

TABLE 16: PHYSICAL QUALITY FACTORS OF WHITE MAIZE ACCORDING TO GRADE 2007/2008

Number of samples	Region	Hectolitre mass			100 kernel mass (g)			Kernel size (%)						Breakeage susceptibility (%)						Stress cracks (%)			Milling index					
		kg/hl		kg/hl	kernel mass (g)		kernel mass (g)	Above 10 mm sieve		Above 8 mm sieve		Below 8 mm sieve		< 6.3 mm sieve		< 4.75 mm sieve		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM 1																												
5	Region 12	76.9	70.8	79.0	35.3	32.6	36.2	21.1	10.6	30.5	68.2	61.8	76.7	10.7	7.7	13.3	1.9	1.0	2.8	1.3	0.8	1.8	6	1	12	104.0	100.4	106.4
6	Region 13	77.8	76.5	79.6	33.5	31.1	37.9	26.7	18.7	36.5	62.3	54.0	66.7	11.1	6.9	14.6	1.0	0.5	1.7	0.6	0.2	1.1	3	0	8	104.9	101.7	111.1
17	Region 14	79.4	76.3	81.6	34.6	28.8	38.3	28.2	20.7	36.3	63.9	58.5	68.8	7.8	2.1	12.9	0.8	0.2	1.7	0.6	0.1	1.3	3	0	8	102.9	90.8	109.9
2	Region 15	80.0	79.8	80.1	32.9	32.8	32.9	27.0	25.4	28.6	62.7	60.3	65.1	10.3	9.5	11.1	0.8	0.8	0.8	0.6	0.6	0.6	1	0	2	101.0	99.0	102.9
19	Region 16	78.2	74.8	79.9	34.4	25.4	39.3	27.4	14.9	40.0	63.4	55.2	76.2	9.2	4.7	14.5	1.0	0.1	2.0	0.8	0.1	1.8	3	0	12	98.9	87.5	108.0
16	Region 17	78.3	75.3	79.4	34.6	31.8	38.3	25.6	14.6	35.4	64.0	55.0	72.7	10.4	5.2	19.6	1.0	0.3	2.1	0.7	0.3	1.6	3	0	7	100.1	91.9	111.9
19	Region 18	78.6	77.9	79.3	35.6	31.9	38.6	23.0	13.7	34.6	64.3	58.4	70.8	12.7	6.6	18.2	1.0	0.5	2.1	0.8	0.4	1.2	3	0	8	96.6	91.1	106.5
9	Region 19	77.5	70.9	79.6	33.8	31.2	36.1	23.3	13.6	36.5	65.4	59.6	73.6	11.3	3.9	16.7	1.6	0.6	3.9	1.2	0.5	2.6	3	1	9	100.6	93.8	109.2
11	Region 20	77.9	77.2	79.8	35.5	32.9	37.7	25.7	15.2	43.1	64.5	53.0	72.9	9.8	3.9	12.2	1.2	0.3	3.4	0.9	0.3	2.8	3	0	13	95.5	87.7	105.5
18	Region 21	78.5	75.7	79.8	33.6	24.7	36.9	23.3	5.6	32.2	64.4	59.2	73.7	12.4	7.5	24.7	1.1	0.5	2.1	0.8	0.3	1.7	3	0	10	97.0	82.5	109.5
15	Region 22	78.5	75.7	79.6	34.2	31.3	36.7	27.2	11.9	37.3	62.9	55.5	70.2	9.9	6.9	17.9	1.1	0.6	1.9	0.9	0.4	1.4	2	0	6	93.5	82.9	102.0
46	Region 23	79.0	75.9	81.2	34.3	31.5	36.6	26.4	7.8	40.3	63.2	52.7	74.2	10.4	3.9	23.3	0.9	0.1	3.1	0.7	0.1	2.3	3	0	16	97.5	80.2	109.3
45	Region 24	79.1	76.6	80.6	34.2	28.2	38.1	27.6	13.5	48.3	63.4	48.1	72.2	9.0	3.6	16.9	1.2	0.5	5.7	0.9	0.3	4.4	5	0	29	96.4	84.6	111.3
16	Region 25	78.0	76.3	80.2	32.1	26.7	37.3	18.2	2.0	34.9	63.2	49.1	72.1	18.6	6.9	48.5	2.0	0.4	8.0	1.3	0.4	5.1	9	0	44	93.6	81.3	114.6
12	Region 26	77.7	70.2	80.1	33.1	29.8	35.2	16.8	8.5	36.6	68.4	62.5	84.2	14.8	6.1	22.9	1.1	0.3	3.0	0.8	0.3	2.2	3	0	13	99.5	89.2	108.5
1	Region 27	75.0	75.0	75.0	37.3	37.3	37.3	15.2	15.2	15.2	74.6	74.6	74.6	10.2	10.2	10.2	6.5	6.5	6.5	3.6	3.6	3.6	43	43	43	100.1	100.1	100.1
9	Region 28	77.4	74.5	79.0	33.8	31.6	37.1	22.1	14.8	31.9	66.1	60.5	76.5	11.8	7.4	18.0	1.2	0.3	2.7	0.9	0.0	2.2	3	0	5	97.2	86.7	103.3
33	Region 29	78.4	72.0	80.8	35.3	28.1	41.1	26.7	14.5	47.8	63.5	38.8	72.5	9.8	3.6	26.8	1.0	0.1	2.3	0.8	0.0	1.4	2	0	6	100.1	86.7	108.8
41	Region 30	77.6	75.0	80.6	33.9	27.2	39.2	17.6	7.4	35.2	68.2	58.6	79.3	14.3	6.2	29.3	0.9	0.3	2.5	0.7	0.2	1.6	3	0	8	96.6	81.9	111.7
5	Region 31	76.1	71.7	78.8	33.9	30.1	38.6	16.7	4.7	28.5	65.0	60.3	69.3	18.3	8.1	35.0	2.4	0.6	4.2	1.6	0.5	2.4	3	2	5	91.3	80.3	100.3
19	Region 32	78.0	74.8	80.7	36.6	33.0	41.2	28.2	13.7	47.9	63.1	49.0	74.3	8.7	3.0	16.9	1.4	0.2	2.8	1.2	0.2	2.7	4	0	11	102.7	91.0	111.9
26	Region 33	76.9	73.9	78.9	35.3	31.0	39.8	23.8	5.1	42.8	64.1	51.5	72.1	12.1	4.9	33.2	1.6	0.6	4.0	1.1	0.3	2.1	4	0	11	99.0	91.2	107.2
25	Region 34	78.0	75.2	80.3	36.5	31.7	40.6	27.0	11.4	38.2	64.0	54.9	75.3	9.0	4.2	16.6	1.3	0.2	3.4	1.0	0.1	2.5	4	0	13	96.8	83.2	114.9
14	Region 35	79.6	77.1	81.6	34.6	28.6	43.7	18.2	0.4	55.6	59.1	43.4	73.1	22.8	1.0	46.2	0.9	0.2	1.7	0.7	0.0	1.4	2	0	6	103.8	94.1	117.4
15	Region 36	77.9	75.4	79.9	35.0	28.8	39.4	24.1	0.5	44.2	62.1	48.1	71.0	13.8	1.5	51.4	0.9	0.3	1.7	0.6	0.2	1.5	6	0	20	100.8	95.3	106.1
444	Ave WM 1	78.3			34.6			24.3			64.1			11.6			1.2			0.9			4			98.3		
	Min WM 1	70.2			24.7			0.4			38.8			1.0			0.1			0.0			0			80.2		
	Max WM 1	81.6			43.7			55.6			84.2			51.4			8.0			5.1			44			117.4		

TABLE 16: PHYSICAL QUALITY FACTORS OF WHITE MAIZE ACCORDING TO GRADE 2007/2008
(continue)

Number of samples	Region	Hectolitre mass kg/hl			100 kernel mass (g)			Kernel size (%)						Breakage susceptibility (%)						Stress cracks (%)			Milling index								
		kg/hl		max.	kernel mass (g)		max.	Above 10 mm sieve		Above 8 mm sieve		Below 8 mm sieve		< 6.3 mm sieve		< 4.75 mm sieve		Stress cracks (%)		Milling index											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.									
GRADE: WM 2																															
1	Region 13	72.6	72.6	72.6	30.2	30.2	30.2	13.1	13.1	13.1	67.5	67.5	67.5	19.4	19.4	19.4	9.7	9.7	9.7	7.3	7.3	7.3	4	4	4	85.3	85.3	85.3			
1	Region 17	78.3	78.3	78.3	33.0	33.0	33.0	32.6	32.6	32.6	57.3	57.3	57.3	10.1	10.1	10.1	2.4	2.4	2.4	2.0	2.0	2.0	1	1	1	105.5	105.5	105.5			
1	Region 19	77.2	77.2	77.2	39.9	39.9	39.9	37.7	37.7	37.7	58.1	58.1	58.1	4.2	4.2	4.2	4.1	4.1	4.1	2.9	2.9	2.9	5	5	5	111.1	111.1	111.1			
2	Region 20	78.0	77.0	79.0	34.2	32.2	36.2	27.9	19.5	36.2	61.5	59.6	63.3	10.7	4.2	17.2	2.3	1.6	3.0	1.8	1.4	2.2	1	0	1	98.5	92.3	104.6			
1	Region 21	78.5	78.5	78.5	33.4	33.4	33.4	26.6	26.6	26.6	61.6	61.6	61.6	11.8	11.8	11.8	1.2	1.2	1.2	0.8	0.8	0.8	2	2	2	91.6	91.6	91.6			
1	Region 22	76.3	76.3	76.3	28.6	28.6	28.6	18.3	18.3	18.3	62.3	62.3	62.3	19.4	19.4	19.4	3.0	3.0	3.0	2.6	2.6	2.6	2	2	2	85.5	85.5	85.5			
1	Region 23	79.5	79.5	79.5	34.6	34.6	34.6	29.4	29.4	29.4	63.0	63.0	63.0	7.6	7.6	7.6	0.6	0.6	0.6	0.3	0.3	0.3	3	3	3	95.6	95.6	95.6			
2	Region 26	78.1	77.2	78.9	28.8	24.7	32.9	12.9	0.5	25.3	42.9	23.3	62.4	44.3	12.3	76.2	1.8	1.5	2.0	1.0	0.6	1.3	2	1	2	99.0	95.0	102.9			
2	Region 28	76.7	76.3	77.0	32.7	31.7	33.6	27.3	25.4	29.1	62.7	61.7	63.7	10.1	7.2	12.9	1.5	1.0	2.0	1.0	0.6	1.4	2	1	2	95.1	92.7	97.4			
5	Region 29	77.8	76.7	79.6	36.4	32.6	44.7	36.4	25.8	69.7	56.5	28.9	64.4	7.1	1.4	11.3	1.3	0.7	2.0	1.0	0.6	1.2	7	1	32	102.6	93.9	115.4			
6	Region 30	77.8	75.9	80.1	33.5	30.0	38.1	20.6	17.5	26.8	65.6	62.1	68.0	13.8	5.7	18.4	2.1	1.5	2.8	1.4	0.9	1.9	1	0	3	92.0	82.4	101.3			
4	Region 32	78.2	77.6	78.8	38.0	37.8	38.2	29.0	27.5	31.3	62.7	61.0	65.2	8.4	5.9	10.9	1.9	0.6	3.1	1.3	0.6	1.8	5	4	7	106.9	100.0	114.3			
3	Region 33	76.0	75.4	76.7	34.7	33.0	37.6	26.9	20.6	35.1	63.4	60.7	67.3	9.7	4.2	12.8	2.3	1.1	3.7	1.4	0.7	2.2	7	0	11	98.4	93.1	105.0			
3	Region 34	79.6	79.3	79.7	38.7	34.3	45.6	39.1	23.3	57.1	54.7	41.3	63.8	6.1	1.6	12.9	1.7	1.2	2.0	1.3	1.0	1.6	11	9	13	109.8	107.3	113.7			
33	Ave WM 2	77.7			34.7			27.7	0.5	69.7	60.2	23.3	68.0	12.2	1.4	76.2	2.1	0.6	9.7	1.5	0.3	7.3	4	0	32	99.3		82.4	115.4		
	Min WM 2	72.6			24.7			24.7		45.6																					
	Max WM 2	80.1			45.6			45.6		45.6																					
GRADE: WM 3																															
1	Region 13	73.1	73.1	73.1	31.7	31.7	31.7	28.8	28.8	28.8	62.9	62.9	62.9	8.3	8.3	8.3	4.0	4.0	4.0	1.0	1.0	1.0	3	3	3	94.4	94.4	94.4			
1	Region 14	65.3	65.3	65.3	17.0	17.0	17.0	1.0	1.0	1.0	34.8	34.8	34.8	64.2	64.2	64.2	4.7	4.7	4.7	1.6	1.6	1.6	1	1	1	63.5	63.5	63.5			
1	Region 25	75.8	75.8	75.8	36.3	36.3	36.3	40.6	40.6	40.6	51.4	51.4	51.4	8.0	8.0	8.0	1.1	1.1	1.1	0.9	0.9	0.9	2	2	2	76.0	76.0	76.0			
1	Region 29	74.3	74.3	74.3	28.9	28.9	28.9	16.0	16.0	16.0	71.0	71.0	71.0	13.0	13.0	13.0	3.1	3.1	3.1	2.5	2.5	2.5	4	4	4	86.3	86.3	86.3			
1	Region 30	77.2	77.2	77.2	34.6	34.6	34.6	28.1	28.1	28.1	62.1	62.1	62.1	9.8	9.8	9.8	1.7	1.7	1.7	1.3	1.3	1.3	2	2	2	87.4	87.4	87.4			
1	Region 32	76.5	76.5	76.5	34.6	34.6	34.6	19.3	19.3	19.3	69.1	69.1	69.1	11.6	11.6	11.6	3.7	3.7	3.7	3.0	3.0	3.0	5	5	5	95.3	95.3	95.3			
6	Ave WM 3	73.7			30.5			22.3	1.0	40.6	58.6	34.8	71.0	19.2	8.0	64.2	3.1	1.1	4.7	1.7	0.9	3.0	3	1	5	83.8		63.5	95.3		
	Min WM 3	65.3			17.0			17.0		36.3																					
	Max WM 3	77.2			36.3			36.3		36.3																					
483	Ave white maize	78.2			34.5			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	98.2		63.5	117.4		
	Min white maize	65.3			17.0			17.0		36.3																					
	Max white maize	81.6			45.6			45.6		45.6																					
900	Ave maize	77.5			33.5			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	96.9		63.5	118.5		
	Min maize	65.3			17.0			17.0		36.3																					
	Max maize	81.6			45.6			45.6		45.6																					

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Number of samples	Region	Hectolitre mass		100 kernel mass (g)		Kernel size (%)						Breakage susceptibility (%)						Stress cracks (%)			Milling index							
		ave.	min.	max.	ave.	min.	max.	Above 10 mm sieve		Above 8 mm sieve		Below 8 mm sieve		< 6.3 mm sieve		< 4.75 mm sieve		ave.	min.	max.	ave.	min.	max.					
								ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.							min.	max.			
WHITE																												
5	Region 12	76.9	70.8	79.0	35.3	32.6	36.2	21.1	10.6	30.5	68.2	61.8	76.7	10.7	7.7	13.3	1.9	1.0	2.8	1.3	0.8	1.8	6	1	12	104.0	100.4	106.4
8	Region 13	76.5	72.6	79.6	32.8	30.2	37.9	25.2	13.1	36.5	63.0	54.0	67.5	11.8	6.9	19.4	2.5	0.5	9.7	1.5	0.2	7.3	3	0	8	101.1	85.3	111.1
18	Region 14	78.6	65.3	81.6	33.7	17.0	38.3	26.7	1.0	36.3	62.3	34.8	68.8	11.0	2.1	64.2	1.0	0.2	4.7	0.7	0.1	1.6	3	0	8	100.7	63.5	109.9
2	Region 15	80.0	79.8	80.1	32.9	32.8	32.9	27.0	25.4	28.6	62.7	60.3	65.1	10.3	9.5	11.1	0.8	0.8	0.8	0.6	0.6	0.6	1	0	2	101.0	99.0	102.9
19	Region 16	78.2	74.8	79.9	34.4	25.4	39.3	27.4	14.9	40.0	63.4	55.2	76.2	9.2	4.7	14.5	1.0	0.1	2.0	0.8	0.1	1.8	3	0	12	98.9	87.5	108.0
17	Region 17	78.3	75.3	79.4	34.5	31.8	38.3	26.0	14.6	35.4	63.6	55.0	72.7	10.4	5.2	19.6	1.1	0.3	2.4	0.8	0.3	2.0	3	0	7	100.4	91.9	111.9
19	Region 18	78.6	77.9	79.3	35.6	31.9	38.6	23.0	13.7	34.6	64.3	58.4	70.8	12.7	6.6	18.2	1.0	0.5	2.1	0.8	0.4	1.2	3	0	8	96.6	91.1	106.5
10	Region 19	77.5	70.9	79.6	34.4	31.2	39.9	24.7	13.6	37.7	64.7	58.1	73.6	10.6	3.9	16.7	1.8	0.6	4.1	1.4	0.5	2.9	4	1	9	101.6	93.8	111.1
13	Region 20	78.0	77.0	79.8	35.3	32.2	37.7	26.0	15.2	43.1	64.0	53.0	72.9	10.0	3.9	17.2	1.3	0.3	3.4	1.0	0.3	2.8	3	0	13	96.0	87.7	105.5
19	Region 21	78.5	75.7	79.8	33.6	24.7	36.9	23.5	5.6	32.2	64.2	59.2	73.7	12.3	7.5	24.7	1.1	0.5	2.1	0.8	0.3	1.7	3	0	10	96.7	82.5	109.5
16	Region 22	78.4	75.7	79.6	33.8	28.6	36.7	26.6	11.9	37.3	62.9	55.5	70.2	10.5	6.9	19.4	1.3	0.6	3.0	1.0	0.4	2.6	2	0	6	93.0	82.9	102.0
47	Region 23	79.0	75.9	81.2	34.3	31.5	36.6	26.5	7.8	40.3	63.2	52.7	74.2	10.4	3.9	23.3	0.9	0.1	3.1	0.7	0.1	2.3	3	0	16	97.5	80.2	109.3
45	Region 24	79.1	76.6	80.6	34.2	28.2	38.1	27.6	13.5	48.3	63.4	48.1	72.2	9.0	3.6	16.9	1.2	0.5	5.7	0.9	0.3	4.4	5	0	29	96.4	84.6	111.3
17	Region 25	77.8	75.8	80.2	32.4	26.7	37.3	19.6	2.0	40.6	62.5	49.1	72.1	17.9	6.9	48.5	1.9	0.4	8.0	1.2	0.4	5.1	9	0	44	92.5	76.0	114.6
14	Region 26	77.8	70.2	80.1	32.5	24.7	35.2	16.3	0.5	26.6	64.8	23.3	84.2	19.0	6.1	76.2	1.2	0.3	3.0	0.8	0.3	2.2	3	0	13	99.5	89.2	108.5
1	Region 27	75.0	75.0	75.0	37.3	37.3	37.3	15.2	15.2	15.2	74.6	74.6	74.6	10.2	10.2	10.2	6.5	6.5	6.5	3.6	3.6	3.6	43	43	43	100.1	100.1	100.1
11	Region 28	77.2	74.5	79.0	33.6	31.6	37.1	23.0	14.8	31.9	65.5	60.5	76.5	11.5	7.2	18.0	1.3	0.3	2.7	0.9	0.0	2.2	3	0	5	96.8	86.7	103.3
39	Region 29	78.2	72.0	80.8	35.3	28.1	44.7	27.7	14.5	69.7	62.8	28.9	72.5	9.5	1.4	26.8	1.1	0.1	3.1	0.8	0.0	2.5	3	0	32	100.1	86.3	115.4
48	Region 30	77.6	75.0	80.6	33.9	27.2	39.2	18.2	7.4	35.2	67.7	58.6	79.3	14.1	5.7	29.3	1.1	0.3	2.8	0.8	0.2	1.9	3	0	8	95.9	81.9	111.7
5	Region 31	76.1	71.7	78.8	33.9	30.1	38.6	16.7	4.7	28.5	65.0	60.3	69.3	18.3	8.1	35.0	2.4	0.6	4.2	1.6	0.5	2.4	3	2	5	91.3	80.3	100.3
24	Region 32	78.0	74.8	80.7	36.8	33.0	41.2	28.0	13.7	47.9	63.3	49.0	74.3	8.7	3.0	16.9	1.6	0.2	3.7	1.3	0.2	3.0	4	0	11	103.1	91.0	114.3
29	Region 33	76.8	73.9	78.9	35.3	31.0	39.8	24.1	5.1	42.8	64.0	51.5	72.1	11.8	4.2	33.2	1.6	0.6	4.0	1.1	0.3	2.2	4	0	11	98.9	91.2	107.2
28	Region 34	78.2	75.2	80.3	36.7	31.7	45.6	28.3	11.4	57.1	63.0	41.3	75.3	8.7	1.6	16.6	1.4	0.2	3.4	1.0	0.1	2.5	5	0	13	98.2	83.2	114.9
14	Region 35	79.6	77.1	81.6	34.6	28.6	43.7	18.2	0.4	55.6	59.1	43.4	73.1	22.8	1.0	46.2	0.9	0.2	1.7	0.7	0.0	1.4	2	0	6	103.8	94.1	117.4
15	Region 36	77.9	75.4	79.9	35.0	28.8	39.4	24.1	0.5	44.2	62.1	48.1	71.0	13.8	1.5	51.4	0.9	0.3	1.7	0.6	0.2	1.5	6	0	20	100.8	95.3	106.1
483	Ave white	78.2			34.5			24.5			63.8			11.7		76.2	1.2			0.9			4			98.2		
	Min white	65.3			17.0			0.4			23.3			1.0		0.1	0.1	0.1		0.0			0			63.5		
	Max white	81.6			45.6			69.7			84.2			9.7		7.3	9.7	9.7		7.3			44			117.4		