

**TABLE 14: PHYSICAL QUALITY FACTORS OF WHITE AND YELLOW MAIZE
2003/04 - 2012/13**

Season of samples	Hectolitre mass (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			
	ave.	min.	max.	ave.	min.	max.	Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve			Stress cracks (%)			
							ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.
White Maize																									
2003/04	599	78.1	63.8	83.2	36.2	23.7	58.8	29.9	0.4	65.5	59.2	31.0	78.0	11.0	1.0	64.9	1.4	0.0	15.0	1.0	0.0	9.5	6	0	58
2004/05	601	77.9	68.9	83.2	35.3	26.3	44.3	29.7	0.8	59.7	60.1	31.3	80.3	10.2	0.1	54.5	1.4	0.1	8.0	1.1	0.0	6.2	5	0	23
2005/06	593	76.2	58.3	81.6	33.7	18.0	44.7	30.1	0.0	73.9	59.4	24.2	75.0	10.5	1.2	75.8	2.1	0.2	12.6	1.6	0.1	10.4	4	0	36
2006/07	563	78.1	68.1	82.8	29.8	19.4	40.1	17.1	0.2	51.7	63.3	16.7	78.2	19.6	0.8	81.6	1.5	0.0	12.1	1.0	0.0	11.5	3	0	27
2007/08	483	78.2	65.3	81.6	34.5	17.0	45.6	24.5	0.4	69.7	63.8	23.3	84.2	11.7	1.0	76.2	1.2	0.1	9.7	0.9	0.0	7.3	4	0	44
2008/09	483	77.6	61.6	82.8	35.1	27.1	44.0	26.2	0.5	46.4	63.3	43.1	84.0	10.5	2.1	51.0	1.5	0.2	11.7	1.1	0.1	8.7	5	0	50
2009/10	458	77.9	60.2	84.4	36.0	24.1	59.1	26.3	1.2	90.7	62.6	9.2	82.0	11.2	0.1	53.5	1.5	0.2	24.3	1.2	0.1	23.1	4	0	36
2010/11	413	77.7	71.3	81.8	34.5	25.0	44.0	24.9	1.4	55.8	63.5	33.5	83.9	11.6	1.7	65.1	1.6	0.0	8.4	1.2	0.0	5.9	5	0	31
2011/12	577	78.2	71.8	82.0	31.2	71.4	44.4	18.8	0.8	63.3	64.9	26.2	79.7	16.3	2.8	72.4	0.8	0.0	8.6	0.6	0.0	4.9	5	0	25
2012/13	508	78.2	69.7	82.9	29.6	17.7	46.0	15.1	0.0	59.9	65.0	16.2	80.5	20.0	3.1	83.5	1.0	0.0	6.6	0.7	0.0	4.6	4	0	37
Weighted Average		77.8			33.5			24.4			62.4			13.3			1.4			1.0			4		
Minimum		58.3			17.0			0.0			9.2			0.1			0.0			0.0			0		
Maximum		84.4			59.1			90.7			84.2			83.5			24.3			23.1			58		
Yellow Maize																									
2003/04	301	77.0	68.0	80.1	34.0	25.5	62.9	20.2	0.9	59.8	65.4	35.8	79.4	14.4	0.8	53.9	1.7	0.2	22.0	1.2	0.1	21.5	8	0	60
2004/05	399	76.8	68.4	81.0	33.0	21.5	44.4	19.8	1.0	46.9	64.3	32.9	82.3	15.9	1.4	66.1	1.7	0.2	24.4	1.2	0.0	12.9	5	0	21
2005/06	307	75.4	53.4	81.9	31.5	22.0	40.1	19.0	1.1	53.1	65.4	43.3	80.1	15.7	3.2	50.8	2.5	0.1	17.6	1.7	0.0	11.7	5	0	24
2006/07	337	76.4	70.2	81.2	27.4	16.6	38.6	8.5	0.0	34.2	61.7	17.1	79.5	29.8	6.4	82.9	2.1	0.2	10.9	1.3	0.0	6.0	4	0	24
2007/08	417	76.7	69.3	79.9	32.4	24.4	42.9	15.2	0.3	50.9	66.0	39.6	78.6	18.8	2.8	60.1	1.9	0.3	15.2	1.3	0.1	8.3	5	0	58
2008/09	327	76.6	69.9	81.2	32.9	24.2	45.4	15.7	1.3	52.8	66.5	44.3	79.9	17.8	1.6	44.6	1.8	0.1	10.3	1.3	0.0	9.9	6	0	32
2009/10	342	76.6	69.0	81.6	33.0	23.3	42.5	14.3	0.0	41.7	68.5	50.9	79.9	17.2	4.0	47.7	2.1	0.4	10.3	1.6	0.3	8.4	5	0	27
2010/11	280	76.2	69.0	81.5	31.9	22.0	40.4	14.4	1.1	43.7	68.6	39.5	79.6	16.9	1.9	58.7	2.1	0.5	8.1	1.6	0.0	5.0	5	0	24
2011/12	423	76.1	68.1	81.0	29.4	14.5	40.9	11.3	0.0	38.3	63.9	13.7	79.4	24.8	6.5	86.3	1.3	0.2	15.6	1.0	0.0	8.3	6	0	27
2012/13	492	76.6	67.8	81.6	28.4	15.2	41.3	9.8	0.0	42.6	61.7	10.1	80.9	28.5	3.4	89.9	1.7	0.1	8.2	1.1	0.0	5.4	5	0	31
Weighted Average		76.5			31.2			14.5			65.0			20.5			1.9			1.3			5		
Minimum		53.4			14.5			0.0			10.1			0.8			0.1			0.0			0		
Maximum		81.9			62.9			59.8			82.3			89.9			24.4			21.5			58		
White & Yellow Maize																									
2003/04	900	77.8	63.8	83.2	35.5	23.7	62.9	26.6	0.4	65.5	61.3	31.0	79.4	12.1	0.8	64.9	1.5	0.0	22.0	1.1	0.0	21.5	7	0	60
2004/05	1000	77.5	68.4	83.2	34.4	21.5	44.4	25.7	0.8	59.7	61.8	31.8	82.3	12.5	0.1	66.1	1.5	0.1	24.4	1.1	0.0	12.9	5	0	23
2005/06	900	75.9	53.4	81.9	32.9	18.0	44.7	26.3	0.0	73.9	61.4	24.2	80.1	12.3	1.2	75.8	2.3	0.1	17.6	1.6	0.0	11.7	4	0	36
2006/07	900	77.5	68.1	82.8	28.9	16.6	40.1	13.9	0.0	51.7	62.7	16.7	79.5	23.4	0.8	82.9	1.7	0.0	12.1	1.1	0.0	11.5	3	0	27
2007/08	900	77.5	65.3	81.6	33.5	17.0	45.6	20.2	0.3	69.7	64.8	23.3	84.2	15.0	1.0	76.2	1.5	0.1	15.2	1.1	0.0	8.3	4	0	58
2008/09	810	77.2	61.6	82.8	34.2	24.2	45.4	21.9	0.5	52.8	64.6	43.1	84.0	13.4	1.6	51.0	1.6	0.1	11.7	1.2	0.0	9.9	5	0	50
2009/10	800	77.4	60.2	84.4	34.7	23.3	59.1	21.1	0.0	90.7	65.1	9.2	82.0	13.7	0.1	53.5	1.8	0.2	24.3	1.4	0.1	23.1	4	0	36
2010/11	693	77.1	69.0	81.8	33.5	22.0	44.0	20.7	1.1	55.8	65.6	33.5	83.9	13.8	1.7	65.1	1.8	0.0	8.4	1.3	0.0	5.9	5	0	31
2011/12	1000	77.3	68.1	82.0	30.4	14.5	44.4	15.6	0.0	63.3	64.5	13.7	79.7	19.9	2.8	86.3	1.0	0.0	15.6	0.7	0.0	8.3	6	0	27
2012/13	1000	77.4	67.8	82.9	29.0	15.2	46.0	12.5	0.0	59.9	63.4	10.1	80.9	24.2	3.1	89.9	1.4	0.0	8.2	0.9	0.0	5.4	5	0	37
Weighted Average		77.3			32.6			20.3			63.4			16.2			1.6			1.1			5		
Minimum		53.4			14.5			0.0			9.2			0.1			0.0			0.0			0		
Maximum		84.4			62.9			90.7			84.2			89.9			24.4			23.1			60		

Graph 29: Hectolitre mass of South African maize over 10 seasons

