

Final Report
Strictly Confidential

Pricing behaviour in the South African food and agricultural sector

**A report to the National
Treasury**

**Nick Vink
Johann Kirsten**

June 2002

CONTENTS

	List of Tables	ii
	List of Figures	iii
	Acknowledgements	iv
	Executive summary	v
	Purpose	1
1	The food and agricultural sector	2
1.1	Agricultural and food policy	2
1.2	The effects of deregulation	5
1.3	State intervention	9
1.4	Competitiveness in the food and food manufacturing sectors	10
2	Trends in food prices in South Africa	13
2.1	Food demand	13
2.2	Inflation and food price inflation	14
2.3	The maize price increase of 2001/2002	18
2.4	Trends in farm gate prices	23
2.4.1	Cereals and grains	23
2.4.2	Dairy products	32
2.4.3	Red meat	37
2.4.4	Poultry	40
2.4.5	Fruit and vegetables	46
2.5	Trends in consumer prices	49
2.5.1	Grain and cereal prices	49
2.5.2	Dairy products	53
2.5.3	Sunflower oil	57
2.6	Concluding comments: Are commodity prices a leading indicator of inflation?	58
3	South Africa's Consumer Price Index (CPI) for food	59
3.1	Introduction	59
3.2	Calculating the CPI	59
3.3	The CPI in South Africa	59
3.4	Evaluations of the South African CPIF	61
3.5	Assessment of the CPIF	63
4	The causes and consequences of pricing mechanisms	65
4.1	Lessons from experience	65
4.1.1	Southern African lessons	65
4.1.2	South African lessons	66
4.1.3	International experience	68
4.2	Conclusions	73
4.3	Recommendations	76
5	References	79

List of Tables

1	Deregulation of the South African tariff structure	4
2	The structure of tariffs in South Africa	4
3	The composition of growth in farm output, 1965/66 to 2000/01	6
4	Trends in South Africa's agricultural exports, 1980 - 2000	8
5	Total domestic support to South African agriculture (PSE)	10
6	Global comparison between % PSEs	10
7	The South African food and beverage sector	11
8	Food and beverage output in South Africa, 1996	11
9	Comparative advantage in the South African agro-food industry	12
10	Comparative advantage of selected agro-food chains in South Africa	12
11	Distribution of personal monthly income by population group	13
12	South African retail chains: turnover and market share	14
13	A comparison of grocery retail prices in the SADC region	14
14	The contribution to CPI Food, April 2001 to April 2002	17
15	Calculation of import parity prices for white maize	20
16	Number of commercial milk producers per province, 1997 and 2001	33
17	Geographical distribution of milk production per province, 1994 – 2001	33
18	Size distribution of milk producers, 1995 and 2001	33
19	International comparison of milk production per km ² per day	34
20	The number of buyers and producer-distributors registered with the Milk Board, 1997	34
21	Average annual growth in real producer prices for beef, 1990-2002	38
22	Real average consumer prices for selected products, 1988 - 2002	49
23	Average annual and monthly growth rates in CPI for grain products	49
24	Percentage share in the retail price of white bread	50
25	Percentage share in the retail price of brown bread	51
26	The market for dairy products, 1996	53
27	The division of the formal trade in dairy products, 1996	54
28	The different CPI indexes measured in South Africa, 2001-2002	61
29	The share of food in the CPI, selected countries	64
30	Differences in price per kg between the East London market and hawkers/retailers (1996)	65

List of Figures

1	Outputs, inputs and TFP in South African agriculture, 1947-1999	6
2	The changing composition of the value of agricultural output in South Africa	6
3	The use of capital in South African agriculture	7
4	The amount of capital required to produce R1.00 of net farm income, 1971 - 2001	8
5	The degree of openness of the South African economy	9
6	Food price inflation and deregulation	15
7	Inflation in the prices of processed and unprocessed agricultural products	15
8a	Annual increase in the CPI for food, Jan 1998 to April 2002	16
8b	Difference between annual increase in CPI-all and CPIex-food, 1998 – 2002	17
9	Illustration of how SAFEX spot prices fluctuate between import parity and export parity (April 1998 to May 2002).	19
10	White maize producer price vs. the R/\$ exchange rate, May 2000 to March 2002	24
11	White maize producer price vs. the R/\$ exchange rate, 1998 – 2002	24
12	Yellow maize producer price vs. the R/\$ exchange rate, May 2000 to March 2002	25
13	Yellow maize producer price vs. the R/\$ exchange rate, 1998 – 200	25
14	Short term movement in the spot price for white maize, January to May 2002	26
15	Real maize producer prices, 1975 – 2001 (2000 prices)	27
16	Wheat producer price vs. the R/\$ exchange rate, April 2001 to March 2002	28
17	Real wheat producer prices, 1975 – 2001 (2000 prices)	29
18	Sunflower seed producer prices vs. the R/\$ exchange rate, April 2001 to March 2002	30
19	Real sunflower seed producer prices, 1975 – 2001 (2000 prices)	31
20	Producer prices and import parity for red-speckled dry-beans, 1996 – 2002	31
21	The annual increase in the PPI for grain products: July 1993 – March 2002	32
22	Monthly average producer and input prices for milk, 1995 – 2002	36
23	Real producer price for fresh milk, 1990 – 2001	37
24	Annual milk production, 1983/84 – 2003/2004	37
25	The relative price of maize and beef, 1998-2002	38
26	Nominal and real weighted average producer prices for beef, 1990 – 2002	39
27	Nominal and real producer prices for mutton and lamb, 1990 – 2002	40
28	Broiler production, 1980 – 2001	41
29	Contribution to the total protein market (2 105 844 ton) in South Africa, 2000	41
30	Producer's share in consumer rand for broilers, Jan 1998 to March 2002	42
31	Breakdown of different broiler end-products (807 967 ton) for 2000	42
32	Real consumer and producer prices of poultry in c/kg, January 1998 – March 2002	43
33	Fresh egg consumption (428 050 000 dozen) for 2000	44
34	Producer share of consumer rand for eggs, January 1990 - December 2001	45
35	Real producer and consumer prices for eggs (constant 2000 prices), 1990 – 2001	45
36	Real producer (Pp) and consumer prices (Cp) for oranges and apples, 1998 – 2001	46
37	Real producer (Pp) and consumer prices (Cp) for Bananas, 1998 – 2001	47
38	Real producer (Pp) and consumer prices (Cp) for potatoes and tomatoes, 1998 – 2001	47
39	Real producer (PriceP) and consumer prices (PriceC) for Onions, 1998 – 2001	48
40	Real producer (PriceP) and consumer prices (PriceC) for pumpkins, 1998 – 2001	48
41	Monthly increase in the PPI and CPI for grain products, 1993 – 2002	50
42	Real consumer prices for white bread, 1975 – 2001	51
43	Real retail price for white maize meal (constant 2000 prices), 1975 – 2001	52
44	Annual increase in the CPI for grain, meat and dairy products	53
45	The real price of milk and the growth in the marketing margins, 1990- 2001	55
46	Real producer price of milk for butter and real retail price of butter: 1990 - 2001	55
47	The real price of cheese, 1990 – 2001	56
48	Real farm-retail spread for milk, cheese and butter, 1990 - 2001	56
49	Nominal and real retail prices of 750ml cooking oil versus the exchange rate	57

ACKNOWLEDGEMENTS

A number of individuals provided valuable assistance to enable us to complete this report over the 3-month period March to May 2002:

First of all we would like to thank our colleagues for the hours of hard work they put into the project. At the Department of Agricultural Economics, Extension and Rural Development, University of Pretoria, Lindie Jenkins, Ferdi Meyer, Deon Scheepers, Michela Calcaterra, Prof Chris Blynnaut and Walter Moldenhauer assisted. At the University of Stellenbosch Caroline Woermann, Norma Tregurtha and Francois Ferreira provided valuable inputs. Without their help we would certainly not have been able to complete this study in this short period of time.

Completing this study required a lot of data. We made wide use of data that is publicly available through the National Department of Agriculture, the Reserve Bank and STATSSA, but are grateful to the following for responding to requests for further data:

- Agrimark Consultants
- Chicago Board of Trade (CBOT)
- Competition Commission
- Department of Trade and Industry
- Dry Bean Producers Organisation
- International Financial Statistics (IFS)
- Milk Producers' Organisations
- SAFEX/AMD
- South African Feedlot Association
- South African Grain Information Service (SAGIS)
- South African Meat Industry Company (SAMIC)

A glaring omission in our data was however the detail statistics on costs, volumes and prices at retail level. These statistics are generally treated as confidential and difficult to obtain without the collaboration of the major retail chains. This was not forthcoming despite several requests.

We also tested our findings with key stakeholders in the industry and with individuals knowledgeable about the working of our agricultural and food markets.

Our thanks and appreciation goes to the Steering Committee lead by Elias Masilela and Kathu Thodani at National Treasury for their support and guidance throughout the study.

Johann Kirsten, University of Pretoria
Nick Vink, University of Stellenbosch
Pretoria
20 June 2002