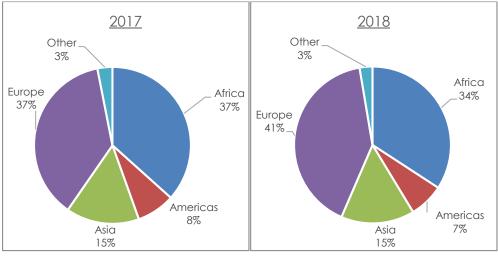


Figure 18: WC Top FBT Export Destinations - Regions, 2017 vs 2018 Source: (Quantec, 2019)

In addition to being the biggest destination country for WC FBT exports, Namibia was also the second biggest origin of agricultural imports (11%) in 2018, as shown in Figure 19 below. The top supplier was Russia with 11%, taking over from Ukraine in 2017. It may be possible that this shift is rather due to changes in the capturing of exports from the two countries. The biggest supplier of Agricultural imports into the WC in 2007, USA, made up only 8% of imports in 2017 and fell further to only 5% in 2018.

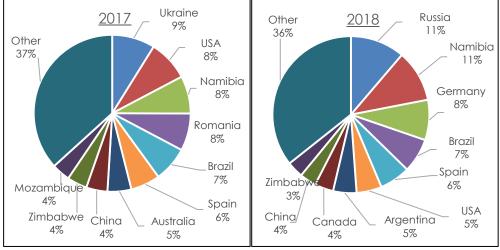


Figure 19: WC Agricultural Import Origins - Countries, 2017 v 2018 Source: (Quantec, 2019)

Regionally between 2017 and 2018, as shown in Figure 20, there was a slight drop in the share of agricultural imports coming from Asia and Europe. This drop was made up by increase in the imports of agricultural products from Africa and Americas.

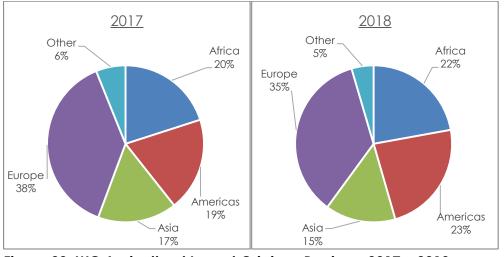


Figure 20: WC Agricultural Import Origins - Regions, 2017 v 2018 Source: (Quantec, 2019)

The biggest supplier of FBT imports to the WC, shown in Figure 21, was Thailand for both 2017 and 2018. The share from the UK fell from 11% to 9%, whilst Namibia rose to second position with 11% in 2018.

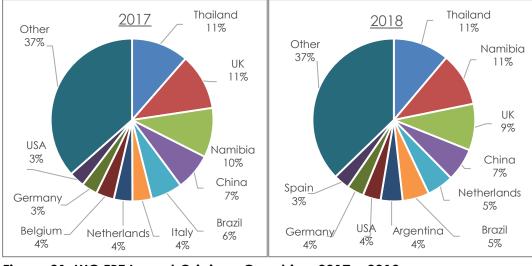


Figure 21: WC FBT Import Origins - Countries, 2017 v 2018 Source: (Quantec, 2019)

The regional breakdown of WC FBT import origins, shown in Figure 22, again showed an increase in Africa and America's prominence, increasing the regions share from 18% to 19% and 14% to 15% respectively. This was mainly at the expense of the Asia and Europe's decline.

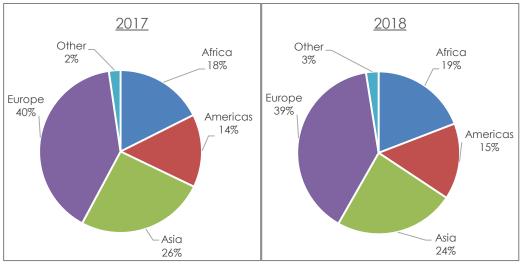


Figure 22: WC FBT Import Origins - Regions, 2017 v 2018 Source: (Quantec, 2019)

The remainder of the trade analysis is conducted at the detailed HS6 product level. The high level of product specification allows for certain agri processing products to be identified which fall under other manufacturing sub sectors, such a textiles, where they could not previously be identified at aggregated product levels. Agriculture and agri processing is thus broadly taken to include a range of agriculture, forestry, fisheries and agri processing products. Specifically all products falling under codes HS01-HS24; HS41-HS48; and HS50-HS53² (Pienaar & Partridge, 2015). Table 4 below shows the main WC agricultural exports in terms of value, at the detailed HS6 digit level according to this definition.

 $^{^{\}rm 2}$ In the 2018 sector profile HS 41-48 were not included so there may be some minor changes due to that new inclusion

	Exports Share Real Grov						
#	HS6	Description	2018	2018	2017-2018		
1	080510	Oranges	6 881 248 102	10.21%	4.82%		
2	080610	Table grapes	6 005 657 079	8.91%	-7.96%		
3	220421	Bottled wine	5 872 440 962	8.71%	-3.27%		
4	080810	Apples	4 315 829 313	6.40%	-2.24%		
5	080521	Soft citrus	2 586 430 172	3.84%	18.63%		
6	080830	Pears	2 318 651 052	3.44%	-9.73%		
7	220429	Bulk wine (> 10l containers)	2 266 181 267	3.36%	11.71%		
8	080550	Lemons & limes	1 794 887 126	2.66%	-16.49%		
9	030474	Hake	1 660 946 538	2.46%	18.75%		
10	240220	Cigarettes	1 496 730 004	2.22%	-19.25%		
11	080540	Grapefruit	1 358 005 586	2.01%	33.75%		
12	230120	Fish meal	1 220 869 687	1.81%	18.68%		
13	100590	Maize	1 153 403 172	1.71%	193.73%		
14	081040	Cranberries	1 051 275 827	1.56%	53.41%		
15	121299	Fruit stones, kernels & other veg	1 011 429 286	1.50%	1.73%		
16	030743	Frozen crayfish & squid	918 393 917	1.36%	51.14%		
17	080940	Plums	911 260 694	1.35%	-11.47%		
18	200990	Mixed fruit juice	777 876 568	1.15%	3.23%		
19	080620	Dried grapes	752 687 212	1.12%	52.25%		
20	220422	Bulk wine (21 - 101 containers)	743 328 740	1.10%	0.98%		
Oth	ner agricu	Itural exports	22 315 801 519	33.10%	-		

Table 4: Biggest WC Agricultural and Agri Processing Exports by Value, 2018

Source: (Quantec, 2019)

The biggest agricultural export from the WC in 2018 at HS-6 digit level was fresh Oranges, accounting for a total value of R6.9 billion. The only other product to break the R6 billion mark was table grapes (R6 billion) with bottled wine falling from R6.5 billion in 2017 to R5.8 billion in 2018. These three products accounted for 27.8% of all agricultural exports.

There were some products where growth was very rapid but from a very small base. Table 5 lists the fastest growing export between 2008 and 2018. All 20 products listed make up only a little over 1% of total agriculture and agri processing exports but are worth taking note of, due to very high real growth rates, as high as 242% per annum over two for tropical wood.

The biggest import classified as agriculture or agri processing in 2018 was beer, accounting for a total of R1.5 billion as shown in Table 6. Other big imports recorded for the year were: whisky; chicken offal (frozen); wheat; and tinned sardines. Particularly impressive growth was observed in imports of roasted malt; and dog and cat food.

#	HS6	Description	Exports 2018	Share 2018	10yr Annual Real Growth
1	440349	Tropical wood	3 437 374	0.01%	242.29%
2	240399	Chewing tobacco	21 419 436	0.03%	194.77%
3	230500	Peanut oil	616 812	0.00%	185.24%
4	190520	Gingerbread	3 874 729	0.01%	159.30%
5	230630	Sunflower oilcake	21 405 316	0.03%	137.55%
6	110630	Fruit powders	2 119 007	0.00%	134.75%
7	530310	Raw or retted jute	814 454	0.00%	132.96%
8	510910	Yarn >=85% wool	214 478	0.00%	129.94%
9	150790	Soya-bean oil	10 828 494	0.02%	128.05%
10	520100	Cotton, uncarded	10 343 294	0.02%	124.18%
11	481620	Self-copy paper	246 120	0.00%	120.65%
12	190430	Bulgur wheat	334 433	0.00%	112.49%
13	080211	Almonds in shell	819 104	0.00%	102.67%
14	240110	Raw tobacco	8 486 000	0.01%	101.09%
15	510130	Carbonised wool, uncorded	14 639	0.00%	92.67%
16	430400	Artificial fur products	777 815	0.00%	89.27%
17	220510	Bottled vermouth	47 996 603	0.07%	88.60%
18	020311	Pig carcases	7 792 902	0.01%	84.79%
19	080122	Shelled brazil nuts	116 985	0.00%	84.62%
20	140420	Cotton linters	2 482 001	0.00%	84.05%
Oth	ner agricu	Iltural exports	67 256 689 513	99.77%	

Table 5: Fastest Growing WC Agricultural and Agri Processing Exports, 2008-2018

Source: (Quantec, 2019)

Table 6: Biggest WC Agricultural and Agri Processing Imports by Value, 2018

#	HS6	Description	Imports 2018	Share 2018	Real Growth 2017-2018
1	220300	Beer	1 549 685 193	4.65%	24.08%
2	220830	Whisky	1 530 544 254	4.59%	-43.47%
3	020714	Chicken offal, frozen	1 240 874 040	3.72%	227.14%
4	100199	Wheat	1 131 439 037	3.39%	
5	160413	Tinned sardines	1 098 619 846	3.30%	40.56%
6	050400	Animal guts	992 050 258	2.98%	79.30%
7	030353	Frozen sardines	813 447 823	2.44%	
8	100630	Milled rice	781 071 101	2.34%	-35.17%
9	240220	Cigarettes	719 094 472	2.16%	3769.90%
10	200979	Apple juice, Brix > 20	659 657 752	1.98%	141.45%
11	200969	Grape juice, Brix > 20	524 400 089	1.57%	43.77%
12	240120	Processed tobacco	517 158 741	1.55%	-19.44%
13	220210	Flavoured water	506 860 308	1.52%	29.44%
14	030617	Frozen shrimps & prawns	485 900 400	1.46%	
15	230910	Dog & cat food	447 208 780	1.34%	19756.51%
16	100640	Broken rice	444 025 340	1.33%	192.10%
17	160414	Tinned tuna	412 568 603	1.24%	-3.14%
18	030474	Hake fillets	402 951 525	1.21%	
19	110720	Roasted malt	387 222 483	1.16%	221447.67%
20	030366	Frozen hake	369 797 706	1.11%	
Oth	ner agricu	Itural exports	18 326 932 642	54.97%	_

Source: (Quantec, 2019)

There were again some other products which exhibited impressively high growth rates from small bases as listed in Table 7. Between 2008 and 2018 imports of peppers grew up by 325% per annum over and above inflationary increases. There were also a very strong growth in imports of butter and cottons linters where average annual growth rate over the past ten years were 277% and 167% respectively.

		esi Growing we Agriconoral and	Imports	Share	10yr Annual
#	HS6	Description	2018	2018	Real Growth
1	070960	Peppers	3 395 851	0.01%	325.88%
2	040510	Butter	151 343 209	0.45%	277.21%
3	140420	Cotton linters	12 271 300	0.04%	167.15%
4	040310	Yoghurt	67 893	0.00%	158.03%
5	200840	Pears	181 782	0.00%	145.90%
6	200870	Peaches & nectarines	3 408 702	0.01%	140.45%
7	230690	Miscellaneous vegetable oils	4 423 026	0.01%	135.75%
8	070410	Cauliflower & broccoli	2 876 317	0.01%	121.23%
9	110720	Roasted malt	387 222 483	1.16%	116.05%
10	410120	Buffalo hides	7 961 661	0.02%	109.24%
11	030612	Lobsters	156 963	0.00%	105.36%
12	081020	Raspberries & blackberries	1 072 473	0.00%	91.59%
13	021099	Miscellaneous meat & offal	3 961 121	0.01%	89.31%
14	160249	Miscellaneous preserved pork	39 144 928	0.12%	83.65%
15	040520	Dairy spreads	206 298	0.00%	82.31%
16	220720	Denatured ethyl alcohol	451 725	0.00%	81.02%
17	080620	Dried grapes	2 670 814	0.01%	76.71%
18	071021	Peas	17 242 611	0.05%	75.25%
19	040620	Cheese, grated or powdered	2 891 145	0.01%	74.92%
20	040291	Unsweetened dairy concentrate	3 179 280	0.01%	74.43%
Oth	ner agricu	Itural exports	32 352 146 386	97.03%	-

Table 7: Fastest Growing	WC Aaricultural and	Aari Processing Import	2008-2018
			S, 2000-2010

Source: (Quantec, 2019)

5. AGRICULTURAL EMPLOYMENT

At the end of 2018 it is estimated that there were 196 352 individuals employed in the WC agricultural sector. This is according to quarterly employment data, seasonally adjusted using four-period moving averages. The seasonal adjustment is necessary as otherwise the short term fluctuations in production as a result of the different seasons can lead to misleading interpretations. Whilst employment at the end of 2018 is lower than the 222 730 recorded at the end of the fourth quarter of 2015, it is still higher than the value at any period between the first quarter of 2008 and the last quarter of 2014.

The performance in the past year shows signs of a recovery from the impacts of the recent drought in the Western Cape which resulted in significant job losses in the agricultural sector (Pienaar & Boonzaaier, 2018). Between the last quarter of 2017 and the last quarter of 2018, seasonally adjusted employment in the agricultural sector increased from 180 thousand to 188 thousand with the addition of 7 115 jobs.

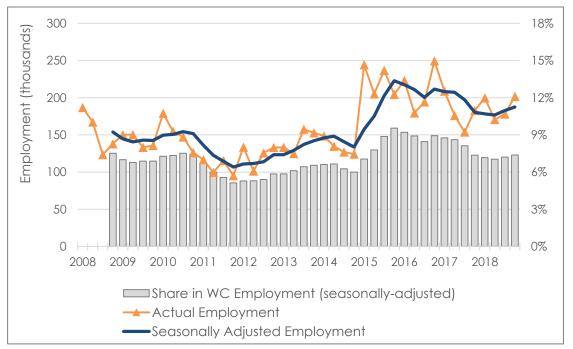


Figure 23: WC Employment in Agriculture, 2008-2018 Source: (Stats SA, 2019a)

Employment in the FBT Sector, shown in Figure 24, showed an overall upward trend between 2008 and 2018. This has been particularly so since 2010, when employment was 58 thousand, before increasing to 112 thousand by the end of 2018. This implies that between the beginning of 2010 and in the end of 2018 the WC FBT sector created on average 94 096 new jobs each year. This is despite the fact that it has been on a slight decline over the past two years.

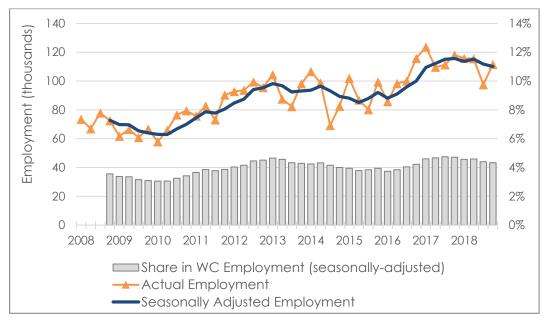


Figure 24: Western Cape Employment in Food, Beverages & Tobacco (FBT) 2008-2018 Source: (Stats SA, 2019a)

When the employment series for agriculture and FBT are combined, as plotted by the line graph in Figure 25, the downward pressure after 2008 is still evident. This is followed by a stagnant period where employment havered between just below 200 thousand and 250 thousand for a few years after which there was significant upward growth. At the end of 2018, combined employment across the two sectors was 297 688 making up 11.7% of the total employment in the province.

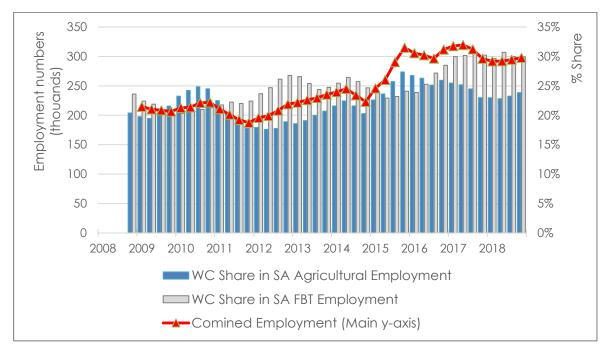


Figure 25: WC Share in National Sectoral Employment (seasonally adj.), 2008-2018 Source: (Stats SA, 2019a)

When looking at employment performance, employment growth needs to be considered in tandem with changes in the structure of employment. It is not just enough to create jobs but it is important to also look at whether the jobs being created are meaningful and sustainable going forward. South Africa's NDP also highlights the need to improve economic access to marginalised groups, specifically black individuals, women and the youth. The plan also recognises the lack of economic access for rural communities and the high incidence and intensity of poverty in these areas. The plan also recognises the lack of economic access for rural communities and the high incident and density of poverty in these areas (NPC, 2011).

Table 8 provides the changes in the past year in terms of the demographic breakdown of employment. The share of the WC agricultural labour force made up of black³ workers increased marginally, maintaining the relatively flat trend around 91% which has been observed over the past decade (Partridge & Morokong, 2018). There was a large increase in the female labour force in the past year, making up for the slow decline which had been observed over the preceding ten years. Poor performance was observed in terms of creating employment opportunities for the youth in the past year and there was a continuation of the upward trend in the share of the labour force residing in rural areas.

able 8. Demographics of Western Cape Agricultural Employment, 2017						
	Black	Female	Youth	Rural		
<u>Agriculture</u>						
2017	92%	36%	52%	60%		
2018	92%	40%	44%	63%		
Relative Change	0.2%	4.6%	-7.8%	3.1%		
Food, Beverages and	<u>d Tobacco</u>					
2017	85%	41%	47%	2%		
2018	92%	46%	48%	1%		
Relative Change	6.4%	5.6%	0.4%	-0.6%		
<u>Combined</u>						
2017	90%	37%	50%	40%		
2018	92%	43%	45%	40%		
Relative Change	2.4%	5.1%	-4.9%	0.3%		

Table 8: Demographics of Western Cape Agricultural Employment, 2017 vs 2018

Source: (Stats SA, 2019a)

The performance of the FBT sector looks more positive with increases in the share of the labour force made up of black workers, female workers and youth. The rural share of the labour force fell slightly although it was already very low. The aggregate movement over the past year was thus an increase in the shares of the labour force who are black and female, but overall the youth's share in the labour force fell. The rural share remained relatively consistent around 40%.

³ "Black" is defined according to the Broad-Based Black Economic Empowerment (B-BBEE) Act of 2003 which states that "'black people' is a generic term which means Africans, Coloureds and Indians" (RSA Presidency, 2003, p. 4). The definition was amended in 2013 to include the qualification of being a South African citizen (RSA Presidency, 2014). The QLFS does not capture individuals' citizenship status so this analysis had to take the pre-amendment definition without the citizenship qualification

6. SUBSISTENCE FARMING

Subsistence farming is an important part of livelihoods in both rural and urban areas, although rural dwellers are more reliant on it compared with their urban counterparts. Figure 26 shows the weighted number of households in the Western Cape who were recorded as partaking in agricultural activities outside of paid employment. Households where agricultural activities were for leisure purposes only were excluded so that the results show only those households farming for subsistence purposes or to sell their produce.

Whilst there were more households involved in subsistence agriculture in 2018 (21 837) compared with 2008 (12 650), this is mainly as a result of a general upward trend between 2008 and 2015. In 2015 there were an estimated 71 303 households involved in subsistence farming after which there have been 3 consecutive years of decline to 2018.

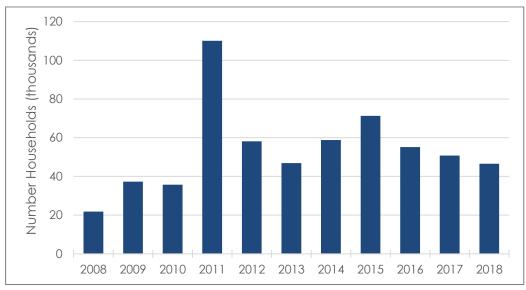


Figure 26: Households Involved in Non-Commercial Agriculture, 2008-2018 Source: (Stats SA, 2019b)

When analysing Figure 26 above it is also important to consider the recent drought and resultant water restrictions which would be expected to put significant downward pressure on the downward trend for 2017 and 2018.

Figure 27 compares the number of households in 2011 and 2016 in each classification of specific agricultural activities undertaken. Over this five year period there has been a decline in the number of households only rearing animals and an increase in the number growing only crops. There was also a decline in the number of households which reared animals and grew crops, as well the number of households whose activities do fall not within one of the three aforementioned groups. In 2016 more than half (58%) of agricultural households in the province exclusively grew crops. This is a relative increase from a share of 35% in 2011.

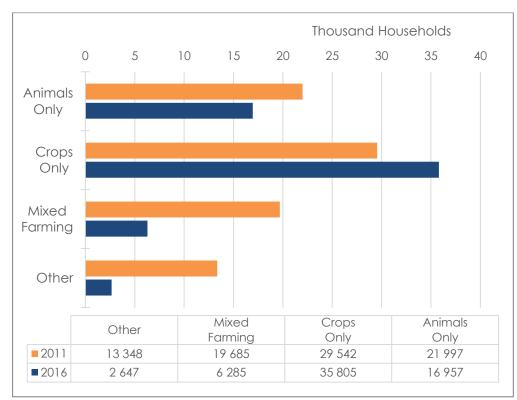


Figure 27: WC Agricultural Households by Activity, 2011 vs 2016 Source: (Stats SA, 2016)

Focusing on livestock activities, broken down by type in Figure 28, the decline was almost uniformly felt across the different livestock options. The exception was for households only farming pigs where there was a very slight increase from 947 to 965 over the 5 year period.

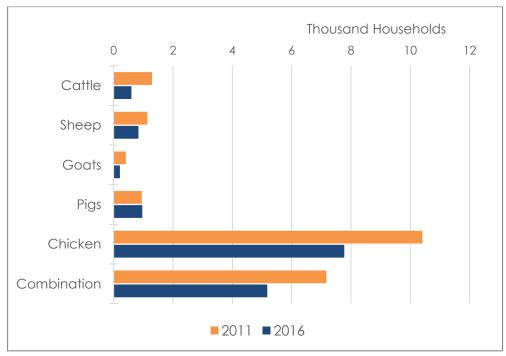


Figure 28: WC Livestock Households by Livestock Type, 2011 vs 2016 Source: (Stats SA, 2016)

The biggest net decline was in households rearing chickens which fell from 10 411 to 7 773 (decline of 2 638 households). However, it should be noted that this is from a large base as even with this drop the share in total households with livestock stood at 50% in 2016. The biggest relative decline was in cattle farming where the drop from 1 294 to 597 households worked out to a drop of 54%. Whilst it is hard to pinpoint the exact reason for these changes the onset of the drought nation-wide would be expected to play a role.

7. INVESTMENT IN AGRICULTURE

In real terms, investment in the WC's agricultural sector was less in 2018 than in most of the previous ten years. This is not surprising given the decline in the sector already observed, as well the increased risk in agricultural investments brought about by climate change (Partridge & Wagner, 2016).

When converting the 2008 investments in the sector into 2018 prices, they would be valued R4.6 billion, which is slightly greater than the amount of R4.4 billion achieved in 2018. The real annual investment amounts over the ten year period between these two years are shown in Figure 29, along with the corresponding share in national investment in the sector.

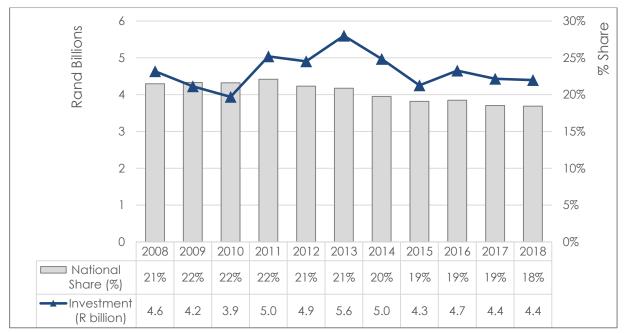


Figure 29: Real Investment (GFCF) in WC Agriculture (2018 prices), 2008-2018 Source: (Quantec, 2019)

The main type of investment was in machinery equipment, as illustrated in Figure 30 which shows investment in the agricultural sector broken down into five investment typologies. Investment in machinery and equipment incressed in real terms over the past ten years at an average annual rate of just under 1% per annum, from R1.90 billion in 2008 to R2.02 billion in 2018, 46% of total investemnt in the sector.

All other typologies experienced a real decline over the ten year period with the exception of research and expoloration which increased from R1.14 billion to R1.33 billion. It is a concern to see the decline in investment in most areas of the sector, but it is a really positive sign to see this increasing investment in research and information since this has the potential to improve the overall capabilities of the sector and drive long-term productivity improvements.

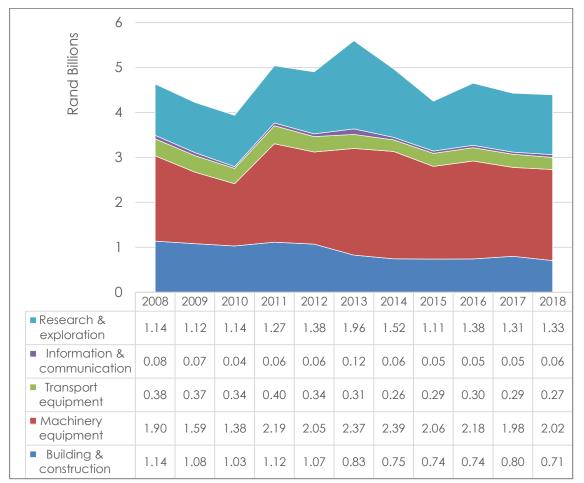


Figure 30: Real Investment (GFCF) in WC Agriculture by Nature (2018 prices), 2008-2018 Source: (Quantec, 2019)

Table 9 shows the geographic spread of investment in the WC's agricultural sector for 2018, as well as the previous year and 10 years prior. Investment generally follows production with most investment going to the Cape Winelands and West Coast where the highest levels of production are (See Section 2: "Agricultural Production"). The share of agricultural investment going into the City of Cape Town has increased from 15.4% in 2008 to 17.7% in 2018. Outside of the City of Cape Town the only other district with positive real growth in agricultural investment over the past decade was in the West Coast where there was positive growth in all but one local municipality (the exception being Cederberg). All other districts had negative real growth and even at the local municipality only one municipality (Bitou) had positive real growth over the ten year period.

Investment in the WC's Food, Beverages and Tobacco (FBT) sector has also exhibited a real decline over the past 10 years, as shown in Figure 31. This is slightly surprising given the good economic performance of the sector already observed, as well as the fact that the sector is less vulnerable to weather-related risks when compared to the agricultural sector. The real decline over the period was experienced by both the food sub sector (-3.4% per annum) as well as beverages and tobacco (-4.5% per annum).

	2008		2017		2018		10y Annual
	Rm	Share	Rm	Share	Rm	Share	Growth
City of Cape Town	711	15.4%	773	17.5%	778	17.7%	0.90%
City of Cape Town	711	15.4%	773	17.5%	778	17.7%	0.90%
West Coast	1 013	21.9 %	1 080	24.4%	1 080	24.6%	0.63%
Matzikama	211	4.5%	256	5.8%	256	5.8%	1.97%
Cederberg	185	4.0%	166	3.8%	164	3.7%	-1.20%
Bergrivier	262	5.7%	276	6.2%	276	6.3%	0.52%
Saldanha Bay	54	1.2%	69	1.5%	70	1.6%	2.58%
Swartland	302	6.5%	313	7.1%	314	7.1%	0.38%
Cape Winelands	1 699	36.7%	1 506	34.0%	1 482	33.7%	-1.35%
Witzenberg	361	7.8%	336	7.6%	332	7.6%	-0.83%
Drakenstein	392	8.5%	362	8.2%	358	8.1%	-0.90%
Stellenbosch	257	5.6%	219	4.9%	214	4.9%	-1.80%
Breede Valley	411	8.9%	352	8.0%	346	7.9%	-1.72%
Langeberg	278	6.0%	237	5.4%	232	5.3%	-1.77%
Overberg	555	12.0%	473	10.7%	464	10.6%	-1. 78 %
Theewaterskloof	366	7.9%	310	7.0%	304	6.9%	-1.85%
Overstrand	54	1.2%	48	1.1%	47	1.1%	-1.39%
Cape Agulhas	51	1.1%	44	1.0%	43	1.0%	-1.64%
Swellendam	83	1.8%	70	1.6%	69	1.6%	-1.84%
Eden	527	11. 4 %	475	10.7%	469	10.7%	-1.17%
Kannaland	65	1.4%	56	1.3%	54	1.2%	-1.80%
Hessequa	110	2.4%	91	2.0%	89	2.0%	-2.09%
Mossel Bay	49	1.1%	43	1.0%	42	1.0%	-1.53%
George	159	3.4%	148	3.4%	147	3.3%	-0.79%
Oudtshoorn	93	2.0%	85	1.9%	84	1.9%	-0.97%
Bitou	25	0.5%	26	0.6%	26	0.6%	0.46%
Knysna	27	0.6%	27	0.6%	26	0.6%	-0.11%
Central Karoo	127	2.7%	122	2.7%	121	2.8%	-0.49%
Laingsburg	29	0.6%	27	0.6%	26	0.6%	-0.79%
Prince Albert	28	0.6%	27	0.6%	27	0.6%	-0.22%
Beaufort West	71	1.5%	68	1.5%	68	1.5%	-0.48%
Western Cape	4 633	100.0%	4 428	100.0%	4 393	100.0%	-0.53%

Table 9: Geography of Agricultural Investment (GDFI), 2008-2018

Source: (Quantec, 2019)

The main type of investment in the WC's FBT sector, shown in Figure 32, has historically been machinery and equipment, making up 59% of all investments in the sector in 2018. This is, however, a decline from 75% in 2008. Investment increased in real terms by 2.2% per annum over the past decade in relation to building and construction, by 3.7% for information and communication, and by 1.4% for research and exploration. Transport equipment fell by 16.2% per annum in real terms and investment in machinery and equipment fell by 6.2% per annum.

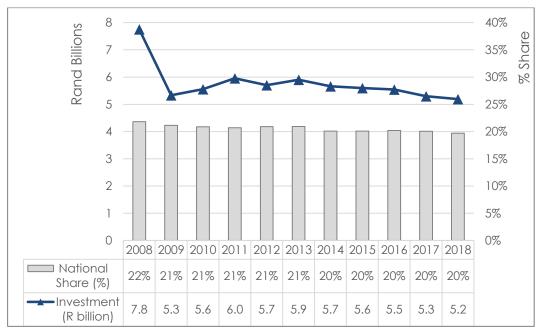


Figure 31: Investment (GFCF) in Western Cape FBT and National Share, 2008-2018 Source: (Quantec, 2019)

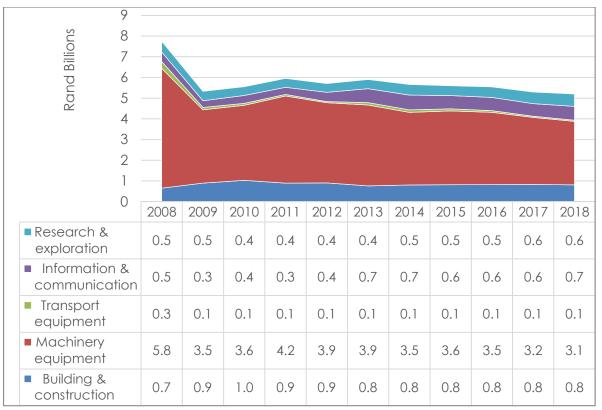


Figure 32: Investment (GFCF) in Western Cape FBT by Nature, 2008-2018 Source: (Quantec, 2019)

The geographic distribution of investment in the WC's FBT sector in Table 10 shows a strong concentration in the City of Cape Town which accounted for 61% of provincial FBT investment. This level of concentration has also increased over time from 55% in 2008, this despite negative real investment growth in the district. In fact only one local municipality had positive growth over the past ten years, this being Cape Agulhas where the increase was at a modest rate of 0.1% per annum.

	2008		2017	.000-2010	2018		10y Annual Growth
	Rm	Share	Rm	Share	Rm	Share	Growin
City of Cape Town	4 241	54.7%	3 189	60.2%	3 159	60.8%	-2.90%
City of CT	4 241	54.7%	3 187 3 189	60.2%	3 159	60.8%	-2.90%
West Coast	955	12.3%	767	1 4.5%	758	14.6%	-2.28%
Matzikama	108	1.4%	68	1.3%	66	1.3%	-4.80%
Cederberg	97	1.2%	84	1.6%	83	1.6%	-1.49%
Bergrivier	135	1.7%	117	2.2%	115	2.2%	-1.62%
Saldanha Bay	329	4.2%	245	4.6%	241	4.6%	-3.08%
Swartland	286	3.7%	254	4.8%	253	4.9%	-1.20%
Cape Winelands	1 810	23.3%	810	15.3%	753	14.5%	-8.39%
Witzenberg	178	2.3%	109	2.1%	106	2.0%	-5.09%
Drakenstein	642	8.3%	265	5.0%	244	4.7%	-9.21%
Stellenbosch	507	6.5%	204	3.8%	186	3.6%	-9.52%
Breede Valley	215	2.8%	120	2.3%	116	2.2%	-6.02%
Langeberg	268	3.5%	111	2.1%	102	2.0%	-9.23%
Overberg	218	2.8%	173	3.3%	173	3.3%	-2.30%
Theewaterskloof	95	1.2%	74	1.4%	74	1.4%	-2.46%
Overstrand	82	1.1%	59	1.1%	58	1.1%	-3.41%
Cape Agulhas	22	0.3%	22	0.4%	22	0.4%	0.09%
Swellendam	20	0.3%	19	0.4%	19	0.4%	-0.34%
Eden	518	6.7%	347	6.6%	340	6.6%	-4.12%
Kannaland	41	0.5%	18	0.3%	16	0.3%	-8.86%
Hessequa	32	0.4%	27	0.5%	27	0.5%	-1.83%
Mossel Bay	96	1.2%	56	1.1%	55	1.1%	-5.45%
George	220	2.8%	154	2.9%	152	2.9%	-3.62%
Oudtshoorn	85	1.1%	58	1.1%	56	1.1%	-4.04%
Bitou	14	0.2%	11	0.2%	11	0.2%	-2.52%
Knysna	31	0.4%	24	0.5%	24	0.5%	-2.56%
Central Karoo	12	0.2%	8	0.1%	8	0.1%	-4.27%
Laingsburg	0	0.0%	0	0.0%	0	0.0%	-7.99%
Prince Albert	3	0.0%	2	0.0%	2	0.0%	-4.30%
Beaufort West	8	0.1%	6	0.1%	5	0.1%	-4.13%
Western Cape	7 754	100.0%	5 295	100.0%	5 191	100.0%	-3.93%

Table 10: Geography of FBT Investment (GDFI), 2008-2018

Source: (Quantec, 2019)

Figure 33 shows the investment in five additional sectors which have either vertical or horizontal links to the agricultural sector, namely: fisheries; forestry; textiles and apparel; wood products; and paper products. All sectors exhibited a downward trend with the exception of fisheries which increased in real terms over the ten year period. As already discussed, it is not always possible with the available data to distinguish between the subsectors producing specifically agri processing products and those processing synthetic materials. As such these trends should only to be taken as indicative of what is happening in these broad sectors.

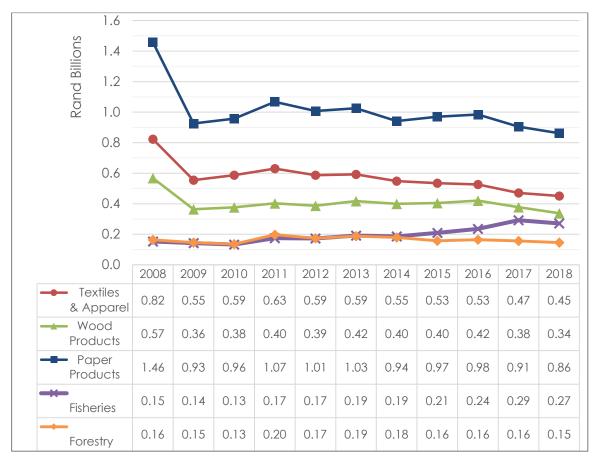


Figure 33: Investment (GFCF) in WC Sectors with Connections to Agriculture, 2008-2018 Source: (Quantec, 2019)

8. AGRICULTURAL INFRASTRUCTURE

Production infrastructure is concentrated in different areas based on agricultural production in the region. Looking at the breakdown of infrastructure by municipality in Table 11, it is clear that the Cape Winelands is particularly well endowed in terms of infrastructure with the highest number of chicken batteries, homesteads, nurseries, piggeries and tunnels of all the districts.

	City of CT	West Coast	Cape Winelands	Overberg	Eden	Central Karoo	WC Total
Airfields	7	39	21	20	16	26	129
Chicken Batteries	82	7	143	41	5	0	278
Dams*	1 154	3 159	4 494	4 857	6 215	2 613	22 492
Feedlots	4	7	5	11	18	6	51
Homesteads	1 201	9 191	13 958	6 315	3 697	3 159	37 521
Nurseries	30	17	64	26	8	2	147
Piggeries	8	18	31	7	3	1	68
Shade Netting	42	673	388	207	62	5	1 376
Tunnels	25	73	93	36	3	1	231

Table 11: WC	Aaricultural	Production	Infrastructure.	2017
	/ .g			

* 2013 data used Source: (WCDoA, 2019b)

The West Coast is also well endowed, particularly with regards to airfields and shade netting where the district's share in the provincial total stands at 30% and 49% respectively. Eden has the highest amount of dams, thanks largely to the high number of dams in Hessequa and George municipalities, and the highest amount feedlots.

Moving away from the infrastructure necessary for production to look at facilities where different agricultural products can be processed, Table 12 shows the number of various processing facilities at the district level. Again different facilities are concentrated in different areas depending on what is produced locally, highlighting how the development of agri processing facilities can aid in the development of local producers.

Once again the Cape Winelands is very well set up with the highest number of pack houses, distilleries, fruit packers, cool chain facilities, olive cellars and unsurprisingly given the District name, wine cellars. The cellars have a particularly high concentration in the Cape Winelands which is home to 66% of the province's wine cellars and 66% of the province's olive cellars. It should be noted that the facilities with high concentrations in the Cape Winelands are aimed at processing fruit.

The highest concentrated observed is in terms of tea processing where 96% of all processing facilities are in the West Coast District. This is the only product with the highest concentration in the West Coast District. The City of Cape Town boasts the highest number of breweries (61%) and millers (42%). The Overberg has the highest number of silos (37%), although only slightly higher than Eden (30%). Eden itself has the highest number of crush pens/dip tanks

(41%) and dairies (50%). The Central Karoo has the most abattoirs (25%), but again only slightly higher than Eden (20%).

	City	West	Cape			Central	wc
	of CT	Coast	Winelands	Overberg	Eden	Karoo	Total
Abattoirs	7	10	9	8	12	15	61
Crush pens/Dip tanks	65	426	162	372	975	381	2381
Dairies	23	35	41	118	215	0	432
Packhouses	5	135	294	176	39	34	683
Silos	5	15	8	34	28	2	92
Brewery	31	2	15	2	1	0	51
Distillery	2	0	5	1	1	0	9
Fruit Packers	3	37	115	36	1	1	193
Cool Chain	36	32	66	36	1	1	172
Millers	10	3	7	2	2	0	24
Olive Cellar	6	3	42	6	2	5	64
Wine Cellar	54	24	309	64	13	3	467
Tea Processing	0	72	1	1	1	0	75
Other Facilities	94	32	37	36	19	4	222

Table 12: WC Agricultural Processing Infrastructure (number), 2017

Source: (WCDoA, 2019b)

9. DOMESTIC MARKET

The number of households in the WC has increased as the population has expanded (see Section 1: Overview of the Western Cape). This can be seen in Figure 34 which shows the number of households and average households size between 2008 and 2018 in the WC. In 2018, there was a recorded 1.9 million households in the province. The increase from only 1.4 million households in 2008 implies that each year on average an additional 42 780 households are added to the province. As the number of households has increased in the province, there has been a slight decline in the average household size, from 3.56 in 2008 and 3.19 in 2018.

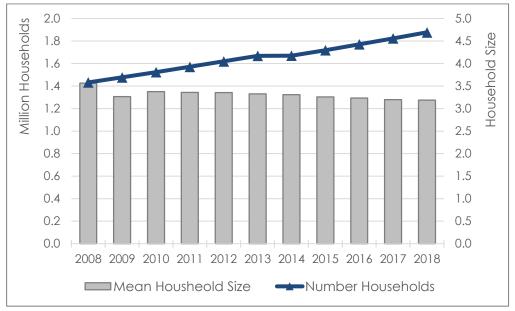


Figure 34: Number Households and Average Household Size, 2008-2018 Source (Stats SA, 2019b)

Figure 35 shows the number of households by its expenditure bracket for 2008, 2013 and 2018. Due to the data only being provided in brackets, no conversion was able to be made with regards to inflation so values reflect nominal monetary values and thus some upward movement is expected. However, this is still a positive sign of avoiding the very undesirable case where poor households are not are not able increase their incomes as inflation causes prices to rise.

The proportion of the WC population experiencing self-reported hunger at least sometimes has until recently been on the rise. This upward trend, shown in Figure 36, started in 2008, when only 9.7% of the WC households were reported to have at least one child who suffers from hunger ("child hunger") and 8.6% of households were reported to have at least one adult who suffers from hunger ("adult hunger"). Both adult and child hunger generally rose from this point until 2014, where adult hunger peaked up at 13.9% before declining. Child hunger peaked a year later in 2015 at 15.1% then also declined. In 2018 adult hunger was estimated at 11.7% and Child hunger at 11.1%.

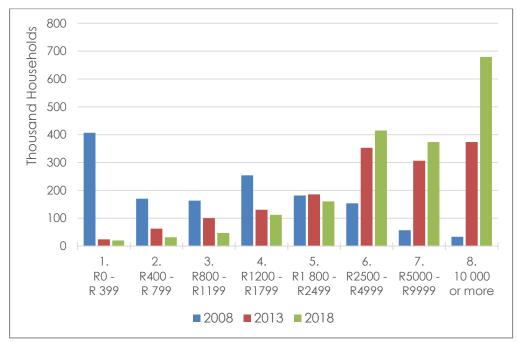
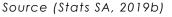


Figure 35: Monthly Household Expenditure, 2008, 2013 & 2018



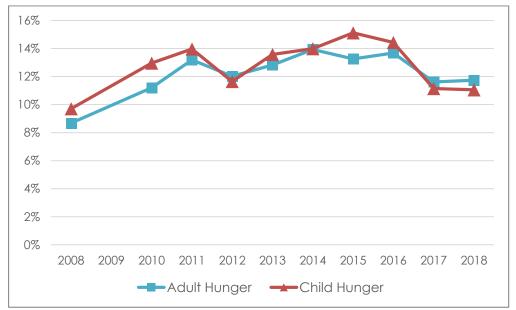


Figure 36: Prevalence of Hunger in the Western Cape, 2008-2018 Source (Stats SA, 2019b)

Inflation in the WC has moved more or less with national inflation. The similarity can be seen in Figure 37 which shows national and provincial inflation. Due to data issues with the change in methodology used in calculating inflation in South Africa 2008, comparable data was not available for 2008 and hence percentage changes could only be calculated for 2009 onwards. It is interesting to see the divergence of the two inflation trends after 2016. For all other years inflation in South Africa and the WC are quite similar, however in 2017 and 2018 WC inflation significantly exceeds that of South Africa.

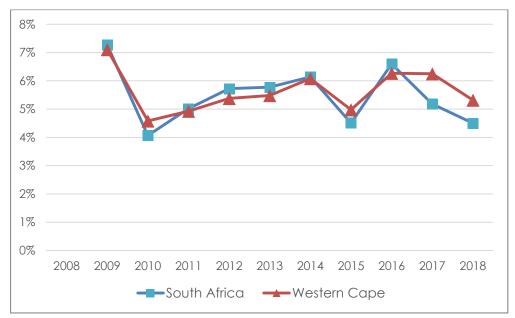


Figure 37: National and Provincial Inflation (CPI), 2008-2018 Source: (Stats SA, 2019c)

In recent years inflation on food and beverages has tended to be higher than on other items. This can be seen in Figure 37 which compares overall inflation with inflation on food and non-alcoholic beverages. The most notable exceptions are 2010 and 2018 where there was a very low price increase on food and non-alcoholic beverages (1.8% and 3.8% respectively) and in 2017 where inflation on alcoholic beverages was only 2.6%.

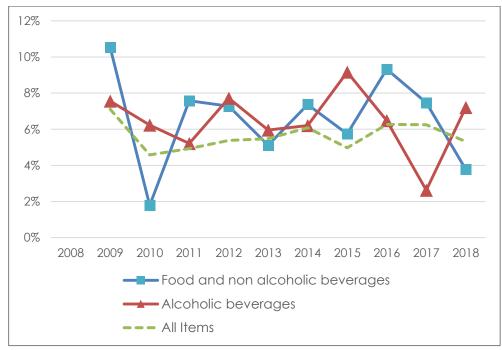


Figure 38: WC Food and Beverage Inflation (CPI), 2008-2018 Source: (Stats SA, 2019c)

Table 13 shows the nominal changes in the average prices of selected agricultural products in local markets, annually from 2013 to 2018 as well as the average annual growth rate over the five years leading up to 2018. These are market prices so will be expected to fluctuate

quite significantly and it should be noted that this does not necessary reflect changes in prices received by producers. The province's CPI for all items and for food and beverages are also provided for comparable purposes.

	Ann	5 Year				
	2014	2015	2016	2017	2018	Average
WC CPI: Headline	6.1%	5.0%	6.3%	6.3%	5.3%	5.8%
WC CPI: Food & Beverages	7.4%	5.7%	9.3%	7.5%	3.8%	6.7%
Beef: Class A2/A3	13.3%	4.3%	10.4%	20.6%	1.7%	9.9%
Beef: Class AB2/AB3	10.6%	6.6%	12.1%	22.8%	2.2%	10.6%
Beef: Class B2/B3	10.3%	7.6%	11.8%	24.2%	3.4%	11.3%
Beef: Class C2/C3	8.9%	11.0%	10.7%	28.9%	3.7%	12.3%
Mutton: Class A2/A3	15.5%	8.0%	9.5%	22.4%	1.9%	11.2%
Mutton: Class AB2/AB3	14.8%	7.4%	9.2%	22.3%	3.1%	11.2%
Mutton: Class B2/B3	6.2%	8.2%	11.9%	21.4%	10.3%	11.5%
Mutton: Class C2/C3	11.9%	10.3%	9.1%	22.9%	5.3%	11.7%
Pork: Bacon	11.9%	5.9%	6.7%	13.4%	-12.3%	4.7%
Pork: Pork	11.4%	10.4%	3.1%	11.4%	-7.6%	5.5%
Pork: Sausage	17.7%	10.3%	-6.1%	24.2%	-8.7%	6.7%
Pork: Average	12.0%	6.3%	6.8%	13.0%	-11.6%	4.9%
Poultry: Frozen Class A	10.1%	4.2%	0.3%	18.1%	0.0%	6.4%
Poultry: Fresh	28.7%	15.8%	0.8%	16.0%	0.2%	11.8%
Wheat: Kansas City (Winter)	-1.8%	-9.2%	-0.8%	-9.7%	13.1%	-2.0%
Wheat: Minneapolis (Spring)	-1.8%	-9.2%	-0.8%	-9.7%	12.8%	-2.0%
Wheat: Safex	0.0%	3.1%	10.1%	-5.1%	-4.7%	0.5%
Lemons	34.5%	0.2%	-5.7%	-2.4%	-5.7%	3.1%
Oranges	66.3%	-20.5%	66.4%	10.0%	-17.9%	14.7%
Naartjies	45.4%	12.6%	3.1%	1.9%	-19.0%	6.9%
Apples	17.7%	-9.6%	7.5%	1.2%	18.8%	6.6%
Pears	2.5%	11.8%	2.9%	-7.9%	11.2%	3.8%
Plums	156.5%	-1.9%	70.6%	-26.7%	-3.6%	24.8%
Peaches	0.2%	28.9%	21.0%	-6.1%	16.0%	11.2%
Strawberries	-36.1%	45.9%	21.9%	29.4%	-9.9%	5.8%
Table Grapes	6.7%	86.6%	33.8%	12.6%	-21.3%	18.8%
Onions	312.6%	1475.1%	94.3%	-37.3%	30.4%	152.8%
Potatoes	0.8%	-19.8%	73.2%	-26.5%	7.3%	2.0%
Tomatoes	21.7%	3.5%	-3.2%	-0.9%	11.4%	6.1%

Table 13: Market Price Performance of Select Agricultural Products, 2014-2018

Source: (WCDoA, 2019c)

In addition to showing which products exhibited the strongest price increases Table 13 also highlights the products which are subject to the most volatility. Generally products which have limited staring capacity, and hence are heavily influenced by seasonality and supply availability, tend to be more volatile. For example orange prices are highly volatile, especially compared to products such as apples and pears which can be stared for a full year with right infrastructure.

10. AGRI TOURISM

Table 14 shows the geographic spread of agri tourism activities in the WC. For more general outdoor activities there is quite an even spread across the Districts. These activities would include birding, camping, ecotourism, fishing, hiking and mountain biking. The exception District is the City of Cape Town, where aside from ecotourism, there are far less of these general activities.

	City of CT	West Coast	Cape Winelands	Overberg	Eden	Central Karoo	WC Total
4x4 Facilities	5	32	19	15	28	48	147
Accommodation	51	162	443	221	145	129	1151
Birding	4	49	44	38	26	49	210
Breweries	17	7	26	8	0	1	59
Camping	11	66	42	30	29	34	212
Cellars & Wine Shops	16	5	109	20	4	3	157
Conference & Functions	53	42	256	82	27	22	482
Ecotourism	24	38	47	43	41	53	246
Farm Market	9	7	21	15	3	1	56
Farm Stall	4	19	54	23	23	12	135
Fishing	10	34	50	45	29	23	191
Hiking	26	90	108	121	55	72	472
Horse Riding	8	10	55	24	17	22	136
Mountain Bike	13	49	89	89	45	55	340
Ostrich	2	0	4	0	3	0	9
Picnics	20	37	126	48	31	73	335
Quad Bike	2	10	13	13	8	17	63
Restaurant	53	42	256	82	27	22	482

Source: (WCDoA, 2018)

The Cape Winelands has the most number for thirteen out of the eighteen activities. The highest concentrations were for cellars and wine shops (69%), conference functions (53%) and restaurants (53%). The Central Karoo has the highest for four of the five remaining activities with particularly high concentration in terms of 4x4 facilities (33%). The only activity where the highest concentration is not the Cape Winelands or Central Karoo is camping where the West Coast has the highest share (31%). It should be noted, however, that the West Coast also has the joint highest number of birding facilities with the Central Karoo (each 23%) and that the Overberg has the joint highest mountain bike trails with the Cape Winelands (26%).

11. WATER

The Western Cape Province has a Mediterranean climate and therefore receives most of its rain during the winter season. However, limited precipitation during the winter seasons of 2015-2018 caused a drought in the province. Approximately 98% of the water in the province comes from the dams.

There are 19 Water Management Areas (WMAs) in the country, and the four dominant ones found in the Western Cape Province are; Gouritz, Breede, Berg and Olifants (WMA) (Figure 40). The Breede and Gouritz (Breede-Gouritz) WMAs have a full total supply capacity of 1318.07 million cubic metres (Mm³), and Berg together with the Olifants (Berg-Olifants) WMAs have a full total supply capacity of 43.95 Mm³ (DWS, 2020).



Figure 3940: Western Cape Water Management Area (WMA) boundary Source: (WCDoA, 2019a)

A large amount of water in the Western Cape is supplied through the Western Cape Water Supply System (WCWSS). This infrastructure is an "integrated and collectively managed systems of dams, pumps stations, pipelines and tunnels" (City of Cape Town, 2018, p. 15). The WCWSS also transfers water between dams and catchment systems. Regions supplied through the WCWSS include the City of Cape Town, Overberg, Boland, West Coast and Swartland. Currently domestic and industrial use accounts for 72% (390m³ million) of annual water allocations from the WCWSS, 89% of which is for the City of Cape Town (347m³ million). Going forward it is expected that the water allocations for the City of Cape Town will need to increase, whereas allocations for agricultural use, currently 186m³ million, will not (DWS, 2019).

The WCWSS dam's water level dropped to a low 20% in 2017 and 2018 (City of Cape Town, 2020). This decline was severe since the average water levels in the dams for period 2012 to 2019 was 63% (Figure 39). Water shortages negatively affected many economic sectors including agriculture, resulting in a decline in production and job losses (Pienaar & Boonzaaier, 2018).

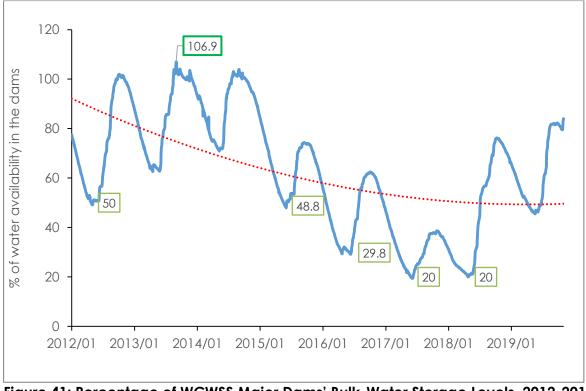


Figure 41: Percentage of WCWSS Major Dams' Bulk-Water Storage Levels, 2012-2019 Source: (City of Cape Town, 2020)

Of the 186 m³ million allocated to agriculture, 31% supplies Riviersonderend, with a further 29% of the allocations going to the Upper Berg Irrigation Board and 14% to the Wynland Water Use Authority. The Upper Berg River Pumped Schemes accounts for a further 11%, as does the Lower Berg Irrigation Board. The detailed account of water allocations for agriculture in the WCWSS is provided in Table 15.

System	Allocation	Sharo
System	(million m3/a) 61.7	Share 31%
Riviersonderend (Theewaterskloof Dam)		31%
Zonderend IB	36.1	
Vyeboom IB	13.2	
Individual Irrigators	12.4	1 400
Wynland WUA	26.2	14%
Stellenbosch IB	11.9	
Helderberg IB	11.6	
Lower Eerste River IB	2.1	
Industrial use	0.7	
Banhoek Tunnel	1.8	1%
Upper Berg Irrigation Board	54.4	29 %
Sub-District 1	14.3	
Sub-District 2	21.5	
Sub-District 2	0.6	
Sub-District 3	18.0	
Upper Berg River Pumped Schemes	21.1	11%
Suid-Agter Paarl	3.5	
Simondium Pipeline	1.0	
Simonsberg	0.5	
Perdeberg	6.6	
Noord-Agter Paarl	3.6	
Noord-Agter Paarl	1.3	
Groenberg Ward 1 - Pipeline	1.1	
Groenberg Ward 2 - Pipeline	0.6	
Riebeeck Kasteel *	1.5	
Riebeek West Ward 1	0.7	
Riebeek West Ward 2	0.8	
Lower Berg Irrigation Board	21.3	11%
Lower Berg Irrigation Board	11.0	
Other licences	10.3	
WCWSS Total Allocation	186.4	100%
Source: (DWS, 2019)	100.4	100/

Table 15: Water Allocations for Agriculture in the WCWSS

Source: (DWS, 2019)

On average, as illustrated in Figure 42, irrigation water tariffs in the WCWSS have increased by 6% at national level, 2% at Berg-Olifants and 6% at Breede-Gouritz in the past three years (DWS, 2020b). Furthermore, domestic and industry raw water tariffs also increased by 6% at national level but in the Western Cape the tariff increased by the 2%. A high increase of raw water tariffs did occur in forestry, with a 14% increase at the national level and an 11% to 16% increase in the Western Cape.

Raw water pricing information at the national level is important to promote information symmetry and for comparisons of prices charged by Catchment Management Agencies in different provinces. Water pricing plays a significant role in equitable and fair access to water resources and increased agricultural production. Furthermore, water pricing ensures efficient allocation of water to economically viable activities.

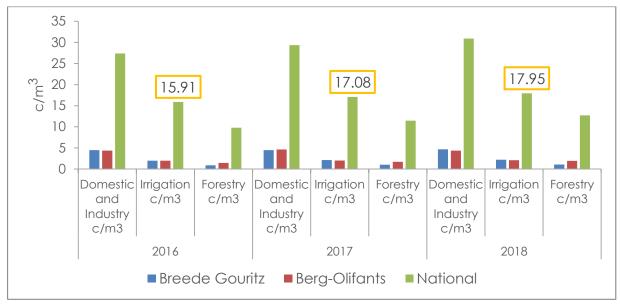


Figure 42: Western Cape Raw Water Tariffs and One-Year % change (2016-2018) Source: (DWS, 2020)

The Breede Gouritz WMA dam inspection status is based on 187 small dams, 235 medium sized dams, 34 large dams and 9 unclassified dams. The results, displayed in Figure 43, show that 42% of the small dams were not inspected within 10 years. The rest of the dams (58%) were inspected within the last or previous 5 years. In the case of medium dams only 32% of them were not inspected within 10 years, and the remaining 68% were inspected within the last or previous 5 years. The Berg-Olifants WMA dam inspection status is based on 225 small dams, 213 medium dams and 2 unclassified dam. It shows that 57% of the small dams and 40% of the medium dams have not being inspected within ten years. The remaining 43% of the small dams and 60% of the medium dams were inspected within the last or previous 5 years. In the case of large dams, 75% were inspected in within the last 5 years and 25% in the previous 5 years.

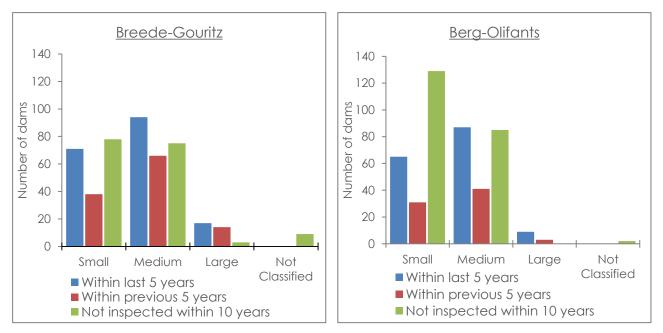


Figure 43: Status of Dam Inspection in the Breede-Gouritz and Berg-Olifants WMAs Source: (DWS, 2020b)

At policy level, there is much support to increase the supply of water for irrigation, domestic, industrial and forestry uses due to the economic and social benefits. Rehabilitation and restoration of ecological infrastructure is an important component in the sustainability of water resource. The invasive alien plant species (IAPs) are also a problem affecting WMAs, since they consume more water than native plants (City of Cape Town, 2018). According to Morokong et al. (2016), clearing (IAPs) early is a cost effective approach in the management of the WMAs because the cost of delayed IAPs clearing is higher than that cost of protecting the investment in the dam.

12. CONCLUSION

The 2019 Western Cape Agricultural Sector Profile has shown that the province is still feeling the effect of the recent drought, although signs of recovery are evident in certain areas. It is important that role players continue to assist the sector, particularly areas which are still highly water stressed as in much of the Central and Klein Karoo.

Export performance has been good over recent years, despite obvious pressure on production in general. One point of concern is the rising imports of agri processing products. In the interest of food security and building a stronger agricultural system in the province, increased efforts should be put into looking for opportunities where raw agricultural products are exported and the processed version imported. These are products where there is already proven demand and the capacity to produce the inputs into production.

The continued decline in investment into the agricultural sector of the province is also worrying. Increased efforts are needed to improve the attractiveness of WC agriculture for investors, to help improve growth and resilience in the sector.

The upturn in employment is a positive sign, especially when considered in conjunction with the increase in the share attributable to black and female workers. However, the declining youth employment in the sector needs urgent addressing, to make agriculture an attractive and profitable endeavour for young people in the province particularly in rural areas.

Asides from these concerns there are many positives highlighted in this paper. It is believed that if these key areas of concern can be addressed the WC agricultural sector could be on a very quick path out of recovery and on to racing forward, bringing with it increased economic growth, employment and food security in the province.

REFERENCES

Battersby-Lennard, J. & Haysom, G., 2012. *Philippi Horticultural Area: A City Asset or Potential Development Node?*, University of Cape Town:: A report commissioned by Rooftops Canada Foundation Inc. – Foundation Abri International in partnership with the African Food Security Urban Network..

BFAP, 2018. BFAP Baseline Agricultural Outlook: 2018-2027, Pretoria: Bureau of Food and Agricultural Policy.

City of Cape Town, 2012. The Role of the Philippi Horticultural Area in Securing the Future of the City, Cape Town: Report to Economic, Environment and Spatial Planning Commission, 466, August 2012.

City of Cape Town, 2018. Water Services and Cape Town Urban Water Cycle, Cape Town: City of Cape Town.

City of Cape Town, W. C., 2020. City of Cape Town Open Data Portal-Data Set Description. [Online] Available at: <u>https://web1.capetown.gov.za/web1/OpenDataPortal/DatasetDetail?DatasetName=Da</u>

m%20levels [Accessed 24 January 2020].

DWS, 2019. The Support for the Implementation and Maintenance of the Water Reconciliation Strategy for the Western Cape Water Supply System WP11179: Allocations Report, Final Draft November 2019, Pretoria: Department of Water and Santitation.

DWS, 2020. National Integrated Water Information System. [Online] Available at: <u>http://niwis.dws.gov.za/niwis2/</u>[Accessed 23 January 2020].

Morokong, T. et al., 2016. Clearing invasive alien plants as a cost-effective strategy for water catchment management: The case of the Olifants River catchment, South Africa. South African Journal of Economic and Management Sciences, 5(774-787), p. 19.

NPC, 2011. National Development Plan: Vision of 2030, Pretoria: National Planning Commission.

Partridge, A. & Morokong, T., 2018. Western Cape Agricultural Sector Profile: 2018, Elsenburg: Western Cape Department of Agriculture.

Partridge, A. & Wagner, N., 2016. Risky Business: Agricultural Insurance in the Face of Climate Change. *Elsenburg Journal*, 13(3), pp. 49-53.

Pienaar, P. & Boonzaaier, J., 2018. Drought Policy Brief: Western Cape Agriculture, Elsenburg: Western Cape Department of Agriculture.

Pienaar, P. & Partridge, A., 2015. Agri Processing Report: Opportunities for Growth and Employment across the Western Cape, Elsenburg: Western Cape Department of Agriculture. Quantec, 2019. EasyData by Quantec. [Online] Available at: <u>www.easydata.co.za</u> [Accessed 23 08 2019].

RSA National Treasury, 2019. Budget Review 2019, National Treasury, Republic of South Africa: Pretoria.

RSA Presidency, 2003. Broad-Based Black Economic Empowerment Act No. 53, 2003, Cape Town: Governemnt Gazette, Vol. 463, No. 25899.

RSA Presidency, 2014. Broad-Based Black Economic Empowerment Amendment Act No. 46, 2013, Cape Town: Government Gazette, Vol. 583, No. 37271.

Stats SA, 2016. Community Survey 2016: Agricultural Households, Pretoria: Statistics South Africa.

Stats SA, 2019a. Quarterly Labour Force Surveys. [Online] Available at: <u>http://www.statssa.gov.za/?page_id=1854&PPN=P0211</u> [Accessed 13 06 2019].

Stats SA, 2019b. General Household Surveys. [Online] Available at: <u>datafirst.uct.ac.za</u> [Accessed 2019 09 22].

Stats SA, 2019c. Consumer Price Index. [Online] Available at: www.statssa.gov.za/?page id=1854&PPN=P0141 [Accessed 18 11 2019].

Vink, N. & Tregurtha, N., 2005. Western Cape Agricultural Sector: Structure, Performance and Future Prospects: An Overview, Stellenbosch: Department of Agricultural Economics, University of Stellenbosch.

WC Provincial Treasury, 2019. *Provincial Economic Review and Outlook 2019, Cape Town:* Western Cape Government Provincial Treasury.

WCDoA, 2018. The Western Cape Mapping of Agricultural Commodities and Infrastructure for 2017, Elsenburg: GIS Services, Western Cape Department of Agriculture..

WCDoA, 2019a. Cape Farm Mapper. [Online] Available at: <u>https://gis.elsenburg.com/apps/cfm/</u>[Accessed 28 10 2019].

WCDoA, 2019b. Database of all Western Cape Land Transactions on the Open Market, Elsenburg:: Statistical Services, Agricultural Economics Services, Western Cape Department of Agriculture.

WCDoA, 2019c. Western Cape Price Trends and Performance: Select Agricultural Commodities, Elsenburg: Statistical Services, Agricultural Economics Services, Western Cape Department of Agriculture.

World Bank, 2018. Africa's Pulse: An Analysis of Issues Shaping Africa's Economic Future. Volume 18, October 2018, Washington DC: The World Bank.