

Income & Cost Budgets

Summer Crops – 2018/19



A joint initiative between the

**Bureau for Food and Agricultural Policy
(BFAP)**

and the

Protein Research Foundation (PRF)

and the

**Oil & Protein Seeds Development Trust
/ Oilseeds Advisory Committee**

and

Grain South Africa

Oil & Protein Seeds Development Trust & Oilseeds Advisory Committee

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INSIGHT

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INCOME & COST BUDGETS FOR SUMMER CROPS – 2018/19 SEASON

Foreword

The Protein Research Foundation (PRF) strives to make a significant contribution to the promotion of local production of protein on a sustainable basis, in order to satisfy the growing demand for protein for animal production purposes as well as the optimal utilisation thereof, which will lead to an increase in the standard of living of all people in the Republic of South Africa. The main objectives of the Protein Research Foundation (PRF) are to replace imported protein used in animal feed with locally produced protein and to encourage the better utilisation of this protein. The objectives are promoted through research funding and technology transfer.

Historically, the Protein Research Foundation (PRF), Grain South Africa (GSA) and the Bureau for Food and Agricultural Policy (BFAP) have published their individual cost of production budgets which focusses on key summer- and winter crops produced in South Africa's key agro-ecological zones, both under dryland- and irrigation cultivation. Given the existing activities associated within the organisations and the extent of the coverage of South African agricultural production, these initiatives are once again integrated to compile the 2018/19 summer crop budgets.

It is acknowledged that regional variation will occur and that estimates will differ from farm to farm. Whilst every care has been taken in preparing this report, it is advised to adjust the estimates according to the farm's respective location, yield potential, cultivation system and/or strategies.

Disclaimer

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Area coverage

Table 1.1 and Table 1.2 indicates the area of coverage and include the dryland and irrigated crops. The source of data and collaborators are also included.

Table 1.1: Area coverage: Dryland

Area	Dryland Crops	Source & Collaborators
KwaZulu-Natal		
Bloedrivier	Maize & Soybeans	GSA / BFAP / Individual Farmers
Mpumalanga		
Middelburg / Trichardt	Maize, Soybeans & Grain Sorghum	GSA / BFAP / Individual Farmers
Ermelo	Maize & Soybeans	GSA / BFAP / Individual Farmers
Eastern Free State		
Reitz region	Maize, soybeans, sunflower & dry beans	GSA / VKB / BFAP / Individual Farmers
Western / Northern Free State		
Wesselsbron (high potential)	Maize	GSA / Senwes / BFAP
Bothaville	Maize	GSA / Senwes / BFAP
Western / Northern Free State	Maize, soybeans, sunflower, ground nuts & grain sorghum	GSA / Senwes / BFAP
North West		
Koster	Maize, soybeans & sunflower	GSA / NWK / BFAP / Individual Farmers
Lichtenburg	Maize, soybeans, sunflower & ground nuts	GSA / NWK / BFAP / Individual Farmers

Table 1.2: Area coverage: Irrigation

Area	Irrigated Crops	Source & Collaborators
Northern Cape		
GWK Area	Maize, soybeans, ground nuts & sunflower (oil)	GWK, GSA & BFAP
KwaZulu-Natal		
Bergville	Maize & soybeans	GSA & Individual Farmers
North West		
Britz / Northam / Koedoeskop	Maize, soybeans, sunflower & sorghum	GSA, NWK & Individual Farmers
Limpopo		
Loskop Irrigation Scheme	Maize & Soybeans	GSA & Individual Farmers

Yield Assumptions

Figure 1.1 and Figure 1.2 present the yield assumptions for dryland and irrigated crops. The assumptions represent target yields and crop input allocation is based on achieving the stipulated target yields. The respective target yields were determined in a round table discussion with industry experts.

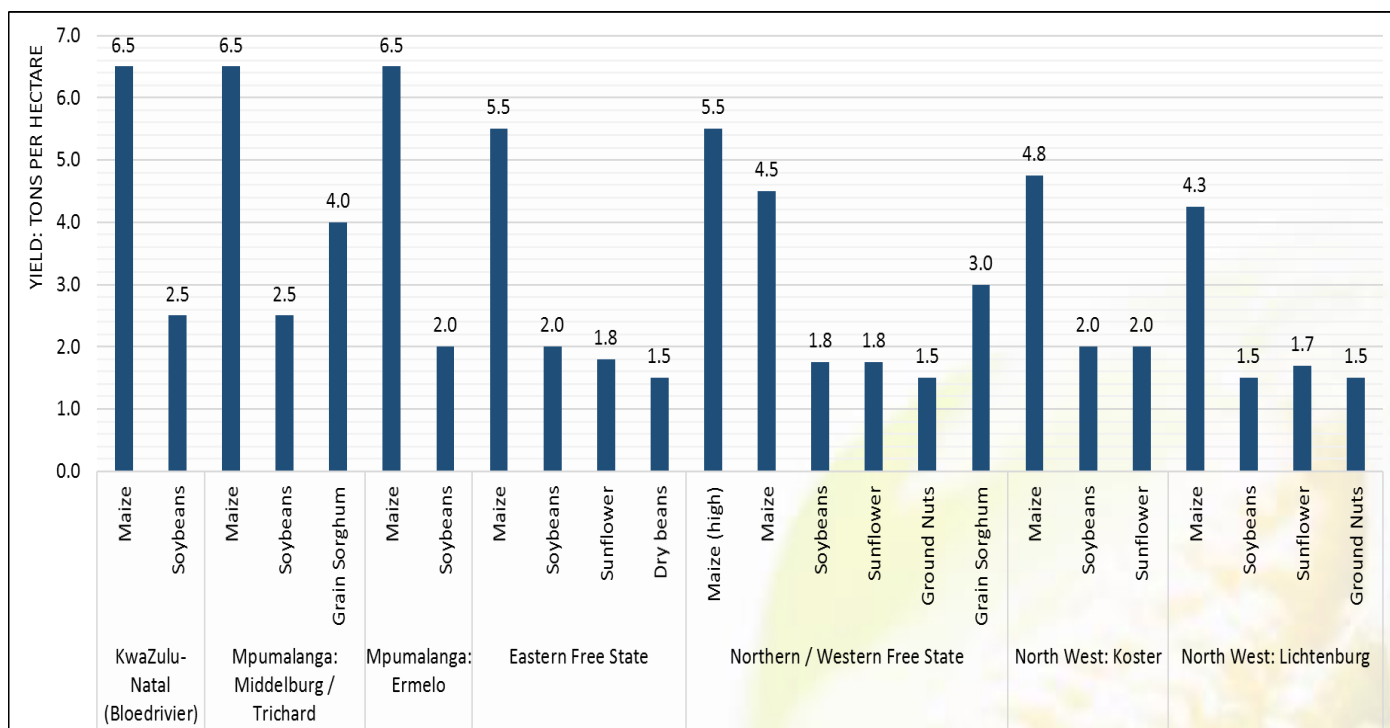


Figure 1.1: Dryland crops yield assumptions

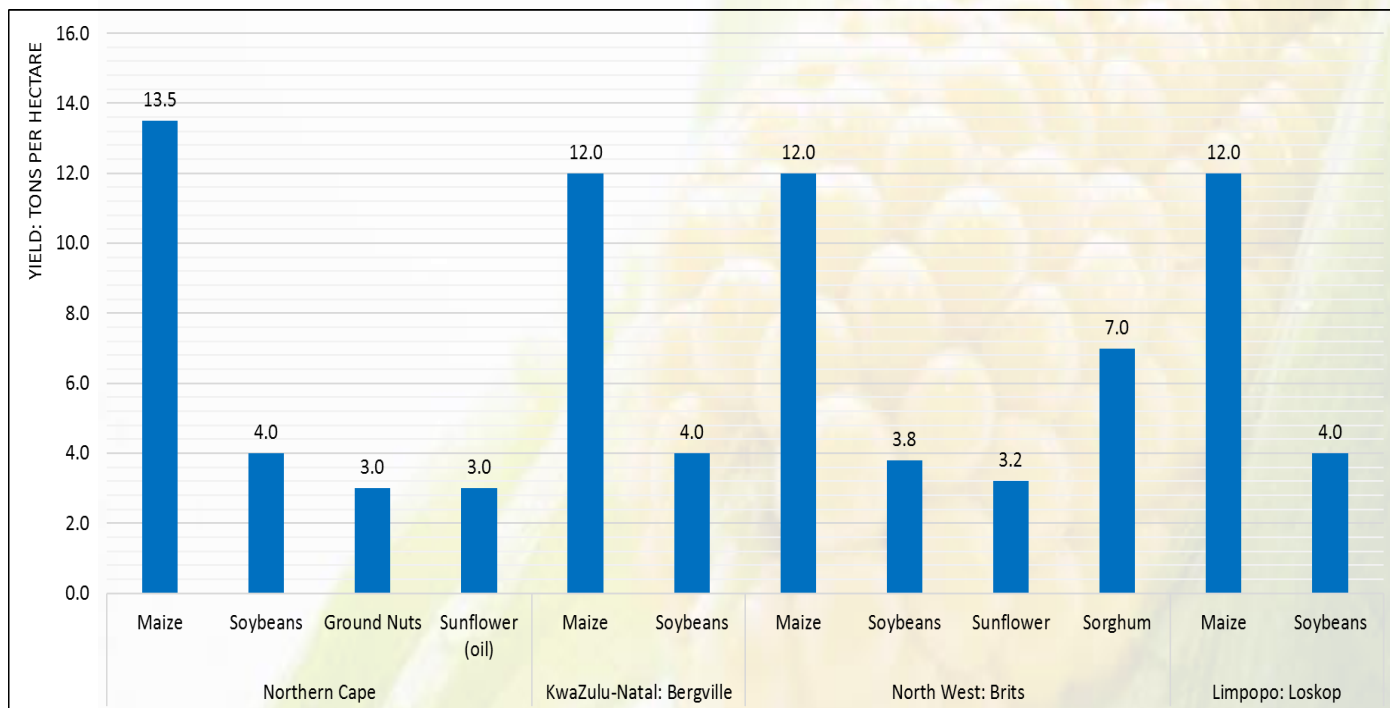


Figure 1.2: Irrigated crops yield assumptions

Crop Price Assumptions

Annually, the Bureau for Food and Agricultural Policy (BFAP) publishes an outlook on agricultural production, consumption, prices and trade in South Africa over a 10-year period. The information presented is based on assumptions about a range of economic, technological, environmental, political, institutional, and social factors. The outlook is generated by the BFAP system of models. A number of critical assumptions have to be made for baseline projections. One of the most important assumption is that normal weather conditions will prevail in Southern Africa and around the world; therefore, yields grow constantly over the baseline as technology improves. Assumptions regarding the outlook on macroeconomic conditions are based on a combination of projections developed by the International Monetary Fund (IMF), the World Bank and the Bureau for Economic Research (BER) at Stellenbosch University. Baseline projections for world commodity markets were generated by FAPRI at the University of Missouri. Once the critical assumptions are captured in the BFAP system of models, the Outlook for all commodities is simulated within a closed system of equations. This implies that, for example, any shocks in the grain sector are transmitted to the livestock sector and vice versa. Therefore, for each commodity, important components of supply and demand are identified, after which an equilibrium is established through balance sheet principles by equalling total demand to total supply.

Figure 1.3 illustrates the commodity price assumptions for white maize, yellow maize, sorghum, sunflower and soybeans that were used in the summer crop budgets for the 2018/19 production season. The sensitivity analysis in the respective crop budgets makes provision for variation in price and yield and indicates the gross margin under each price and yield combination.

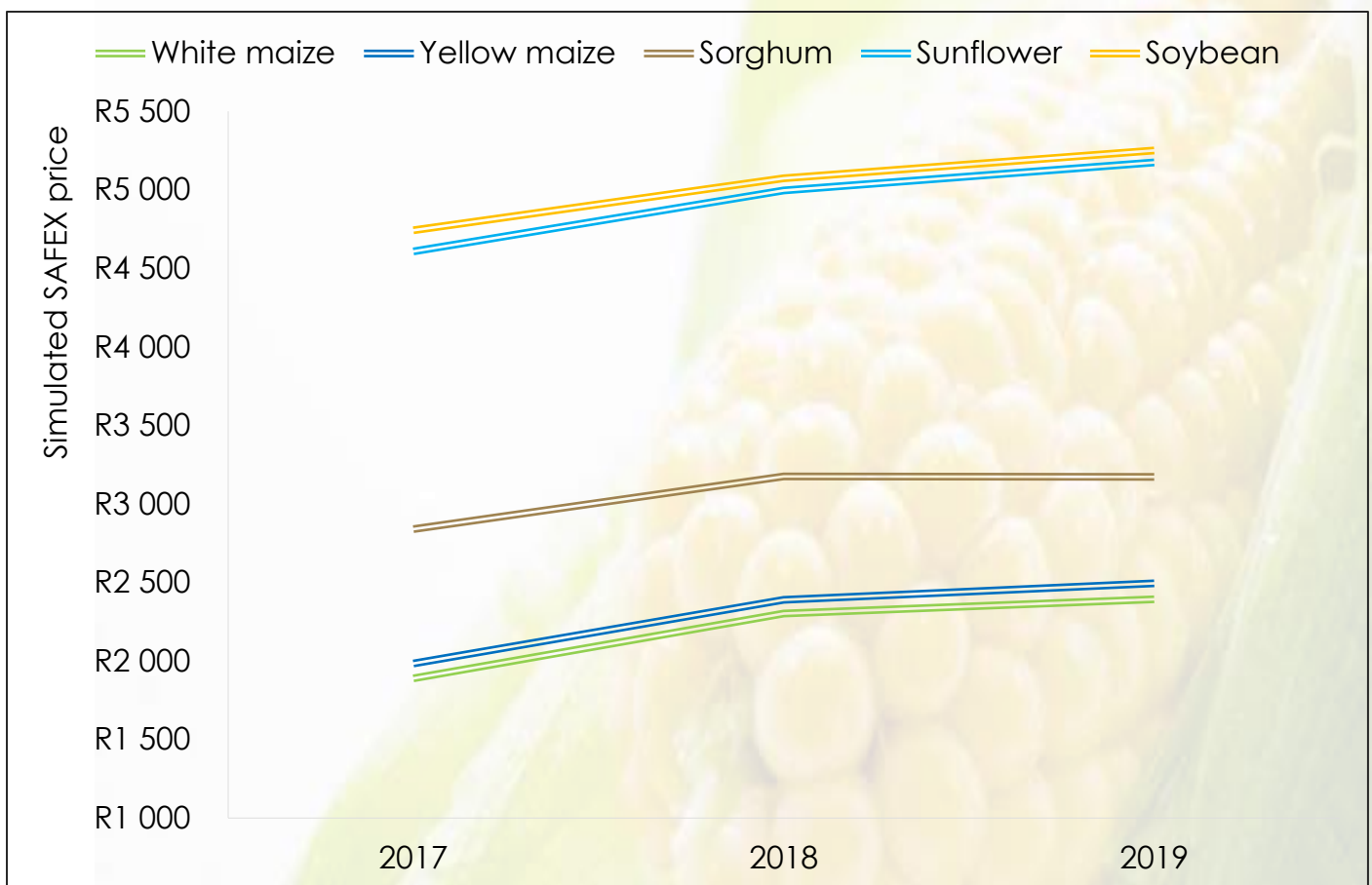


Figure 1.3: BFAP average annual commodity price projections: 2017-2019

Source: BFAP, 2018

Input Cost Trends & Assumptions

The firm depreciation in the Rand over the period from June to beginning September 2018 raises concerns on the cost for agricultural inputs for the 2018/19 production season. It is acknowledged that the depreciation provides support to domestic price levels, however it could be harmful in a scenario where the Rand appreciate towards the harvesting season. Figure 1.4 illustrates the recent increasing cost trends for key fertilisers and agricultural fuel in South Africa. Figure 1.5 presents a summary for input cost inflation assumptions for the period from 2017/18 to 2018/19 production seasons. It is important to note that intra-regional variation will occur, however, the estimates serve only as a guideline, based on trends observed in agricultural input markets.

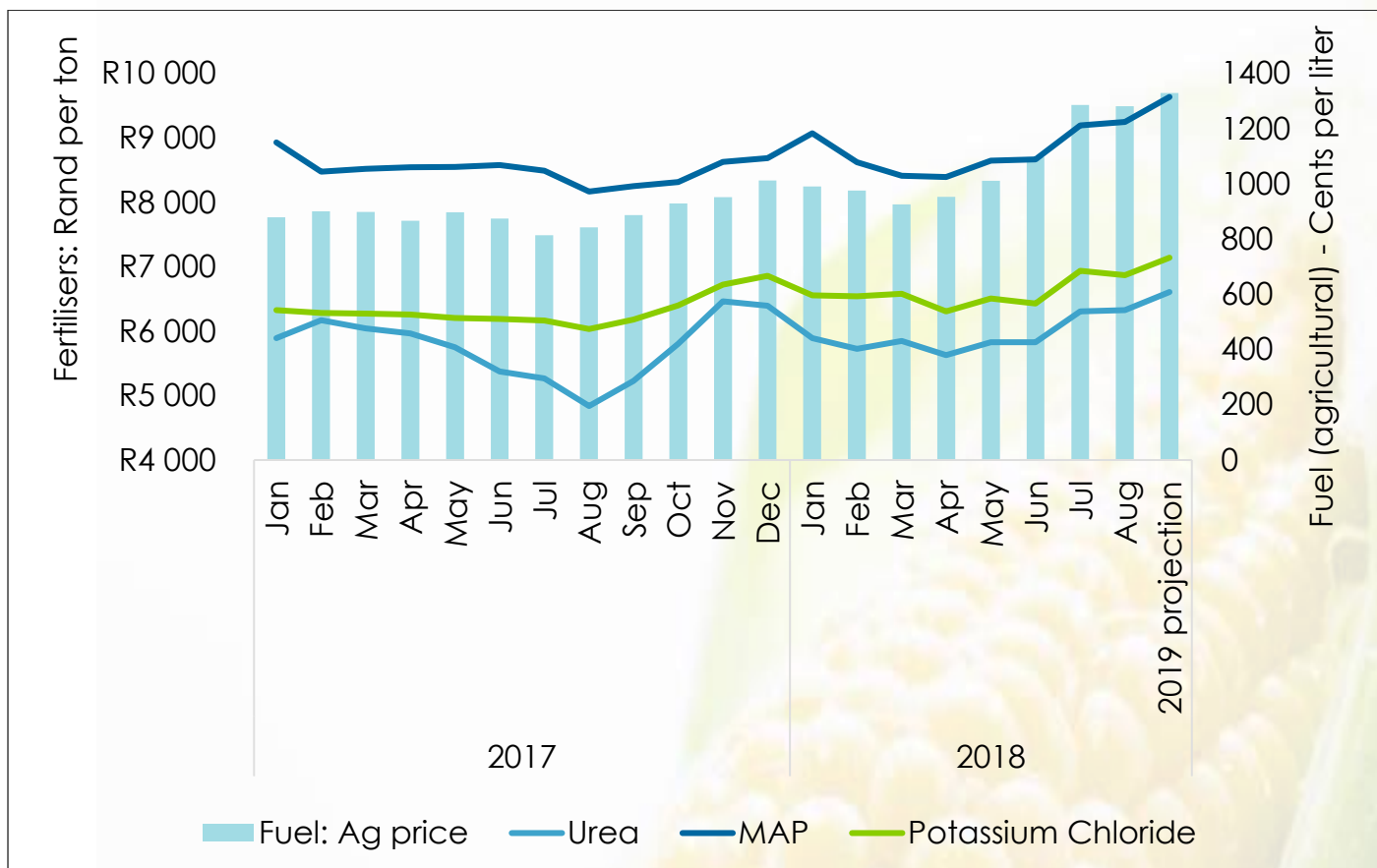


Figure 1.4: Fertiliser & fuel cost trends: January 2017 to August 2018 & 2019 projections

Source: Grain SA & BFAP, 2018

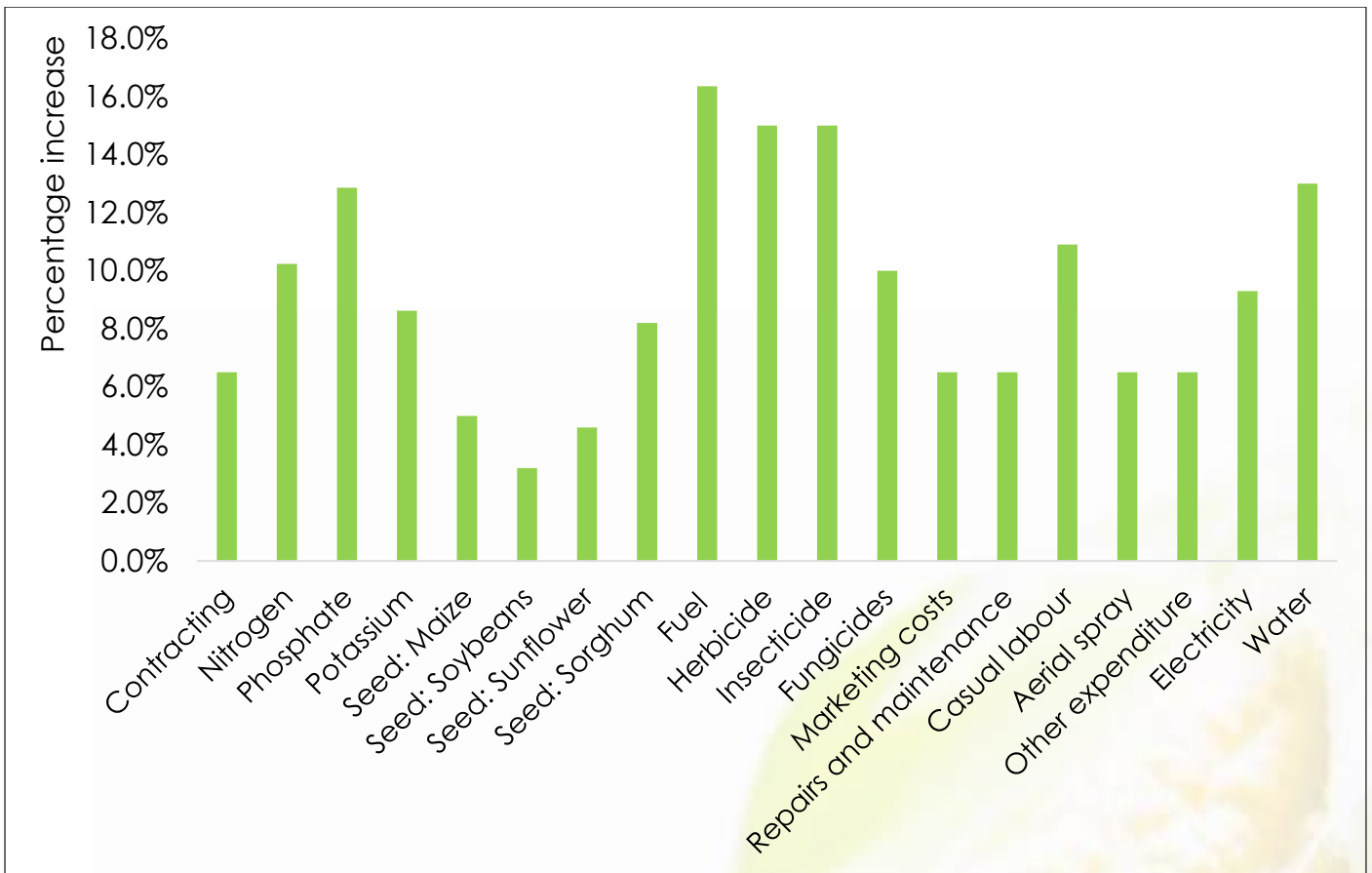


Figure 1.5: Input cost inflation summary : 2017/2018 to 2018/2019 production seasons

Source: BFAP, 2018

2018/19 INCOME & COST BUDGETS – DRYLAND PRODUCTION REGION

KwaZulu-Natal

Table 2.1: Income & cost budgets for maize & soybeans for KwaZulu-Natal (Bloedrivier Region) - Dryland

KwaZulu-Natal: Bloedrivier			
Crop		Maize	Soybeans
Production System		Dryland	Dryland
1) INCOME			
Yield: Deterministic	T/HA	6.50	2.50
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250
Total deductions	R/TON	R377	R59
- Transport differential	R/TON	R317	R-
- Grade differential	R/TON	R-	R-
- Marketing & Handling	R/TON	R60	R59
Price premiums	R/TON	R-	R-
Net Farm Gate Price	R/TON	R2 117	R5 191
GROSS INCOME	R/HA	R13 763	R12 978
2) VARIABLE EXPENDITURES			
Contracting	R/HA	R-	R-
Crop insurance	R/HA	R523	R1 583
Fertilizer	R/HA	R3 748	R1 938
Lime	R/HA	R600	R-
Seed	R/HA	R2 727	R1 035
Fuel	R/HA	R896	R501
Herbicide	R/HA	R1 027	R1 051
Insecticide	R/HA	R95	R259
Fungicides	R/HA	R695	R530
Marketing costs	R/HA	R-	R-
Repairs and maintenance	R/HA	R680	R446
Casual labour	R/HA	R256	R-
Aerial spray	R/HA	R-	R-
Other expenditure	R/HA	R-	R-
TOTAL VARIABLE EXPENDITURE	R/HA	R11 246	R7 344
TOTAL VARIABLE EXPENDITURE	R/TON	R1 730	R2 938
3.1) GROSS MARGIN:	R/HA	R2 517	R5 635
3.2) GROSS MARGIN:	R/TON	R387	R2 254

Source: BFAP, GSA & Individual Farmers, 2018

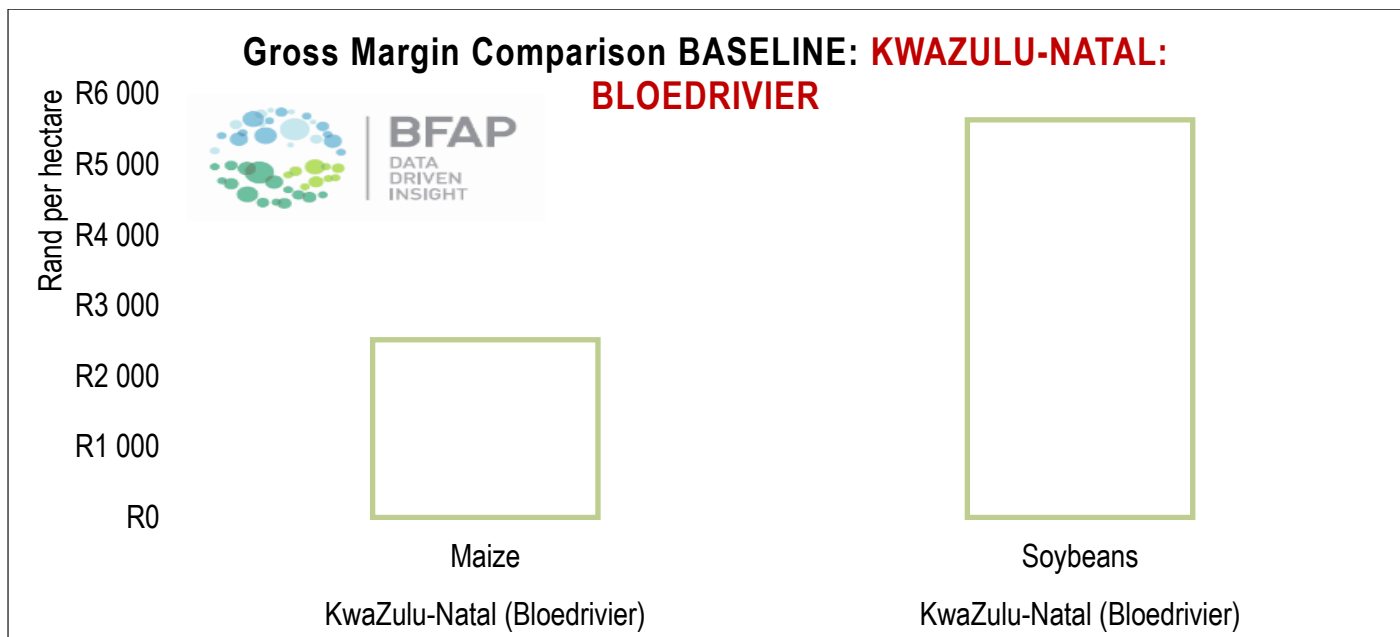


Figure 2.1: Gross margin comparison – Baseline: KwaZulu-Natal (Bloedrivier Region)

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): KWAZULU-NATAL: BLOEDRIVIER

PRODUCERS PRICE	YIELD (T/HA)							
	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50
R4 791	R 1 041	R 2 239	R 3 437	R 4 635	R 5 832	R 7 030	R 8 228	R 9 426
R4 891	R 1 216	R 2 439	R 3 662	R 4 885	R 6 107	R 7 330	R 8 553	R 9 776
R4 991	R 1 391	R 2 639	R 3 887	R 5 135	R 6 382	R 7 630	R 8 878	R 10 124
R5 091	R 1 566	R 2 839	R 4 112	R 5 385	R 6 657	R 7 930	R 9 203	R 10 476
R5 191	R 1 741	R 3 039	R 4 337	R 5 635	R 6 932	R 8 230	R 9 528	R 10 824
R5 291	R 1 916	R 3 239	R 4 562	R 5 885	R 7 207	R 8 530	R 9 853	R 11 176
R5 391	R 2 091	R 3 439	R 4 787	R 6 135	R 7 482	R 8 830	R 10 178	R 11 476
R5 491	R 2 266	R 3 639	R 5 012	R 6 385	R 7 757	R 9 130	R 10 503	R 11 876
R5 591	R 2 441	R 3 839	R 5 237	R 6 635	R 8 032	R 9 430	R 10 828	R 12 224

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): KWAZULU-NATAL: BLOEDRIVIER

YIELD PRICE (R/TON)	YIELD PRICE (R/TON)									
	R 4 891	R 4 991	R 5 091	R 5 191	R 5 291	R 5 391	R 5 491	R 5 591	R 5 691	R 5 791
1.50	-R 2 524	-R 2 374	-R 2 224	-R 2 074	-R 1 924	-R 1 774	-R 1 624	-R 1 474	-R 1 324	-R 1 174
1.75	-R 1 301	-R 1 126	-R 951	-R 776	-R 601	-R 426	-R 251	-R 76	-R 101	-R 251
2.00	-R 78	R 122	R 322	R 522	R 722	R 922	R 1 122	R 1 322	R 1 522	R 1 722
2.25	R 1 144	R 1 369	R 1 594	R 1 819	R 2 044	R 2 269	R 2 494	R 2 719	R 2 944	R 3 169
2.50	R 2 367	R 2 617	R 2 867	R 3 117	R 3 367	R 3 617	R 3 867	R 4 117	R 4 367	R 4 617
2.75	R 3 590	R 3 865	R 4 140	R 4 415	R 4 690	R 4 965	R 5 240	R 5 515	R 5 790	R 6 065
3.00	R 4 813	R 5 113	R 5 413	R 5 713	R 6 013	R 6 313	R 6 613	R 6 913	R 7 213	R 7 513
3.25	R 6 036	R 6 361	R 6 686	R 7 011	R 7 336	R 7 661	R 7 986	R 8 311	R 8 636	R 8 961
3.50	R 7 259	R 7 609	R 7 959	R 8 309	R 8 659	R 9 009	R 9 359	R 9 709	R 10 059	R 10 409

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

Mpumalanga

Table 2.2: Income & cost budgets for maize, soybeans & grain sorghum for Mpumalanga - Dryland

Crop	Middelburg / Trichardt			Ermelo		
		Maize	Soybeans	Grain Sorghum	Maize	Soybeans
Production System		Dryland	Dryland	Dryland	Dryland	Dryland
1) INCOME						
Yield: Deterministic	T/HA	6.50	2.50	4.00	6.50	2.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250	R3 172	R2 494	R5 250
Total deductions	R/TON	R260	R59	R63	R329	R60
- Transport differential	R/TON	R200	R-	R-	R269	R-
- Grade differential	R/TON	R-	R-	R-	R-	R-
- Marketing & Handling	R/TON	R60	R59	R63	R60	R60
Price premiums	R/TON	R-	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 234	R5 191	R3 109	R2 165	R5 190
GROSS INCOME	R/HA	R14 524	R12 978	R12 434	R14 075	R10 381
2) VARIABLE EXPENDITURES						
Contracting	R/HA	R-	R-	R-	R-	R-
Crop insurance	R/HA	R552	R1 583	R373	R535	R1 266
Fertilizer	R/HA	R3 138	R1 981	R2 092	R3 138	R1 785
Lime	R/HA	R600	R-	R600	R600	R-
Seed	R/HA	R2 231	R1 035	R585	R2 112	R949
Fuel	R/HA	R869	R689	R923	R869	R668
Herbicide	R/HA	R1 027	R1 051	R617	R1 027	R1 051
Insecticide	R/HA	R95	R259	R428	R95	R259
Fungicides	R/HA	R395	R230	R695	R395	R230
Marketing costs	R/HA	R-	R-	R-	R-	R-
Repairs and maintenance	R/HA	R672	R536	R695	R672	R532
Casual labour	R/HA	R256	R-	R-	R256	R-
Aerial spray	R/HA	R-	R-	R-	R-	R-
Other expenditure	R/HA	R-	R-	R192	R-	R-
TOTAL VARIABLE EXPENDITURE	R/HA	R9 835	R7 365	R7 200	R9 699	R6 741
TOTAL VARIABLE EXPENDITURE	R/TON	R1 513	R2 946	R1 800	R1 492	R3 371
3.1) GROSS MARGIN:	R/HA	R4 689	R5 613	R5 234	R4 377	R3 639
3.2) GROSS MARGIN:	R/TON	R721	R2 245	R1 309	R673	R1 820

Source: BFAP, GSA & Individual Farmers, 2018

Gross Margin Comparison BASELINE: Mpumalanga

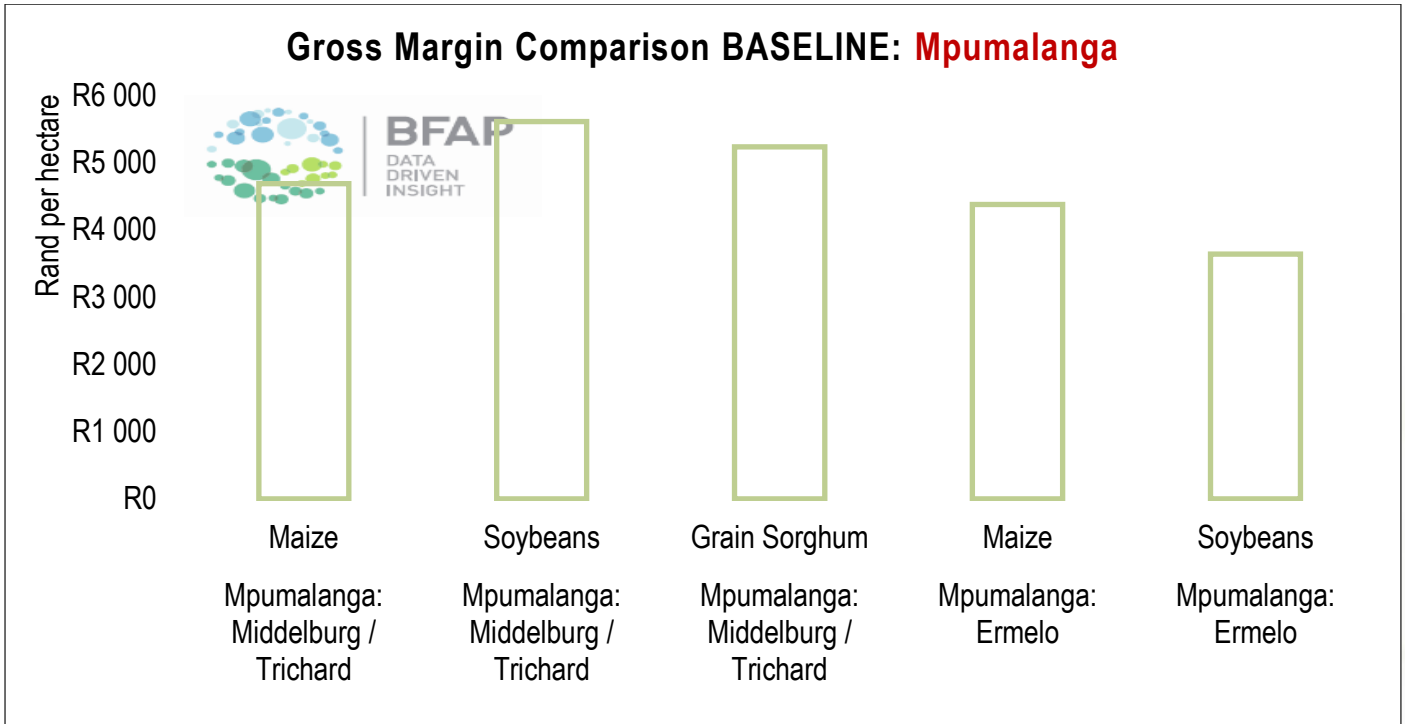


Figure 2.2: Gross margin comparison – Baseline: Mpumalanga

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): MPUMALANGA: MIDDELBURG / TRICHARD										
PRODUCERS PRICE	YIELD (T/HA)									
	1.75	2.00	2.25	2.50	2.75	3.00	3.25			
R4 791	R 1 019	R 2 217	R 3 415	R 4 613	R 5 811	R 7 009	R 8 207			
R4 891	R 1 194	R 2 417	R 3 640	R 4 863	R 6 086	R 7 309	R 8 532			
R4 991	R 1 369	R 2 617	R 3 865	R 5 113	R 6 361	R 7 609	R 8 857			
R5 091	R 1 544	R 2 817	R 4 090	R 5 363	R 6 636	R 7 909	R 9 182			
R5 191	R 1 719	R 3 017	R 4 315	R 5 613	R 6 911	R 8 209	R 9 507			
R5 291	R 1 894	R 3 217	R 4 540	R 5 863	R 7 186	R 8 509	R 9 832			
R5 391	R 2 069	R 3 417	R 4 765	R 6 113	R 7 461	R 8 809	R 10 157			
R5 491	R 2 244	R 3 617	R 4 990	R 6 363	R 7 736	R 9 109	R 10 482			
R5 591	R 2 419	R 3 817	R 5 215	R 6 613	R 8 011	R 9 409	R 10 807			

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): MPUMALANGA: MIDDELBURG / TRICHARD										
YIELD PRICE (R/TON)	YIELD PRICE (R/TON)									
	4 891	4 991	5 091	5 191	5 291	5 391	5 491			
1.50	-R 4 717	-R 4 567	-R 4 417	-R 4 267	-R 4 117	-R 3 967	-R 3 817			
1.75	-R 3 495	-R 3 320	-R 3 145	-R 2 970	-R 2 795	-R 2 620	-R 2 445			
2.00	-R 2 272	-R 2 072	-R 1 872	-R 1 672	-R 1 472	-R 1 272	-R 1 072			
2.25	-R 1 049	-R 824	-R 599	-R 374	-R 149	R 76	R 301			
2.50	R 174	R 424	R 674	R 924	R 1 174	R 1 424	R 1 674			
2.75	R 1 397	R 1 672	R 1 947	R 2 222	R 2 497	R 2 772	R 3 047			
3.00	R 2 620	R 2 920	R 3 220	R 3 520	R 3 820	R 4 120	R 4 420			
3.25	R 3 843	R 4 168	R 4 493	R 4 818	R 5 143	R 5 468	R 5 793			
3.50	R 5 065	R 5 415	R 5 765	R 6 115	R 6 465	R 6 815	R 7 165			

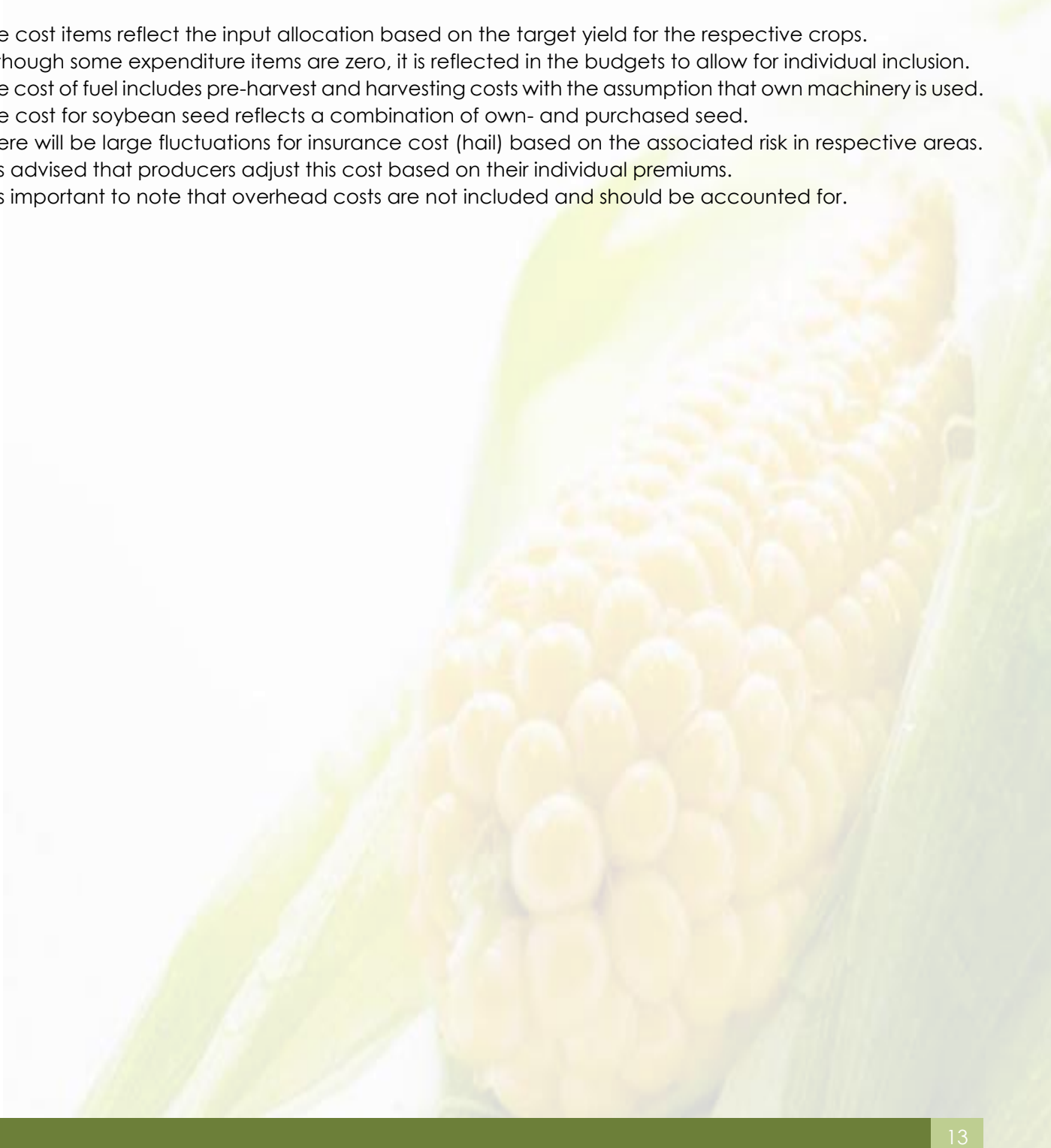
SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): MPUMALANGA: ERMELO										
PRODUCERS PRICE	YIELD (T/HA)									
	1.25	1.50	1.75	2.00	2.25	2.50	2.75			
R4 790	-R 753	R 444	R 1 642	R 2 839	R 4 037	R 5 234	R 6 432			
R4 890	-R 628	R 594	R 1 817	R 3 039	R 4 262	R 5 484	R 6 707			
R4 990	-R 503	R 744	R 1 992	R 3 239	R 4 487	R 5 734	R 6 982			
R5 090	-R 378	R 894	R 2 167	R 3 439	R 4 712	R 5 984	R 7 257			
R5 190	-R 253	R 1 044	R 2 342	R 3 639	R 4 937	R 6 234	R 7 532			
R5 290	-R 128	R 1 194	R 2 517	R 3 839	R 5 162	R 6 484	R 7 807			
R5 390	-R 3	R 1 344	R 2 692	R 4 039	R 5 387	R 6 734	R 8 082			
R5 490	R 122	R 1 494	R 2 867	R 4 239	R 5 612	R 6 984	R 8 357			
R5 590	R 247	R 1 644	R 3 042	R 4 439	R 5 837	R 7 234	R 8 632			

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): MPUMALANGA: ERMELO

	YIELD PRICE (R/TON)													
	R	4 890	R	4 990	R	5 090	R	5 190	R	5 290	R	5 390	R	5 490
1.00	-R	6 228	-R	6 128	-R	6 028	-R	5 928	-R	5 828	-R	5 728	-R	5 628
1.25	-R	5 005	-R	4 880	-R	4 755	-R	4 630	-R	4 505	-R	4 380	-R	4 255
1.50	-R	3 782	-R	3 632	-R	3 482	-R	3 332	-R	3 182	-R	3 032	-R	2 882
1.75	-R	2 560	-R	2 385	-R	2 210	-R	2 035	-R	1 860	-R	1 685	-R	1 510
2.00	-R	1 337	-R	1 137	-R	937	-R	737	-R	537	-R	337	-R	137
2.25	-R	115	R	110	R	335	R	560	R	785	R	1 010	R	1 235
2.50	R	1 108	R	1 358	R	1 608	R	1 858	R	2 108	R	2 358	R	2 608
2.75	R	2 331	R	2 606	R	2 881	R	3 156	R	3 431	R	3 706	R	3 981
3.00	R	3 553	R	3 853	R	4 153	R	4 453	R	4 753	R	5 053	R	5 353

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.



Eastern Free State

Table 2.3: Income & cost budgets for maize, soybeans, sunflower & dry beans for Eastern Free State - Dryland

Eastern Free State					
Crop		Maize	Soybeans	Sunflower	Dry beans
Production System		Dryland	Dryland	Dryland	Dryland
1) INCOME					
Yield: Deterministic	T/HA	5.50	2.00	1.80	1.50
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250	R5 174	R12 500
Total deductions	R/TON	R313	R62	R363	R62
- Transport differential	R/TON	R253	R-	R270	R-
- Grade differential	R/TON	R-	R-	R-	R-
- Marketing & Handling	R/TON	R60	R62	R93	R62
Price premiums	R/TON	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 181	R5 188	R4 811	R12 438
GROSS INCOME	R/HA	R11 998	R10 377	R8 660	R18 657
2) VARIABLE EXPENDITURES					
Contracting	R/HA	R-	R-	R-	R1 225
Crop insurance	R/HA	R360	R1 038	R372	R750
Fertilizer	R/HA	R3 017	R1 034	R1 497	R1 651
Lime	R/HA	R424	R-	R-	R451
Seed	R/HA	R1 388	R1 035	R509	R3 125
Fuel	R/HA	R968	R661	R690	R607
Herbicide	R/HA	R1 027	R1 051	R764	R1 374
Insecticide	R/HA	R95	R259	R128	R1 264
Fungicides	R/HA	R395	R230	R-	R-
Marketing costs	R/HA	R-	R-	R-	R-
Repairs and maintenance	R/HA	R985	R698	R807	R676
Casual labour	R/HA	R200	R-	R-	R399
Aerial spray	R/HA	R-	R-	R-	R-
Other expenditure	R/HA	R-	R54	R135	R96
TOTAL VARIABLE EXPENDITURE	R/HA	R8 858	R6 061	R4 902	R11 617
TOTAL VARIABLE EXPENDITURE	R/TON	R1 611	R3 031	R2 723	R7 745
3.1) GROSS MARGIN:	R/HA	R3 140	R4 315	R3 758	R7 040
3.2) GROSS MARGIN:	R/TON	R571	R2 158	R2 088	R4 693

Source: BFAP, GSA, VKB & Individual Farmers, 2018

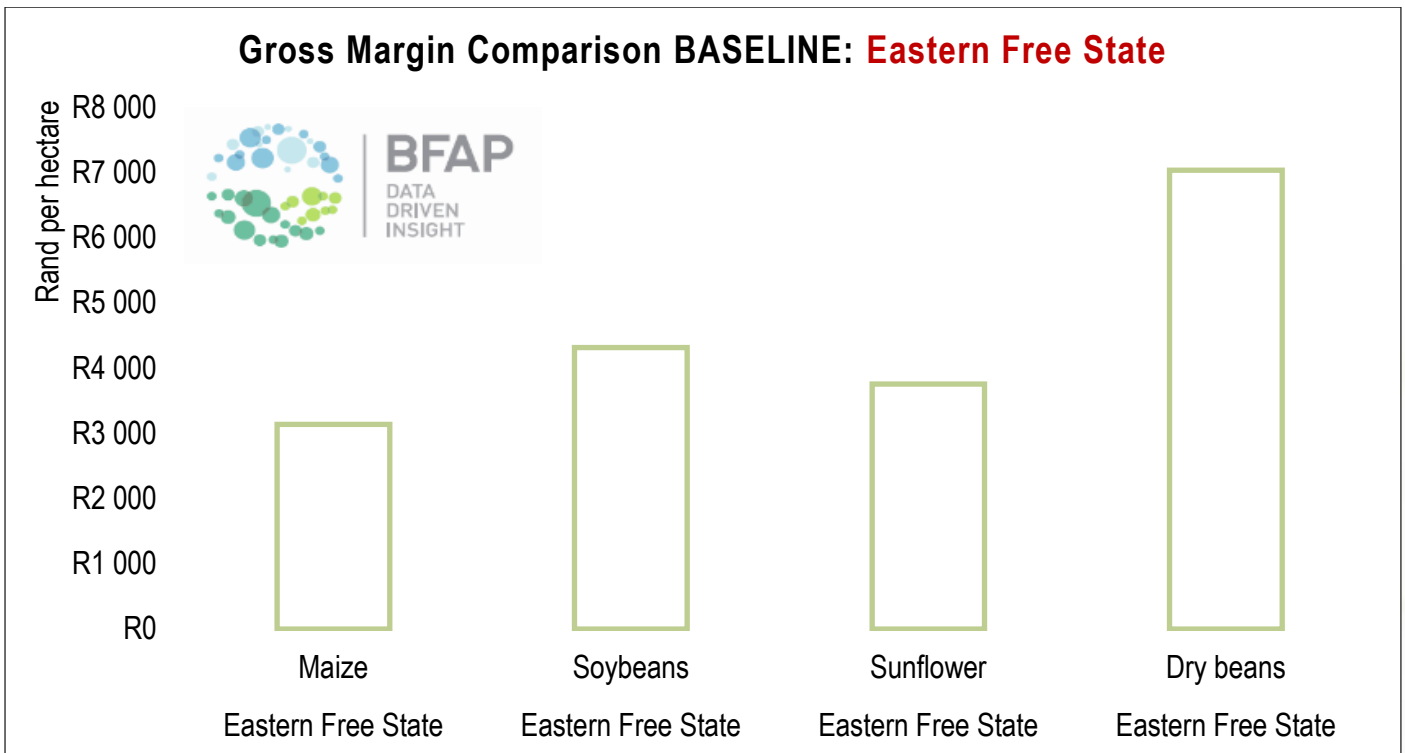


Figure 2.3: Gross margin comparison – Baseline: Eastern Free State

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): EASTERN FREE STATE

PRODUCERS PRICE	YIELD (T/HA)						
	1.25	1.50	1.75	2.00	2.25	2.50	2.75
R4 788	R 76	R 1 121	R 2 318	R 3 515	R 4 713	R 5 910	R 7 107
R4 888	R 49	R 1 271	R 2 493	R 3 715	R 4 938	R 6 160	R 7 382
R4 988	R 174	R 1 421	R 2 668	R 3 915	R 5 163	R 6 410	R 7 657
R5 088	R 299	R 1 571	R 2 843	R 4 115	R 5 388	R 6 660	R 7 932
R5 188	R 424	R 1 721	R 3 018	R 4 315	R 5 613	R 6 910	R 8 207
R5 288	R 549	R 1 871	R 3 193	R 4 515	R 5 838	R 7 160	R 8 482
R5 388	R 674	R 2 021	R 3 368	R 4 715	R 6 063	R 7 410	R 8 757
R5 488	R 799	R 2 171	R 3 543	R 4 915	R 6 288	R 7 660	R 9 032
R5 588	R 924	R 2 321	R 3 718	R 5 115	R 6 513	R 7 910	R 9 307

SUNFLOWER SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): EASTERN FREE STATE

PRODUCERS PRICE	YIELD (T/HA)						
	1.00	1.25	1.50	1.80	2.00	2.25	2.50
R4 411	R 491	R 612	R 1 715	R 3 038	R 3 921	R 5 023	R 6 126
R4 511	R 391	R 737	R 1 865	R 3 218	R 4 121	R 5 248	R 6 376
R4 611	R 291	R 862	R 2 015	R 3 398	R 4 321	R 5 473	R 6 626
R4 711	R 191	R 987	R 2 165	R 3 578	R 4 521	R 5 698	R 6 876
R4 811	R 91	R 1 112	R 2 315	R 3 758	R 4 721	R 5 923	R 7 126
R4 911	R 9	R 1 237	R 2 465	R 3 938	R 4 921	R 6 148	R 7 376
R5 011	R 109	R 1 362	R 2 615	R 4 118	R 5 121	R 6 373	R 7 626
R5 111	R 209	R 1 487	R 2 765	R 4 298	R 5 321	R 6 598	R 7 876
R5 211	R 309	R 1 612	R 2 915	R 4 478	R 5 521	R 6 823	R 8 126

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): EASTERN FREE STATE

YIELD PRICE (R/TON)		R 4 888 R 4 988 R 5 088 R 5 188 R 5 288 R 5 388 R 5 488	
1.00	-R 4 312 -R 4 212 -R 4 112 -R 4 012 -R 3 912 -R 3 812 -R 3 712		
1.25	-R 3 090 -R 2 965 -R 2 840 -R 2 715 -R 2 590 -R 2 465 -R 2 340		
1.50	-R 1 868 -R 1 718 -R 1 568 -R 1 418 -R 1 268 -R 1 118 -R 968		
1.75	-R 646 -R 471 -R 296 -R 121 R 54 R 229 R 404		
2.00	R 576 R 776 R 976 R 1 176 R 1 376 R 1 576 R 1 776		
2.25	R 1 798 R 2 023 R 2 248 R 2 473 R 2 698 R 2 923 R 3 148		
2.50	R 3 020 R 3 270 R 3 520 R 3 770 R 4 020 R 4 270 R 4 520		
2.75	R 4 242 R 4 517 R 4 792 R 5 067 R 5 342 R 5 617 R 5 892		
3.00	R 5 464 R 5 764 R 6 064 R 6 364 R 6 664 R 6 964 R 7 264		

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

Western / Northern Free State

Table 2.4: Income & cost budgets for maize, soybeans, sunflower, ground nuts & grain sorghum for Western / Northern Free State - Dryland

Area		Wessels bron	Botha- ville	Western / Northern Free State			
Crop		Maize	Maize (high)	Soybean	Sunflower	Ground Nuts	Grain Sorghum
Production System		Dryland	Dryland	Dryland	Dryland	Dryland	Dryland
1) INCOME							
Yield: Deterministic	T/HA	5.50	4.50	1.75	1.75	1.50	3.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 393	R2 393	R5 250	R5 174	R7 447	R3 172
Total deductions	R/TON	R340	R280	R63	R296	R-	R80
- Transport differential	R/TON	R277	R217	R-	R203	R-	R-
- Grade differential	R/TON	R-	R-	R-	R-	R-	R17
- Marketing & Handling	R/TON	R63	R63	R63	R93	R-	R63
Price premiums	R/TON	R-	R-	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 053	R2 113	R5 187	R4 879	R7 447	R3 092
GROSS INCOME	R/HA	R11 290	R9 508	R9 078	R8 538	R11 170	R9 276
2) VARIABLE EXPENDITURES							
Contracting	R/HA	R-	R-	R-	R-	R-	R-
Crop insurance	R/HA	R124	R105	R220	R256	R168	R371
Fertilizer	R/HA	R2 931	R2 337	R842	R1 270	R701	R754
Lime	R/HA	R124	R102	R-	R-	R124	R113
Seed	R/HA	R1 336	R1 137	R794	R431	R1 430	R293
Fuel	R/HA	R997	R940	R655	R743	R1 088	R926
Herbicide	R/HA	R791	R737	R682	R406	R738	R505
Insecticide	R/HA	R29	R77	R909	R578	R465	R249
Fungicides	R/HA	R-	R-	R-	R-	R-	R-
Marketing costs	R/HA	R-	R-	R-	R-	R-	R-
Repairs and maintenance	R/HA	R801	R753	R613	R582	R1 329	R744
Casual labour	R/HA	R268	R219	R-	R-	R998	R146
Aerial spray	R/HA	R-	R-	R-	R-	R-	R-
Other expenditure	R/HA	R-	R-	R-	R-	R533	R-
TOTAL VARIABLE EXPENDITURE	R/HA	R7 402	R6 408	R4 715	R4 265	R7 573	R4 100
TOTAL VARIABLE EXPENDITURE	R/TON	R1 346	R1 424	R2 694	R2 437	R5 049	R1 367
3.1) GROSS MARGIN:	R/HA	R3 889	R3 100	R4 363	R4 273	R3 597	R5 176
3.2) GROSS MARGIN:	R/TON	R707	R689	R2 493	R2 442	R2 398	R1 725

Source: BFAP, GSA & Senwes, 2018

Gross Margin Comparison BASELINE: NORTHERN FREE STATE

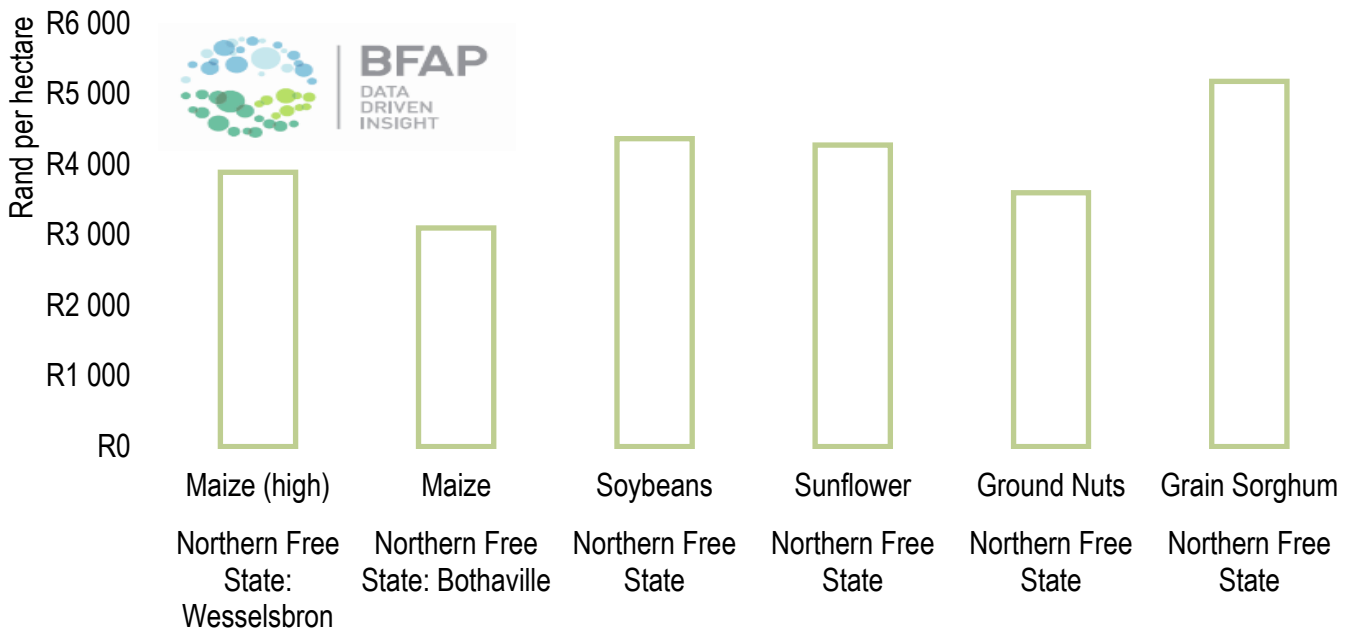


Figure 2.4: Gross margin comparison – Baseline: Western / Northern Free State

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN FREE STATE

PRODUCERS PRICE	YIELD (T/HA)													
	1.00		1.25		1.50		1.75		2.00		2.25		2.50	
R4 787	R 72	R 1 269	R 2 466	R 3 663	R 4 860	R 6 057	R 7 253							
R4 887	R 172	R 1 394	R 2 616	R 3 838	R 5 060	R 6 282	R 7 503							
R4 987	R 272	R 1 519	R 2 766	R 4 013	R 5 260	R 6 507	R 7 753							
R5 087	R 372	R 1 644	R 2 916	R 4 188	R 5 460	R 6 732	R 8 003							
R5 187	R 472	R 1 769	R 3 066	R 4 363	R 5 660	R 6 957	R 8 253							
R5 287	R 572	R 1 894	R 3 216	R 4 538	R 5 860	R 7 182	R 8 503							
R5 387	R 672	R 2 019	R 3 366	R 4 713	R 6 060	R 7 407	R 8 753							
R5 487	R 772	R 2 144	R 3 516	R 4 888	R 6 260	R 7 632	R 9 003							
R5 587	R 872	R 2 269	R 3 666	R 5 063	R 6 460	R 7 857	R 9 253							

SUNFLOWER SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN FREE STATE

PRODUCERS PRICE	YIELD (T/HA)													
	1.00		1.25		1.50		1.75		2.00		2.25		2.50	
R4 479	R 214	R 1 333	R 2 453	R 3 573	R 4 692	R 5 812	R 6 932							
R4 579	R 314	R 1 458	R 2 603	R 3 748	R 4 892	R 6 037	R 7 182							
R4 679	R 414	R 1 583	R 2 753	R 3 923	R 5 092	R 6 262	R 7 432							
R4 779	R 514	R 1 708	R 2 903	R 4 098	R 5 292	R 6 487	R 7 682							
R4 879	R 614	R 1 833	R 3 053	R 4 273	R 5 492	R 6 712	R 7 932							
R4 979	R 714	R 1 958	R 3 203	R 4 448	R 5 692	R 6 937	R 8 182							
R5 079	R 814	R 2 083	R 3 353	R 4 623	R 5 892	R 7 162	R 8 432							
R5 179	R 914	R 2 208	R 3 503	R 4 798	R 6 092	R 7 387	R 8 682							
R5 279	R 1 014	R 2 333	R 3 653	R 4 973	R 6 292	R 7 612	R 8 932							

GROUND NUTS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN FREE STATE

PRODUCERS PRICE	YIELD (T/HA)							
	0.75	1.00	1.25	1.50	1.75	2.00	2.25	
R7 047	-R 1 613	R 373	R 2 360	R 4 347	R 6 333	R 8 320	R 10 307	
R7 147	-R 1 538	R 473	R 2 485	R 4 497	R 6 508	R 8 520	R 10 532	
R7 247	-R 1 463	R 573	R 2 610	R 4 647	R 6 683	R 8 720	R 10 757	
R7 347	-R 1 388	R 673	R 2 735	R 4 797	R 6 858	R 8 920	R 10 982	
R7 447	-R 1 313	R 773	R 2 860	R 4 947	R 7 033	R 9 120	R 11 207	
R7 547	-R 1 238	R 873	R 2 985	R 5 097	R 7 208	R 9 320	R 11 432	
R7 647	-R 1 163	R 973	R 3 110	R 5 247	R 7 383	R 9 520	R 11 657	
R7 747	-R 1 088	R 1 073	R 3 235	R 5 397	R 7 558	R 9 720	R 11 882	
R7 847	-R 1 013	R 1 173	R 3 360	R 5 547	R 7 733	R 9 920	R 12 107	

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): NORTHERN FREE STATE

YIELD PRICE (R/TON)														
	R	4 887	R	4 987	R	5 087	R	5 187	R	5 287	R	5 387	R	5 487
0.75	-R	4 938	-R	4 863	-R	4 788	-R	4 713	-R	4 638	-R	4 563	-R	4 488
1.00	-R	3 716	-R	3 616	-R	3 516	-R	3 416	-R	3 316	-R	3 216	-R	3 116
1.25	-R	2 494	-R	2 369	-R	2 244	-R	2 119	-R	1 994	-R	1 869	-R	1 744
1.50	-R	1 273	-R	1 123	-R	973	-R	823	-R	673	-R	523	-R	373
1.75	-R	51	R	124	R	299	R	474	R	649	R	824	R	999
2.00	R	1 171	R	1 371	R	1 571	R	1 771	R	1 971	R	2 171	R	2 371
2.25	R	2 393	R	2 618	R	2 843	R	3 068	R	3 293	R	3 518	R	3 743
2.50	R	3 615	R	3 865	R	4 115	R	4 365	R	4 615	R	4 865	R	5 115
2.75	R	4 837	R	5 112	R	5 387	R	5 662	R	5 937	R	6 212	R	6 487

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

North West: Koster

Table 2.5: Income & cost budgets for maize, soybeans & sunflower for North West: Koster region - Dryland

Area		North West: Koster		
Crop		Maize	Soybeans	Sunflower
Production System		Dryland	Dryland	Dryland
1) INCOME				
Yield: Deterministic	T/HA	4.75	2.00	2.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 393	R5 250	R5 174
Total deductions	R/TON	R211	R59	R221
- Transport differential	R/TON	R148	R-	R128
- Grade differential	R/TON	R-	R-	R-
- Marketing & Handling	R/TON	R63	R59	R93
Price premiums	R/TON	R-	R-	R-
Net Farm Gate Price	R/TON	R2 182	R5 191	R4 954
GROSS INCOME	R/HA	R10 364	R10 383	R9 908
2) VARIABLE EXPENDITURES				
Contracting	R/HA	R-	R-	R-
Crop insurance	R/HA	R176	R862	R277
Fertilizer	R/HA	R2 354	R982	R1 409
Lime	R/HA	R325	R-	R-
Seed	R/HA	R754	R621	R437
Fuel	R/HA	R947	R750	R788
Herbicide	R/HA	R983	R665	R406
Insecticide	R/HA	R587	R252	R578
Fungicides	R/HA	R-	R-	R-
Marketing costs	R/HA	R-	R-	R-
Repairs and maintenance	R/HA	R933	R632	R734
Casual labour	R/HA	R231	R-	R147
Aerial spray	R/HA	R-	R-	R-
Other expenditure	R/HA	R-	R-	R-
TOTAL VARIABLE EXPENDITURE	R/HA	R7 288	R4 764	R4 776
TOTAL VARIABLE EXPENDITURE	R/TON	R1 534	R2 382	R2 388
3.1) GROSS MARGIN:	R/HA	R3 075	R5 619	R5 131
3.2) GROSS MARGIN:	R/TON	R647	R2 809	R2 566

Source: BFAP, GSA, NWK & Individual Farmers, 2018

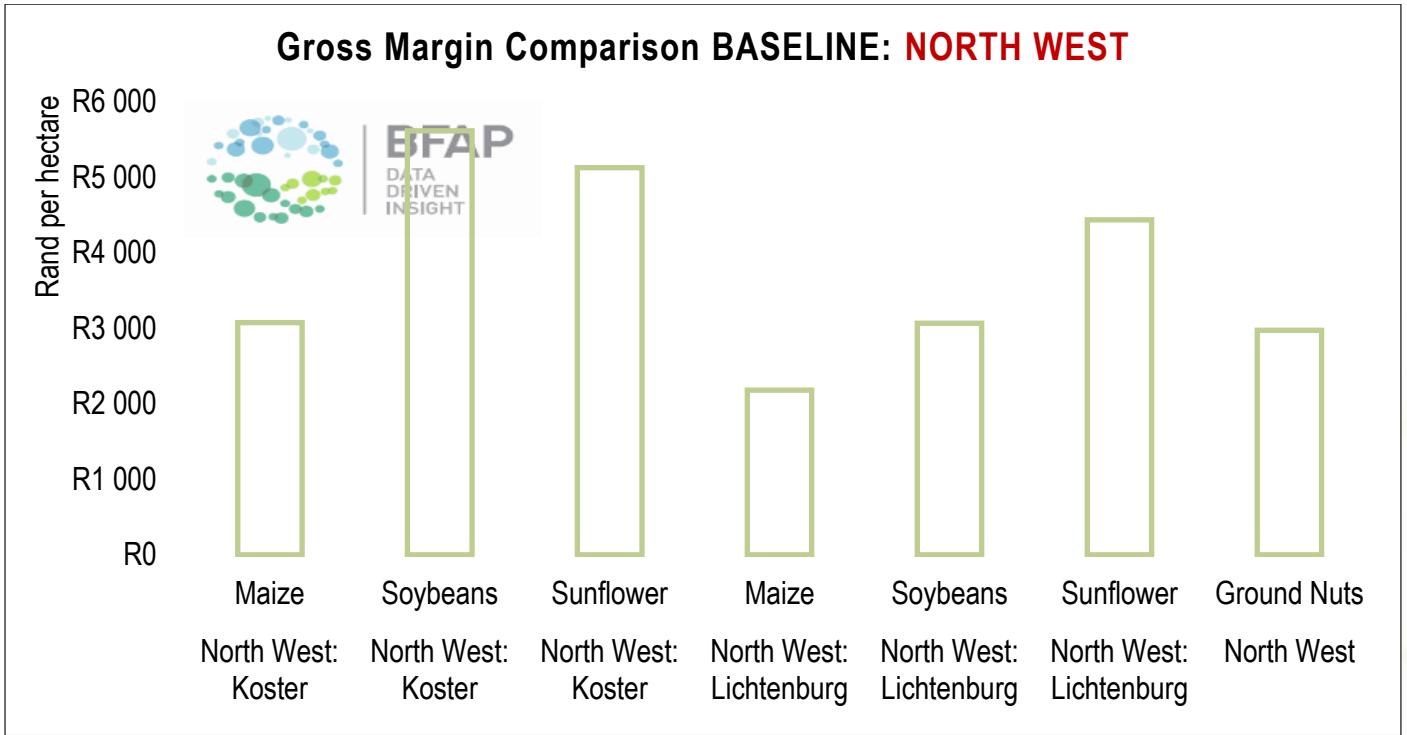


Figure 2.5: Gross margin comparison – Baseline: North West: Koster & Lichtenburg

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST KOSTER

PRODUCERS PRICE	YIELD (T/HA)						
	1.25	1.50	1.75	2.00	2.25	2.50	2.75
R4 791	R 1 225	R 2 423	R 3 621	R 4 819	R 6 017	R 7 215	R 8 413
R4 891	R 1 350	R 2 573	R 3 796	R 5 019	R 6 242	R 7 465	R 8 688
R4 991	R 1 475	R 2 723	R 3 971	R 5 219	R 6 467	R 7 715	R 8 963
R5 091	R 1 600	R 2 873	R 4 146	R 5 419	R 6 692	R 7 965	R 9 238
R5 191	R 1 725	R 3 023	R 4 321	R 5 619	R 6 917	R 8 215	R 9 513
R5 500	R 2 111	R 3 486	R 4 861	R 6 236	R 7 611	R 8 986	R 10 361
R5 750	R 2 424	R 3 861	R 5 299	R 6 736	R 8 174	R 9 611	R 11 049
R6 000	R 2 736	R 4 236	R 5 736	R 7 236	R 8 736	R 10 236	R 11 736
R6 250	R 3 049	R 4 611	R 6 174	R 7 736	R 9 299	R 10 861	R 12 424

SUNFLOWER SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST KOSTER

PRODUCERS PRICE	YIELD (T/HA)						
	1.25	1.50	1.75	2.00	2.25	2.50	2.75
R4 554	R 916	R 2 054	R 3 193	R 4 331	R 5 470	R 6 608	R 7 747
R4 654	R 1 041	R 2 204	R 3 368	R 4 531	R 5 695	R 6 858	R 8 022
R4 754	R 1 166	R 2 354	R 3 543	R 4 731	R 5 920	R 7 108	R 8 297
R4 854	R 1 291	R 2 504	R 3 718	R 4 931	R 6 145	R 7 358	R 8 572
R4 954	R 1 416	R 2 654	R 3 893	R 5 131	R 6 370	R 7 608	R 8 847
R5 250	R 1 786	R 3 099	R 4 411	R 5 724	R 7 036	R 8 349	R 9 661
R5 500	R 2 099	R 3 474	R 4 849	R 6 224	R 7 599	R 8 974	R 10 349
R5 750	R 2 411	R 3 849	R 5 286	R 6 724	R 8 161	R 9 599	R 11 036
R6 000	R 2 724	R 4 224	R 5 724	R 7 224	R 8 724	R 10 224	R 11 724

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): NORTH WEST KOSTER

YIELD PRICE (R/TON)		R	4 891	R	4 991	R	5 091	R	5 191	R	5 291	R	5 391	R	5 491
0.50	-R	5 393	-R	5 343	-R	5 293	-R	5 243	-R	5 193	-R	5 143	-R	5 093	
0.75	-R	4 170	-R	4 095	-R	4 020	-R	3 945	-R	3 870	-R	3 795	-R	3 720	
1.00	-R	2 948	-R	2 848	-R	2 748	-R	2 648	-R	2 548	-R	2 448	-R	2 348	
1.25	-R	1 725	-R	1 600	-R	1 475	-R	1 350	-R	1 225	-R	1 100	-R	975	
2.00	R	1 944	R	2 144	R	2 344	R	2 544	R	2 744	R	2 944	R	3 144	
1.75	R	721	R	896	R	1 071	R	1 246	R	1 421	R	1 596	R	1 771	
2.00	R	1 944	R	2 144	R	2 344	R	2 544	R	2 744	R	2 944	R	3 144	
2.25	R	3 167	R	3 392	R	3 617	R	3 842	R	4 067	R	4 292	R	4 517	
2.50	R	4 389	R	4 639	R	4 889	R	5 139	R	5 389	R	5 639	R	5 889	

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

North West: Lichtenburg

Table 2.6: Income & cost budgets for maize, soybeans & sunflower for North West: Lichtenburg region - Dryland

Area		North West: Lichtenburg			
Crop		Maize	Soybeans	Sunflower	Ground Nuts
Production System		Dryland	Dryland	Dryland	Dryland
1) INCOME					
Yield: Deterministic	T/HA	4.25	1.50	1.70	1.50
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 393	R5 250	R5 174	R7 447
Total deductions	R/TON	R260	R60	R271	R-
- Transport differential	R/TON	R197	R-	R178	R-
- Grade differential	R/TON	R-	R-	R-	R-
- Marketing & Handling	R/TON	R63	R60	R93	R-
Price premiums	R/TON	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 133	R5 190	R4 903	R7 447
GROSS INCOME	R/HA	R9 064	R7 786	R8 336	R11 170
2) VARIABLE EXPENDITURES					
Contracting	R/HA	R-	R-	R-	R-
Crop insurance	R/HA	R154	R646	R233	R246
Fertilizer	R/HA	R2 121	R1 179	R1 262	R701
Lime	R/HA	R325	R-	R-	R124
Seed	R/HA	R678	R621	R437	R1 430
Fuel	R/HA	R930	R728	R777	R1 088
Herbicide	R/HA	R1 124	R665	R286	R826
Insecticide	R/HA	R391	R252	R24	R1 452
Fungicides	R/HA	R-	R-	R-	R-
Marketing costs	R/HA	R-	R-	R-	R-
Repairs and maintenance	R/HA	R929	R628	R732	R1 185
Casual labour	R/HA	R231	R-	R147	R750
Aerial spray	R/HA	R-	R-	R-	R-
Other expenditure	R/HA	R-	R-	R-	R392
TOTAL VARIABLE EXPENDITURE	R/HA	R6 884	R4 718	R3 898	R8 194
TOTAL VARIABLE EXPENDITURE	R/TON	R1 620	R3 146	R2 293	R5 463
3.1) GROSS MARGIN:	R/HA	R2 181	R3 067	R4 437	R2 975
3.2) GROSS MARGIN:	R/TON	R513	R2 045	R2 610	R1 984

Source: BFAP, GSA, NWK & Individual Farmers, 2018

Gross Margin Comparison BASELINE: NORTH WEST

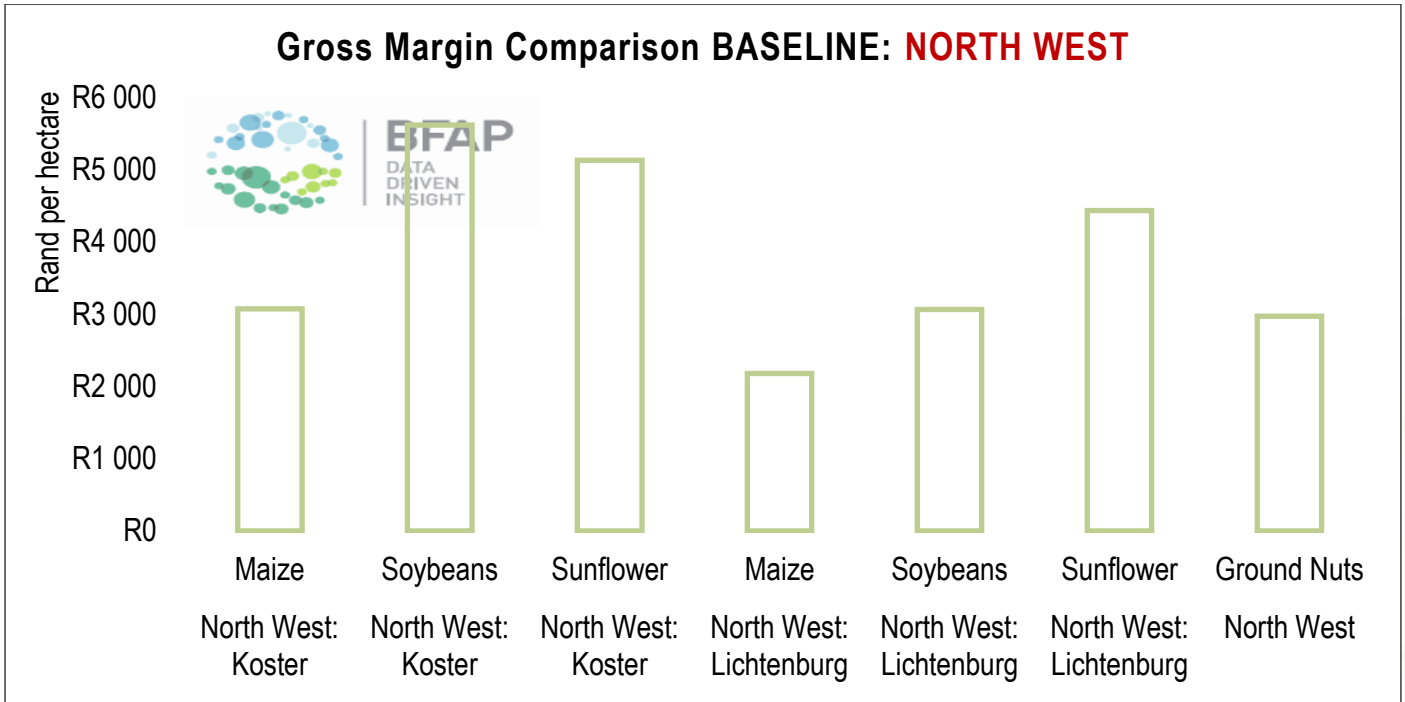


Figure 2.6: Gross margin comparison – Baseline: North West: Koster & Lichtenburg

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST LICHTENBURG

PRODUCERS PRICE	YIELD (T/HA)							
	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.25
R4 790	-R 1 126	R 72	R 1 270	R 2 467	R 3 665	R 4 862	R 6 060	
R4 890	-R 1 051	R 172	R 1 395	R 2 617	R 3 840	R 5 062	R 6 285	
R4 990	-R 976	R 272	R 1 520	R 2 767	R 4 015	R 5 262	R 6 510	
R5 090	-R 901	R 372	R 1 645	R 2 917	R 4 190	R 5 462	R 6 735	
R5 190	-R 826	R 472	R 1 770	R 3 067	R 4 365	R 5 662	R 6 960	
R5 290	-R 751	R 572	R 1 895	R 3 217	R 4 540	R 5 862	R 7 185	
R5 390	-R 676	R 672	R 2 020	R 3 367	R 4 715	R 6 062	R 7 410	
R5 490	-R 601	R 772	R 2 145	R 3 517	R 4 890	R 6 262	R 7 635	
R5 590	-R 526	R 872	R 2 270	R 3 667	R 5 065	R 6 462	R 7 860	

SUNFLOWER SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST LICHTENBURG

PRODUCERS PRICE	YIELD (T/HA)							
	1.00	1.25	1.50	1.70	2.00	2.25	2.50	2.50
R4 503	R 605	R 1 731	R 2 857	R 3 757	R 5 108	R 6 234	R 7 360	
R4 603	R 705	R 1 856	R 3 007	R 3 927	R 5 308	R 6 459	R 7 610	
R4 703	R 805	R 1 981	R 3 157	R 4 097	R 5 508	R 6 684	R 7 860	
R4 803	R 905	R 2 106	R 3 307	R 4 267	R 5 708	R 6 909	R 8 110	
R4 903	R 1 005	R 2 231	R 3 457	R 4 437	R 5 908	R 7 134	R 8 360	
R5 003	R 1 105	R 2 356	R 3 607	R 4 607	R 6 108	R 7 359	R 8 610	
R5 103	R 1 205	R 2 481	R 3 757	R 4 777	R 6 308	R 7 584	R 8 860	
R5 203	R 1 305	R 2 606	R 3 907	R 4 947	R 6 508	R 7 809	R 9 110	
R5 303	R 1 405	R 2 731	R 4 057	R 5 117	R 6 708	R 8 034	R 9 360	

GROUND NUTS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST

		YIELD (T/HA)													
PRODUCERS PRICE		0.75		1.00		1.25		1.50		1.75		2.00		2.25	
R7 047	-R	2 234	-R	248	R	1 739	R	3 725	R	5 712	R	7 699	R	9 685	
R7 147	-R	2 159	-R	148	R	1 864	R	3 875	R	5 887	R	7 899	R	9 910	
R7 247	-R	2 084	-R	48	R	1 989	R	4 025	R	6 062	R	8 099	R	10 135	
R7 347	-R	2 009	R	52	R	2 114	R	4 175	R	6 237	R	8 299	R	10 360	
R7 447	-R	1 934	R	152	R	2 239	R	4 325	R	6 412	R	8 499	R	10 585	
R7 547	-R	1 859	R	252	R	2 364	R	4 475	R	6 587	R	8 699	R	10 810	
R7 647	-R	1 784	R	352	R	2 489	R	4 625	R	6 762	R	8 899	R	11 035	
R7 747	-R	1 709	R	452	R	2 614	R	4 775	R	6 937	R	9 099	R	11 260	
R7 847	-R	1 634	R	552	R	2 739	R	4 925	R	7 112	R	9 299	R	11 485	

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): NORTH WEST LICHTENBURG

		YIELD PRICE (R/TON)													
		R	4 890	R	4 990	R	5 090	R	5 190	R	5 290	R	5 390	R	5 490
0.50	-R	4 454	-R	4 404	-R	4 354	-R	4 304	-R	4 254	-R	4 204	-R	4 154	
0.75	-R	3 231	-R	3 156	-R	3 081	-R	3 006	-R	2 931	-R	2 856	-R	2 781	
1.00	-R	2 009	-R	1 909	-R	1 809	-R	1 709	-R	1 609	-R	1 509	-R	1 409	
1.25	-R	786	-R	661	-R	536	-R	411	-R	286	-R	161	-R	36	
1.50	R	436	R	586	R	736	R	886	R	1 036	R	1 186	R	1 336	
1.75	R	1 659	R	1 834	R	2 009	R	2 184	R	2 359	R	2 534	R	2 709	
2.00	R	2 882	R	3 082	R	3 282	R	3 482	R	3 682	R	3 882	R	4 082	
2.25	R	4 104	R	4 329	R	4 554	R	4 779	R	5 004	R	5 229	R	5 454	
2.50	R	5 327	R	5 577	R	5 827	R	6 077	R	6 327	R	6 577	R	6 827	

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

2018/19 INCOME & COST BUDGETS – IRRIGATION

Northern Cape

Table 3.1: Income & cost budgets for maize, soybeans, ground nuts & sunflower (oil) for Northern Cape - Irrigation

Northern Cape: Irrigation					
Area		Maize	Soybeans	Ground Nuts	Sunflower (oil)
Crop		Maize	Soybeans	Ground Nuts	Sunflower (oil)
Production System		Irrigation	Irrigation	Irrigation	Irrigation
1) INCOME					
Yield: Deterministic	T/HA	13.50	4.00	3.00	3.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250	R8 750	R5 174
Total deductions	R/TON	R355	R59	R-	R-
- Transport differential	R/TON	R292	R-	R-	R-
- Grade differential	R/TON	R-	R-	R-	R-
- Marketing & Handling	R/TON	R63	R59	R-	R-
Price premiums	R/TON	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 139	R5 191	R8 750	R5 174
GROSS INCOME	R/HA	R28 882	R20 766	R28 275	R15 523
2) VARIABLE EXPENDITURES					
Contracting	R/HA	R-	R-	R3 250	R1 425
Crop insurance	R/HA	R578	R2 118	R283	R497
Fertilizer	R/HA	R9 760	R6 019	R7 475	R5 404
Lime	R/HA	R-	R-	R630	R-
Seed	R/HA	R4 727	R1 668	R3 205	R904
Fuel	R/HA	R1 023	R431	R880	R684
Herbicide	R/HA	R238	R848	R277	R133
Insecticide	R/HA	R3 183	R248	R3 750	R230
Fungicides	R/HA	R-	R-	R-	R-
Marketing costs	R/HA	R-	R-	R-	R-
Repairs and maintenance	R/HA	R510	R248	R678	R619
Casual labour	R/HA	R-	R-	R154	R-
Aerial spray	R/HA	R400	R-	R-	R-
Irrigation Electricity	R/HA	R3 152	R3 152	R2 833	R2 239
Water	R/HA	R1 049	R1 049	R942	R745
Other expenditure: Scheduling / Irrigation Equipment R&M	R/HA	R532	R532	R2 132	R532
TOTAL VARIABLE EXPENDITURE	R/HA	R25 152	R16 313	R26 488	R13 411
TOTAL VARIABLE EXPENDITURE	R/TON	R1 863	R4 078	R8 829	R4 470
3.1) GROSS MARGIN:	R/HA	R3 730	R4 453	R1 787	R2 111
3.2) GROSS MARGIN:	R/TON	R276	R1 113	R596	R704

Source: BFAP, GSA & GWK, 2018

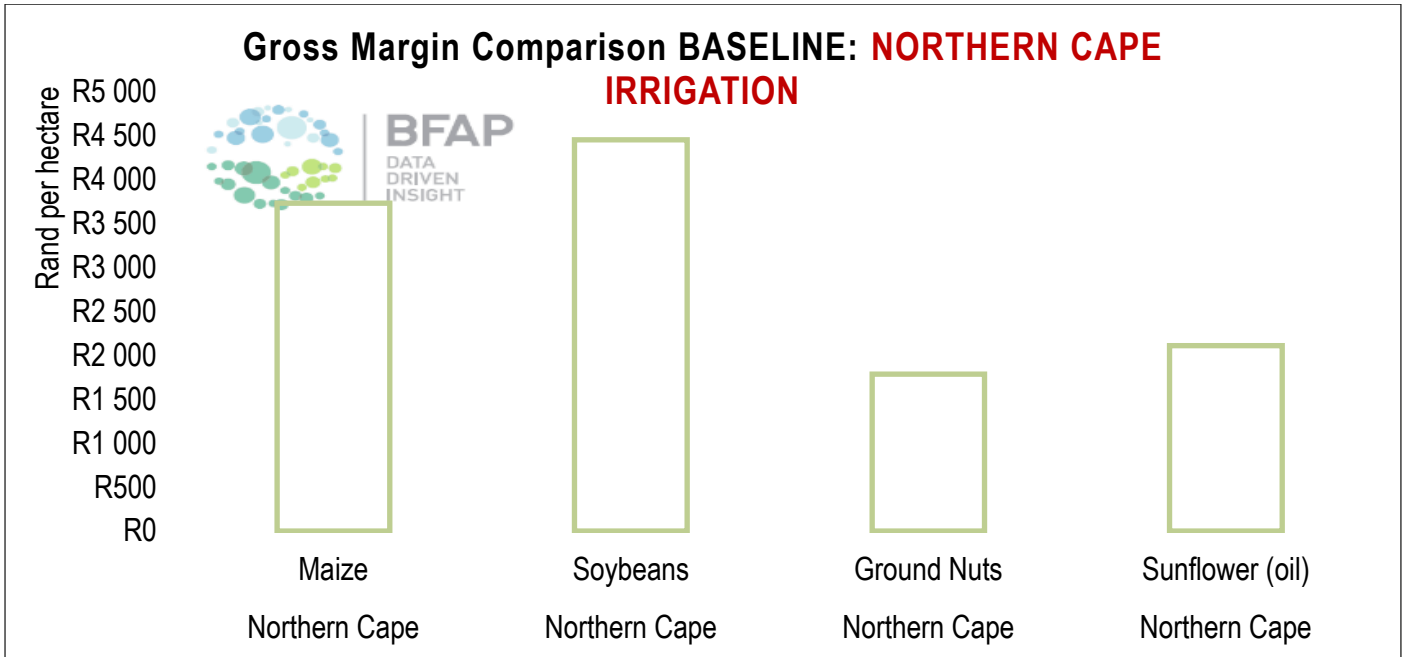


Figure 3.1: Gross margin comparison – Baseline: Northern Cape Irrigation

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN CAPE IRRIGATION

		YIELD (T/HA)						
PRODUCERS PRICE		3.25	3.50	3.75	4.00	4.25	4.50	4.75
R4 791	-R	741	R 457	R 1 655	R 2 853	R 4 051	R 5 249	R 6 446
R4 891	-R	416	R 807	R 2 030	R 3 253	R 4 476	R 5 699	R 6 921
R4 991	-R	91	R 1 157	R 2 405	R 3 653	R 4 901	R 6 149	R 7 396
R5 091	R	234	R 1 507	R 2 780	R 4 053	R 5 326	R 6 599	R 7 871
R5 191	R	559	R 1 857	R 3 155	R 4 453	R 5 751	R 7 049	R 8 346
R5 291	R	884	R 2 207	R 3 530	R 4 853	R 6 176	R 7 499	R 8 821
R5 391	R	1 209	R 2 557	R 3 905	R 5 253	R 6 601	R 7 949	R 9 296
R5 491	R	1 534	R 2 907	R 4 280	R 5 653	R 7 026	R 8 399	R 9 771
R5 591	R	1 859	R 3 257	R 4 655	R 6 053	R 7 451	R 8 849	R 10 246

GROUND NUTS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN CAPE IRRIGATION

		YIELD (T/HA)						
PRODUCERS PRICE		2.25	2.50	2.75	3.00	3.50	4.00	4.50
R8 350	-R	5 675	-R 3 363	-R 1 050	R 1 262	R 5 887	R 10 512	R 15 137
R8 450	-R	5 450	-R 3 113	-R 775	R 1 562	R 6 237	R 10 912	R 15 587
R8 550	-R	5 225	-R 2 863	-R 500	R 1 862	R 6 587	R 11 312	R 16 037
R8 650	-R	5 000	-R 2 613	-R 225	R 2 162	R 6 937	R 11 712	R 16 487
R8 750	-R	4 775	-R 2 363	R 50	R 2 462	R 7 287	R 12 112	R 16 937
R8 850	-R	4 550	-R 2 113	R 325	R 2 762	R 7 637	R 12 512	R 17 387
R8 950	-R	4 325	-R 1 863	R 600	R 3 062	R 7 987	R 12 912	R 17 837
R9 050	-R	4 100	-R 1 613	R 875	R 3 362	R 8 337	R 13 312	R 18 287
R9 150	-R	3 875	-R 1 363	R 1 150	R 3 662	R 8 687	R 13 712	R 18 737

SUNFLOWER OIL SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTHERN CAPE IRRIGATION

		YIELD (T/HA)													
PRODUCERS PRICE		2.25		2.50		2.75		3.00		3.50		4.00		4.50	
R4 774	-R	2 669	-R	1 476	-R	282	R	911	R	3 298	R	5 686	R	8 073	
R4 874	-R	2 444	-R	1 226	-R	7	R	1 211	R	3 648	R	6 086	R	8 523	
R4 974	-R	2 219	-R	976	R	268	R	1 511	R	3 998	R	6 486	R	8 973	
R5 074	-R	1 994	-R	726	R	543	R	1 811	R	4 348	R	6 886	R	9 423	
R5 174	-R	1 769	-R	476	R	818	R	2 111	R	4 698	R	7 286	R	9 873	
R5 274	-R	1 544	-R	226	R	1 093	R	2 411	R	5 048	R	7 686	R	10 323	
R5 374	-R	1 319	R	24	R	1 368	R	2 711	R	5 398	R	8 086	R	10 773	
R5 474	-R	1 094	R	274	R	1 643	R	3 011	R	5 748	R	8 486	R	11 223	
R5 574	-R	869	R	524	R	1 918	R	3 311	R	6 098	R	8 886	R	11 673	

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): NORTHERN CAPE IRRIGATION

		YIELD PRICE (R/TON)													
		R 4 891		R 4 991		R 5 091		R 5 191		R 5 291		R 5 391		R 5 491	
3.00	-R	5 369	-R	5 069	-R	4 769	-R	4 469	-R	4 169	-R	3 869	-R	3 569	
3.25	-R	4 146	-R	3 821	-R	3 496	-R	3 171	-R	2 846	-R	2 521	-R	2 196	
3.50	-R	2 923	-R	2 573	-R	2 223	-R	1 873	-R	1 523	-R	1 173	-R	823	
3.75	-R	1 700	-R	1 325	-R	950	-R	575	-R	200	R	175	R	550	
4.00	-R	477	-R	77	R	323	R	723	R	1 123	R	1 523	R	1 923	
4.25	R	745	R	1 170	R	1 595	R	2 020	R	2 445	R	2 870	R	3 295	
4.50	R	1 968	R	2 418	R	2 868	R	3 318	R	3 768	R	4 218	R	4 668	
4.75	R	3 191	R	3 666	R	4 141	R	4 616	R	5 091	R	5 566	R	6 041	
5.00	R	4 414	R	4 914	R	5 414	R	5 914	R	6 414	R	6 914	R	7 414	

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

KwaZulu-Natal: Bergville

Table 3.2: Income & cost budgets for maize & soybeans for KwaZulu-Natal: Bergrivier - Irrigation

Area		KwaZulu-Natal: Bergrivier	
Crop		Maize	Soybeans
Production System		Irrigation	Irrigation
1) INCOME			
Yield: Deterministic	T/HA	12.00	4.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250
Total deductions	R/TON	R357	R59
- Transport differential	R/TON	R297	R-
- Grade differential	R/TON	R-	R-
- Marketing & Handling	R/TON	R60	R59
Price premiums	R/TON	R-	R-
Net Farm Gate Price	R/TON	R2 137	R5 191
GROSS INCOME	R/HA	R25 649	R20 766
2) VARIABLE EXPENDITURES			
Contracting	R/HA	R-	R-
Crop insurance	R/HA	R975	R2 533
Fertilizer	R/HA	R7 731	R3 137
Lime	R/HA	R600	R-
Seed	R/HA	R3 880	R1 668
Fuel	R/HA	R1 129	R431
Herbicide	R/HA	R1 007	R1 051
Insecticide	R/HA	R42	R259
Fungicides	R/HA	R602	R530
Marketing costs	R/HA	R-	R-
Repairs and maintenance	R/HA	R672	R376
Casual labour	R/HA	R256	R-
Aerial spray	R/HA	R-	R-
Irrigation Electricity	R/HA	R2 271	R1 858
Water	R/HA	R1 617	R1 323
Other expenditure: Scheduling / Irrigation Equipment R&M	R/HA	R572	R572
TOTAL VARIABLE EXPENDITURE	R/HA	R21 353	R13 739
TOTAL VARIABLE EXPENDITURE	R/TON	R1 779	R3 435
3.1) GROSS MARGIN:	R/HA	R4 295	R7 026
3.2) GROSS MARGIN:	R/TON	R358	R1 757

Source: BFAP, GSA & Individual Farmers, 2018

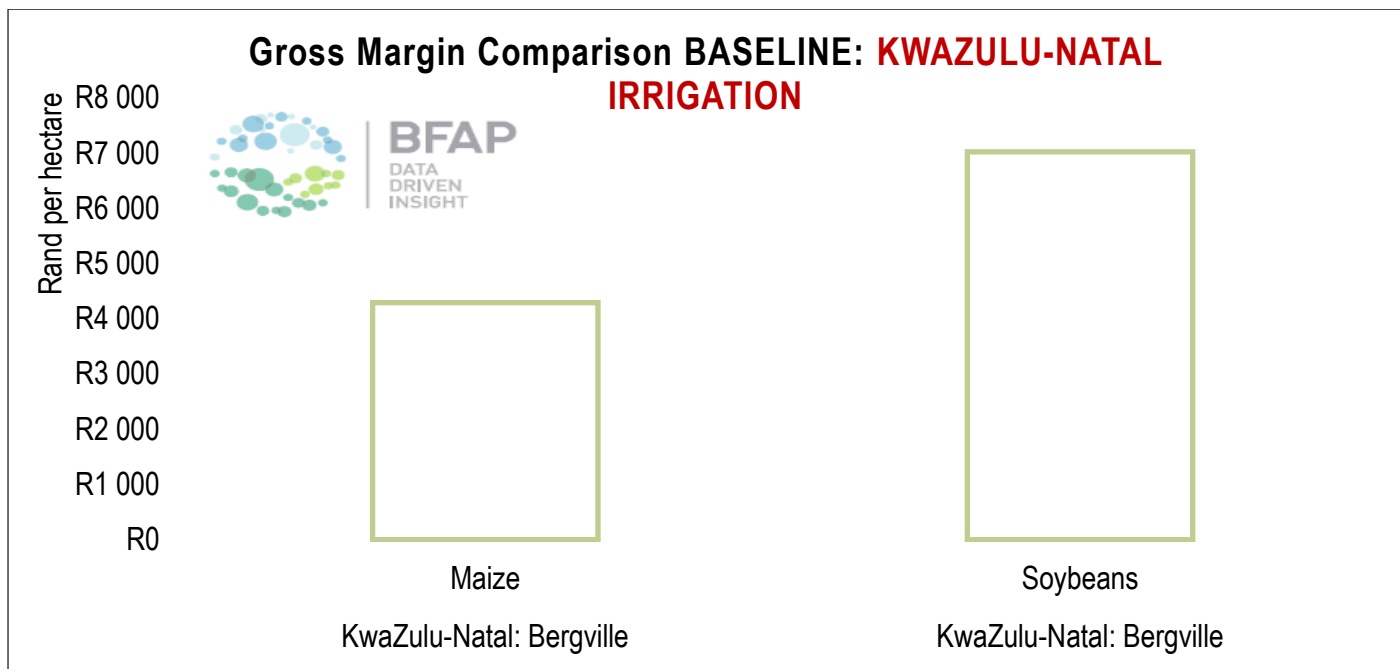


Figure 3.2: Gross margin comparison – Baseline: KwaZulu-Natal: Berggrivier

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): KWAZULU-NATAL:BERGVILLE										
		YIELD (T/HA)								
PRODUCERS PRICE		3.25	3.50	3.75	4.00	4.25	4.50	4.75		
R4 791	R	1 833	R 3 031	R 4 229	R 5 426	R 6 624	R 7 822	R 9 020		
R4 891	R	2 158	R 3 381	R 4 604	R 5 826	R 7 049	R 8 272	R 9 495		
R4 991	R	2 483	R 3 731	R 4 979	R 6 226	R 7 474	R 8 722	R 9 970		
R5 091	R	2 808	R 4 081	R 5 354	R 6 626	R 7 899	R 9 172	R 10 445		
R5 191	R	3 133	R 4 431	R 5 729	R 7 026	R 8 324	R 9 622	R 10 920		
R5 291	R	3 458	R 4 781	R 6 104	R 7 426	R 8 749	R 10 072	R 11 395		
R5 391	R	3 783	R 5 131	R 6 479	R 7 826	R 9 174	R 10 522	R 11 870		
R5 491	R	4 108	R 5 481	R 6 854	R 8 226	R 9 599	R 10 972	R 12 345		
R5 591	R	4 433	R 5 831	R 7 229	R 8 626	R 10 024	R 11 422	R 12 820		

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): KWAZULU-NATAL:BERGVILLE										
		YIELD PRICE (R/TON)								
		4 891	4 991	5 091	5 191	5 291	5 391	5 491		
3.00	-R	3 360	-R 3 060	-R 2 760	-R 2 460	-R 2 160	-R 1 860	-R 1 560		
3.25	-R	2 138	-R 1 813	-R 1 488	-R 1 163	-R 838	-R 513	-R 188		
3.50	-R	915	-R 565	-R 215	R 135	R 485	R 835	R 1 185		
3.75	R	308	R 683	R 1 058	R 1 433	R 1 808	R 2 183	R 2 558		
4.00	R	1 531	R 1 931	R 2 331	R 2 731	R 3 131	R 3 531	R 3 931		
4.25	R	2 754	R 3 179	R 3 604	R 4 029	R 4 454	R 4 879	R 5 304		
4.50	R	3 977	R 4 427	R 4 877	R 5 327	R 5 777	R 6 227	R 6 677		
4.75	R	5 200	R 5 675	R 6 150	R 6 625	R 7 100	R 7 575	R 8 050		
5.00	R	6 422	R 6 922	R 7 422	R 7 922	R 8 422	R 8 922	R 9 422		

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

North-West

Table 3.3: Income & cost budgets for maize, soybeans, sunflower & sorghum for North West: Brits region - Irrigation

Area	North West: Brits / Northam / Koedoeskop				
Crop		Maize	Soybeans	Sunflower	Sorghum
Production System		Irrigation	Irrigation	Irrigation	Irrigation
1) INCOME					
Yield: Deterministic	T/HA	12.00	3.80	3.20	7.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250	R5 174	R3 172
Total deductions	R/TON	R207	R59	R190	R63
- Transport differential	R/TON	R144	R-	R97	R-
- Grade differential	R/TON	R-	R-	R-	R-
- Marketing & Handling	R/TON	R63	R59	R93	R63
Price premiums	R/TON	R-	R-	R-	R-
Net Farm Gate Price	R/TON	R2 287	R5 191	R4 984	R3 109
GROSS INCOME	R/HA	R27 449	R19 727	R15 950	R21 760
2) VARIABLE EXPENDITURES					
Contracting	R/HA	R-	R-	R-	R-
Crop insurance	R/HA	R1 647	R2 407	R319	R913
Fertilizer	R/HA	R6 419	R2 315	R2 338	R3 744
Lime	R/HA	R416	R-	R-	R416
Seed	R/HA	R3 898	R1 685	R748	R669
Fuel	R/HA	R938	R754	R878	R917
Herbicide	R/HA	R817	R1 182	R486	R1 971
Insecticide	R/HA	R456	R134	R28	R456
Fungicides	R/HA	R-	R-	R-	R-
Marketing costs	R/HA	R-	R-	R-	R-
Repairs and maintenance	R/HA	R436	R378	R441	R609
Casual labour	R/HA	R-	R-	R105	R133
Aerial spray	R/HA	R-	R-	R-	R213
Irrigation Electricity	R/HA	R4 123	R2 811	R1 874	R2 811
Water	R/HA	R970	R662	R441	R662
Other expenditure: Scheduling / Irrigation Equipment R&M	R/HA	R372	R394	R372	R394
TOTAL VARIABLE EXPENDITURE	R/HA	R20 492	R12 722	R8 031	R13 908
TOTAL VARIABLE EXPENDITURE	R/TON	R1 708	R3 348	R2 510	R1 987
3.1) GROSS MARGIN:	R/HA	R6 957	R7 005	R7 918	R7 852
3.2) GROSS MARGIN:	R/TON	R580	R1 843	R2 475	R1 122

Source: BFAP, GSA, NWK & Individual Farmers, 2018

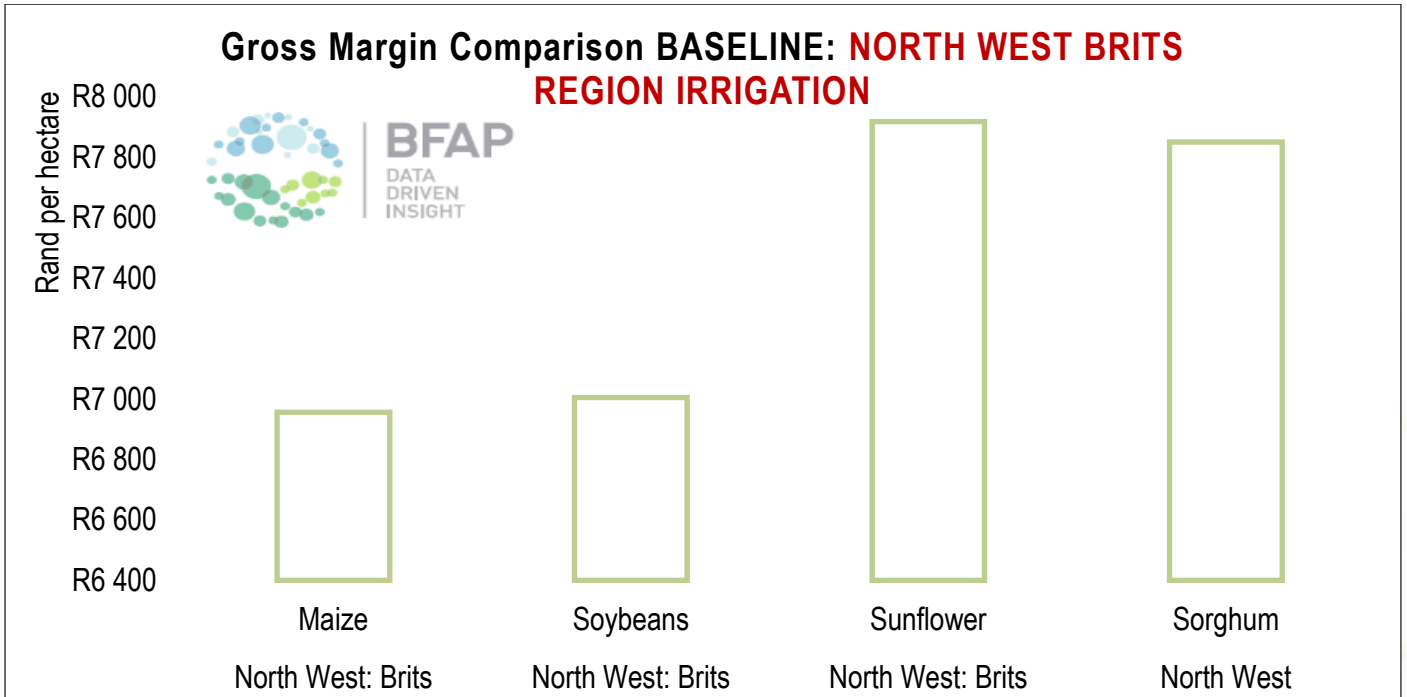


Figure 3.3: Gross margin comparison – Baseline: North West: Brits Region

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST BRITS

		YIELD (T/HA)						
PRODUCERS PRICE		3.00	3.25	3.50	3.80	4.00	4.25	4.50
R4 791	R	1 652	R 2 850	R 4 048	R 5 485	R 6 444	R 7 641	R 8 839
R4 891	R	1 952	R 3 175	R 4 398	R 5 865	R 6 844	R 8 066	R 9 289
R4 991	R	2 252	R 3 500	R 4 748	R 6 245	R 7 244	R 8 491	R 9 739
R5 091	R	2 552	R 3 825	R 5 098	R 6 625	R 7 644	R 8 916	R 10 189
R5 191	R	2 852	R 4 150	R 5 448	R 7 005	R 8 044	R 9 341	R 10 639
R5 291	R	3 152	R 4 475	R 5 798	R 7 385	R 8 444	R 9 766	R 11 089
R5 391	R	3 452	R 4 800	R 6 148	R 7 765	R 8 844	R 10 191	R 11 539
R5 491	R	3 752	R 5 125	R 6 498	R 8 145	R 9 244	R 10 616	R 11 989
R5 591	R	4 052	R 5 450	R 6 848	R 8 525	R 9 644	R 11 041	R 12 439

SUNFLOWER SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): NORTH WEST BRITS

		YIELD (T/HA)						
PRODUCERS PRICE		2.50	2.75	3.00	3.20	3.50	3.75	4.00
R4 584	R	3 429	R 4 575	R 5 722	R 6 638	R 8 014	R 9 160	R 10 306
R4 684	R	3 679	R 4 850	R 6 022	R 6 958	R 8 364	R 9 535	R 10 706
R4 784	R	3 929	R 5 125	R 6 322	R 7 278	R 8 714	R 9 910	R 11 106
R4 884	R	4 179	R 5 400	R 6 622	R 7 598	R 9 064	R 10 285	R 11 506
R4 984	R	4 429	R 5 675	R 6 922	R 7 918	R 9 414	R 10 660	R 11 906
R5 084	R	4 679	R 5 950	R 7 222	R 8 238	R 9 764	R 11 035	R 12 306
R5 184	R	4 929	R 6 225	R 7 522	R 8 558	R 10 114	R 11 410	R 12 706
R5 284	R	5 179	R 6 500	R 7 822	R 8 878	R 10 464	R 11 785	R 13 106
R5 384	R	5 429	R 6 775	R 8 122	R 9 198	R 10 814	R 12 160	R 13 506

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): NORTH WEST BRITS

YIELD PRICE (R/TON)		R 4 891 R 4 991		R 5 091 R 5 191		R 5 291 R 5 391		R 5 491	
2.75	-R 6 227	-R 5 952	-R 5 677	-R 5 402	-R 5 127	-R 4 852	-R 4 577		
3.00	-R 5 004	-R 4 704	-R 4 404	-R 4 104	-R 3 804	-R 3 504	-R 3 204		
3.25	-R 3 782	-R 3 457	-R 3 132	-R 2 807	-R 2 482	-R 2 157	-R 1 832		
3.50	-R 2 559	-R 2 209	-R 1 859	-R 1 509	-R 1 159	-R 809	-R 459		
3.80	-R 1 091	-R 711	R 331	R 49	R 429	R 809	R 1 189		
4.00	-R 113	R 287	R 687	R 1 087	R 1 487	R 1 887	R 2 287		
4.25	R 1 110	R 1 535	R 1 960	R 2 385	R 2 810	R 3 235	R 3 660		
4.50	R 2 333	R 2 783	R 3 233	R 3 683	R 4 133	R 4 583	R 5 033		
4.75	R 3 556	R 4 031	R 4 506	R 4 981	R 5 456	R 5 931	R 6 406		

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.



Limpopo

Table 3.4: Income & cost budgets for maize & soybeans for Limpopo: Loskop region - Irrigation

Area		Limpopo: Loskop	
Crop		Maize	Soybeans
Production System		Irrigation	Irrigation
1) INCOME			
Yield: Deterministic	T/HA	12.00	4.00
SAFEX SIMULATED PRICE / PRODUCER PRICE: 2019	R/TON	R2 494	R5 250
Total deductions	R/TON	R309	R59
- Transport differential	R/TON	R246	R-
- Grade differential	R/TON	R-	R-
- Marketing & Handling	R/TON	R63	R59
Price premiums	R/TON	R-	R-
Net Farm Gate Price	R/TON	R2 185	R5 191
GROSS INCOME	R/HA	R26 225	R20 766
2) VARIABLE EXPENDITURES			
Contracting	R/HA	R-	R-
Crop insurance	R/HA	R1 573	R955
Fertilizer	R/HA	R6 419	R2 360
Lime	R/HA	R416	R-
Seed	R/HA	R3 898	R2 224
Fuel	R/HA	R938	R901
Herbicide	R/HA	R817	R943
Insecticide	R/HA	R456	R248
Fungicides	R/HA	R-	R-
Marketing costs	R/HA	R-	R-
Repairs and maintenance	R/HA	R436	R471
Casual labour	R/HA	R-	R-
Aerial spray	R/HA	R-	R-
Irrigation Electricity	R/HA	R4 123	R2 967
Water	R/HA	R970	R698
Other expenditure: Scheduling / Irrigation Equipment R&M	R/HA	R372	R394
TOTAL VARIABLE EXPENDITURE	R/HA	R20 419	R12 161
TOTAL VARIABLE EXPENDITURE	R/TON	R1 702	R3 040
3.1) GROSS MARGIN:	R/HA	R5 806	R8 605
3.2) GROSS MARGIN:	R/TON	R484	R2 151

Source: BFAP, GSA & Individual Farmers, 2018

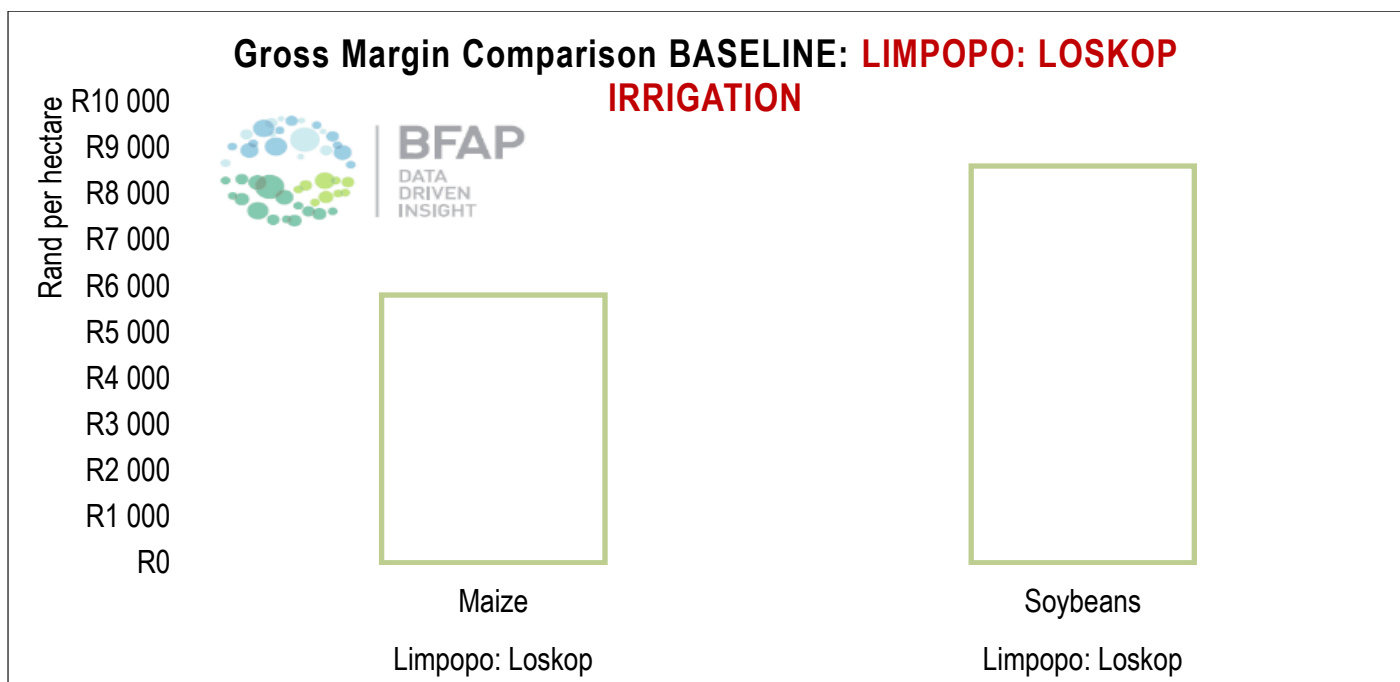


Figure 3.4: Gross margin comparison – Baseline: Limpopo: Loskop Region

SOYBEANS SENSITIVITY ANALYSIS (GROSS MARGIN PER HECTARE): LIMPOPO: LOSKOP AREA

PRODUCERS PRICE	YIELD (T/HA)						
	3.25	3.50	3.75	4.00	4.25	4.50	4.75
R4 791	R 3 411	R 4 609	R 5 807	R 7 005	R 8 203	R 9 400	R 10 598
R4 891	R 3 736	R 4 959	R 6 182	R 7 405	R 8 628	R 9 850	R 11 073
R4 991	R 4 061	R 5 309	R 6 557	R 7 805	R 9 053	R 10 300	R 11 548
R5 091	R 4 386	R 5 659	R 6 932	R 8 205	R 9 478	R 10 750	R 12 023
R5 191	R 4 711	R 6 009	R 7 307	R 8 605	R 9 903	R 11 200	R 12 498
R5 291	R 5 036	R 6 359	R 7 682	R 9 005	R 10 328	R 11 650	R 12 973
R5 391	R 5 361	R 6 709	R 8 057	R 9 405	R 10 753	R 12 100	R 13 448
R5 491	R 5 686	R 7 059	R 8 432	R 9 805	R 11 178	R 12 550	R 13 923
R5 591	R 6 011	R 7 409	R 8 807	R 10 205	R 11 603	R 13 000	R 14 398

SOYBEANS MARGIN ABOVE / BELOW MAIZE (GROSS MARGIN PER HECTARE): LIMPOPO: LOSKOP AREA

YIELD PRICE (R/TON)	YIELD PRICE (R/TON)						
	R 4 891	R 4 991	R 5 091	R 5 191	R 5 291	R 5 391	R 5 491
3.00	-R 3 293	-R 2 993	-R 2 693	-R 2 393	-R 2 093	-R 1 793	-R 1 493
3.25	-R 2 070	-R 1 745	-R 1 420	-R 1 095	-R 770	-R 445	-R 120
3.50	-R 847	-R 497	-R 147	R 203	R 553	R 903	R 1 253
3.75	R 376	R 751	R 1 126	R 1 501	R 1 876	R 2 251	R 2 626
4.00	R 1 599	R 1 999	R 2 399	R 2 799	R 3 199	R 3 599	R 3 999
4.25	R 2 822	R 3 247	R 3 672	R 4 097	R 4 522	R 4 947	R 5 372
4.50	R 4 044	R 4 494	R 4 944	R 5 394	R 5 844	R 6 294	R 6 744
4.75	R 5 267	R 5 742	R 6 217	R 6 692	R 7 167	R 7 642	R 8 117
5.00	R 6 490	R 6 990	R 7 490	R 7 990	R 8 490	R 8 990	R 9 490

Notes:

- The cost items reflect the input allocation based on the target yield for the respective crops.
- Although some expenditure items are zero, it is reflected in the budgets to allow for individual inclusion.
- The cost of fuel includes pre-harvest and harvesting costs with the assumption that own machinery is used.
- The cost for soybean seed reflects a combination of own- and purchased seed.
- There will be large fluctuations for insurance cost (hail) based on the associated risk in respective areas. It is advised that producers adjust this cost based on their individual premiums.
- It is important to note that overhead costs are not included and should be accounted for.

Summary: 2018/19 Income & Cost Budgets

Figures 4.1, 4.2 and 4.3 provide a summary on gross margins for dryland and irrigated summer crops for the 2018/19 production season. It further compares its performance against 2018 gross margin levels. Figure 4.1 indicates the average dryland gross margin for maize, soybeans and sunflower for 9 agro-ecological regions. It is projected that maize will perform better opposed to 2018, driven by higher domestic and international maize prices which is further supported by a weaker exchange rate to the US dollar. Over the medium term, it is anticipated that a continuous shift towards feed related crops will occur. Furthermore, productivity will be critical to counterpart the cost price squeeze effect in low price scenarios.

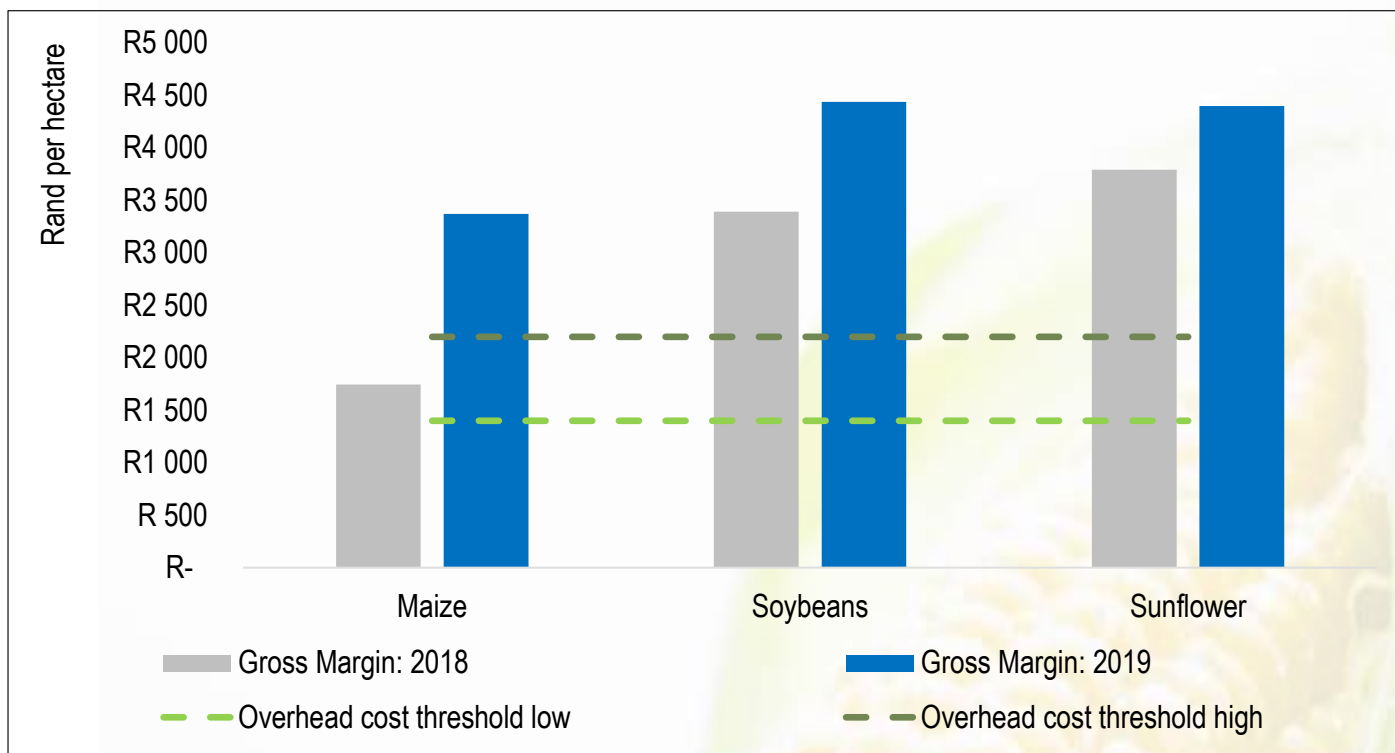


Figure 4.1: Dryland - Deterministic gross margin comparison: 2017/18 vs. 2018/19

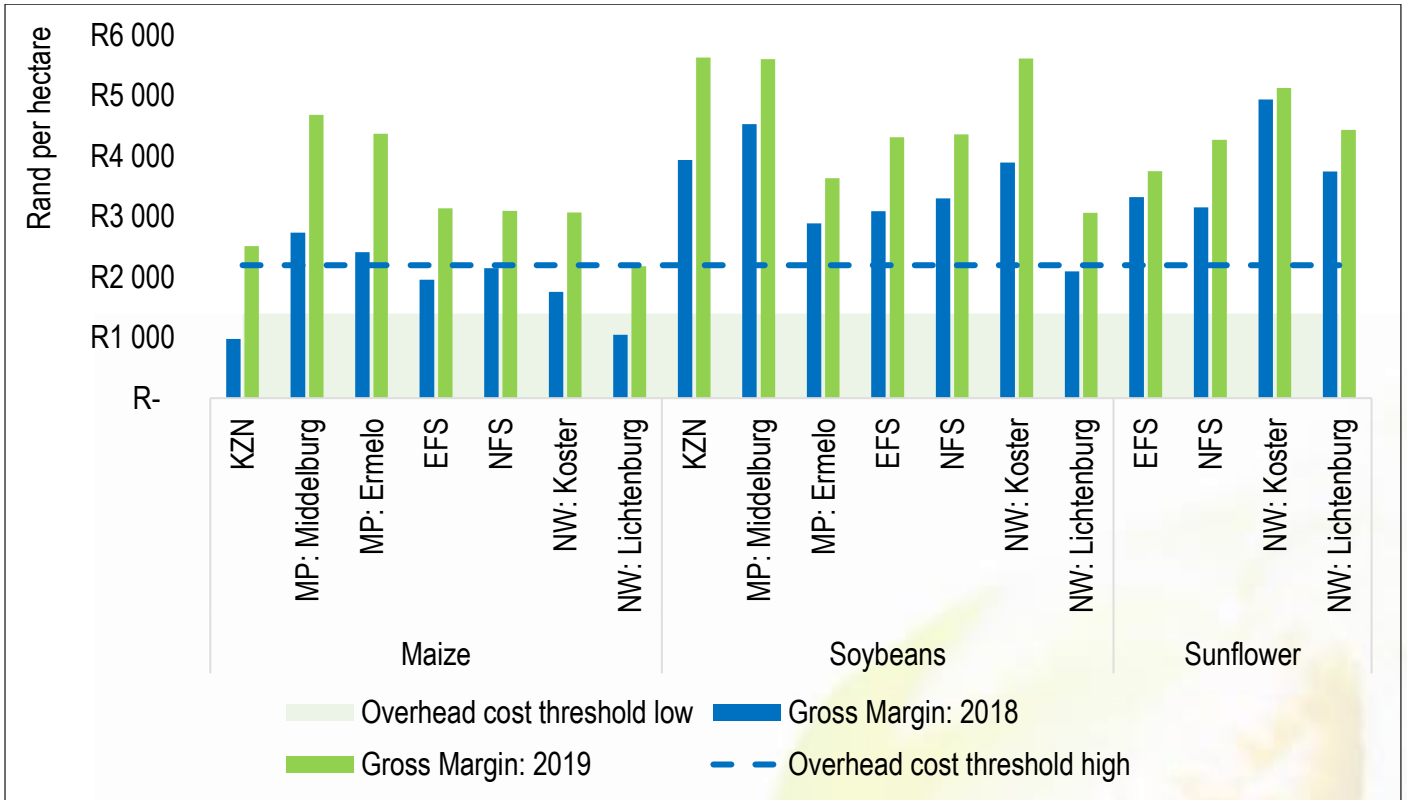


Figure 4.2: Dryland - Deterministic regional gross margin comparison: 2017/18 vs. 2018/19

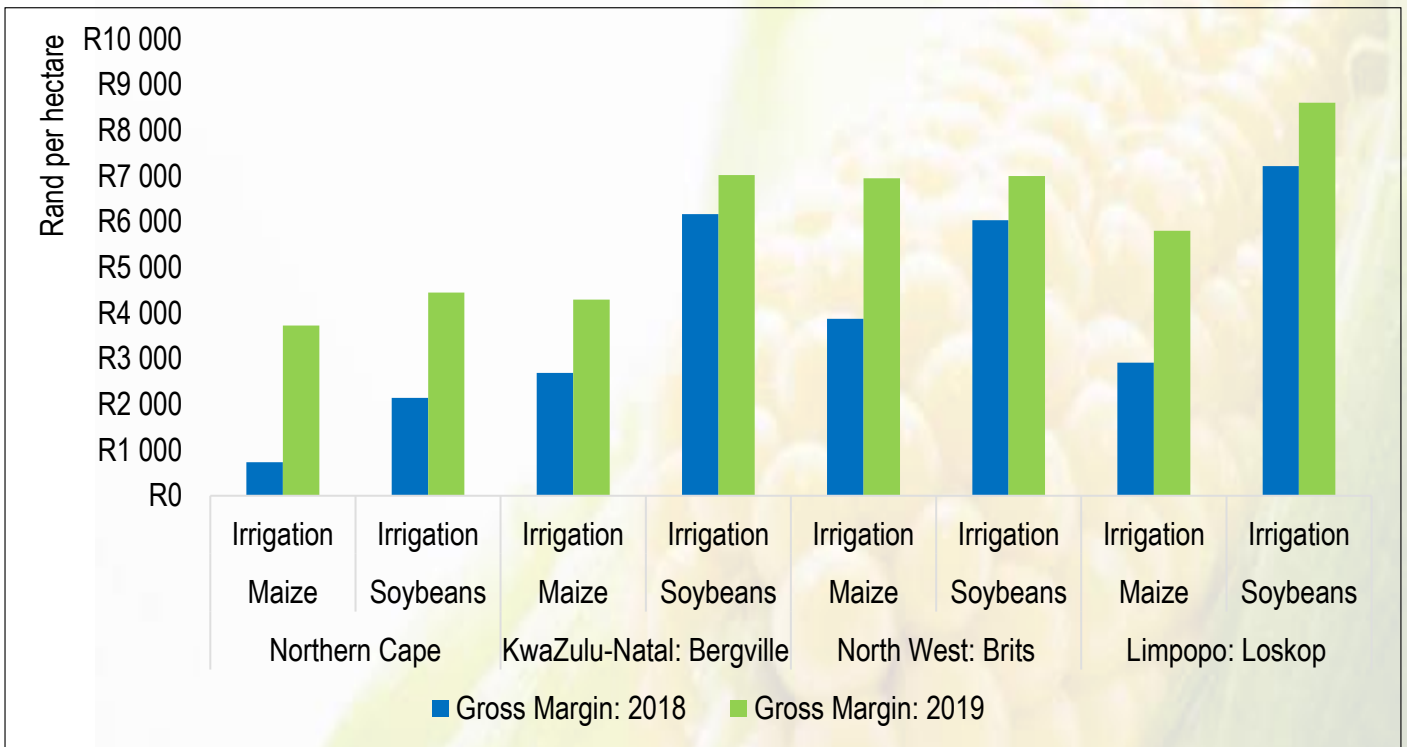


Figure 4.3: Irrigation - Deterministic regional gross margin comparison: 2017/18 vs. 2018/19