

## REFERENCES:

Bac, C., J. Chevet and E. Ghysels (2001). “Time-series Model with periodic Stochastic Regime Switching”, *Macroeconomic Dynamics*, Vol. 5, 2001.

Balcombe, K. (2003). “Threshold Effects in Price transmission: The case of Brazilian Wheat, Maize, and Soya Prices”, Consultancy paper provided to the OECD Secretariat, 2003.

Barret, C.B. (1999). “The Effects of real Exchange Rate depreciation on stochastic Producer Prices in low-income Agriculture”, *Agricultural Economics*, Vol. 20, 1999.

Barret, C.B. (2001). “Measuring Integration and Efficiency in International Agricultural Markets”, *Review of Agricultural Economics*, Vol. 23, No. 1, 2001.

Barret, C.B. and J.R. Li (2002). “Distinguishing between Equilibrium and Integration in Spatial Price Analysis”, *American Journal of Agricultural Economics* Vol 84 (2): 292-307, 2002.

BFAP (2005). “South African Agricultural Outlook for the Grain, Livestock and Dairy Industry”, University of Pretoria, June 2005.

Baulch, B. (1997). “Transfer Costs, Spatial Arbitrage, and Testing for Food Market Integration”, *American Journal of Agricultural Economics*, Vol 79, May 1997.

Brooks, J. and O. Melyukhina (2005). “Estimating the Pass-Through of Agricultural Policy Reforms: An Application to Brazilian Commodity Markets”, *OECD Food Agriculture and Fisheries Working Papers*, No. 2, OECD Publishing.

Bressler, G. and R.A. King (1970). “Markets Prices and Interregional Trade”, McGraw-Hill, Inc., New York.

Chiang, Alpha C. (1984). “Fundamental Methods of Mathematical Economics”, Third Edition, McGraw-Hill, Inc., New York, 1984

Cleasby, R.C.G, M.A.G Darroch and G.F Ortmann (1993). “Factors Affecting the Demand for and Supply of South African Yellow Maize Exports, *Agrekon*, Vol 32, No 1, March 1993.

Cluff, M. (2003). “A Review of Spatial Price transmission in major World Commodity Models”, Paper provided to the Aglink Users Group, OECD, 2003.

Enders, W. and P. Silkos (1999). “Cointegration and threshold adjustment”, The University of Alabama Economics, Finance and Legal Studies, Working Paper Series, n. 01-03-02.

FAPRI (2005). “FAPRI 2005 World Agricultural Outlook”, Iowa State University, University of Missouri-Columbia, 2005.

Ferris, J.N. (1998). “Agricultural Prices and Commodity Market Analysis”, McGraw-Hill, Inc., New York.

Goodwin, B.K., T.J. Grennes, and M.K. Wohlgenant (1990). “A revised Test of the Law of One Price using Rational Price expectations”, *American Journal of Agricultural Economics*, Vol 72, August 1990.

Gujarati, D.N. (1995). “Basic Econometrics”, Third Edition, McGraw-Hill, Inc., New York.

Kirsten, J.F., and N. Vink (2000). “Deregulation of Agricultural Marketing in South Africa”, The Free Market Foundation, No. 25.

Kostov, P. and J. Lingard (2004). “Regime-switching Vector Error Correction Model (VECM) analysis of UK meat consumption, *Econometrics* 0409007, September 2004.

Mas-Colell, A., M.D. Whinston, and J.R. Green (1995). “Microeconomic Theory”, Oxford University Press, Inc., New York

Meyer, F.H. (2002). “Modelling the Market Outlook and Policy Alternatives for the Wheat Sector in South Africa”, Unpublished MSc. (Agric) dissertation, University of Pretoria.

Meyer, F.H., and P Westhoff (2003). “The South African Grain, Livestock and Dairy Model”, Presentation at Maize Trust Meeting, unpublished, Pretoria 2003.

Meyer, F.H and J.F. Kirsten (2005). “Modelling the wheat sector in South Africa”, *Agrekon*, Vol 44, No 2, June 2005.

Meyer, J. (2003). “Measuring Market Integration in the Presence of Transaction Costs”, Paper read at the Conference of the International Association of Agricultural Economists, August, Durban 2003.

NDA (2005). “Abstract of Agricultural Statistics, 2005”, National Department of Agriculture, Pretoria.

Pindyck, R.S., and D.L. Rubinfeld (1998). “Econometric Models and Economic Forecasts”, Forth Edition, McGraw-Hill, Inc., New York.

Poonyth, D. and F.H. Meyer (2000). “Forecasting the Market Outlook for the South African Maize and Sorghum Sector using Econometric Modelling”, *Agrekon*, Vol 39, No 4, December 2000.

Quarterly Bulletin (2005). South African Reserve Bank, March 2005.

Roche M.J. and K. McQuinn (2003). “Grain Price Volatility in a Small Open Economy”, Paper read at the Conference of the International Association of Agricultural Economists. August, Durban 2003.

Sadoulet, E. and A. DeJanvry (1995). “Quantitative Development Policy Analysis”, Baltimore: Johns Hopkins University Press.

Schimmelpfennig, D, F.H Meyer, L. Beyers, D. Scheepers (2003). “The Price of Staple Maize in South Africa: Stable Equilibrium or Short-run Disequilibrium?” Poster Paper read at the Conference of the International Association of Agricultural Economists. August, Durban 2003.

Sexton, R., C. Kling, and H. Carmen (1991). “ Market Integration, Efficiency of Arbitrage, and imperfect Competition: Methodology and Application to U.S. Celery Markets”, American Journal of Agricultural Economics, Vol 73, August 1991.

Sharma, R. (2002). “The Transmission of World Price Signals: Concepts, Issues, and some Evidence from Asian Cereal Markets”, OECD Global Forum on Agriculture Discussion Paper, OECD Publishing.

Van Tongeren, F, H. van Meijl and Y. Surry (2000). “Global Models applied to agricultural and trade policies: a review and assessment”, Agricultural Economics, Vol 26, 149 -172, August 2000.

Varian, H.R. (1984). “Microeconomic Analysis”, WW Norton and Company, New York.

Westhoff, P.C., J.F. Fabiosa, J.C. Beghin, and W.H. Meyers (2004). “Challenges in Modelling the Effects of Trade Agreements on the Agricultural Sector”, Paper read at the Southern Agricultural Economics Association Meetings, February, Tulsa, Oklahoma.

## APPENDIX 1

Table A1.1: Commodity balance sheets

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>TOTAL MAIZE</b>																
Area harvested: Total	1000 ha	3207.0	3487.0	3662.0	3904.0	2952.0	3307.0	3361.0	2956.0	2904.7	3230.4	2707.9	3016.8	3100.0	2843.0	2810.0
Yield: Total	t/ha	2.7	0.9	2.7	3.4	1.6	3.1	2.9	2.5	2.5	3.2	2.9	3.1	3.0	3.3	4.1
Production: Total	1000 tons	8614.0	2965.0	9997.0	13275.0	4866.0	10180.2	9732.0	7256.0	7311.0	10409.0	7936.0	9310.0	9392.0	9482.0	11450.0
Begin Stock	1000 tons	1189.0	957.0	457.0	1683.0	2730.0	595.0	1283.0	2608.0	1074.0	983.0	2115.0	1202.0	2710.0	2624.0	3148.0
Imports	1000 tons	342.0	3949.0	63.0	0.0	1119.0	139.0	109.0	98.0	569.0	0.0	395.0	925.0	441.0	219.0	325.0
<b>Total supply</b>	<b>1000 tons</b>	<b>10145.0</b>	<b>7871.0</b>	<b>10517.0</b>	<b>14958.0</b>	<b>8715.0</b>	<b>10914.2</b>	<b>11124.0</b>	<b>9962.0</b>	<b>8954.0</b>	<b>11392.0</b>	<b>10446.0</b>	<b>11437.0</b>	<b>12543.0</b>	<b>12325.0</b>	<b>14923.0</b>
Human consumption	1000 tons	3302.0	3051.0	3612.0	3449.0	3705.0	3416.0	3410.0	3381.0	3648.0	3685.0	4105.0	3892.0	3932.0	4028.0	4013.5
Per capita consump	1000 tons	91.2	82.5	95.6	89.3	93.9	84.2	82.7	80.2	84.7	79.2	88.2	83.1	83.4	85.3	84.3
Feed	1000 tons	4204.0	3760.0	3533.5	3601.0	3440.0	3315.0	2973.0	2960.0	3137.0	3239.0	3457.0	3478.0	3719.0	3745.0	3999.0
Seed & On-farm use	1000 tons	841.0	517.0	308.5	549.0	88.0	556.2	212.0	1159.0	534.0	865.0	347.0	169.0	1083.0	572.0	940.0
Exports	1000 tons	841.0	86.0	1380.0	4629.0	887.0	2344.0	1921.0	1388.0	652.0	1488.0	1335.0	1188.0	1185.0	832.0	2323.0
Ending stock	1000 tons	957.0	457.0	1683.0	2730.0	595.0	1283.0	2608.0	1074.0	983.0	2115.0	1202.0	2710.0	2624.0	3148.0	3647.5
<b>Total demand</b>	<b>1000 tons</b>	<b>10145.0</b>	<b>7871.0</b>	<b>10517.0</b>	<b>14958.0</b>	<b>8715.0</b>	<b>10914.2</b>	<b>11124.0</b>	<b>9962.0</b>	<b>8954.0</b>	<b>11392.0</b>	<b>10446.0</b>	<b>11437.0</b>	<b>12543.0</b>	<b>12325.0</b>	<b>14923.0</b>
<b>WHITE MAIZE</b>																
Area harvested	1000 ha	1717.0	1881.0	1984.0	2026.0	1401.0	1904.0	1794.0	1797.2	1829.7	2003.0	1596.0	1842.5	2083.0	1842.0	1700.0
Yield	t/ha	2.5	0.7	2.5	3.2	1.8	3.2	2.9	2.7	2.6	3.2	2.9	3.0	3.1	3.2	3.8
Production	1000 tons	4305.5	1252.0	4985.5	6520.5	2558.5	6125.5	5183.0	4806.0	4669.0	6440.0	4636.0	5576.0	6366.0	5805.0	6541.0
Begin Stock	1000 tons	947.0	725.0	397.0	727.0	1156.0	294.0	838.0	1247.0	682.0	609.0	1273.0	559.0	1718.0	2123.0	2402.0
Imports	1000 tons	0.0	0.0	0.0	0.0	747.0	88.0	5.0	0.0	0.0	0.0	47.0	274.0	33.0	0.0	0.0
<b>Total supply</b>	<b>1000 tons</b>	<b>5252.5</b>	<b>1977.0</b>	<b>5382.5</b>	<b>7247.5</b>	<b>4461.5</b>	<b>6507.5</b>	<b>6026.0</b>	<b>6053.0</b>	<b>5351.0</b>	<b>7049.0</b>	<b>5956.0</b>	<b>6409.0</b>	<b>8117.0</b>	<b>7928.0</b>	<b>8943.0</b>
Human consumption	1000 tons	3208.0	980.0	3421.0	3237.0	3495.0	3318.0	3316.0	3255.0	3457.0	3473.0	3858.0	3643.0	3687.0	3766.0	3746.5
Per capita consump.	kg/capita	88.6	26.5	90.5	83.8	88.5	81.8	80.4	77.3	80.3	74.7	82.9	77.7	78.2	79.7	78.9
Feed	1000 tons	529.0	50.0	453.5	453.1	290.0	465.0	268.0	331.0	452.0	783.0	446.0	105.0	641.0	733.0	606.0
Seed & On-farm use	1000 tons	413.5	499.0	231.0	512.4	50.5	492.5	76.0	677.0	239.0	659.0	281.0	126.0	597.0	315.0	320.0
Exports	1000 tons	377.0	51.0	550.0	1889.0	332.0	1394.0	1119.0	1108.0	594.0	861.0	812.0	817.0	1069.0	712.0	1914.5
Ending stock	1000 tons	725.0	397.0	727.0	1156.0	294.0	838.0	1247.0	682.0	609.0	1273.0	559.0	1718.0	2123.0	2402.0	2356.0
<b>Total demand</b>	<b>1000 tons</b>	<b>5252.5</b>	<b>1977.0</b>	<b>5382.5</b>	<b>7247.5</b>	<b>4461.5</b>	<b>6507.5</b>	<b>6026.0</b>	<b>6053.0</b>	<b>5351.0</b>	<b>7049.0</b>	<b>5956.0</b>	<b>6409.0</b>	<b>8117.0</b>	<b>7928.0</b>	<b>8943.0</b>

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		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>YELLOW MAIZE</b>																
Area harvested	1000 ha	1490.0	1606.0	1678.0	1878.0	1551.0	1403.0	1567.0	1158.8	1075.0	1227.4	1111.9	1174.3	1017.0	1001.0	1110.0
Yield	t/ha	2.9	1.1	3.0	3.6	1.5	2.9	2.9	2.1	2.5	3.2	3.0	3.1	3.1	3.7	4.4
Production	1000 tons	4308.5	1713.0	5011.5	6754.5	2307.5	4054.7	4549.0	2450.0	2642.0	3969.0	3300.0	3734.0	3026.0	3677.0	4909.0
Begin Stock	1000 tons	242.0	232.0	60.0	956.0	1574.0	301.0	445.0	1361.0	392.0	374.0	842.0	643.0	992.0	501.0	746.0
Imports	1000 tons	342.0	3949.0	63.0	0.0	372.0	51.0	104.0	98.0	569.0	0.0	348.0	651.0	408.0	219.0	325.0
<b>Total supply</b>	<b>1000 tons</b>	<b>4892.5</b>	<b>5894.0</b>	<b>5134.5</b>	<b>7710.5</b>	<b>4253.5</b>	<b>4406.7</b>	<b>5098.0</b>	<b>3909.0</b>	<b>3603.0</b>	<b>4343.0</b>	<b>4490.0</b>	<b>5028.0</b>	<b>4426.0</b>	<b>4397.0</b>	<b>5980.0</b>
Human consumption	1000 tons	94.0	2071.0	191.0	212.0	210.0	98.0	94.0	126.0	191.0	212.0	247.0	249.0	245.0	262.0	267.0
Per capita consump.	Kg/capita	2.6	56.0	5.1	5.5	5.3	2.4	2.3	3.0	4.4	4.6	5.3	5.3	5.2	5.5	5.4
Feed	1000 tons	3675.0	3710.0	3080.0	3147.9	3150.0	2850.0	2705.0	2629.0	2685.0	2456.0	3011.0	3373.0	3078.0	3012.0	3393.0
Seed & On-farm use	1000 tons	427.5	18.0	77.5	36.6	37.5	63.7	136.0	482.0	295.0	206.0	66.0	43.0	486.0	257.0	620.0
Exports	1000 tons	464.0	35.0	830.0	2740.0	555.0	950.0	802.0	280.0	58.0	627.0	523.0	371.0	116.0	120.0	408.5
Ending stock	1000 tons	232.0	60.0	956.0	1574.0	301.0	445.0	1361.0	392.0	374.0	842.0	643.0	992.0	501.0	746.0	1291.5
<b>Total demand</b>	<b>1000 tons</b>	<b>4892.5</b>	<b>5894.0</b>	<b>5134.5</b>	<b>7710.5</b>	<b>4253.5</b>	<b>4406.7</b>	<b>5098.0</b>	<b>3909.0</b>	<b>3603.0</b>	<b>4343.0</b>	<b>4490.0</b>	<b>5028.0</b>	<b>4426.0</b>	<b>4397.0</b>	<b>5980.0</b>

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>WHEAT</b>																
Area summer	1000 ha	1106.4	408.6	646.8	641.7	962.4	890.8	982.3	448.0	408.0	588.5	628.5	577.1	423.0	476.0	503.0
Area winter	1000 ha	327.6	334.9	418.0	397.8	400.8	403.0	400.0	300.0	310.0	345.5	345.0	364.0	325.0	354.0	302.0
Yield: Summer	t/ha	1.5	1.7	1.9	1.7	1.2	2.1	1.8	2.2	2.8	2.8	2.7	2.7	2.4	2.4	2.5
Yield: Winter	t/ha	1.5	1.9	1.8	1.9	2.0	2.0	1.4	1.8	1.9	2.0	2.1	2.5	1.6	1.5	2.1
Prod Summer	1000 tons	1636.5	688.8	1232.5	1094.1	1149.3	1894.0	1733.5	996.0	1133.5	1657.6	1720.0	1535.4	1010.0	1160.0	1260.0
Prod Winter	1000 tons	496.5	627.3	742.8	738.1	819.2	806.0	550.0	535.0	591.5	691.0	730.0	891.8	530.0	520.0	645.0
Begin Stock	1000 tons	341.0	348.0	330.0	268.0	403.0	286.0	578.0	1074.0	647.0	483.0	551.0	580.0	897.0	598.0	574.0
Imports	1000 tons	136.9	856.0	252.2	705.0	1007.0	508.0	575.0	871.0	624.0	304.0	407.0	747.0	1042.0	1227.0	1074.0
<b>Total supply</b>	<b>1000 tons</b>	<b>2610.8</b>	<b>2520.1</b>	<b>2557.5</b>	<b>2805.2</b>	<b>3378.6</b>	<b>3494.0</b>	<b>3436.5</b>	<b>3476.0</b>	<b>2996.0</b>	<b>3135.6</b>	<b>3408.0</b>	<b>3754.2</b>	<b>3479.0</b>	<b>3505.0</b>	<b>3553.0</b>
Human consumption	1000 tons	2130.0	2124.0	2249.0	2350.0	2407.0	2493.0	2250.0	2440.0	2345.0	2412.0	2519.0	2575.0	2652.0	2734.0	2762.0
Per capita consump.	kg/capita	58.8	57.4	59.5	60.8	61.0	61.4	54.6	57.9	54.5	51.9	54.1	54.9	56.2	57.9	58.2
Feed	1000 tons	4.8	3.8	7.2	4.4	24.0	21.0	30.0	85.0	24.0	39.0	98.4	30.0	50.0	23.0	41.0
Seed & On-farm use	1000 tons	55.3	49.5	33.3	32.8	81.6	42.0	10.5	106.0	72.0	30.6	61.6	24.0	21.0	16.0	22.0
Wheat Exports	1000 tons	72.7	12.8	0.0	15.0	580.0	360.0	72.0	198.0	72.0	103.0	149.0	179.0	158.0	158.0	122.0
Wheat Ending stock	1000 tons	348.0	330.0	268.0	403.0	286.0	578.0	1074.0	647.0	483.0	551.0	580.0	946.2	598.0	574.0	606.0
<b>Wheat Total demand</b>	<b>1000 tons</b>	<b>2610.8</b>	<b>2520.1</b>	<b>2557.5</b>	<b>2805.2</b>	<b>3378.6</b>	<b>3494.0</b>	<b>3436.5</b>	<b>3476.0</b>	<b>2996.0</b>	<b>3135.6</b>	<b>3408.0</b>	<b>3754.2</b>	<b>3479.0</b>	<b>3505.0</b>	<b>3553.0</b>

Table A1.2: Monthly price and trade data

	White maize						Yellow maize					
	Domestic price R/ton	Import parity Randfontein R/ton	Export parity Africa R/ton	Nr.2 Fob Gulf US \$/ton	Imports 1000 tons	Exports 1000 tons	Domestic price R/ton	Import parity Durban R/ton	Export parity Africa R/ton	Nr.2 fob Gulf US \$/ton	Imports 1000 tons	Exports 1000 tons
May-00	669.4	1210.0	684.3	100.7	0.0	20.0	678.6	1008.5	637.9	100.7	0.0	7.0
Jun-00	602.7	1108.8	577.1	89.8	0.0	47.0	610.5	915.7	544.0	89.8	0.0	1.0
Jul-00	535.0	986.0	492.7	79.5	0.0	106.0	528.5	803.8	470.5	79.5	0.0	28.0
Aug-00	506.8	980.3	486.9	78.0	0.0	148.0	502.4	799.0	465.5	78.0	0.0	65.0
Sep-00	539.4	1028.8	530.2	80.9	0.0	82.0	543.6	841.8	503.2	80.9	0.0	41.0
Oct-00	615.1	1114.0	610.2	86.6	0.0	50.0	629.5	916.7	572.8	86.6	0.0	44.0
Nov-00	672.0	1177.1	653.6	90.3	0.0	112.0	707.4	965.1	609.6	90.3	0.0	80.0
Dec-00	684.8	1250.9	726.1	99.0	0.0	85.0	737.9	1029.3	672.6	99.0	0.0	49.0
Jan-01	804.1	1260.7	745.9	96.0	0.0	74.0	821.8	1028.6	669.9	96.0	0.0	111.0
Feb-01	844.9	1221.8	708.8	94.3	0.0	53.0	885.0	994.6	636.0	94.3	0.0	98.0
Mar-01	819.0	1223.6	709.0	92.2	0.0	40.0	861.4	996.4	636.2	92.2	0.0	59.0
Apr-01	809.3	1204.3	687.0	89.0	0.0	44.0	823.7	980.0	616.1	89.0	0.0	44.0
May-01	755.1	1181.5	632.6	86.3	0.0	61.0	774.7	964.4	566.5	86.3	0.0	4.0
Jun-01	784.6	1229.9	641.2	84.6	0.0	45.0	800.8	1011.7	574.4	84.6	0.0	68.0
Jul-01	901.3	1328.2	727.7	90.8	0.0	59.0	876.0	1098.6	653.3	90.8	0.0	79.0
Aug-01	977.4	1362.8	759.3	93.6	0.0	40.0	927.7	1129.1	682.1	93.6	0.0	105.0
Sep-01	1002.8	1372.0	762.1	89.8	0.0	26.0	978.1	1137.9	684.6	89.8	0.0	24.0
Oct-01	1057.7	1412.8	792.9	87.5	0.0	56.0	1048.0	1174.7	712.8	87.5	0.0	54.0
Nov-01	1275.0	1524.0	891.0	92.8	0.0	43.0	1230.2	1272.9	802.3	92.8	0.0	43.0
Dec-01	1546.6	1776.5	1104.7	95.5	0.0	54.0	1463.9	1497.3	997.2	95.5	0.0	54.0
Jan-02	1728.5	1774.9	1079.7	93.8	0.0	95.0	1645.6	1485.3	973.3	93.8	82.0	31.0
Feb-02	1854.9	1747.8	1053.2	92.3	0.0	133.0	1516.3	1461.6	949.1	92.3	73.0	27.0
Mar-02	2006.9	1724.7	1029.2	90.6	0.0	90.0	1467.7	1441.7	927.1	90.6	106.0	9.0
Apr-02	1925.2	1655.1	968.0	87.8	47.0	58.0	1395.0	1380.0	871.3	87.8	87.0	25.0
May-02	1775.8	1558.3	891.7	92.2	48.0	75.0	1312.1	1293.3	801.7	92.2	47.0	19.0
Jun-02	1754.1	1608.0	937.4	94.7	76.0	70.0	1345.8	1336.9	843.3	94.7	14.0	47.0
Jul-02	1697.1	1677.7	991.5	99.9	44.0	44.0	1389.1	1399.4	892.6	99.9	27.0	30.0
Aug-02	1737.7	1897.3	1187.6	110.2	30.0	43.0	1491.9	1593.1	1071.5	110.2	0.0	21.0
Sep-02	1763.6	1922.4	1210.6	113.6	53.0	53.0	1543.9	1615.0	1092.4	113.6	0.0	26.0
Oct-02	1756.5	1751.9	1150.7	111.4	23.0	62.0	1467.8	1452.4	1037.7	111.4	31.0	34.0
Nov-02	1790.0	1608.8	1057.9	110.9	0.0	50.0	1410.0	1321.6	953.1	110.9	56.0	39.0
Dec-02	1744.4	1486.8	952.9	108.6	0.0	47.0	1346.0	1213.5	857.3	108.6	69.0	21.0
Jan-03	1531.9	1436.4	893.5	107.5	0.0	54.0	1301.2	1160.7	802.4	107.5	80.0	34.0
Feb-03	1097.7	1371.4	839.3	107.3	0.0	77.0	1088.8	1102.9	753.0	107.3	136.0	31.0
Mar-03	894.9	1370.1	833.7	106.6	0.0	68.0	942.3	1102.4	747.9	106.6	74.0	16.0

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	White maize						Yellow maize					
	Domestic price	Import parity	Export parity	Nr.2 Fob	Imports	Exports	Domestic price	Import parity	Export parity	Nr.2 fob	Imports	Exports
	R/ton	Randfontein R/ton	Africa R/ton	Gulf US \$/ton	1000 tons	1000 tons	R/ton	Durban R/ton	Africa R/ton	Gulf US \$/ton	1000 tons	1000 tons
Apr-03	793.5	1327.7	777.0	106.3	0.0	107.0	828.2	1067.4	696.2	106.3	117.0	8.0
May-03	878.4	1361.9	809.0	108.6	0.0	69.0	904.5	1097.4	725.3	108.6	22.0	12.0
Jun-03	887.0	1364.8	810.8	107.8	0.0	60.0	918.6	1100.1	727.1	107.8	9.0	5.0
Jul-03	830.0	1256.2	712.7	100.0	0.0	132.0	859.0	1004.6	637.6	100.0	2.0	7.0
Aug-03	859.0	1259.9	705.4	101.4	0.0	91.0	879.0	1009.3	631.0	101.4	0.0	5.0
Sep-03	901.0	1278.0	725.9	104.4	0.0	103.0	928.0	1024.8	649.7	104.4	0.0	17.0
Oct-03	884.0	1242.5	695.7	107.2	0.0	109.0	931.0	993.4	622.3	107.2	0.0	16.0
Nov-03	910.9	1305.4	685.2	113.0	0.0	79.0	973.9	1057.7	612.7	113.0	20.0	4.0
Dec-03	1094.0	1312.7	681.9	113.8	0.0	89.0	1115.3	1065.4	609.7	113.8	0.0	6.0
Jan-04	1302.5	1469.0	754.5	117.2	0.0	72.0	1312.2	1179.4	673.5	117.2	13.0	9.0
Feb-04	1327.7	1684.3	783.5	124.0	0.0	61.0	1378.7	1390.6	699.7	124.0	109.0	5.0
Mar-04	1090.7	1696.0	800.2	128.1	10.0	80.0	1202.3	1400.2	714.9	128.1	135.0	3.0
Apr-04	1111.6	1683.6	839.1	134.4	23.0	59.0	1196.4	1382.6	750.5	134.4	98.0	3.0
May-04	1050.2	1617.0	813.1	128.6	0.0	45.0	1077.3	1319.5	726.8	128.6	83.0	0.0
Jun-04	989.8	1478.5	731.8	123.0	0.0	28.0	998.6	1191.8	652.7	123.0	2.0	3.0
Jul-04	881.6	1264.0	558.6	104.6	0.0	32.0	904.8	1000.2	494.7	104.6	1.0	4.0
Aug-04	939.1	1315.1	595.0	104.1	0.0	42.0	964.4	1046.5	527.9	104.1	0.0	6.0
Sep-04	917.2	1282.1	553.4	98.7	0.0	35.0	953.5	1019.0	489.9	98.7	1.0	5.0
Oct-04	891.9	1290.1	517.8	94.4	0.0	60.0	940.8	1031.5	457.5	94.4	1.0	8.0
Nov-04	973.5	1259.8	475.6	94.8	0.0	63.0	963.7	1006.8	418.9	94.8	8.0	7.0
Dec-04	799.5	1216.7	442.2	95.9	0.0	41.0	857.5	968.1	388.4	95.9	66.0	7.0
Jan-05	734.7	1320.1	488.5	96.5	0.0	80.0	778.5	1065.4	430.7	96.5	43.0	8.0
Feb-05	537.1	1295.5	467.8	95.5	0.0	70.0	645.8	1043.6	411.8	95.5	0.0	5.0
Mar-05	539.0	1328.0	513.0	100.6	0.0	79.0	607.0	1133.0	417.0	100.6	14.0	5.0
Apr-05	551.0	1326.7	506.0	96.4	0.0	90.0	610.0	1130.0	408.0	96.4	0.0	6.0



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	Wheat					
	Domestic price	Import parity	Export parity	HRW fob	Imports	Exports
	R/ton	Randfontein R/ton	parity Africa R/ton	Gulf US \$/ton	1000 tons	1000 tons
May-00	1305.0	1374.0	695.3	117.0	105.0	8.0
Jun-00	1322.0	1362.1	685.8	118.0	28.0	3.0
Jul-00	1292.0	1345.6	669.6	116.0	28.0	5.0
Aug-00	1211.0	1339.7	662.7	114.0	15.0	6.0
Sep-00	1197.0	1440.5	759.5	124.0	33.0	5.0
Oct-00	1199.0	1538.3	851.6	131.0	90.0	6.0
Nov-00	1244.0	1558.8	868.8	130.0	26.0	5.0
Dec-00	1338.0	1562.0	872.6	131.0	20.0	8.0
Jan-01	1379.7	1651.7	956.7	136.0	28.0	8.0
Feb-01	1396.5	1530.5	876.0	131.3	8.0	11.0
Mar-01	1409.8	1545.5	888.9	131.0	40.0	8.0
Apr-01	1405.1	1596.8	940.3	131.8	7.0	11.0
May-01	1425.3	1604.0	942.8	136.0	49.0	10.0
Jun-01	1448.4	1566.0	902.6	130.0	0.0	11.0
Jul-01	1424.0	1570.3	899.0	127.5	10.0	7.0
Aug-01	1355.8	1583.8	910.1	127.0	26.0	10.0
Sep-01	1351.4	1637.6	955.7	126.3	4.0	8.0
Oct-01	1430.0	1713.0	1019.9	127.3	0.0	9.0
Nov-01	1625.7	1806.4	1100.5	129.4	7.0	9.0
Dec-01	1931.9	2043.9	1298.6	125.3	15.0	12.0
Jan-02	1886.2	2102.2	1330.9	130.0	65.0	18.0
Feb-02	1811.5	2081.7	1310.5	127.0	45.0	11.0
Mar-02	1807.9	2069.4	1296.9	125.8	36.0	19.0
Apr-02	1870.0	2018.8	1253.6	125.3	49.0	14.0
May-02	1908.2	1817.1	1077.3	123.6	17.0	13.0
Jun-02	1859.8	1969.2	1220.4	135.8	25.0	9.0
Jul-02	1909.7	2124.1	1355.3	151.2	31.0	13.0
Aug-02	1974.0	2373.7	1578.9	165.2	52.0	11.0
Sep-02	2040.2	2536.6	1851.8	191.8	65.0	11.0
Oct-02	2034.0	2432.0	1822.6	194.4	138.0	12.0
Nov-02	1824.1	2173.4	1588.9	182.8	51.0	5.0
Dec-02	1685.4	1915.7	1355.2	164.7	78.0	4.0
Jan-03	1576.2	1735.4	1172.3	154.7	157.0	5.0
Feb-03	1438.3	1631.2	1081.0	153.8	55.0	18.0
Mar-03	1425.3	1589.7	1037.1	144.8	115.0	23.0
Apr-03	1430.0	1491.0	927.2	143.2	100.0	26.0
May-03	1416.7	1535.8	969.1	146.2	32.0	16.0

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	Wheat					
	Domestic price R/ton	Import parity Randfontein R/ton	Export parity Africa R/ton	HRW fob Gulf US \$/ton	Imports 1000 tons	Exports 1000 tons
Jun-03	1477.0	1428.1	865.7	132.7	0.0	13.0
Jul-03	1569.0	1412.2	825.5	133.8	0.0	17.0
Aug-03	1702.0	1668.4	963.4	155.1	0.0	20.0
Sep-03	1652.0	1685.8	919.0	149.8	21.0	18.0
Oct-03	1629.0	1457.8	893.7	151.0	75.0	5.0
Nov-03	1666.0	1587.4	953.0	169.3	52.0	7.0
Dec-03	1600.0	1646.9	908.0	169.9	101.0	18.0
Jan-04	1703.0	1692.5	978.1	170.1	91.0	14.0
Feb-04	1735.0	1802.7	900.8	164.1	108.0	20.0
Mar-04	1714.0	1812.2	911.0	169.0	108.0	27.0
Apr-04	1723.0	1760.8	911.8	171.9	17.0	12.0
May-04	1715.0	1666.1	858.3	164.3	70.0	12.0
Jun-04	1548.0	1513.2	763.5	157.5	86.0	17.0
Jul-04	1446.0	1397.0	687.6	152.4	96.0	5.0
Aug-04	1447.1	1448.0	710.3	145.3	131.0	10.0
Sep-04	1416.2	1510.4	757.6	155.5	107.0	11.0
Oct-04	1398.9	1491.1	719.8	154.8	85.0	11.0
Nov-04	1346.4	1463.7	686.1	163.3	156.0	20.0
Dec-04	1269.0	1406.0	638.5	160.4	64.0	13.0
Jan-05	1295.1	1460.5	675.5	157.5	45.0	13.0
Feb-05	1297.0	1429.6	661.5	151.5	156.0	20.0
Mar-05	1317.0	1538.0	631.0	150.4	100.0	10.0
Apr-05	1384.0	1503.0	589.0	150.0	78.0	14.0

## APPENDIX 2

Table A2.1: 10 percent shock in parity prices in 2007 – scenario change from baseline 1

	White maize: Import parity				
	2006	2007	2008	2009	2010
White Maize Area Harvested	Thousand hectares				
Baseline	973.0	1590.8	1878.0	1596.9	1525.6
Scenario	973.0	1590.8	1968.6	1534.7	1522.8
Absolute Change	0.0	0.0	90.6	-62.1	-2.8
% Change	0.0%	0.0%	4.8%	-3.9%	-0.2%
White Maize Production	Thousand tons				
Baseline	3538.1	2500.0	6953.3	5962.5	5743.1
Scenario	3538.1	2500.0	7288.8	5730.5	5732.6
Absolute Change	0.0	0.0	335.4	-232.0	-10.5
% Change	0.0%	0.0%	4.8%	-3.9%	-0.2%
White Maize Ending Stock	Thousand tons				
Baseline	1035.4	280.0	1181.3	1346.2	1361.7
Scenario	1035.4	280.0	1333.7	1342.5	1355.7
Absolute Change	0.0	0.0	152.4	-3.7	-6.0
% Change	0.0%	0.0%	12.9%	-0.3%	-0.4%
White Maize Human Consumption	Thousand tons				
Baseline	3696.1	3545.2	3699.6	3731.6	3712.8
Scenario	3696.1	3512.5	3732.6	3733.2	3711.8
Absolute Change	0.0	-32.7	33.0	1.6	-1.0
% Change	0.0%	-0.9%	0.9%	0.0%	0.0%
White Maize Feed Consumption	Thousand tons				
Baseline	644.0	493.2	634.9	670.3	680.3
Scenario	644.0	475.7	639.7	682.8	675.6
Absolute Change	0.0	-17.5	4.8	12.5	-4.7
% Change	0.0%	-3.6%	0.8%	1.9%	-0.7%
White Maize Exports	Thousand tons				
Baseline	431.2	0.0	1392.6	1099.9	1052.4
Scenario	431.2	0.0	1537.7	1030.1	1050.5
Absolute Change	0.0	0.0	145.1	-69.8	-2.0
% Change	0.0%	0.0%	10.4%	-6.3%	-0.2%
White Maize Imports	Thousand tons				
Baseline	157.7	1108.0	0.0	29.3	42.9
Scenario	157.7	1057.8	0.0	49.4	43.5
Absolute Change	0.0	-50.2	0.0	20.1	0.6
% Change	0.0%	-4.5%	#DIV/0!	68.8%	1.3%
White Maize Producer Price	R/ton				
Baseline	1025.6	1394.1	1067.0	995.7	1025.0
Scenario	1025.6	1522.2	991.9	991.8	1027.5
Absolute Change	0.0	128.1	-75.1	-3.9	2.4
% Change	0.0%	9.2%	-7.0%	-0.4%	0.2%

		<b>Yellow maize: Import parity</b>				
		<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Yellow Maize Area Harvested		Thousand hectares				
Baseline		575.0	984.4	1052.4	995.1	968.7
Scenario		575.0	984.4	1099.9	959.6	978.0
Absolute Change		0.0	0.0	47.5	-35.5	9.4
% Change		0.0%	0.0%	4.5%	-3.6%	1.0%
Yellow Maize Production		Thousand tons				
Baseline		2355.7	1000.0	4208.5	4022.7	3956.8
Scenario		2355.7	1000.0	4398.4	3879.3	3995.1
Absolute Change		0.0	0.0	189.9	-143.4	38.3
% Change		0.0%	0.0%	4.5%	-3.6%	1.0%
Yellow Maize Ending Stock		Thousand tons				
Baseline		566.9	230.0	711.9	870.8	913.0
Scenario		566.9	230.0	799.5	853.8	920.6
Absolute Change		0.0	0.0	87.6	-17.0	7.5
% Change		0.0%	0.0%	12.3%	-2.0%	0.8%
Yellow Maize Human Consumption		Thousand tons				
Baseline		242.3	236.3	242.8	244.4	242.1
Scenario		242.3	230.4	247.0	243.2	242.5
Absolute Change		0.0	-6.0	4.2	-1.2	0.4
% Change		0.0%	-2.5%	1.7%	-0.5%	0.2%
Yellow Maize Feed Consumption		Thousand tons				
Baseline		3295.5	3345.4	3447.6	3559.0	3606.5
Scenario		3295.5	3243.6	3529.0	3525.9	3618.4
Absolute Change		0.0	-101.7	81.4	-33.1	11.9
% Change		0.0%	-3.0%	2.4%	-0.9%	0.3%
Yellow Maize Exports		Thousand tons				
Baseline		98.6	0.0	214.2	218.2	219.1
Scenario		98.6	0.0	216.9	217.5	219.4
Absolute Change		0.0	0.0	2.8	-0.7	0.2
% Change		0.0%	0.0%	1.3%	-0.3%	0.1%
Yellow Maize Imports		Thousand tons				
Baseline		940.0	2426.8	359.9	339.7	335.1
Scenario		940.0	2319.2	346.1	343.4	333.9
Absolute Change		0.0	-107.7	-13.9	3.7	-1.2
% Change		0.0%	-4.4%	-3.8%	1.1%	-0.4%
Yellow Maize Producer Price		R/ton				
Baseline		976.9	1095.6	968.5	926.7	956.6
Scenario		976.9	1210.3	886.7	950.5	948.3
Absolute Change		0.0	114.7	-81.8	23.8	-8.3
% Change		0.0%	10.5%	-8.4%	2.6%	-0.9%

		<b>Wheat: Import parity</b>				
		<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Wheat Summer Area Harvested		Thousand hectares				
	Baseline	530.5	490.0	481.7	511.3	551.5
	Scenario	530.5	490.0	500.7	519.8	554.0
	Absolute Change	0.0	0.0	18.9	8.5	2.5
	% Change	0.0%	0.0%	3.9%	1.7%	0.5%
Wheat Winter Area Harvested		Thousand hectares				
	Baseline	323.5	344.3	328.7	329.5	338.2
	Scenario	323.5	344.3	339.0	329.4	339.1
	Absolute Change	0.0	0.0	10.4	-0.2	0.9
	% Change	0.0%	0.0%	3.2%	0.0%	0.3%
Wheat Production		Thousand tons				
	Baseline	1988.1	980.0	1884.7	1977.4	2113.9
	Scenario	1988.1	980.0	1954.4	2000.7	2122.4
	Absolute Change	0.0	0.0	69.7	23.2	8.5
	% Change	0.0%	0.0%	3.7%	1.2%	0.4%
Wheat Ending Stock		Thousand tons				
	Baseline	611.2	599.0	587.3	572.0	561.0
	Scenario	611.2	580.6	577.9	568.1	559.3
	Absolute Change	0.0	-18.5	-9.5	-3.9	-1.7
	% Change	0.0%	-3.1%	-1.6%	-0.7%	-0.3%
Wheat Human Consumption		Thousand tons				
	Baseline	2751.8	2811.2	2741.9	2716.4	2710.4
	Scenario	2751.8	2802.5	2728.7	2715.8	2710.8
	Absolute Change	0.0	-8.7	-13.2	-0.6	0.4
	% Change	0.0%	-0.3%	-0.5%	0.0%	0.0%
Wheat Feed Consumption		Thousand tons				
	Baseline	90.7	98.8	75.2	63.7	60.9
	Scenario	90.7	99.4	68.0	65.2	60.4
	Absolute Change	0.0	0.6	-7.2	1.5	-0.5
	% Change	0.0%	0.6%	-9.6%	2.3%	-0.8%
Wheat Exports		Thousand tons				
	Baseline	123.9	7.5	117.2	131.9	147.4
	Scenario	123.9	10.4	126.1	133.7	148.1
	Absolute Change	0.0	2.9	8.9	1.9	0.7
	% Change	0.0%	38.9%	7.6%	1.4%	0.5%
Wheat Imports		Thousand tons				
	Baseline	1003.1	1945.0	1057.6	938.8	813.4
	Scenario	1003.1	1921.4	985.3	923.9	807.7
	Absolute Change	0.0	-23.6	-72.3	-15.0	-5.6
	% Change	0.0%	-1.2%	-6.8%	-1.6%	-0.7%
Wheat Producer Price		R/ton				
	Baseline	1433.2	1564.2	1685.1	1822.8	1940.9
	Scenario	1433.2	1704.7	1685.1	1822.8	1940.9
	Absolute Change	0.0	140.6	0.0	0.0	0.0
	% Change	0.0%	9.0%	0.0%	0.0%	0.0%

**Table A2.2: 10 percent shock in parity prices in 2007 – scenario change from baseline 2**

		White maize: Near-autarky				
		2006	2007	2008	2009	2010
White Maize Area Harvested		Thousand hectares				
	Baseline	973.0	1613.7	1548.3	1502.5	1549.1
	Scenario	973.0	1613.7	1584.7	1491.6	1544.6
	Absolute Change	0.0	0.0	36.5	-10.9	-4.6
	% Change	0.0%	0.0%	2.4%	-0.7%	-0.3%
White Maize Production		Thousand tons				
	Baseline	3538.1	5922.1	5732.3	5610.1	5831.6
	Scenario	3538.1	5922.1	5867.4	5569.4	5814.4
	Absolute Change	0.0	0.0	135.1	-40.7	-17.1
	% Change	0.0%	0.0%	2.4%	-0.7%	-0.3%
White Maize Ending Stock		Thousand tons				
	Baseline	1035.4	1237.1	1284.9	1260.2	1344.0
	Scenario	1035.4	1211.8	1328.2	1270.3	1343.4
	Absolute Change	0.0	-25.3	43.3	10.1	-0.7
	% Change	0.0%	-2.0%	3.4%	0.8%	0.0%
White Maize Human Consumption		Thousand tons				
	Baseline	3696.1	3745.2	3742.3	3717.4	3708.0
	Scenario	3696.1	3751.1	3750.0	3720.1	3708.1
	Absolute Change	0.0	5.9	7.7	2.7	0.1
	% Change	0.0%	0.2%	0.2%	0.1%	0.0%
White Maize Feed Consumption		Thousand tons				
	Baseline	644.0	659.0	658.1	656.9	672.4
	Scenario	644.0	647.3	663.2	662.0	672.1
	Absolute Change	0.0	-11.6	5.0	5.1	-0.4
	% Change	0.0%	-1.8%	0.8%	0.8%	-0.1%
White Maize Exports		Thousand tons				
	Baseline	431.2	1038.3	1013.3	995.0	1077.9
	Scenario	431.2	1062.4	1055.0	983.1	1073.2
	Absolute Change	0.0	24.1	41.7	-11.9	-4.8
	% Change	0.0%	2.3%	4.1%	-1.2%	-0.4%
White Maize Imports		Thousand tons				
	Baseline	157.7	47.0	54.2	59.5	35.6
	Scenario	157.7	40.1	42.2	62.9	37.0
	Absolute Change	0.0	-7.0	-12.0	3.4	1.4
	% Change	0.0%	-14.8%	-22.2%	5.8%	3.9%
White Maize Producer Price		R/ton				
	Baseline	1025.6	954.4	969.7	1029.5	1036.9
	Scenario	1025.6	997.7	952.2	1023.2	1036.6
	Absolute Change	0.0	43.3	-17.5	-6.3	-0.2
	% Change	0.0%	4.5%	-1.8%	-0.6%	0.0%

		Yellow maize: Near-autarky				
		2006	2007	2008	2009	2010
Yellow Maize Area Harvested		Thousand hectares				
Baseline		575.0	984.4	977.2	964.6	970.9
Scenario		575.0	984.4	984.0	959.0	972.6
Absolute Change		0.0	0.0	6.9	-5.6	1.7
% Change		0.0%	0.0%	0.7%	-0.6%	0.2%
Yellow Maize Production		Thousand tons				
Baseline		2355.7	3891.9	3907.5	3899.4	3966.0
Scenario		2355.7	3891.9	3934.9	3876.8	3973.0
Absolute Change		0.0	0.0	27.4	-22.6	6.9
% Change		0.0%	0.0%	0.7%	-0.6%	0.2%
Yellow Maize Ending Stock		Thousand tons				
Baseline		566.9	762.2	855.3	885.3	922.7
Scenario		566.9	751.6	863.5	880.5	923.3
Absolute Change		0.0	-10.6	8.2	-4.8	0.6
% Change		0.0%	-1.4%	1.0%	-0.5%	0.1%
Yellow Maize Human Consumption		Thousand tons				
Baseline		242.3	246.1	246.5	243.9	242.3
Scenario		242.3	245.0	247.1	243.7	242.4
Absolute Change		0.0	-1.1	0.5	-0.2	0.1
% Change		0.0%	-0.5%	0.2%	-0.1%	0.0%
Yellow Maize Feed Consumption		Thousand tons				
Baseline		3295.5	3419.7	3517.0	3566.5	3619.5
Scenario		3295.5	3417.3	3523.0	3558.0	3620.8
Absolute Change		0.0	-2.3	6.0	-8.5	1.3
% Change		0.0%	-0.1%	0.2%	-0.2%	0.0%
Yellow Maize Exports		Thousand tons				
Baseline		98.6	213.3	216.6	217.9	219.3
Scenario		98.6	215.6	217.0	217.8	219.3
Absolute Change		0.0	2.3	0.3	-0.1	0.0
% Change		0.0%	1.1%	0.2%	-0.1%	0.0%
Yellow Maize Imports		Thousand tons				
Baseline		940.0	364.5	347.6	341.1	334.4
Scenario		940.0	352.8	345.9	341.7	334.2
Absolute Change		0.0	-11.7	-1.7	0.7	-0.2
% Change		0.0%	-3.2%	-0.5%	0.2%	0.0%
Yellow Maize Producer Price		R/ton				
Baseline		976.9	907.7	896.0	935.4	951.6
Scenario		976.9	929.2	885.7	939.6	950.4
Absolute Change		0.0	21.5	-10.2	4.2	-1.1
% Change		0.0%	2.4%	-1.1%	0.4%	-0.1%

		<b>Wheat: Import parity</b>				
		<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Wheat Summer Area Harvested		Thousand hectares				
Baseline		530.5	490.0	508.8	532.6	553.9
Scenario		530.5	490.0	534.4	536.7	555.2
Absolute Change		0.0	0.0	25.6	4.0	1.3
% Change		0.0%	0.0%	5.0%	0.8%	0.2%
Wheat Winter Area Harvested		Thousand hectares				
Baseline		323.5	321.4	324.9	332.5	339.7
Scenario		323.5	321.4	334.4	333.3	340.0
Absolute Change		0.0	0.0	9.5	0.9	0.3
% Change		0.0%	0.0%	2.9%	0.3%	0.1%
Wheat Production		Thousand tons				
Baseline		1988.1	1885.0	1952.7	2041.5	2123.2
Scenario		1988.1	1885.0	2039.3	2054.1	2127.2
Absolute Change		0.0	0.0	86.6	12.6	4.0
% Change		0.0%	0.0%	4.4%	0.6%	0.2%
Wheat Ending Stock		Thousand tons				
Baseline		611.2	599.8	586.2	572.9	561.7
Scenario		611.2	579.0	577.5	569.1	560.0
Absolute Change		0.0	-20.8	-8.7	-3.9	-1.7
% Change		0.0%	-3.5%	-1.5%	-0.7%	-0.3%
Wheat Human Consumption		Thousand tons				
Baseline		2751.8	2731.2	2724.8	2722.1	2712.3
Scenario		2751.8	2707.1	2721.7	2721.0	2712.2
Absolute Change		0.0	-24.1	-3.1	-1.1	0.0
% Change		0.0%	-0.9%	-0.1%	0.0%	0.0%
Wheat Feed Consumption		Thousand tons				
Baseline		90.7	75.4	68.3	65.1	60.8
Scenario		90.7	67.5	67.2	65.2	60.8
Absolute Change		0.0	-7.9	-1.1	0.1	-0.1
% Change		0.0%	-10.5%	-1.6%	0.2%	-0.1%
Wheat Exports		Thousand tons				
Baseline		123.9	118.3	127.5	137.9	148.2
Scenario		123.9	124.1	136.2	138.9	148.4
Absolute Change		0.0	5.8	8.7	1.0	0.2
% Change		0.0%	4.9%	6.8%	0.7%	0.1%
Wheat Imports		Thousand tons				
Baseline		1003.1	1048.3	974.0	890.0	806.6
Scenario		1003.1	1001.3	903.9	882.3	804.8
Absolute Change		0.0	-47.0	-70.1	-7.7	-1.7
% Change		0.0%	-4.5%	-7.2%	-0.9%	-0.2%
Wheat Producer Price		R/ton				
Baseline		1433.2	1564.2	1685.1	1822.8	1940.9
Scenario		1433.2	1704.7	1685.1	1822.8	1940.9
Absolute Change		0.0	140.6	0.0	0.0	0.0
% Change		0.0%	9.0%	0.0%	0.0%	0.0%



**Table A2.3: 10 percent shock in parity prices in 2007 – scenario change from baseline 3**

		White maize: Export parity				
		2006	2007	2008	2009	2010
White Maize	Area Harvested	Thousand hectares				
	Baseline	973.0	1631.8	1188.2	1450.0	1553.9
	Scenario	973.0	1631.8	1250.6	1445.7	1546.7
	Absolute Change	0.0	0.0	62.4	-4.3	-7.2
	% Change	0.0%	0.0%	5.3%	-0.3%	-0.5%
White Maize	Production	Thousand tons				
	Baseline	3538.1	7800.0	4399.2	5414.1	5849.5
	Scenario	3538.1	7800.0	4630.4	5398.2	5822.3
	Absolute Change	0.0	0.0	231.2	-15.9	-27.3
	% Change	0.0%	0.0%	5.3%	-0.3%	-0.5%
White Maize	Ending Stock	Thousand tons				
	Baseline	1035.4	2227.6	1342.6	1216.7	1322.1
	Scenario	1035.4	2137.0	1385.6	1237.1	1323.8
	Absolute Change	0.0	-90.6	43.0	20.5	1.8
	% Change	0.0%	-4.1%	3.2%	1.7%	0.1%
White Maize	Human Consumption	Thousand tons				
	Baseline	3696.1	3913.2	3766.5	3711.0	3702.9
	Scenario	3696.1	3910.5	3772.6	3715.6	3703.7
	Absolute Change	0.0	-2.8	6.1	4.7	0.8
	% Change	0.0%	-0.1%	0.2%	0.1%	0.0%
White Maize	Feed Consumption	Thousand tons				
	Baseline	644.0	749.6	727.0	638.5	669.8
	Scenario	644.0	725.0	730.3	646.0	670.3
	Absolute Change	0.0	-24.6	3.3	7.5	0.5
	% Change	0.0%	-3.3%	0.5%	1.2%	0.1%
White Maize	Exports	Thousand tons				
	Baseline	431.2	1620.1	630.4	940.7	1081.1
	Scenario	431.2	1738.0	698.8	936.4	1073.5
	Absolute Change	0.0	117.9	68.4	-4.3	-7.6
	% Change	0.0%	7.3%	10.8%	-0.5%	-0.7%
White Maize	Imports	Thousand tons				
	Baseline	157.7	0.0	164.6	75.2	34.7
	Scenario	157.7	0.0	144.9	76.4	36.9
	Absolute Change	0.0	0.0	-19.7	1.2	2.2
	% Change	0.0%	0.0%	-12.0%	1.6%	6.3%
White Maize	Producer Price	R/ton				
	Baseline	1025.6	585.1	914.7	1044.9	1049.6
	Scenario	1025.6	647.3	900.8	1033.8	1047.7
	Absolute Change	0.0	62.3	-13.9	-11.1	-1.9
	% Change	0.0%	10.6%	-1.5%	-1.1%	-0.2%

	Yellow maize: Near-autarky				
	2006	2007	2008	2009	2010
Yellow Maize Area Harvested	Thousand hectares				
Baseline	575.0	984.4	854.8	999.3	962.1
Scenario	575.0	984.4	860.6	993.3	963.6
Absolute Change	0.0	0.0	5.8	-5.9	1.5
% Change	0.0%	0.0%	0.7%	-0.6%	0.2%
Yellow Maize Production	Thousand tons				
Baseline	2355.7	4500.0	3418.1	4039.5	3930.0
Scenario	2355.7	4500.0	3441.4	4015.4	3936.1
Absolute Change	0.0	0.0	23.3	-24.0	6.1
% Change	0.0%	0.0%	0.7%	-0.6%	0.2%
Yellow Maize Ending Stock	Thousand tons				
Baseline	566.9	1050.9	793.1	911.2	918.7
Scenario	566.9	1041.2	800.0	905.6	918.8
Absolute Change	0.0	-9.7	6.9	-5.5	0.1
% Change	0.0%	-0.9%	0.9%	-0.6%	0.0%
Yellow Maize Human Consumption	Thousand tons				
Baseline	242.3	260.1	242.4	245.3	241.9
Scenario	242.3	259.1	242.9	245.1	241.9
Absolute Change	0.0	-1.0	0.5	-0.2	0.1
% Change	0.0%	-0.4%	0.2%	-0.1%	0.0%
Yellow Maize Feed Consumption	Thousand tons				
Baseline	3295.5	3665.0	3398.5	3612.5	3615.3
Scenario	3295.5	3666.8	3402.9	3601.8	3615.6
Absolute Change	0.0	1.8	4.4	-10.7	0.3
% Change	0.0%	0.0%	0.1%	-0.3%	0.0%
Yellow Maize Exports	Thousand tons				
Baseline	98.6	223.2	214.0	218.7	219.0
Scenario	98.6	224.7	214.3	218.6	219.0
Absolute Change	0.0	1.5	0.3	-0.1	0.0
% Change	0.0%	0.7%	0.1%	-0.1%	0.0%
Yellow Maize Imports	Thousand tons				
Baseline	940.0	314.4	361.0	337.1	335.7
Scenario	940.0	314.4	361.0	337.1	335.7
Absolute Change	0.0	0.0	0.0	0.0	0.0
% Change	0.0%	0.0%	0.0%	0.0%	0.0%
Yellow Maize Producer Price	R/ton				
Baseline	976.9	638.2	974.8	909.8	960.2
Scenario	976.9	658.0	965.8	913.7	959.2
Absolute Change	0.0	19.8	-9.0	3.9	-1.0
% Change	0.0%	3.1%	-0.9%	0.4%	-0.1%

<b>Wheat: Import parity</b>					
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Wheat Summer Area Harvested	Thousand hectares				
Baseline	530.5	490.0	571.2	554.3	557.4
Scenario	530.5	490.0	595.6	557.1	558.8
Absolute Change	0.0	0.0	24.4	2.8	1.4
% Change	0.0%	0.0%	4.3%	0.5%	0.2%
Wheat Winter Area Harvested	Thousand hectares				
Baseline	323.5	303.3	331.9	338.5	340.8
Scenario	323.5	303.3	341.4	339.2	341.0
Absolute Change	0.0	0.0	9.5	0.7	0.2
% Change	0.0%	0.0%	2.9%	0.2%	0.1%
Wheat Production	Thousand tons				
Baseline	1988.1	2600.0	2136.3	2111.6	2134.8
Scenario	1988.1	2600.0	2219.5	2120.7	2139.0
Absolute Change	0.0	0.0	83.2	9.1	4.2
% Change	0.0%	0.0%	3.9%	0.4%	0.2%
Wheat Ending Stock	Thousand tons				
Baseline	611.2	599.3	587.6	574.6	562.9
Scenario	611.2	578.8	579.1	570.6	561.1
Absolute Change	0.0	-20.4	-8.5	-3.9	-1.8
% Change	0.0%	-3.4%	-1.5%	-0.7%	-0.3%
Wheat Human Consumption	Thousand tons				
Baseline	2751.8	2664.0	2715.2	2724.7	2714.3
Scenario	2751.8	2643.3	2712.7	2722.8	2714.0
Absolute Change	0.0	-20.6	-2.4	-1.9	-0.3
% Change	0.0%	-0.8%	-0.1%	-0.1%	0.0%
Wheat Feed Consumption	Thousand tons				
Baseline	90.7	48.4	72.7	63.9	61.7
Scenario	90.7	40.6	71.8	63.9	61.6
Absolute Change	0.0	-7.7	-1.0	0.0	-0.1
% Change	0.0%	-16.0%	-1.3%	0.0%	-0.2%
Wheat Exports	Thousand tons				
Baseline	123.9	207.4	148.1	145.4	149.2
Scenario	123.9	212.8	156.3	146.1	149.5
Absolute Change	0.0	5.4	8.2	0.7	0.3
% Change	0.0%	2.6%	5.6%	0.5%	0.2%
Wheat Imports	Thousand tons				
Baseline	1003.1	327.5	807.7	829.0	798.4
Scenario	1003.1	284.1	741.2	823.3	796.2
Absolute Change	0.0	-43.4	-66.5	-5.6	-2.1
% Change	0.0%	-13.3%	-8.2%	-0.7%	-0.3%
Wheat Producer Price	R/ton				
Baseline	1433.2	1564.2	1685.1	1822.8	1940.9
Scenario	1433.2	1704.7	1685.1	1822.8	1940.9
Absolute Change	0.0	140.6	0.0	0.0	0.0
% Change	0.0%	9.0%	0.0%	0.0%	0.0%