

VinPro Production Plan survey 2016 (Part 1)

The 2016 harvest and the impact on the financial sustainability of primary wine grape producers

According to the latest VinPro Production Plan survey, primary wine grape producers' profits in 2016 were compromised by a smaller crop and steep increases in costs. In this issue of *WineLand* we look at Part 1 of the report which provides an overview of the most important findings over the past 10 years. In the May issue of *WineLand* we look at Part 2 of the report and the practices of the top achievers. By Andries van Zyl



In 2016 the VinPro Production Plan survey was conducted for the 13th consecutive year in the wine industry. The findings show that after four consecutive large crops, wine grape producers in total harvested a smaller crop in the 2016 season. Despite the smaller overall production, three regions managed to produce record crops in 2016.

The income realised is still not in line with sustainable target guidelines, but it is encouraging that despite the season's risks, some producers in each of the nine wine districts manage annually to surpass these guidelines and realise sustainable returns.

INTRODUCTION

In 2016 VinPro Agricultural Economic Division conducted a comprehensive analysis across all nine wine districts. The project is supported by Winetech, the National Agricultural Marketing Council (NAMC), Standard Bank, Absa, Land Bank, FNB, Nedbank and Capital Harvest. The primary objective is still to determine the production structure, cost structure and profitability per district, so as to determine the financial interest of the producers.

Altogether 235 farming units from all nine wine districts participated in the 2016 Production Plan survey. In 2016 the sample consisted of 22 790 ha (23% of the total South African area planted to wine grapes in 2015, producing 400 285 tons (29% of the total South African crop in 2016). Of these 64% and 36% were white and red wine grapes respectively and 66% of the tonnages were harvested mechanically.

The analysis applies to overall grapevine production (bearing as well as non-bearing hectares) and the cost analysis makes no distinction between cultivars and specific blocks. The greater majority of participants are diversified and differ with regard to farm size. The report represents industry average figures, calculated by determining the weighted average of all participants. The Malmesbury district is always evaluated separately and does not form part of industry average figures, in view of the fact that this study group cultivates a large component of dryland vineyards, which require an alternative production, cost and capital structure.

THE COST OF WINE GRAPE PRODUCTION

The annual cost incurred to prepare the 2016 crop comprised cash expenditure and provision for replacement, excluding all tax, interest and entrepreneurial remuneration. Compared to 2015 the industry average total production cost (excluding Malmesbury) increased by 7% to R44 390/ha in 2016.

CASH EXPENDITURE

Cash expenditure is specified as direct cost, labour, mechanisation, fixed improvements and general expenses. Total cash expenditure indicates a 7% increase from 2015 to R34 047/ha in the 2016 production year.

The increase is driven mainly by the labour component which continued to increase more rapidly than some of the other cost elements. This contributed to the increased mechanisation component, including an increase in alternative practices such as mechanical pruning. A second factor that impacted negatively on the cost increase was the weak rand in 2016, compared to 2015. This carries great weight because a large component of our inputs is imported. Record crops in some regions also contributed to the average cost increase, seeing that increased inputs are required. The cost component differs among the various areas due to the level of mechanisation and climatic differences, for example drought. Stringent cost management, with a balance between wine style objective and input requirement for each block, remains

TABLE 1. Average yield per cultivar (ton/ha).

Yield per cultivar (ton/ha)	Klein Karoo	Robertson	Worcester	Breedekloof	Olifants River	Orange River	Paarl	Stellenbosch	Malmesbury Droëland
Chenin Blanc	24,25	24,21	23,91	23,31	25,87	27,56	12,41	7,73	7,59
Colombar	33,48	10,82	26,48	27,16	32,34	33,56	18	11,19	2,25
Sauvignon Blanc	–	17,03	19,21	18,32	16,02	–	11,06	9,02	6,78
Chardonnay	17,23	16,51	16,51	15,16	15,82	14,27	11,76	8,79	7,69
Muscat d’Alexandrie	17	14,36	24,75	29,43	21,72	28,91	19,79	4,54	–
Sémillon	–	20	16,11	22,25	20,36	–	13,88	10,73	7,13
Viognier	–	19,97	15,86	20,61	–	–	12,71	8,66	7,87
Other White	20,06	23,05	27,54	24,07	21,23	41,67	8,22	9,01	5,49
Yield per cultivar (ton/ha)	Klein Karoo	Robertson	Worcester	Breedekloof	Olifants River	Orange River	Paarl	Stellenbosch	Malmesbury Droëland
Cabernet Sauvignon	12,6	13,56	11,29	14,25	11,61	12,91	9,46	7,08	4,93
Shiraz	16,54	15,54	16,82	17,42	15,89	22,15	10,12	9,78	6,02
Pinotage	–	21,18	18,05	19,66	22,5	–	9,57	9,11	7,21
Merlot	14,71	14,65	13,36	16,93	15,11	11,84	10,42	9,57	7,59
Ruby Cabernet	19,72	16,6	16,59	16,91	18,99	25,58	12,59	7,5	–
Cinsaut	–	32,65	19,06	28,75	–	–	16,39	9,03	6,61
Pinot Noir	–	17,97	15,77	11,17	13,28	–	11,56	9,06	–
Other Red	13,03	14,48	13,42	14,99	15,31	20,07	10,38	9,59	9,55

% MECHANICALLY HARVESTED

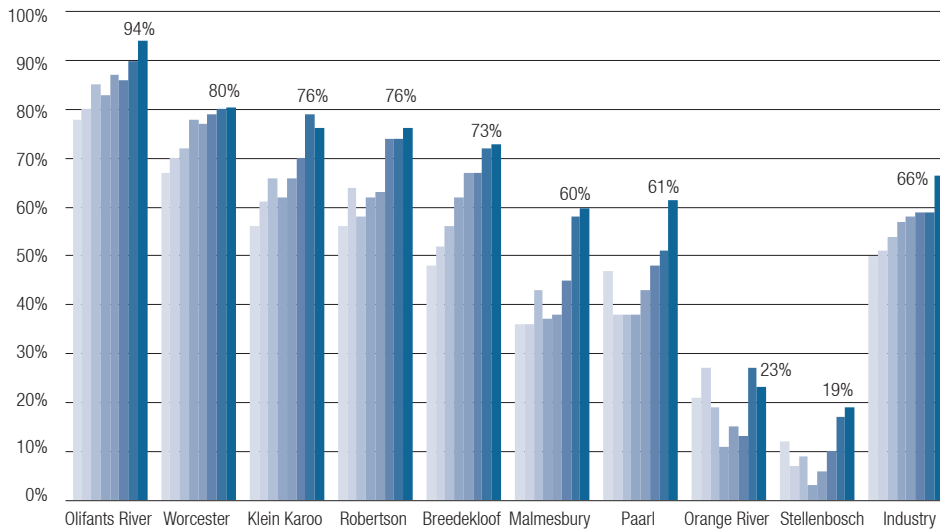


FIGURE 1. Tonnes harvested mechanically per district.

TOTAL PRODUCTION COST

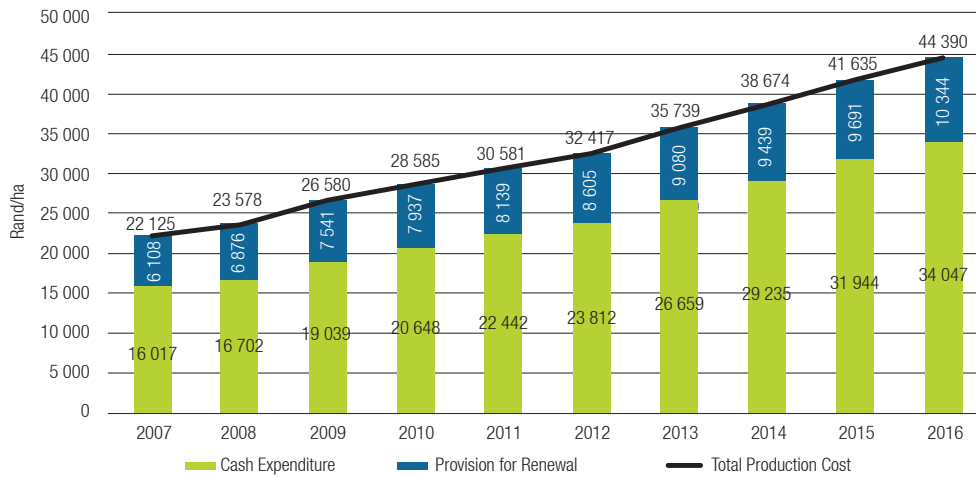


FIGURE 2. Total industry average production cost.

DIRECT COST

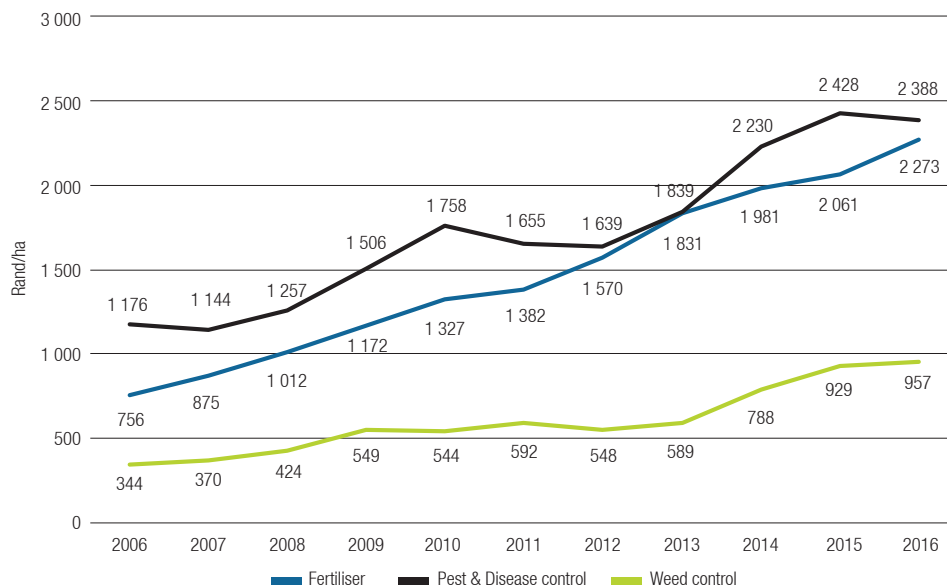


FIGURE 3. Movement of direct cost – industry average.

LABOUR COST

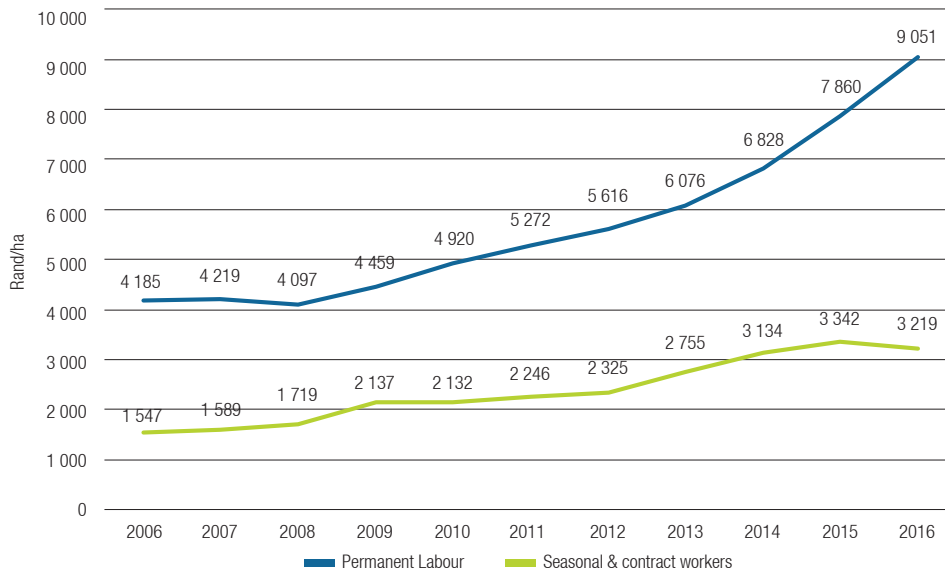


FIGURE 4. Movement of labour cost – industry average.

MECHANISATION COST

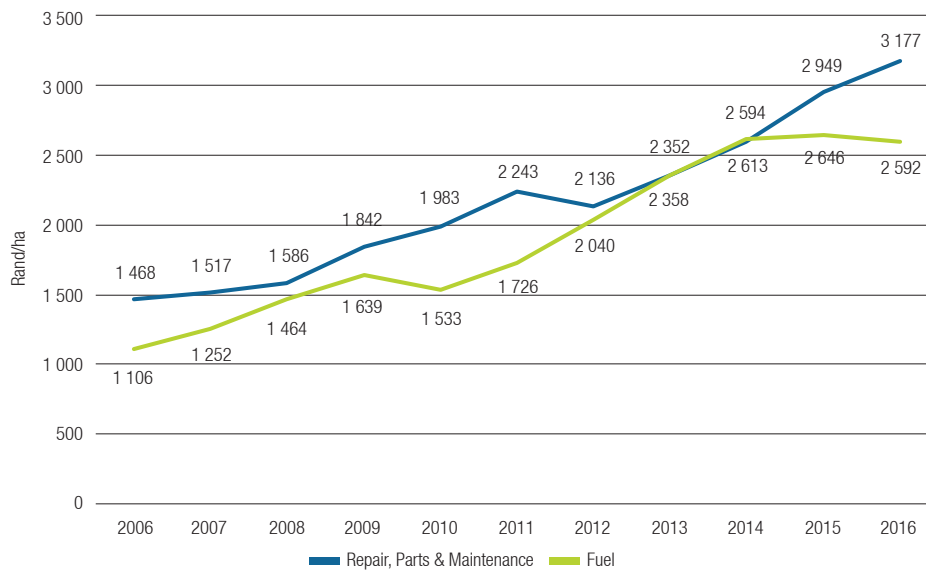


FIGURE 5. Movement of mechanisation cost – industry average.

GENERAL EXPENDITURE

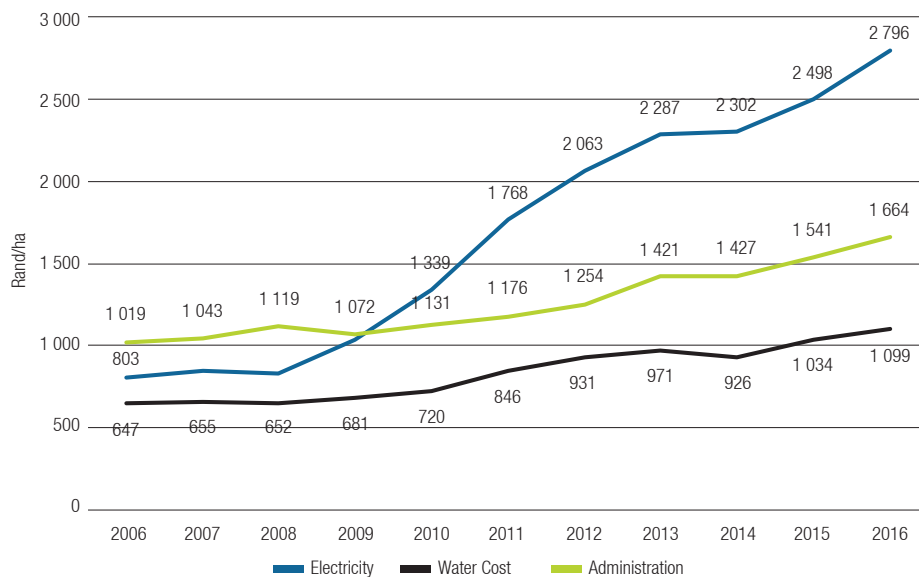


FIGURE 6. Movement of general expenditure – industry average.

TABLE 2. Production cost per district – 2015 harvest.

Industry average	Stellenbosch	Paarl	Robertson	Breedekloof
COST STRUCTURE	RAND PER HA			
DIRECT COST				
SEED	302	110	258	112
FERTILISER	986	1 238	2 308	1 813
ORGANIC MATERIAL	46	41	99	956
PESTICIDE CONTROL	3 216	1 941	2 709	2 441
HERBICIDE CONTROL	817	973	1 378	962
REPAIR AND BINDING MATERIAL	479	314	271	302
Subtotal	5 846	4 617	7 024	6 585
LABOUR				
SUPERVISION	2 338	1 638	1 747	2 446
PERMANENT LABOUR	11 930	7 992	7 870	8 317
SEASONAL LABOUR AND CONTRACT WORK	5 472	3 789	2 565	1 396
Subtotal	19 741	13 419	12 182	12 160
MECHANISATION				
FUEL	2 954	2 045	2 280	2 392
REPAIR, PARTS AND MAINTENANCE	3 690	1 947	4 198	2 748
LISENCES AND INSURANCE	592	486	596	656
TRANSPORT HIRED	214	773	243	128
Subtotal	7 451	5 252	7 317	5 924
FIXED IMPROVEMENTS				
REPAIR AND MAINTENANCE	978	712	841	1 294
INSURANCE	279	219	199	276
Subtotal	1 257	931	1 040	1 570
GENERAL EXPENDITURES				
ELECTRICITY	2 013	2 081	3 258	3 512
WATER COSTS	838	894	779	223
LAND-, PROPERTY- AND MUNICIPAL TAXES	319	237	243	255
ADMINISTRATION	2 716	1 263	1 325	1 425
Subtotal	5 885	4 475	5 605	5 415
TOTAL CASH EXPENDITURES	40 180	28 694	33 168	31 654
PROVISION FOR RENEWAL	9 919	8 980	10 550	11 041
VINEYARDS	5 638	5 782	5 699	5 924
FIXED IMPROVEMENTS	1 175	741	963	1 173
LOOSE ASSETS OR PRODUCTION MEANS	3 105	2 458	3 887	3 944
TOTAL EXPENDITURES	50 099	37 674	43 718	42 695
AVERAGE AREA PLANTED (HA)	107	109	104	119
AREA IRRIGATED (%)	89%	88%	100%	100%
AVERAGE AGE COMPOSITION (%)				
3 YEARS AND YOUNGER	7,41	7,49	15,23	14,02
BETWEEN 4 AND 7 YEARS	11,61	15,30	19,41	14,92
BETWEEN 8 AND 15 YEARS	36,00	44,13	33,38	32,89
BETWEEN 16 AND 20 YEARS	24,30	22,98	19,76	22,21
OLDER THAN 20 YEARS	22,04	9,66	12,22	16,13
AVERAGE YIELD (TON PER HA)	8,71	10,77	19,61	21,20
CASH EXPENDITURES (RAND PER TON)	4 613	2 664	1 691	1 493
TOTAL EXPENDITURES (RAND PER TON)	5 752	3 498	2 229	2 014

Olifants River	Worcester	Orange River	Klein Karoo	Industry Average	Malmesbury
RAND PER HA					
8	150	272	7	168	185
2 606	2 597	1 864	2 213	1 827	573
404	244	180	501	278	20
1 447	2 873	968	2 613	2 388	1 753
472	1 234	853	547	957	713
344	409	115	366	340	94
5 281	7 507	4 253	6 248	5 959	3 338
1 589	2 132	2 268	664	1 960	1 113
8 379	9 419	9 870	7 911	9 051	4 958
1 428	1 110	9 810	1 092	3 219	3 211
11 396	12 661	21 947	9 668	14 231	9 281
2 590	3 293	3 462	2 458	2 592	1 586
3 959	3 201	2 250	2 497	3 177	2 368
925	589	1 065	547	647	483
360	291	197	289	336	683
7 834	7 374	6 974	5 791	6 752	5 120
1 264	1 389	720	436	1 001	677
284	260	409	151	256	268
1 548	1 649	1 129	587	1 256	945
3 490	3 345	2 194	2 269	2 796	841
2 295	1 580	1 404	3 165	1 099	639
498	244	259	264	290	122
1 560	1 515	1 464	1 966	1 664	558
7 843	6 685	5 321	7 664	5 849	2 160
33 902	35 875	39 623	29 957	34 047	20 844
12 127	10 528	9 492	10 407	10 344	8 344
5 315	5 882	5 666	5 747	5 710	5 230
1 257	1 597	543	728	1 065	713
5 556	3 050	3 282	3 932	3 569	2 401
46 029	46 403	49 115	40 364	44 390	29 188
56	97	18	38	95	143
100%	100%	100%	100%	96%	39%
9,95	15,85	10,33	20,61	11,49	9,25
12,36	16,44	16,71	18,97	15,20	8,40
37,06	33,02	37,54	29,20	36,28	48,26
19,61	18,14	18,79	26,10	21,53	23,25
21,49	16,53	16,63	5,43	15,77	10,84
23,83	20,27	30,90	25,23	17,56	7,02
1 423	1 770	1 282	1 187	1 938	2 969
1 932	2 289	1 589	1 600	2 527	4 158

COMPOSITION OF ANNUAL CASH EXPENDITURE

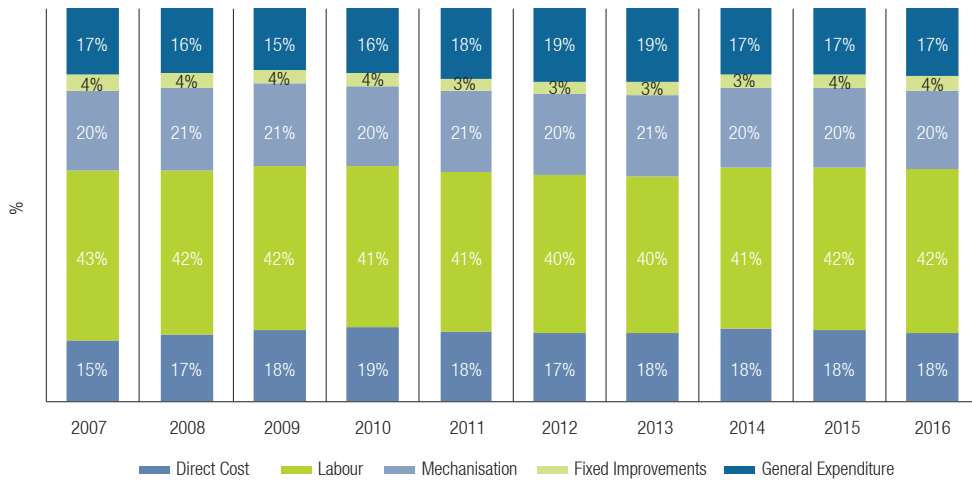


FIGURE 7. Percentage composition of annual cash expenditure – industry average.

AREA UNDER VINES PER PARTICIPANT

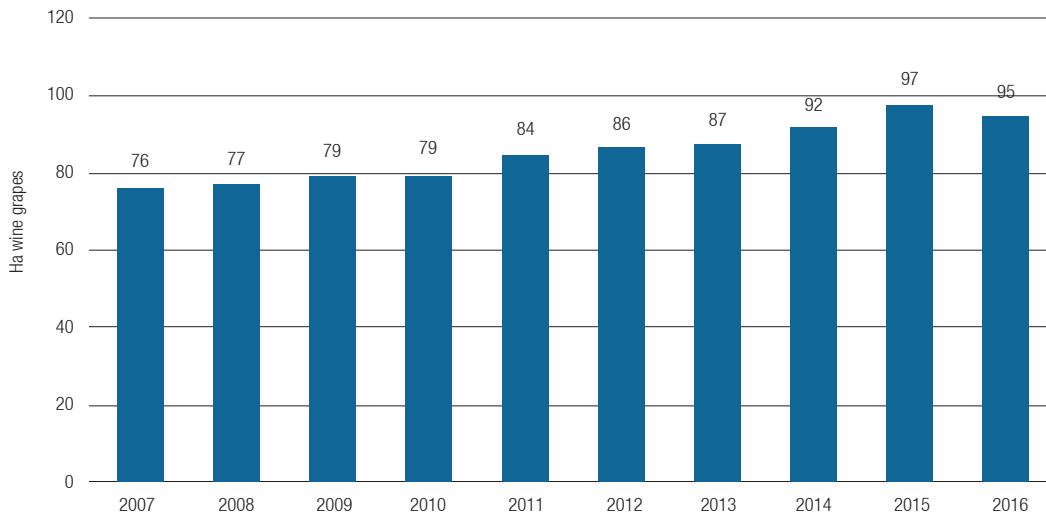


FIGURE 8. Hectares planted to grapevines per participant (bearing and non-bearing hectares) – industry average.

TON/HA

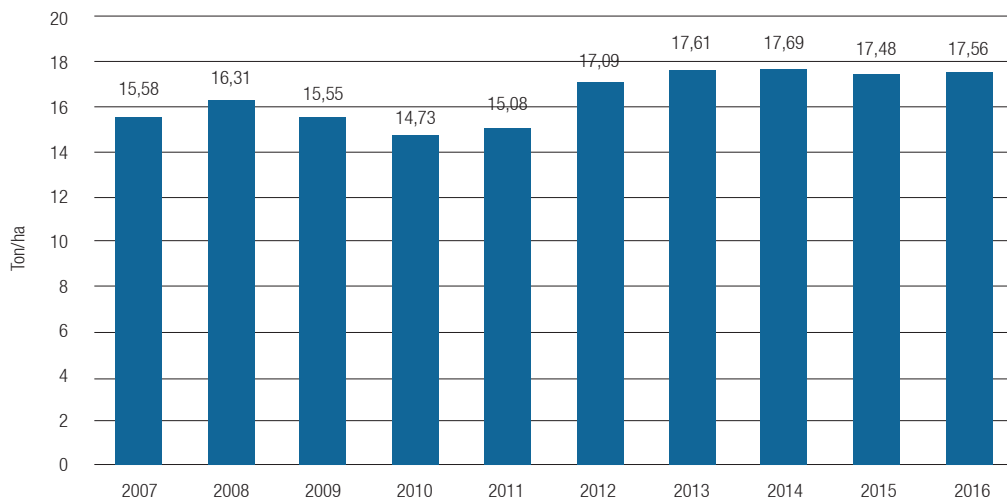


FIGURE 9. Average yield (bearing and non-bearing hectares) – industry average.

BREAK-EVEN

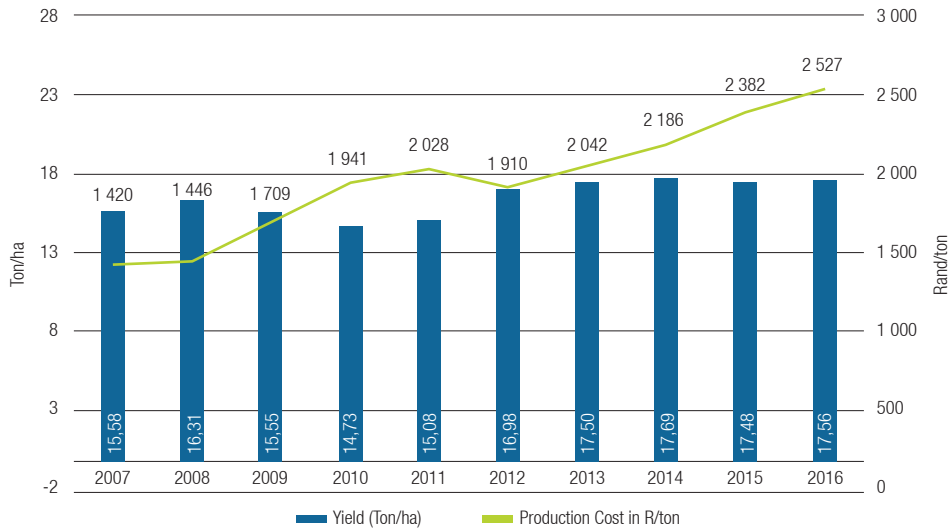


FIGURE 10. Influence of production on break-even of total production cost – industry average.

BREAK-EVEN PER DISTRICT

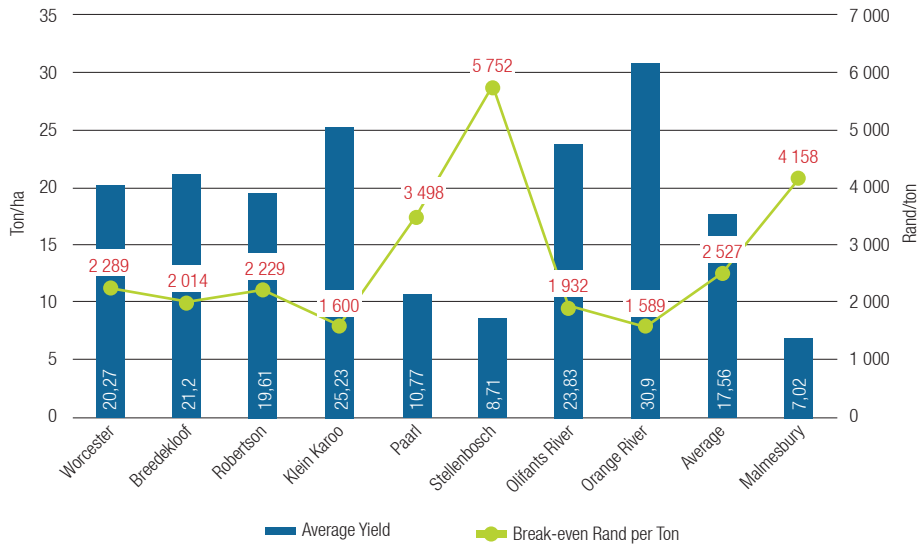


FIGURE 11. Production and break-even per district (2016 harvest).

AGE DISTRIBUTION

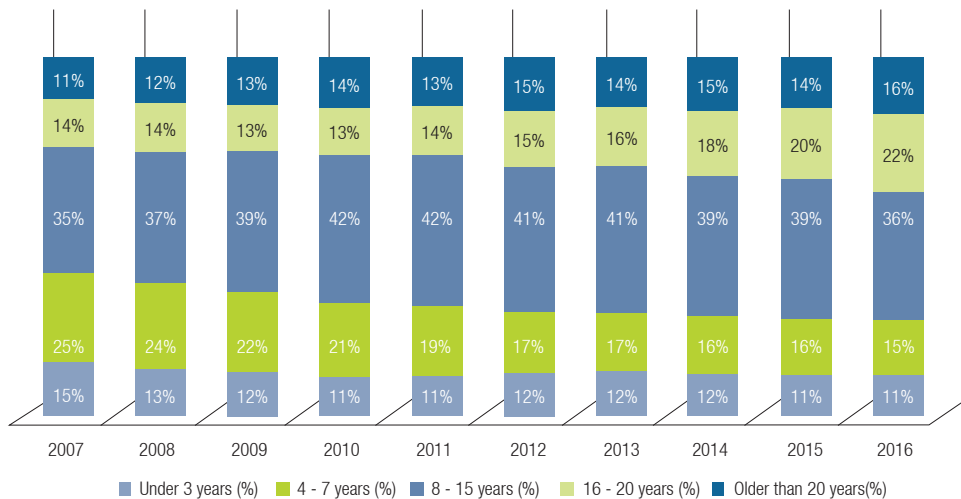


FIGURE 12. Age composition – industry average.

SPREAD OF PROFITABILITY 2016 HARVEST

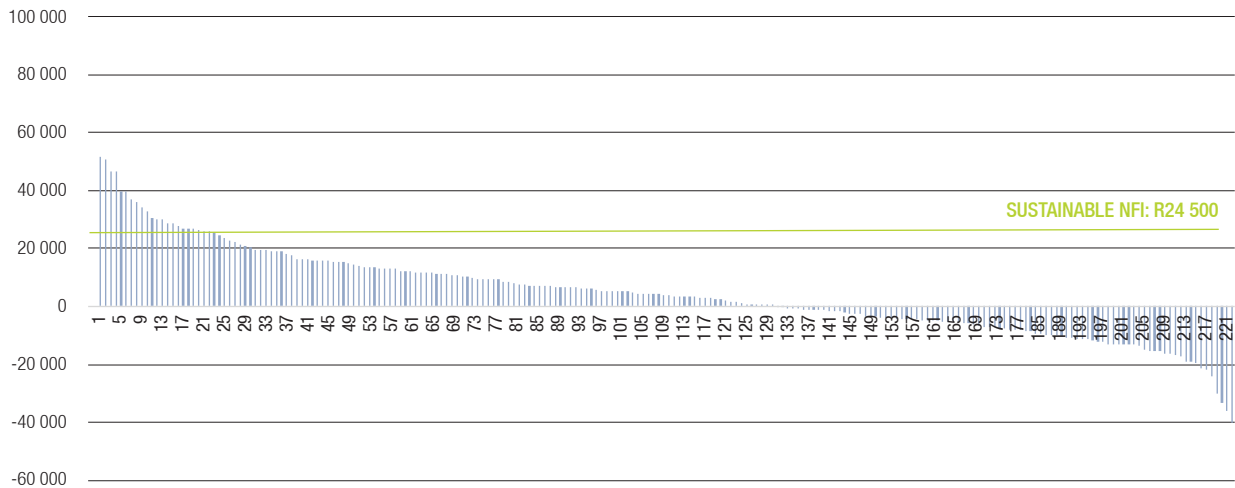


FIGURE 13. S curve.

critical in cycles of sub-inflationary increases in income. Once again agricultural inflation was higher than the average South African inflation.

PROVISION FOR RENEWAL

Production cost is not only limited to cash expenditure; capital items also have to be renewed in due course of time so as to maintain the business as a running concern and ensure a sustainable business model. Tractors, tools, other means of production, vineyards and buildings deteriorate and have to be renewed, therefore the purchase value of the item has to be recovered over a specific lifetime. By using the principle 'provision for renewal', a larger amount is recovered than in the case of 'depreciation'. To a certain extent this addresses the problem of rectilinear depreciation in value.

When calculating provision for renewal, items are written off over different periods at renewal value:

Buildings	60 years
Grapevines	20 years
Moveable assets/ means of production	7 - 15 years

Total provision for renewal amounted to R10 344/ha in the 2016 production year – a 7% increase from 2015.

PRODUCTION STRUCTURE

The average surface planted to wine grapes was 95 ha – the other enterprises are not taken into account. Economy of scale plays a significant role in the broader agriculture and this trend is increasingly common, with many producers aiming for scale benefits.

In the 2016 production year yields varied greatly among the different regions. Worcester, Robertson and the Klein-Karoo harvested record crops (biggest ever measured) while many of the other regions suffered the driest conditions in many years. The average production for bearing and non-bearing grapevines for the 2016 production year was 17.56 ton/ha. Over the past 10

years it has been an obvious trend that producers attempt to increase average yields to counter the effect of rising costs, as well as to increase profitability, but the drought made it very difficult in 2016.

CULTIVAR STRUCTURE

During the 2014 production year a cultivar analysis was also conducted to indicate the production variance between the most planted white and red cultivars. This was continued in 2015 and 2016 and will assist producers with precision farming in the coming years by showing how the cultivars in their enterprise differ and may contribute to greater profitability.

BREAK-EVEN

Total production cost per hectare, which increased by 7% from 2015, caused the break-even in terms of rand per ton to increase from R2 382/ton to R2 527/ton in 2016. In other words: the first R2 527 for a ton of grapes received by the producer during the 2016 harvest, should be applied for total production cost – no entrepreneurial remuneration, interest or tax has been taken into account yet.

The average yields differ considerably among the districts, as well as among the various cultivars, while the production cost does not differ to the same extent. This gives rise to large differences in break-even price in terms of total production cost in the respective district and among the various cultivars.

Due to financial pressure capital maintenance fell behind in many districts. This is reflected in the weakening of the average age composition of vineyards since 2006. It is nevertheless positive to see that certain districts apply replacement stringently and even expand in totality. More than 16% of the plantings are older than 20 years and 11% of the grapevines in the survey are three years and younger. The general norm is that 15% of grapevines should be three years and younger and the component older than 20 years should not be more than 15%.

TABLE 3. Industry average income and expenditure statement.

INCOME AND EXPENDITURE STATEMENT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average price per ton (Rand)	1 766	1 807	2 113	2 192	2 383	2 416	2 524	2 682	2 810	2 909
Average yield per hectare (tons)	15,58	16,31	15,55	14,73	15,08	16,98	17,50	17,69	17,48	17,56
TOTAL INCOME (R/ha)	27 513	29 479	32 857	32 281	35 943	41 023	44 171	47 456	49 108	51 092
minus										
Direct costs (R/ha)	2 482	2 855	3 463	3 920	3 992	4 150	4 670	5 382	5 744	5 959
Labour (R/ha)	6 949	6 956	7 905	8 477	9 111	9 630	10 639	12 001	13 282	14 231
Mechanisation (R/ha)	3 219	3 533	4 022	4 142	4 633	4 868	5 501	5 952	6 439	6 752
Other overheads (R/ha)	3 367	3 357	3 649	4 108	4 706	5 186	5 849	5 899	6 479	7 106
ANNUAL CASH EXPENDITURES	16 017	16 702	19 039	20 648	22 443	23 834	26 659	29 235	31 944	34 047
GROSS MARGIN (R/ha)	11 496	12 777	13 818	11 633	13 500	17 189	17 512	18 221	17 164	17 045
minus										
Provision for replacement (R/ha)	6 108	6 876	7 541	7 937	8 140	8 606	9 080	9 439	9 691	10 344
NET FARMING INCOME (R/ha)	5 388	5 901	6 277	3 696	5 360	8 583	8 432	8 781	7 473	6 702

PROFITABILITY

The profitability, in other words net farming income (NFI), is calculated as total income (R/ton x ton/ha) minus total production cost. The latter consists of cash expenditure and provision for renewal, but excludes entrepreneurial remuneration, interest obligations and tax. The total income is calculated for a specific production year and although the majority of producers realise their income at different stages, no time value of money is taken into account.

It is positive to see how total income per hectare increased over the period under review, but above-inflation cost increases, drought and a slowly increasing price exercised pressure on the NFI. For the 2016

production year the average total income amounted to R51 092/ha – only 4% more than in 2015 – whereas the NFI decreased to R6 702/ha. As a guideline for economically sustainable production, the average income and NFI for the 2016 production year for a 40 hectare unit should in fact have realised R69 190 and R24 800 per hectare respectively, and for a 100 hectare unit R61 990/ha and R17 600/ha.

The low average gross income hampers producers to implement sufficient capital renewal, consequently grapevines, buildings and moveables are beginning to exceed accepted industry norms for age. Producers are still under financial pressure which suppresses long term financial sustainability.

SUMMARY

Many producers will remember the year 2016 for its challenges and exceptions. Wine grape producers' profits were compromised in 2016 by a smaller crop and steep production cost increases. While certain regions suffered drought, others harvested record crops. Furthermore the exchange rate was not always favourable, in January 2016 the rand was 40% weaker than in January 2015 resulting in steep production cost increases.

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