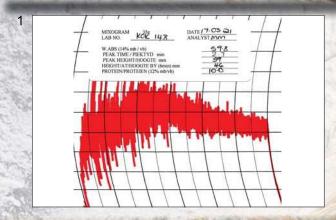
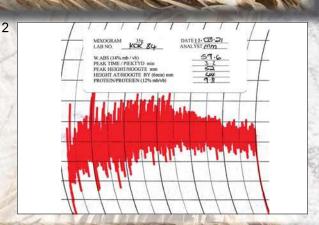
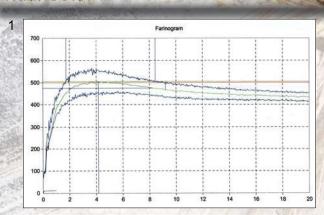
PRODUCTION REGION	(1) Namakwal	and Region				(2) Swartland Western R				
WHEAT										
	ave	min		max	stdev	ave	min		max	stdev
Protein (12% mb), % Falling number, sec	11.5 404	10.3 380		13.3 424	1.36 21.23	10.6 387	9.5 352		12.4 428	0.92 26.53
Moisture, %	10.6	10.3		10.7	0.19	10.9	10.5		11.2	0.26
1000 Kernel mass (13% mb), g	39.5	36.7		41.8	2.13	36.6	34.4		39.9	1.86
Hectolitre mass (dirty), kg/hl	79.0	77.7		79.5	0.87	77.7	74.3	3	80.3	1.89
Screenings (<1.8 mm sieve), %	3.22	2.37		3.70	0.61	2.08	0.63		3.35	1.01
Total damaged kernels, %	1.12	0.28		2.58	1.01	0.53	0.00		1.20	0.34
Combined deviations, % Number of samples	4.82	4.11	4	5.41	0.58	3.10	0.99	11	5.95	1.47
Number of Samples						1		- ''		
CULTIVARS		SST 0117		34.8			SST 0117	7	39.1	
Cultivars with highest % occurrence		SST 0166		24.0			SST 056		15.9	
Cultivars with highest 76 occurrence		SST 087		16.5			SST 016		12.6	
		SST 056 SST 015		14.5			SST 087		12.5	
Number of samples		551 015	4	6.3			SST 88	11	10.8	
,			_ -					- ''		
MIXOGRAM (Quadromat Junior)	ave	min		max	stdev	ave	min	l	max	stdev
Peak time, min Tail height (6 min), mm	2.7 48	2.4 44		2.9 51	0.21 3.30	3.3 44	2.9 41		3.9 50	0.34 2.42
Number of samples	10		4	<u> </u>	0.00		<u></u>	11		2.12
·					COMPOSIT	E SAMPLES	S			_
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	cow
Bühler Extraction, %	-	-	-	-	71.1	-	-	73.4	73.8	73.1
FLOUR										
Protein (12% mb), %		-	-	+ -	10.6	<u> </u>	-	10.3	9.3	10.2
Moisture, % Ash (db), %	+ -	-	-	+ -	13.9 0.65		-	13.6 0.60	13.6 0.56	13.4 0.58
Colour, KJ (wet)	+ : +			+ -	-5.0	 	-	-5.0	-5.0	-5.0
Colour, Konica Minolta CM5 (dry)	_	-		<u> </u>	94.44	_	_	94.35	94.58	94.41
a*	-	-	_	 -	0.34	-	-	0.33	0.31	0.33
b*	- 1	-	-	-	9.41	-	-	10.58	10.13	10.46
RVA										
Peak Viscosity, cP		-	-	-	2209	-	-	2433	2534	2390
Minimum viscosity (Trough), cP	-	-	-	-	1607	-	-	1791	1789	1662
Final Viscosity, cP	-	-		-	2542	-	-	2929	3015	2836
Peak Time, min	-	-	-	-	7.00	-	-	7.00	7.00	7.00
GLUTEN Wet gluten (14% mb), %	-	-	-	_	29.8	-	-	25.8	23.1	26.5
Dry gluten (14% mb), %	-	-	-	-	10.1	-	-	8.9	7.7	8.8
Gluten Index	-	-	-	-	91	-	-	95	95	95
FARINOGRAM					20.0			E7.0		F0.4
Water absorption (14% mb), % Development time, min	+ : -	-	-	+ -	60.0	-	-	57.0 5.3	55.6 2.2	56.4 5.2
Stability, min	+ : +	-		+ -	6.7	-	-	9.4	7.6	8.9
Mixing tolerance index, BU	-	-	-	-	38	-	-	31	23	32
EXTENSOGRAM (45 min pull)										
Area, cm²	<u> </u>	-	-	-	82	-	-	92	83	99
Maximum height, BU Extensibility, mm		-	-	-	329 178	-	-	372 180	349 170	364 198
ALVEOGRAM										
Strength (S), cm ² Stability (P), mm	+ -	-	-	+ -	36.4 84	-	-	34.6 73	32.6 70	34.3 69
Distensibility (L), mm		-	-	-	109	-	-	120	115	132
Configuration ratio (P/L)	1 -	-	-	 -	0.77	-	-	0.61	0.61	0.52
MIXOGRAM					1					1
Peak time, min	-	-	-	 -	2.6	-	-	2.9	3.2	3.2
100 g BAKING TEST Loaf volume, cm³		_	_	_	998	_	_	1028	993	1015

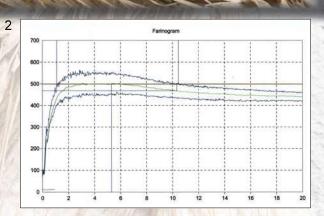
MIXOGRAM



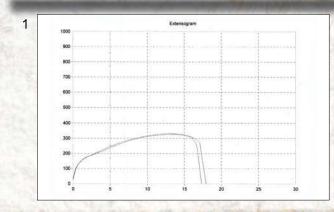


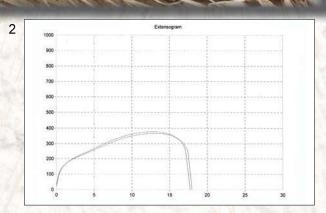
FARINOGRAM

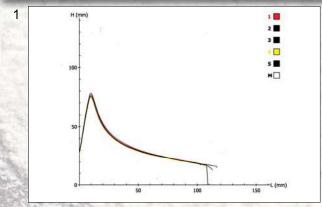


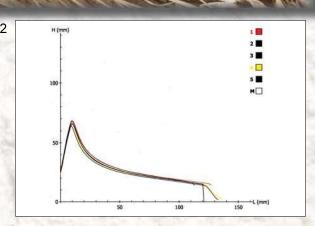


EXTENSOGRAM



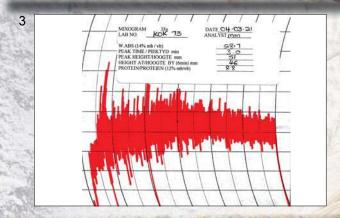


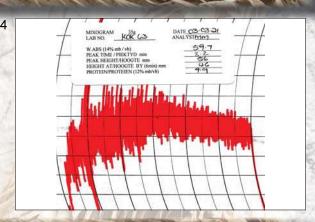




PRODUCTION REGION	(3) Swartland Central Re					(4) Swartland Eastern R				
WHEAT										
mizar	ave	mir	า	max	stdev	ave	mii	n	max	stdev
Protein (12% mb), %	10.7	8.6		13.5	1.07	10.7	9.0		13.1	1.24
Falling number, sec	418	334		542	46.25	417	370		494	35.43
Moisture, %	10.8	9.6		11.6	0.33	10.8	9.9		11.4	0.39
1000 Kernel mass (13% mb), g	38.3	30.8		43.2	2.52	37.4	29.		43.6	3.19
Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), %	77.7 1.88	72. ⁻ 0.20		80.6 3.62	1.44 0.85	78.4 2.03	74. 1.2		80.0 3.52	1.14 0.60
Total damaged kernels, %	1.07	0.10		9.66	1.56	0.67	0.0		2.88	0.70
Combined deviations, %	3.71	0.62		12.67	2.14	3.20	1.9		6.06	1.06
Number of samples			64					24		
CULTIVARS										
		SST 016		26.5			SST 011		22.4	
Cultivars with highest % occurrence	<u> </u>	SST 011		24.3			SST 016		21.8	
, and the second		SST 056 SST 087		18.0		-	SST 056 SST 087		17.4 13.9	
	<u> </u>	SST 007		9.7			SST 007		9.5	
Number of samples		001 012	64	0.7			001 012	24	0.0	
MIXOGRAM (Quadromat Junior)										
	ave	mir		max	stdev	ave	mii		max	stdev
Peak time, min Tail height (6 min), mm	3.0 46	2.5		3.7 52	0.24 2.95	3.2 45	2.6		3.8 50	0.31 2.83
Number of samples	40	- 59	64	32	2.90	40	33	24	30	2.00
					COMPOSIT	E SAMPLE	s			
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	cow
Bühler Extraction, %	72.9	74.2	74.0	73.9	73.6	71.1	70.6	73.5	73.8	74.1
FLOUR	40.4	44.0	400	100		1,,,	400	400		,,
Protein (12% mb), % Moisture, %	12.1	11.2 13.0	10.2 14.1	10.2	9.8 13.5	12.3 13.4	10.9 13.9	10.2 13.2	9.6 13.2	9.4
Ash (db), %	0.59	0.57	0.56	0.56	0.59	0.60	0.57	0.60	0.58	0.54
Colour, KJ (wet)	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
Colour, Konica Minolta CM5 (dry)				1	1				1	1
L*	94.28	94.31	94.47	94.60	94.43	94.31	94.32	94.34	94.46	94.48
a*	0.38	0.34	0.36	0.33	0.36	0.39	0.37	0.39	0.35	0.37
<u>b*</u>	10.28	9.76	9.74	9.52	9.86	10.18	10.25	10.09	9.80	9.80
RVA										
Peak Viscosity, cP	2305	2269	2410	2435	2389	2226	2290	2280	2353	2315
Minimum viscosity (Trough), cP	1588	1572	1606	1700	1692	1540	1639	1560	1695	1600
Final Viscosity, cP	2655	2636	2841	2881	2818	2524	2627	2721	2814	2788
Peak Time, min	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
GLUTEN	20.0	20.4	00.4	00.4	05.5	1 ,,,	07.7	00.4	05.0	00.7
Wet gluten (14% mb), % Dry gluten (14% mb), %	32.9 11.4	30.4 10.4	26.4 8.6	23.4 7.6	25.5 8.4	32.3 10.9	27.7 9.6	26.4 8.9	25.3 8.0	23.7 7.9
Gluten Index	95	94	95	96	94	95	9.6	94	93	95
FARINOGRAM										
Water absorption (14% mb), %	59.9	60.0	58.2	56.9	58.0	60.1	57.0	57.8	57.4	57.0
Development time, min	6.3	5.7	6.2	4.3	4.0	5.4	6.5	5.3	5.7	5.2
Stability, min	11.7	8.7	9.2	7.9	8.1	8.8	12.6	8.5	8.1	8.1
Mixing tolerance index, BU	22	32	31	35	28	30	24	36	37	35
EXTENSOGRAM (45 min pull)										
Area, cm ²	74	105	91	72	84	117	114	80	77	80
Maximum height, BU	258	367	351	305	346	363	452	330	317	312
Extensibility, mm	201	213	188	172	173	230	188	175	176	186
ALVEOGRAM										
Strength (S), cm²	42.7	41.0	35.0	28.9	34.6	46.2	44.5	36.1	33.3	30.6
Stability (P), mm	79	83	75	74	82	77	70	78	74	74
Distensibility (L), mm	137	122	117	92	98	168	175	111	112	98
Configuration ratio (P/L)	0.58	0.68	0.64	0.80	0.84	0.46	0.40	0.70	0.66	0.76
MIXOGRAM				1						
Peak time, min	2.5	2.6	2.8	3.3	3.1	2.7	3.4	3.0	3.1	2.9
	<u> </u>		,	1	1	 		1	1	1
100 g BAKING TEST				1						
Loaf volume, cm³	1155	1103	1064	983	1001	1168	1108	1072	1057	982
Evaluation (see page 74)	0	0	0	0	0	0	0	0	0	0

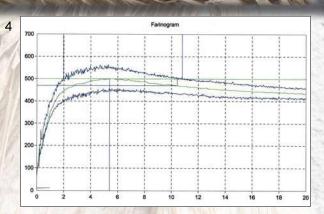
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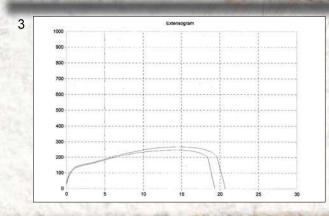


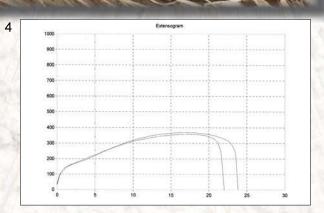
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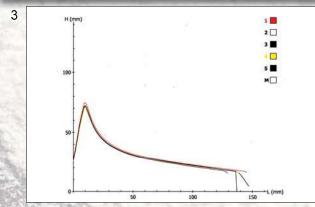


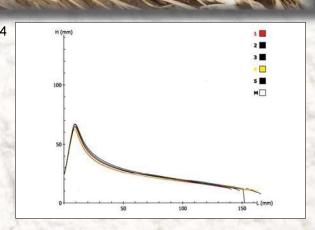


EXTENSOGRAM



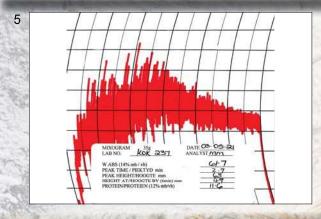


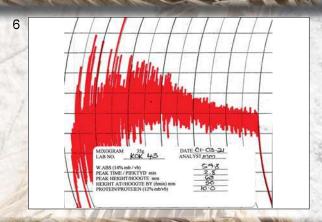




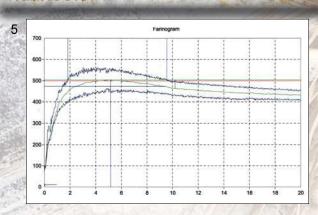
Protein (12% mb), % Falling number, sec Moisture, % 1000 Kernel mass (13% mb), g Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples CULTIVARS Cultivars with highest % occurrence MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, Kolica Minolta CM5 (dry) L* a* b* 93. RVA Peak Viscosity, cP Minimum viscosity, cP Peak Time, min 7.1 GLUTEN	47	mii 10.0 355 11.1 42. 75.0 0.0 0.33 0.5 SST 011 SST 016 SST 087 SST 012 SST 056 mii 2.6 44 B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45 9.35	0 1 8 1 9 9 2 7 8 8 17 66 7 27 8	9.0 13.9 0.63 -5.0 94.23	stdev 1.09 24.68 0.18 1.35 2.03 1.08 0.45 1.18 stdev 0.16 3.11 COMPOSIT COW	ave 11.6 343 11.9 43.0 78.7 0.88 0.78 2.10 ave 2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62 -4.9	mii 10 293 11 40 74 0.1. 0.0. 0.3. SST 011 SST 016 SST 056 SST 087 SST 012 mii 2.4 44 S B1 73.9 11.1 13.9 0.61 -4.9	2 3 3 8 8 2 4 4 2 2 2 2 7 66 6 6 7 7 27	max 13.6 399 12.2 45.7 81.4 2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55	stdev 0.88 25.47 0.26 1.33 1.71 0.70 0.56 1.57 stdev 0.20 3.00 COW 73.8
Protein (12% mb), % Falling number, sec Moisture, % 1000 Kernel mass (13% mb), g Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples Cultivars with highest % occurrence MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* 0.eb*	11.3 386 12.1 44.2 78.8 1.07 0.77 2.27 2.8 48 9er 3.6 5.9 5.0	10. 357 11. 42. 75. 0.00 0.33 0.5 SST 011 SST 016 SST 087 SST 012 SST 056 mit 2.6 44 B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45	0 1 8 1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	13.0 424 12.3 45.8 81.4 3.39 1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	1.09 24.68 0.18 1.35 2.03 1.08 0.45 1.18 stdev 0.16 3.11 COMPOSIT COW	11.6 343 11.9 43.0 78.7 0.88 0.78 2.10 ave 2.8 50 E SAMPLES Super 74.1	10 293 11 40 74 0.11 0.00 0.3. SST 011 SST 016 SST 056 SST 087 SST 012 min 2.4 44 S B1 73.9 11.1 13.9 0.61	2 2 3 3 3 3 8 8 2 2 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2	13.6 399 12.2 45.7 81.4 2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	0.88 25.47 0.26 1.33 1.71 0.70 0.56 1.57 stdev 0.20 3.00 COW 73.8
Falling number, sec Moisture, % 1000 Kernel mass (13% mb), g Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples Cultivars with highest % occurrence MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* 9. RVA Peak Viscosity, cP Peak Time, min 7. GLUTEN Wet gluten (14% mb), % Togluten Index 9 FARINOGRAM FARINOGRAM	386 12.1 44.2 78.8 1.07 0.77 2.27 48 48 9er 3.5 5.9 5.0 98 47	35° 11.4 42. 75.0 0.0 0.33 0.5° SST 011 SST 016 SST 087 SST 012 SST 056 mii 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	1 8 1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	424 12.3 45.8 81.4 3.39 1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	24.68 0.18 1.35 2.03 1.08 0.45 1.18 stdev 0.16 3.11 COMPOSIT COW	343 11.9 43.0 78.7 0.88 0.78 2.10 ave 2.8 50 E SAMPLES Super 74.1	293 11.1 40.1 74.1 0.01 0.03 0.33 SST 011 SST 016 SST 056 SST 087 SST 012 min 2.4 44 S B1 73.9 11.1 13.9 0.61	3 3 3 8 8 2 4 4 2 2 2 2 7 66 6 6 6 7 7 27 22 8 10.3 13.5 0.63	399 12.2 45.7 81.4 2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	25.47 0.26 1.33 1.71 0.70 0.56 1.57 stdev 0.20 3.00 COW 73.8
Moisture, % 1000 Kernel mass (13% mb), g Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples Cultrivars with highest % occurrence MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, KJ (wet) Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Tail height (6 min), mm Number of samples Sugara (dry) 11 Moisture, % Peak Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Total Viscosity, cP Peak Time, min FARINOGRAM	ave 2.8 48 48 48 48 48 47	42. 75. 0.00 0.3: 0.5 SST 011 SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	1 9 9 9 2 2 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	45.8 81.4 3.39 1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 10.63 -5.0 94.23	1.35 2.03 1.08 0.45 1.18 stdev 0.16 3.11 COMPOSIT	43.0 78.7 0.88 0.78 2.10 ave 2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	40 74 0.1. 0.0. 0.3. SST 011 SST 016 SST 056 SST 087 SST 012 mit 2.4 44 8 B1 73.9 11.1 13.9 0.61	8 2 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	45.7 81.4 2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55	1,33 1,71 0,70 0,56 1,57 stdev 0,20 3,00 COW 73.8
Hectolitre mass (dirty), kg/hl Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples CULTIVARS Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP 15 Final Viscosity, cP 20 Minimum viscosity, cP 21 Peak Time, min GLUTEN Wet gluten (14% mb), % 32 FARINOGRAM	78.8 1.07 0.77 2.27 ave 2.8 48 per 5.5 1.9 9.6 6.0	75. 0.00 0.3: 0.5 SST 011 SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	9 9 9 9 2 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	81.4 3.39 1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0	2.03 1.08 0.45 1.18 stdev 0.16 3.11 COMPOSIT 	78.7 0.88 0.78 2.10 ave 2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	74 0.1 0.0.0 0.3 SST 011 SST 016 SST 056 SST 057 SST 012 mit 2.4 44 S B1 73.9 11.1 13.9 0.61	22 22 22 7 66 65 7 7 22 82 73.9 10.3 13.5 0.63	81.4 2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55	1.71 0.70 0.56 1.57 stdev 0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Screenings (<1.8 mm sieve), % Total damaged kernels, % Combined deviations, % Number of samples CULTIVARS Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % 11 Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % 32 Pry gluten (14% mb), % 32 FARINOGRAM	ave 2.8 48 per 3.5 59 6.0 .98	0.00 0.33 0.55 SST 011 SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	9 2 7 8 8 8 8 8 8 8 8 8 9 5 13.6 0.58 -5.0 94.18	3.39 1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	stdev 0.16 3.11 COMPOSIT -	ave 2.8 50 Super 74.1 12.2 13.9 0.62	0.1- 0.00 0.3: SST 011 SST 016 SST 056 SST 012 mili 2.4 44 S B1 73.9 11.1 13.9 0.61	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2.79 2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	stdev 0.20 3.00 COW 73.8 10.1 13.1 0.63 -4.7
Total damaged kernels, % Combined deviations, % Number of samples CULTIVARS Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* 0.0b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	ave 2.27 2.27 ber 3.5 1.9 3.6 5.0	0.3 0.5 SST 011 SST 016 SST 087 SST 056 Mil 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	2	1.72 4.41 36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	stdev 0.16 3.11 COMPOSIT COW	ave 2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	0.00 0.33 SST 011 SST 016 SST 056 SST 087 SST 012 mili 2.4 44 S B1 73.9 11.1 13.9 0.61	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2.00 6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55 83 73.8 9.8 13.5 0.60	0.56 1.57 stdev 0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Combined deviations, % Number of samples CULTIVARS Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* 0.eb* Peak Viscosity, cP Minimum viscosity, cP Peak Viscosity, cP Peak Time, min CLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Cluten Index FARINOGRAM	ave 2.8 48 9er 3.5 1.9 9.6 5.0	0.5 SST 011 SST 016 SST 056 SST 056 min 2.6 44 B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45	7 8 17 8 17 8 18 8 18 8 18 8 18 8 18 8 1	36.9 21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	stdev 0.16 3.11 COMPOSIT COW	2.10 ave 2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	0.3 SST 011 SST 016 SST 056 SST 087 SST 012 min 2.4 44 S B1 73.9 11.1 13.9 0.61	2 22 7 22 8 22 7 3.9 10.3 13.5 0.63	6.81 31.2 22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	stdev 0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* 93. RVA Peak Viscosity, cP Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	7 66 7 27 8 8 8 8 8 8 9.5 13.6 0.58 -5.0	21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	SST 016 SST 056 SST 087 SST 012 mil 2.4 44 SS B1 73.9 11.1 13.9 0.61	7 66 6 7 27 22 82 73.9 10.3 13.5 0.63	22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Cultivars with highest % occurrence Number of samples MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* RVA Peak Viscosity, cP Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min 7. GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	SST 016 SST 056 SST 087 SST 012 mil 2.4 44 SS B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) L* a* b* Peak Viscosity, cP Peak Viscosity, cP Pinal Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	SST 016 SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	21.5 12.9 12.6 7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	SST 016 SST 056 SST 087 SST 012 mil 2.4 44 SS B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	22.8 16.8 11.0 9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) L* a* b* Peak Viscosity, cP Peak Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	SST 087 SST 012 SST 056 min 2.6 44 10.9 13.7 0.59 -5.0 93.98 0.45	7 27 8 8 8 8 8 8 8 9 74.0 9.5 13.6 0.58 -5.0 94.18	12.9 12.6 7.0 max 3.1 52 83 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	SST 056 SST 087 SST 012 mili 2.4 44 S B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	16.8 11.0 9.4 max 3.2 55 83 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) L* a* b* Peak Viscosity, cP Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min CLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45	8 8 8 8 8 8 74.0 9.5 13.6 0.58 -5.0	7.0 max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	min 2.4 44 55 B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	9.4 max 3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* 93. a* b* Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	### 2.6 44 ### 44 ### 10.9 ### 13.7 ### 0.59 ### -5.0 ### 93.98 ### 0.45	8 8 8 82 74.0 9.5 13.6 0.58 -5.0 94.18	max 3.1 52 B3 74.1 9.0 13.9 0.63 -5.0 94.23	0.16 3.11 COMPOSIT COW	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	Mil 2.4 44 55 B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	max 3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
MIXOGRAM (Quadromat Junior) Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* 93. a* b* Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	2.6 44 B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45	8 8 82 74.0 9.5 13.6 0.58 -5.0	3.1 52 B3 74.1 9.0 13.9 0.63 -5.0	0.16 3.11 COMPOSIT	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	2.4 44 5 81 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Peak time, min Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Colour, KJ (wet) Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* b* 9. RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min 7. GLUTEN Wet gluten (14% mb), % Gluten Index 9 FARINOGRAM	2.8 48 per 3.5 5.5 5.9 5.0	2.6 44 B1 74.4 10.9 13.7 0.59 -5.0 93.98 0.45	8 8 74.0 9.5 13.6 0.58 -5.0 94.18	3.1 52 B3 74.1 9.0 13.9 0.63 -5.0	0.16 3.11 COMPOSIT	2.8 50 E SAMPLES Super 74.1 12.2 13.9 0.62	2.4 44 5 81 73.9 11.1 13.9 0.61	22 73.9 10.3 13.5 0.63	3.2 55 B3 73.8 9.8 13.5 0.60	0.20 3.00 73.8 10.1 13.1 0.63 -4.7
Tail height (6 min), mm Number of samples CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* 0. b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	per 5.5 1.9 3.6 59 5.0 .98 47	10.9 13.7 0.59 -5.0 93.98 0.45	8 74.0 9.5 13.6 0.58 -5.0	9.0 13.9 0.63 -5.0 94.23	3.11 COMPOSIT COW - - - -	50 E SAMPLES Super 74.1 12.2 13.9 0.62	44 8 81 73.9 11.1 13.9 0.61	22 73.9 10.3 13.5 0.63	9.8 13.5 0.60	3.00 COW 73.8 10.1 13.1 0.63 -4.7
Number of samples CLASS AND GRADE Sul Bühler Extraction, % 76 FLOUR 11 Protein (12% mb), % 13 Ash (db), % 0.3 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93 a* 0.0 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.1 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	per 5.5 1.9 3.6 59 5.0 .98 47	10.9 13.7 0.59 -5.0 93.98 0.45	8 74.0 9.5 13.6 0.58 -5.0 94.18	9.0 13.9 0.63 -5.0 94.23	COMPOSIT	E SAMPLES Super 74.1 12.2 13.9 0.62	B1 73.9 11.1 13.9 0.61	22 B2 73.9 10.3 13.5 0.63	9.8 13.5 0.60	73.8 10.1 13.1 0.63 -4.7
CLASS AND GRADE Bühler Extraction, % FLOUR Protein (12% mb), % Moisture, % Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* a* 0.4 b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min CLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	5.5 1.9 3.6 59 5.0 .98	74.4 10.9 13.7 0.59 -5.0 93.98 0.45	9.5 13.6 0.58 -5.0	9.0 13.9 0.63 -5.0 94.23	COW	74.1 12.2 13.9 0.62	11.1 13.9 0.61	73.9 10.3 13.5 0.63	9.8 13.5 0.60	73.8 10.1 13.1 0.63 -4.7
Bühler Extraction, % 76 FLOUR 11 Protein (12% mb), % 11 Moisture, % 0.3 Ash (db), % 0.5 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93. a* 0.6 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM 9	5.5 1.9 3.6 59 5.0 .98	74.4 10.9 13.7 0.59 -5.0 93.98 0.45	9.5 13.6 0.58 -5.0 94.18	9.0 13.9 0.63 -5.0 94.23	COW	74.1 12.2 13.9 0.62	11.1 13.9 0.61	73.9 10.3 13.5 0.63	9.8 13.5 0.60	73.8 10.1 13.1 0.63 -4.7
Bühler Extraction, % 76 FLOUR 11 Protein (12% mb), % 11 Moisture, % 0.3 Ash (db), % 0.5 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93. a* 0.6 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM 9	5.5 1.9 3.6 59 5.0 .98	74.4 10.9 13.7 0.59 -5.0 93.98 0.45	9.5 13.6 0.58 -5.0 94.18	9.0 13.9 0.63 -5.0 94.23	-	74.1 12.2 13.9 0.62	73.9 11.1 13.9 0.61	73.9 10.3 13.5 0.63	9.8 13.5 0.60	73.8 10.1 13.1 0.63 -4.7
Protein (12% mb), % 11 Moisture, % 13 Ash (db), % 0.9 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93. a* 0.9 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM 1	3.6 59 5.0 .98 47	13.7 0.59 -5.0 93.98 0.45	13.6 0.58 -5.0 94.18	13.9 0.63 -5.0 94.23	-	13.9 0.62	13.9 0.61	13.5 0.63	13.5 0.60	13.1 0.63 -4.7
Protein (12% mb), % 11 Moisture, % 13 Ash (db), % 0.9 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93. a* 0.9 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN 32 Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	3.6 59 5.0 .98 47	13.7 0.59 -5.0 93.98 0.45	13.6 0.58 -5.0 94.18	13.9 0.63 -5.0 94.23	-	13.9 0.62	13.9 0.61	13.5 0.63	13.5 0.60	13.1 0.63 -4.7
Moisture, % 13 Ash (db), % 0.4 Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* L* 93. a* 0.4 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.4 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	3.6 59 5.0 .98 47	13.7 0.59 -5.0 93.98 0.45	13.6 0.58 -5.0 94.18	13.9 0.63 -5.0 94.23	-	13.9 0.62	13.9 0.61	13.5 0.63	13.5 0.60	13.1 0.63 -4.7
Ash (db), % Colour, KJ (wet) Colour, Konica Minolta CM5 (dry) L* 93. a* 0 b* RVA Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	59 5.0 .98 47	0.59 -5.0 93.98 0.45	0.58 -5.0 94.18	0.63 -5.0 94.23	-	0.62	0.61	0.63	0.60	0.63 -4.7
Colour, KJ (wet) -5 Colour, Konica Minolta CM5 (dry) L* 93. a* 0.4 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.1 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	.98 47	-5.0 93.98 0.45	-5.0 94.18	-5.0 94.23	+					-4.7
Colour, Konica Minolta CM5 (dry) L* 93. a* 0.4 b* Peak Viscosity, cP Minimum viscosity (Trough), cP Final Viscosity, cP Peak Time, min CLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % Gluten Index 9 FARINOGRAM	.98 47	93.98 0.45	94.18	94.23	<u> </u>	-4.5	7.5	-5.0	7.5	
L* 93. a* 0.4 b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	47	0.45							1	1
b* 9. RVA Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM			0.48	0.00	-	93.92	94.11	94.07	94.31	93.95
RVA 20 Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM		9.35		0.38	-	0.54	0.45	0.41	0.37	0.39
Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	70	0.00	8.79	9.63	-	9.09	8.94	9.56	8.29	9.24
Peak Viscosity, cP 20 Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN Wet gluten (14% mb), % Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM										
Minimum viscosity (Trough), cP 15 Final Viscosity, cP 23 Peak Time, min 7.1 GLUTEN Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	170	2234	2661	2398	_	2229	2304	2332	2225	2118
Final Viscosity, cP 23 Peak Time, min 7.0 GLUTEN 32 Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM		1632	1838	1618	 -	1628	1719	1663	1650	1640
Peak Time, min 7.0 GLUTEN 32 Wet gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM		2572	3111	2848	-	2543	2667	2780	2549	2409
Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM	00	7.00	7.00	7.00	-	7.00	7.00	7.00	7.00	7.00
Wet gluten (14% mb), % 32 Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM										1
Dry gluten (14% mb), % 11 Gluten Index 9 FARINOGRAM										
Gluten Index 9 FARINOGRAM	2.9	30.3	27.1	23.0	-	33.9	30.6	28.2	25.6	27.7
FARINOGRAM		10.6 97	9.1 94	7.7 97	-	11.8 93	10.4 95	9.4 94	8.5 95	9.1
	/ *1	31	94	9/	 	93	90	94	95	1 32
v vater ausorption (1470 HID), 70 👚 🚺 🕏 U	۱ ء	60.6	61.2	56.6		63.1	63.2	61.1	60.8	61.2
	.2	4.3	3.5	4.2	-	5.7	4.9	3.7	3.8	4.0
	.7	7.1	6.4	7.7	 -	7.4	6.9	6.6	7.9	6.8
	10	33	42	37	-	39	41	38	31	39
EXTENSOGRAM (45 min pull)										
· · · · ·	06	84	63	71	_	94	78	73	67	75
	64	305	252	294	-	298	280	275	310	286
Extensibility, mm 20	06	203	175	177	-	220	194	187	153	182
ALVEOGRAM										
Strength (S), cm ² 41	_	37.0	31.2	26.3	-	42.2	38.7	34.4	33.6	32.7
7 (7)	'6	79	91	70	-	89	95	86	97	86
	39 55	122 0.65	82 1.11	87 0.80	-	124 0.72	96 0.99	104 0.83	77 1.26	94 0.91
Osiniguration ratio (F/L) 0.3	55	0.00	1.11	0.00	† -	0.12	0.55	0.03	1.20	1 0.81
MIXOGRAM								1		
		2.3	2.4	3.1	-	2.3	2.4	2.4	3.1	2.2
100 g BAKING TEST	.8	I				1			1	
Loaf volume, cm ³ 10	.8		1		1			I	1	1

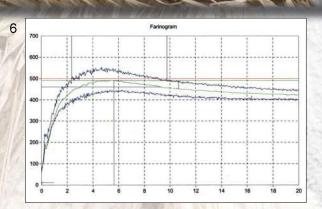
MIXOGRAM



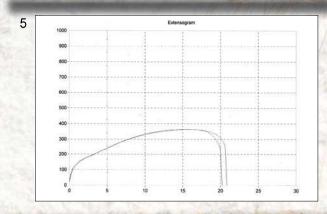


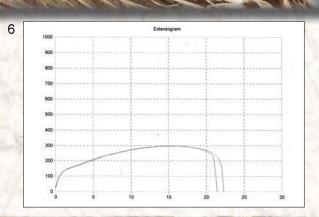
FARINOGRAM

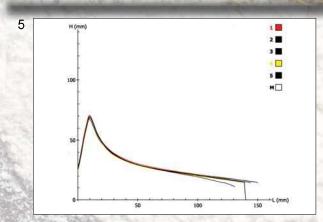


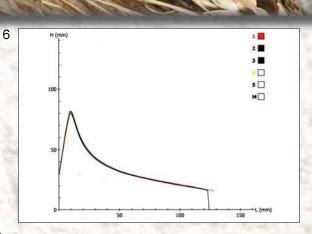


EXTENSOGRAM



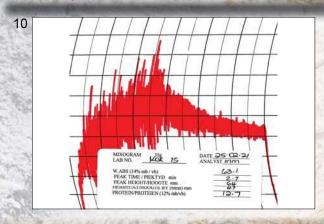


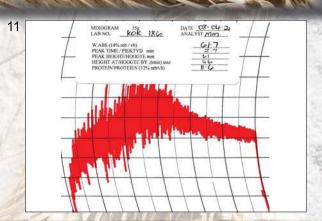




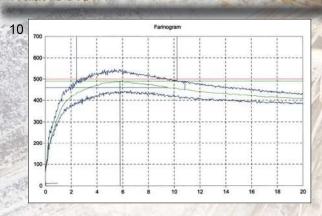
PRODUCTION REGION	(10) Griqualan	d West Rec	jion			(11) Vaalharts	Region			
WHEAT	_									
WILLI	ave	mir	1	max	stdev	ave	mir	1	max	stdev
Protein (12% mb), %	13.1	12.		13.6	0.43	12.6	11.2		13.5	0.81
alling number, sec	369	318	3	432	25.71	410	367	7	453	42.25
Moisture, %	10.4	9.4		11.4	0.69	10.7	10.1		11.2	0.55
1000 Kernel mass (13% mb), g	36.2	33.8		38.4	0.99	36.5	32.6		40.5	3.00
Hectolitre mass (dirty), kg/hl	82.5	78.		85.3	1.60	81.2	78.7		83.6	2.45
Screenings (<1.8 mm sieve), %	0.81	0.19		3.24	0.75	1.54	0.16		3.28	1.51
Total damaged kernels, % Combined deviations, %	0.42 1.47	0.03		0.90 4.10	0.27	0.22 2.41	0.00		0.68 4.04	0.25 1.64
Number of samples	1.47	0.3	22	4.10	0.99	2.41	0.40	6	4.04	1.04
CULTIVARS										
		SST 813		18.4			SST 813		25.8	
Cultivars with highest % occurrence		PAN 340		14.5			PAN 340		14.2	
3	——	SST 884		13.3		-	SST 884		12.8	
		SST 815 PAN 349		7.5		-	SST 815 PAN 347		12.3 10.5	
Number of samples		PAN 348	22	7.5			PAN 347	6	10.5	
MIXOGRAM (Quadromat Junior)										
•	ave	mir		max	stdev	ave	mir		max	stdev
Peak time, min	2.7	2.5		3.0	0.12	2.9	2.6		3.0	0.15
Tail height (6 min), mm Number of samples	47	41	22	50	2.46	47	45	6	49	1.72
vumber or samples	_				COMPOSIT	I TE SAMPLES	•	<u>0</u>		
CLASS AND GRADE	Super	B1	B2	B3	COW	Super	B1	B2	B3	COM
Bühler Extraction, %	76.0	76.0	-	-	-	75.3	-	-	-	-
·										
FLOUR	1									1
Protein (12% mb), %	12.4	11.4	-	-	-	12.2	-	-	-	-
Moisture, %	14.4	13.9	-	-	-	14.0	-	-	-	-
Ash (db), %	0.58	0.55	-	-	-	0.60	-	-	-	-
Colour, KJ (wet)	-5.0	-5.0	-	-	-	-4.9	-	-	-	-
Colour, Konica Minolta CM5 (dry)	1									
-*	93.92	94.06	-	<u> </u>	<u> </u>	93.90	-	-	<u> </u>	<u> </u>
a*	0.59	0.56	-	-	-	0.53	-	-	-	-
o*	10.47	10.61	-	-	-	10.39	-	-	-	-
RVA	1									1
Peak Viscosity, cP	2235	2435	_	_	_	2474	-	_	_	-
Minimum viscosity (Trough), cP	1764	1954	_	<u> </u>	 	2002	-		 	<u> </u>
Final Viscosity, cP	2413	2805	_	_	-	2737		_	-	
Peak Time, min	7.00	7.00	-	_	-	7.00	_	_	_	<u> </u>
				1		1				i
GLUTEN	1				1					1
Wet gluten (14% mb), %	34.3	31.3	-	-	-	32.7	-	-	-	-
Ory gluten (14% mb), %	11.5	10.4	-	-	<u> </u>	10.7	-	-	i -	j -
Gluten Index	95	94	-	-	-	95	-	-	-	-
FARINOGRAM										
Nater absorption (14% mb), %	60.5	58.6	-	-	-	59.8	-	-	-	-
Development time, min	5.8	5.7	-	-	<u> </u>	5.5	-	-	-	<u> </u> -
Stability, min	7.8	8.0	-	+ -	-	7.7	-	-	-	-
Mixing tolerance index, BU	40	38	-	+ -	 -	36	-	-	-	<u> </u>
EXTENSOGRAM (45 min pull)	1				1					1
Area, cm ²	112	100	١ .	_	_	119	_	_	_	_
Maximum height, BU	353	370	-	† -	 -	399	-		 -	<u> </u>
Extensibility, mm	234	199	-	-	 -	221	-	-	<u> </u>	 -
**	1	· ·			İ				İ	İ
	1				1					1
ALVEOGRAM	39.9	35.2	-	-	-	40.0	-	-	-	-
Strength (S), cm ²		1	-	-	-	66	-	-	-	-
Strength (S), cm² Stability (P), mm	63	64				4.50	-			
Strength (S), cm² Stability (P), mm Distensibility (L), mm	63 165	136	-	-	-	159	-	-	-	<u> </u>
Strength (S), cm² Stability (P), mm Distensibility (L), mm	63	!		-	-	0.42	-	-	-	-
Strength (S), cm² Stability (P), mm Distensibility (L), mm Configuration ratio (P/L)	63 165	136	-	+	+				 	
Strength (S), cm² Stability (P), mm Distensibility (L), mm Configuration ratio (P/L)	63 165 0.38	136 0.47	-	-	-	0.42	-	-	-	-
Strength (S), cm² Stability (P), mm Distensibility (L), mm Configuration ratio (P/L)	63 165	136	-	+	+				 	
Strength (S), cm² Stability (P), mm Distensibility (L), mm Configuration ratio (P/L) WIXOGRAM Peak time, min	63 165 0.38	136 0.47	-	-	-	0.42	-	-	-	-
Strength (S), cm² Stability (P), mm Distensibility (L), mm Configuration ratio (P/L)	63 165 0.38	136 0.47	-	-	-	0.42	-	-	-	-

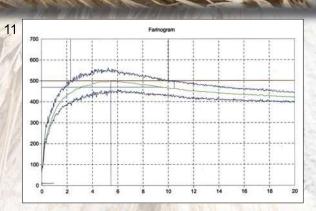
MIXOGRAM



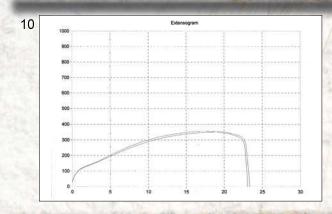


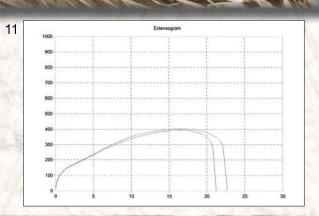
FARINOGRAM

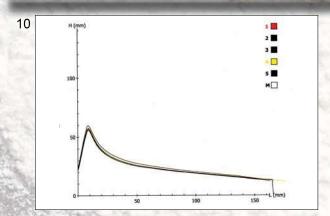


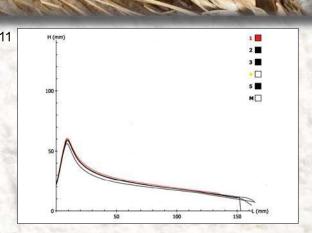


EXTENSOGRAM



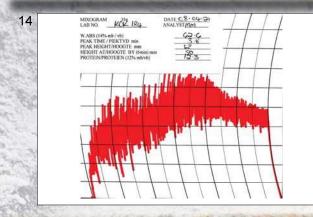


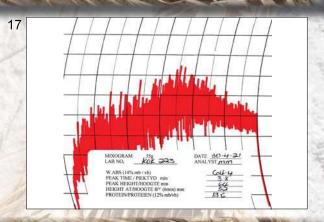




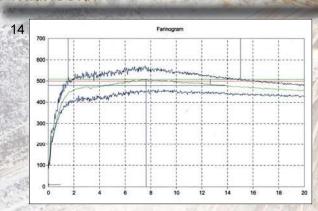
#### A	IKKIGATION WHEAT	200 64274	200		S. 34.1	122	1.000		SESSEC 18 15 1	34 2011/h	53/8/8
A	PRODUCTION REGION	North Wes					North Wes		gion (Ottos	dal)	
Trigon 1759 mby 180	WHEAT										
Samp number, see 397 394 417 15.98 422								mir	1	max	stdev
Modellure, %								-		-	-
1000 Kernel mass (13% mb), g											
Package Pack											
Signature Sign											
Total charged kamels											
2										_	
SST 843	Combined deviations, %									-	
SST 843	Number of samples			4					1		
SST 8154 21.0 SST 8135 41.0 SST 8135	CULTIVARS										
SST 8135 16.8					25.8					59.0	
SSI 18190 18.8 - - - - -	Cultivars with highest % occurrence							SST 813	5 .	41.0	
PAN 3497 6.8	Odditvars with highest 70 occurrence										
Name Search Sea		ļ									
## Annual Control of the Control of	Number of samples	_	PAN 349		6.8			-	1	-	
Seak time, min Side Sid	tumber of campion			•					•		
Peak time, min	MIXOGRAM (Quadromat Junior)	21/2	m:-		may	etdov	31/2	m:	,	mav	etdov
Super Stamples S	Peak time, min								1	-	Stuev -
COMPOSITE SAMPLES	Tail height (6 min), mm							-		-	
Super Supe	Number of samples			4					1		
## Surfer Extraction, % ## FLOUR ## FLOUR ## Protein (12% mb), % ## 13.2 - - - 13.5 - - - - - - -											
## Protein (12% mb), %	CLASS AND GRADE		B1	B2	B3	cow		B1	B2	B3	COM
Protein (12% mb), %	Bühler Extraction, %	72.6	-	-	<u> </u>	-	72.9	-	-	-	<u> </u>
Protein (12% mb), %											
Moisture, % 4.9		40.0					10.5				
Ash (db): %					+	+				 	
2-0lour, KJ (wet)					+	+				 	
Solution Solution					+	+				 	
93.90 93.65		-4.9	-	-	+	 -	-4.7	-	-	-	- -
1	colour, Konica Minora Civis (dry)	03.00					02.65				
Pack Viscosity, cP	L 2*					+				-	+
RVA Peak Viscosity, cP Peak Viscosity, cP Peak Time, min Peak Time	b*				+	+				 	
Peak Viscosity, cP	~				1		- U.L.				†
Peak Viscosity, cP	RVA	İ									
Minimum viscosity (Trough), eP		2504	- 1	_	_	-	2486	-	_	_	-
Peak Time, min	Minimum viscosity (Trough), cP	1881	-	-	-	-	1842	-	_	-	-
Setablity Seta	Final Viscosity, cP	2697	-	-	-	-	2646	-	-	-	-
Met gluten (14% mb), % 33.6 - - - - 33.0 - - - - - - - - -	Peak Time, min	7.00	-		-	-	7.00	-	-	-	-
Met gluten (14% mb), % 33.6 - - - - 33.0 - - - - - - - - -											
Dry gluten (14% mb), %	GLUTEN										
Saluten Index			-	-	-	-		-	-	-	-
FARINOGRAM Nater absorption (14% mb), % 60.4 61.4 5tability, min 7.7 8.3 5tability, min 13.5 13.6			-	-		-			-	-	-
Alter absorption (14% mb), % 60.4 - - - - 61.4 - - - - - - - - -	Gluten Index	97	-	-	 -	 -	99	-	-	<u> </u>	
Alter absorption (14% mb), % 60.4 - - - - 61.4 - - - - - - - - -		1			1						
Development time, min		60.4			1		61.4				1
Stability, min 13.5 - - - 13.6 - - - - - -						+					+
Mixing tolerance index, BU 23 - - - 25 - - - - - - - - -					+	+				 	
EXTENSOGRAM (45 min pull) Area, cm² 138 155						+					
Area, cm²	many tolerance mack, bu		_	-	+ -	1 		-		- -	-
Area, cm²	EXTENSOGRAM (45 min pull)										
Maximum height, BU	Area, cm ²	138	-	_	1 -	-	155	-	-	-	-
ALVEOGRAM Strength (S), cm² 54.9 79	Maximum height, BU				<u> </u>	-					
Strength (S), cm ² 54.9 58.3 Stability (P), mm 79 87			-	-	-			-	-	_	
Strength (S), cm ² 54.9 58.3 Stability (P), mm 79 87											
Stability (P), mm	ALVEOGRAM	1			1					1	1
Distensibility (L), mm 149 144 Configuration ratio (P/L) 0.53 0.60	Strength (S), cm ²	_	-	-	-	-		-	-	-	<u> </u>
Configuration ratio (P/L) 0.53 0.60						-			-		<u> </u>
MIXOGRAM Peak time, min 3.4 3.3 100 g BAKING TEST Loaf volume, cm ³ 1407 1160	Distensibility (L), mm	_			+	+				 	
Peak time, min 3.4 3.3	Configuration ratio (P/L)	0.53	-	-	 -	 -	0.60	-	-	-	- -
Peak time, min 3.4 3.3	MYOODAM										
100 g BAKING TEST _oaf volume, cm³ 1407 1160		1			1						1
_oaf volume, cm³	reak time, min	3.4	-	-	+ -	+ -	3.3	-	-		
_oaf volume, cm³	100 a BAKING TEST				1						1
	•	1407					1160				
				-	+ -	+			-		+

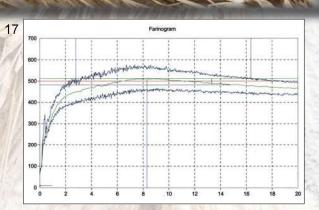
MIXOGRAM



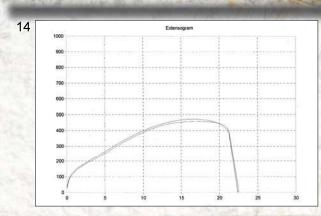


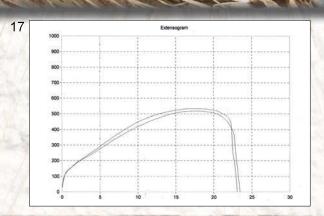
FARINOGRAM

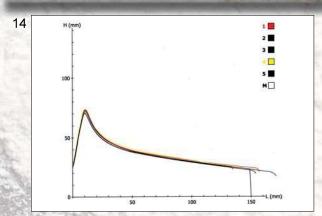


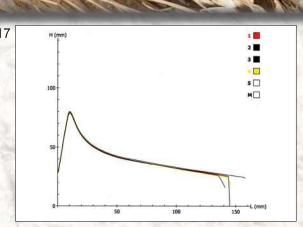


EXTENSOGRAM



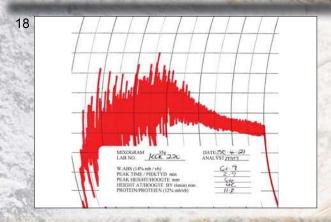


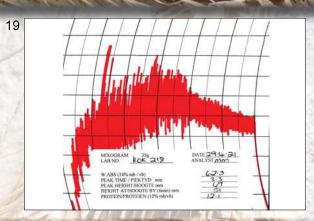




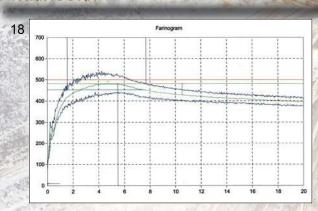
IKRIGATION WHEAT	200	7 1 3		8 14	120	7.00		9.014 67	30 10 ch	1083
PRODUCTION REGION	(18) North Wes Central Re	st egion (Vent	ersdorp)			(19) North Wes Central Re	st egion (Lich	tenburg)		
WHEAT						1				
	ave	mir	า	max	stdev	ave	mir	1	max	stdev
Protein (12% mb), %	13.5	13.1	1	13.8	0.49	13.3	12.0	3	14.4	0.66
Falling number, sec	367	364	1	369	3.54	366	313	3	426	47.87
Moisture, %	12.2	12.0	0	12.3	0.21	11.8	11.	5	12.2	0.31
1000 Kernel mass (13% mb), g	37.5	37.1	1	37.8	0.49	37.0	33.	5	39.3	2.16
Hectolitre mass (dirty), kg/hl	78.7	78.0	0	79.4	0.99	79.0	77.:	3	79.9	1.01
Screenings (<1.8 mm sieve), %	1.23	0.9	5	1.51	0.40	1.01	0.0	5	2.32	0.96
Total damaged kernels, %	1.52	1.34	4	1.70	0.25	0.29	0.10)	0.62	0.20
Combined deviations, %	2.99	2.9		3.07	0.11	1.41	0.2		2.62	1.15
Number of samples			2			1		5		
CULTIVARS		SST 884		72.0			SST 843		35.2	
		PAN 347		19.0			SST 813		24.0	
Cultivars with highest % occurrence		SST 843		9.0			SST 884		23.4	
		-		-			SST 895		10.4	
		_		-			PAN 349		5.0	
Number of samples			2				17111010	5	0.0	
MIXOGRAM (Quadromat Junior)										
,	ave	mir		max	stdev	ave	mir		max	stdev
Peak time, min	2.8	2.6		2.9	0.21	3.6	3.0		4.5	0.65
Tail height (6 min), mm	46	46		46	0.00	52	50		57	2.77
Number of samples			2		0011000			5		
				1		E SAMPLES				
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	COM
Bühler Extraction, %	72.4	-	-	-	-	74.2	-	-	-	-
FLOUR										
Protein (12% mb), %	12.1	-	-	-	-	12.4	-	-	-	-
Moisture, %	13.9	-	-	-	-	13.7	-	-	-	-
Ash (db), %	0.74	-	-	-	-	0.60	-	-	-	-
Colour, KJ (wet)	-4.1	-	-	T -	I -	-4.8	-	-	I -	-
Colour, Konica Minolta CM5 (dry)		İ	İ	i	i				İ	İ
L*	93.04	- 1	-	-	_	93.72	_	_	1 -	-
 a*	0.59	-	-	† -	<u> </u>	0.45	-	-	i -	<u> </u>
b*	9.97	-	-	† -	<u> </u>	9.64	-	-	i -	-
			ĺ	İ	İ				İ	İ
RVA				1	1				1	
Peak Viscosity, cP	2298	- 1	-	-	-	2448	_	_	-	-
Minimum viscosity (Trough), cP	1704	-	-	<u> </u>	<u> </u>	1902	-		<u> </u>	<u> </u>
Final Viscosity, cP	2412	-	-	_	-	2651	-	_	_	<u> </u>
Peak Time, min	7.00	_	_	_	 	7.00	_		 	 -
reak rime, min	7.00			<u> </u>		7.00			1	
GLUTEN										
Wet gluten (14% mb), %	33.8	_	_	_	_	31.2	_	_	_	-
				+	+				 	i
Dry gluten (14% mb), %	11.3	-	-	-	-	11.1	-	-	-	-
Gluten Index	90	-	-	-	+ -	95	-	-	-	-
FARINGCRAM			1						1	1
FARINOGRAM	64.0					60.4			1	1
Water absorption (14% mb), %	61.0	-	-	-	-	60.4	-	-	-	-
Development time, min	5.5	-	-	-	-	7.9	-	-	<u> </u>	-
Stability, min	6.1	-	-	-	-	10.3	-	-	-	-
Mixing tolerance index, BU	53	-	-	-	-	36	-	-	-	-
EVTENO 0.00 *** *** ***										1
EXTENSOGRAM (45 min pull)										1
Area, cm ²	95	-	-	-	-	138	-	-	-	-
Maximum height, BU	370	-	-	-	-	454	-	-	<u> </u>	-
Extensibility, mm	186	-	-	-	-	228	-	-	-	-
	1									
ALVEOGRAM	1									1
Strength (S), cm ²	31.3	-	-	-	-	45.9	-	-	-	-
Stability (P), mm	78	-	-	-	-	79	-	-	-	-
Distensibility (L), mm	93	-	-	-	-	134	-	-	-	-
Configuration ratio (P/L)	0.84	-	-	<u> </u>	<u> </u>	0.59	-	-	-	-
										1
MIXOGRAM										
Peak time, min	2.8	-	-	-	-	3.3	-	-	-	-
100 g BAKING TEST	1		1						1	1
Loaf volume, cm ³	1095	-	-	_	-	1267	-	_	-	-
Evaluation (see page 74)	0	-	-	† -	† .	0	-	_	<u> </u>	
()										

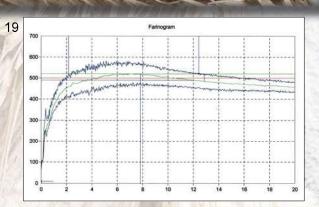
MIXOGRAM



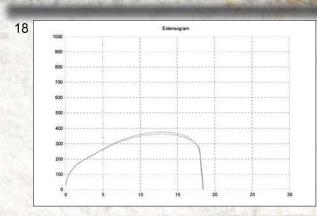


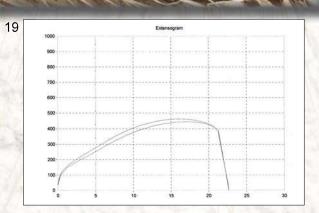
FARINOGRAM

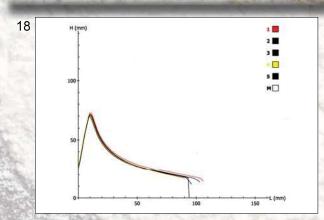


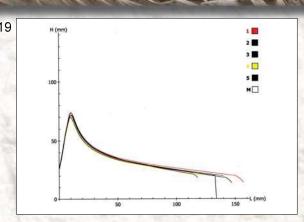


EXTENSOGRAM





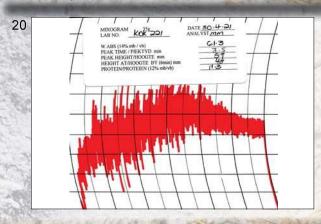


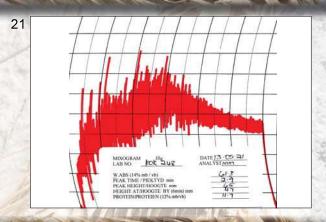


South African quality data per production region

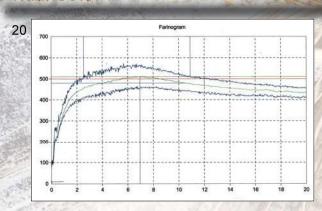
		TION WE			5	SUMME	R RAINF	ALL AN	D IRRIC	GATION
PRODUCTION REGION	(20) North We Eastern R					(21) Free State North-Wes	e stern Regio	n (Viljoens	skroon)	
WHEAT			_		-4-1					atala
Protein (12% mb), %	ave 12.6	mir 11.9		max 13.4	stdev 0.53	ave 12.6	min -	l	max -	stdev -
Falling number, sec	380	164		560	113.59	399			-	
Moisture, %	11.5	10.		12.2	0.48	11.0	_		_	_
1000 Kernel mass (13% mb), g	38.7	36.6	6	40.1	1.33	35.2	-		-	-
Hectolitre mass (dirty), kg/hl	79.1	76.2	2	82.3	2.05	76.1	-		-	-
Screenings (<1.8 mm sieve), %	0.89	0.34		1.40	0.33	4.01	-		-	-
Total damaged kernels, %	1.23	0.02		3.20	1.28	1.12	-		-	-
Combined deviations, % Number of samples	2.54	0.36	6 8	5.06	1.66	5.49	-	1	-	-
CULTIVARS										
SOLITARO		SST 843	3	23.4			PAN 340	0	45.0	
2. Jai		SST 884		21.9			SST 815	6	33.0	
Cultivars with highest % occurrence		SST 813	35	20.3			SST 815	4	13.0	
		DUZI		10.8			SST 884		9.0	
		PAN 340		7.9			-		-	
Number of samples			8			1		1		
MIVOCRAM (Coodram-4 loosis-1)										
MIXOGRAM (Quadromat Junior)	ave	mir	n	max	stdev	ave	min	ı	max	stdev
Peak time, min	3.5	mir 2.7		max 4.1	0.46	2.9	min -	ı	ax	stuev -
Tail height (6 min), mm	48	44		56	3.70	47			-	
Number of samples			8		0.70	1		1		
,					COMPOSIT	E SAMPLES	ss			
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	cow
Bühler Extraction, %	75.0	76.6	-	-	-	-	-	-	-	75.9
FLOUR	1									
Protein (12% mb), %	12.2	11.3	-	-	-	-	-	-	-	12.0
Moisture, %	13.5	13.3	-	-	-	-	-	-	-	13.9
Ash (db), %	0.56	0.60	-	<u> </u>	-	-	-	-	<u> </u>	0.63
Colour, KJ (wet)	-4.4	-4.3	-	<u> </u>	-	-	-	-	<u> </u>	-4.2
Colour, Konica Minolta CM5 (dry)										
L*	93.38	93.52	-	-	-	-	-	-	-	93.17
a*b*	0.47	0.45	-	-	-	<u> </u>	-	-		0.53
0 "	9.79	9.90	-	+ -	-	-	-	-	 -	10.87
RVA	1									
Peak Viscosity, cP	2416	2319	_	l <u>-</u>	l _		_	_	_	2098
Minimum viscosity (Trough), cP	1822	1895		_	<u> </u>	<u> </u>	_	_	<u> </u>	1773
Final Viscosity, cP	2621	2478	-	_	-	-	-	-	-	2210
Peak Time, min	7.00	7.00	-	-	-	· -	-	-	-	6.80
,										İ
GLUTEN	1			1		I				
Wet gluten (14% mb), %	33.1	29.3	-	-	-	-	-	-	-	33.3
Dry gluten (14% mb), %	11.5	9.9	-	-	-	-	-	-	-	11.4
Gluten Index	97	97	-	-	-	-	-	-	-	94
FARINOGRAM			1							
Water absorption (14% mb), %	60.7	57.9	-	-	-	-	-	-	-	59.7
Development time, min	7.0	5.9	-	+ -	-	-	-	-	 -	5.7
Stability, min Mixing tolerance index, BU	8.4	8.4 37	-	+ -	-	-	-	-	-	6.9
winking tolerance index, BU	42	1 3/	 -	+ -	-	-	-	-	 	48
EXTENSOGRAM (45 min pull)										
Area, cm ²	131	108	-	-	-	-	-	-	-	101
Maximum height, BU	421	403	-	-	-	-	-	-	-	347
Extensibility, mm	230	201	-	-	-	-	-	-	-	215
ALV/FOODAM										
ALVEOGRAM	27.0	20.4	1		1				1	25.0
Strength (S), cm² Stability (P), mm	37.2 75	38.1 64	-	+ -	-	-	-	-	-	35.0 62
Stability (P), mm Distensibility (L), mm	108	153	<u> </u>	+ -	 -	-	-	-	 -	157
Configuration ratio (P/L)	0.69	0.42	<u> </u>	+ -	 -	-	-		 -	0.39
Comigaration ratio (F/L)	0.00	0.42		1 -	 	-			 	1 0.00
MIXOGRAM	1		1		1				1	
Peak time, min	3.1	3.2	-	_	_	-	.	-	-	2.9
•	1	<u> </u>	İ		i i				i –	1
100 g BAKING TEST										
Loaf volume, cm³	1216	1144	-		-	-	-	-	-	1142
Evaluation (see page 74)	0	0	-	-	-	-	-	-	-	0

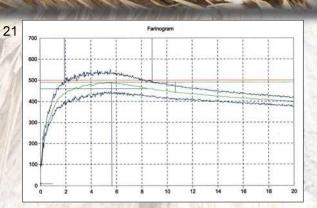
MIXOGRAM



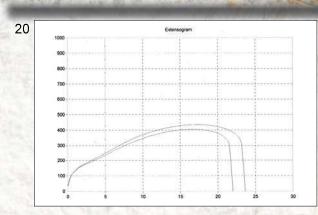


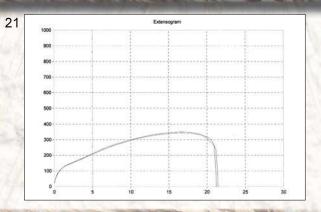
FARINOGRAM

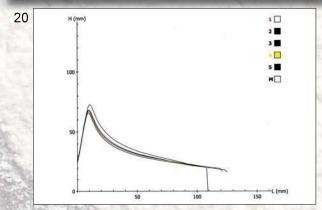


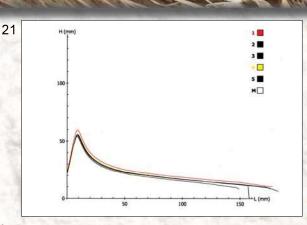


EXTENSOGRAM





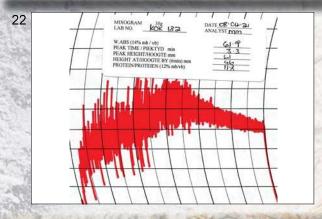


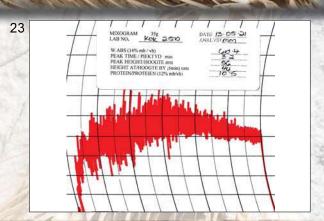


South African quality data per production region SUMMER RAINFALL AND IRRIGATION WHEAT

PRODUCTION REGION	(22)					(23) Free State				
. Noboo non Neolon		stern Regior	ı (Bothav	/ille)			stern Regio	n (Bultfon	tein)	
WHEAT	-									
	ave	min		max	stdev	ave	mir	า	max	stdev
Protein (12% mb), %	13.3	12.8		13.8	0.71	12.6	11.3	3	13.8	1.01
Falling number, sec	385	242		527	201.53	413	325	5	504	81.70
Moisture, %	10.8	10.4		11.1	0.49	10.9	10.1		11.6	0.69
1000 Kernel mass (13% mb), g	33.1	30.7		35.4	3.32	36.4	32.2		38.9	2.54
Hectolitre mass (dirty), kg/hl	69.9	66.0		73.7	5.44	81.3	79.		83.8	1.99
Screenings (<1.8 mm sieve), %	6.28	2.74		9.81	5.00	1.41	0.28		2.11	0.68
Total damaged kernels, %	1.32	1.28		1.36	0.06	0.39	0.20		0.64	0.18
Combined deviations, %	10.13	5.22		15.03	6.94	2.06	0.52		2.91	0.93
lumber of samples			2					5		
NULTIVA DO						l .				
CULTIVARS	1	DAN 040		50.0		l .	D411.000			
		PAN 3497		50.0			PAN 336		23.8	
Cultivars with highest % occurrence		PAN 3400		26.5			PAN 311		19.2	
Julia Varo Will Inglicot 70 Goodifichios		PAN 3541		8.0			SST 884		13.6	
		SST 8156		6.5			SST 813	5	10.8	
		SST 8154		4.5			PAN 340		8.4	
Number of samples			2					5		
ALVOODAM (C										
MIXOGRAM (Quadromat Junior)	ave	min		max	stdev	ave	mir	1	max	stdev
Peak time, min	2.8	2.3		3.3	0.71	3.0	2.6		3.2	0.25
Tail height (6 min), mm	43	40		46	4.24	47	42		52	4.22
Number of samples	, i	10	2	10	1.21		12	5	UZ.	1.22
tumber of sumples					COMPOSIT	E SAMPLES	•	` _		
CLASS AND GRADE	Super	B1	B2	B3	Cow	Super	, В1	B2	B3	COM
Bühler Extraction, %	- Super	-	- 52	-	-	74.4	-	-		-
Julier Extraction, 70	+			 	+	- / 7.7			- -	-
LOUR				1		1 1				
					1	44.0				
Protein (12% mb), %	<u> </u>	-	-	-	 -	11.8	-	-	-	-
Moisture, %	<u> </u>	-	-	<u> </u>	<u> </u>	14.2	-	-	 -	<u> </u>
Ash (db), %	-	-	-	-	-	0.52	-	-	-	-
Colour, KJ (wet)	-	-	-	-	-	-5.0	-	-	-	-
Colour, Konica Minolta CM5 (dry)										
_*	- 1	-	-	-	-	93.68	-	-	-	-
a*	-	-	-	T -	-	0.45	-	-	-	-
o*	-	-	-	-	-	10.43	-	-	-	l -
				i	İ				İ	
RVA				1		1 1				
Peak Viscosity, cP	1 . 1	_	_	-	l <u>-</u>	2149	_	_	_	l -
Minimum viscosity (Trough), cP	 	_		_	 	1821	_		 	 -
Final Viscosity, cP	 		- -	-	+	2478			-	
•										
Peak Time, min	-	-	-	-	-	7.00	-	-	-	-
CLUTEN	1								1	1
GLUTEN						,, ,				
Wet gluten (14% mb), %	-	-	-	-	<u> </u>	31.5	-	-	-	 -
Ory gluten (14% mb), %	-	-	-	-	-	10.7	-	-	-	-
Gluten Index	-	-	-	-	-	97	-	-	-	-
	1								1	1
FARINOGRAM	1								1	1
Nater absorption (14% mb), %	-	-		-	-	60.1	-		<u> </u>	
Development time, min	-	-	-	-	-	5.4	-	-	-	-
Stability, min	-	-	-	-	-	9.6	-	-	-	-
Mixing tolerance index, BU	-	-	-	-	i -	23	-	-	-	-
EXTENSOGRAM (45 min pull)									1	1
Area, cm ²	1 - 1	- 1	_	-	-	110	-	-	-	-
Maximum height, BU	-	_		 	 -	401	_	_	 	 -
Extensibility, mm	1 -	-		+ -	 	205	-	_	 	
	1			+ -	† 	-200			 	
ALVEOGRAM	1								1	1
Strength (S), cm ²	_	_	_	_	l <u>-</u>	48.5	_	_	_	l -
		 			+				+	_
Stability (P), mm	-	-	-	-	-	82	-	-	-	-
Distensibility (L), mm	-	-	-	-	-	138	-	-	-	-
Configuration ratio (P/L)	-	-	-	-	-	0.59	-	-	-	<u> </u>
MIXOGRAM	1								1	1
Peak time, min	-	-	-	-	-	3.0	-	-	-	-
100 g BAKING TEST	1								1	1
	1 .	- 1	-	-	-	1141	-	-	-	-
Loaf volume, cm ³										

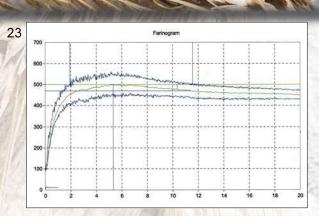
MIXOGRAM





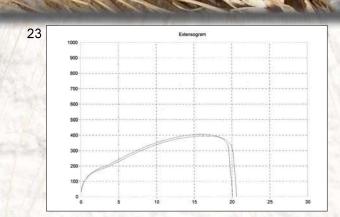
FARINOGRAM

22



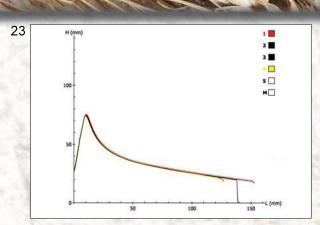
EXTENSOGRAM

22



ALVEOGRAM

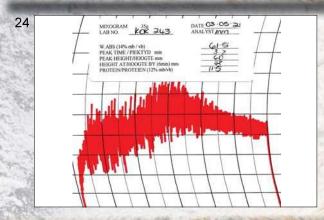
22

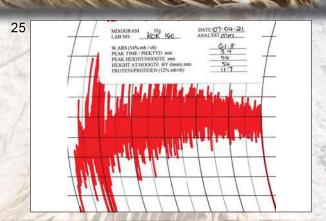


South African quality data per production region SUMMER RAINFALL AND IRRIGATION WHEAT

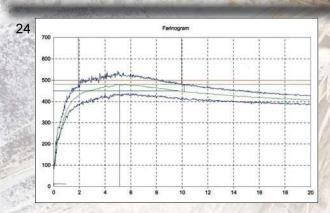
PRODUCTION REGION	(24) Free State Central Re					(25) Free State South-We	stern Regio	on		
WHEAT	21/2	mir		may	otdov	27/0	mir		may	otdov
Protein (12% mb), %	ave 12.8	mir 11.7		max 13.6	stdev 0.76	ave 14.9	mir 13.5		max 16.2	stdev 1.09
Falling number, sec	363	313		385	30.55	173	47		303	118.56
Moisture, %	10.8	10.4		11.3	0.36	12.0	11.7	7	12.3	0.24
1000 Kernel mass (13% mb), g	32.1	27.0		36.8	3.73	36.3	32.9		39.8	3.10
Hectolitre mass (dirty), kg/hl	77.1	68.7	7	81.4	4.58	73.5	70.	1	76.7	2.42
Screenings (<1.8 mm sieve), %	2.91	1.5	1	4.62	1.07	2.86	1.06	3	5.31	1.69
Total damaged kernels, %	0.55	0.00		0.84	0.32	5.67	0.74		11.70	4.90
Combined deviations, % Number of samples	4.80	2.87	6	9.44	2.52	9.40	3.97	5	13.18	3.72
CULTIVARS										
3-1111111	1	SST 8135		18.0			PAN 316	1	40.4	
Cultivara with highest % accurrance		PAN 3368		17.2			PAN 336	8	16.2	
Cultivars with highest % occurrence		PAN 3400		11.7			SST 347		16.2	
		SCHEEPER		8.5			MATLAB		13.8	
		SST 34		8.2			SST 356		8.0	
Number of samples			6			1		5		
MIXOGRAM (Quadromat Junior)										
Peak time, min	ave 3.2	mir 2.9		max 3.4	stdev 0.16	ave 4.0	mir 3.1		max 5.7	stdev 0.99
Tail height (6 min), mm	46	43		50	2.61	51	43		54	4.58
Number of samples			6					5		
						E SAMPLES				
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	cow
Bühler Extraction, %	75.0	74.3	-	<u> </u>	-	72.7	-	-	-	-
FLOUR	40.0	400				44.7				
Protein (12% mb), %	12.2	10.3	-	-	<u> </u>	11.7	-	-	-	-
Moisture, %	13.8	13.6	-	<u> </u>	<u> </u>	13.3	-	-	 -	<u> </u>
Ash (db), %	0.61	0.70	-	-	-	0.55	-	-	-	-
Colour, KJ (wet)	-4.6	-4.5	-	-	-	-3.8	-	-	-	-
Colour, Konica Minolta CM5 (dry)	93.49	93.66	_	_	_	93.21	_		_	l _
a*	0.50	0.49	-	+ -	+ -	0.42	-	-	 	 -
b*	10.42	10.19		+ -	+ :	10.85			 	
	10.72	10.10		 	1	10.00			 	1
RVA					1					
Peak Viscosity, cP	2190	1563	_	1 -	1 -	1488	_	_	_	-
Minimum viscosity (Trough), cP	1741	1309	-	<u> </u>	† -	1257	-	-	<u> </u>	<u> </u>
Final Viscosity, cP	2331	1682	-	-	-	1645	-	-	-	-
Peak Time, min	7.00	6.40	-	-	-	6.53	-	-	-	-
·										İ
GLUTEN										1
Wet gluten (14% mb), %	33.7	29.2	-	-	-	32.2	-	-	-	
Dry gluten (14% mb), %	12.1	9.5	-	-	-	11.0	-	-	-	-
Gluten Index	94	95	-	-	-	99	-	-	-	-
L										1
FARINOGRAM										1
Water absorption (14% mb), %	59.3	58.0	-	-	-	61.4	-	-	-	-
Development time, min	5.2	5.0	-	-	-	5.4	-	-	-	-
Stability, min	8.0	5.6	-	-	-	10.2	-	-	-	-
Mixing tolerance index, BU	34	60	-	-	-	24	-	-	-	-
EXTENSOGRAM (45 min pull)									1	1
Area, cm ²	110	79	_	_	-	85	_	_	l <u>-</u>	-
Maximum height, BU	373	330	-	+ -	 -	321	-		 -	 -
Extensibility, mm	219	176	-	<u> </u>	<u> </u>	192	-	-	<u> </u>	-
<u> </u>	T			1	1	1			i –	i
ALVEOGRAM					1				1	1
Strength (S), cm ²	38.2	24.9		-	-	42.2	-		-	-
Stability (P), mm	62	64	-	-	-	90	-	-	j -	-
Distensibility (L), mm	165	93	-	-	-	100	-	-	j -	-
Configuration ratio (P/L)	0.38	0.69	-	-	<u> </u>	0.90	-	-	<u> </u>	<u> </u>
MIXOGRAM										
Peak time, min	2.8	2.8	-	-	-	3.2	-	-	-	-
l										
100 g BAKING TEST	40.10	4000				400-				
Loaf volume, cm³	1243	1030	-	+ -	<u> </u>	1067	-	-	-	 -
Evaluation (see page 74)	0	0	-	-	-	0	-	-	-	<u> </u>

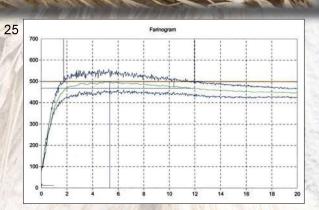
MIXOGRAM



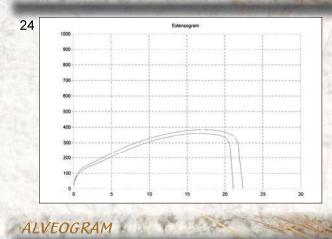


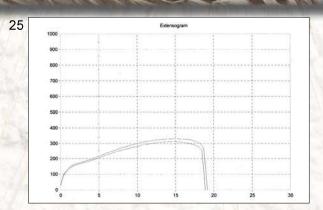
FARINOGRAM

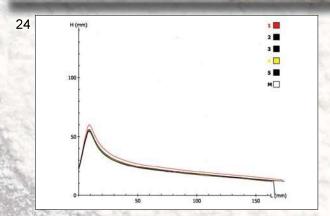


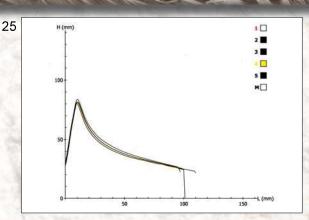


EXTENSOGRAM





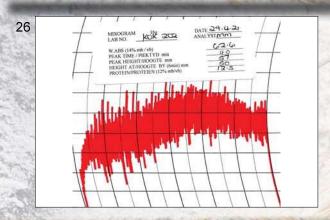


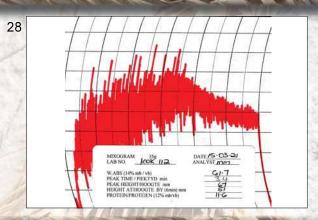


South African quality data per production region SUMMER RAINFALL AND IRRIGATION WHEAT

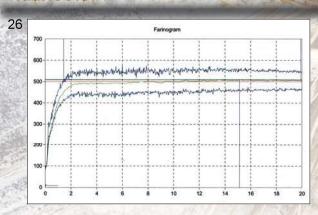
PRODUCTION REGION	(26) Free State South-Eas	e stern Regio	n			(28) Free State Eastern R				
WUSAT	4					1				
WHEAT	ave	min		max	stdev	ave	mir		max	stdev
Protein (12% mb), %	15.0	13.7		16.4	1.11	13.3	11.1		14.9	0.91
Falling number, sec	277	50		391	132.53	282	73		417	95.85
Moisture, %	11.7	11.5	j	12.0	0.22	12.1	11.4		12.4	0.27
1000 Kernel mass (13% mb), g	37.6	30.8		41.6	4.15	38.4	29.3		42.5	3.11
Hectolitre mass (dirty), kg/hl	77.5	71.9)	79.7	3.18	79.1	71.:	2	83.8	3.33
Screenings (<1.8 mm sieve), %	1.28	0.35		3.50	1.28	1.69	0.3		7.00	1.43
Total damaged kernels, %	1.60	0.00		4.28	1.60	1.03	0.0		2.96	0.91
Combined deviations, % Number of samples	3.36	0.92	5	5.73	2.11	3.08	0.78	3 21	7.76	2.05
CULTIVARS										
		PAN 316		52.4			SST 813		22.7	
Cultivars with highest % occurrence		PAN 336		20.4			SST 884		13.2	
Ĭ		MATLAB.	AS	10.0		-	PAN 316		10.8	
		SST 387 SST 347		10.0 3.4		 	PAN 340 SST 387		10.6 8.8	
Number of samples		331 341	5	3.4			331 307	21	0.0	
Number of Samples			<u> </u>					<u> </u>		
MIXOGRAM (Quadromat Junior)	ave	min	1	max	stdev	ave	mir	1	max	stdev
Peak time, min	5.0	3.6		8.0	1.87	3.5	2.6	;	5.0	0.63
Tail height (6 min), mm	50	45		55	3.54	50	41		57	4.21
Number of samples	_		5					21		
				1		E SAMPLES				1
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	COW
Bühler Extraction, %	72.8	-	-	-	-	74.2	-	-	-	73.3
FLOUR										
1	13.2	_	_	_		12.3	_		_	12.1
Protein (12% mb), % Moisture, %	14.3	_		+ -	 	13.6	-	-	 -	13.3
Ash (db), %	0.53			+ -	+ -	0.58			 	0.57
Colour, KJ (wet)	-4.1	-		+ -	+ :-	-4.6	-		 	-3.7
Colour, Konica Minolta CM5 (dry)				1	1	-7.0			1	-0.7
L*	93.34	-	_	_	-	93.55	_	_	-	93.30
a*	0.45	-	-	<u> </u>	<u> </u>	0.48	-	-	<u> </u>	0.40
b*	10.20	- 1	-	-	-	9.40	-	-	i -	9.43
RVA										
Peak Viscosity, cP	2271	-	-	-	-	2165	-	-	-	760
Minimum viscosity (Trough), cP	1858	-	-	-	-	1699	-	-	-	473
Final Viscosity, cP	2544	-	-	-	-	2312	-	-	-	763
Peak Time, min	6.93	-	-	-	-	7.00	-	-	-	5.33
OLUTEN.										
GLUTEN Wot gluton (14% mb) %	21.0					32.4			_	32.8
Wet gluten (14% mb), % Dry gluten (14% mb), %	31.9 11.4	-		-	<u> </u>	33.4 10.9	-	-	<u> </u>	11.3
Gluten (14% mb), %	98	-		-	+ -	96	-	-	<u> </u>	96
ошен шиох				†	1		-	_	<u> </u>	1 33
FARINOGRAM	1			1						
Water absorption (14% mb), %	58.3	-	-	-	-	60.8	-	-	-	60.4
Development time, min	15.2	-	-	-	-	6.5	-	-	-	6.9
Stability, min	18.5	-	-	-	-	8.9	-	-	-	9.8
Mixing tolerance index, BU	0	-	-	-	-	37	-	-	-	33
EXTENSOGRAM (45 min pull)										
Area, cm²	175	-	-	 -	-	129	-	-	-	115
Maximum height, BU	616	-	-	-	-	427	-	-	-	409
Extensibility, mm	217	-	-	-	-	224	-	-	-	209
ALVEOGRAM				1						
Strength (S), cm ²	61.2	_	_	_	_	44.9	_		_	42.5
Stability (P), mm	92	- I		<u> </u>	+ -	78	-	-	<u> </u>	73
Distensibility (L), mm	131	-	<u> </u>	 -	 -	140	-	-	-	144
Configuration ratio (P/L)	0.70	-		 -	+ -	0.56	-	_	-	0.51
25igai adoi: Tado (172)	J., 0			+	1	0.50			†	1 5.51
MIXOGRAM										
Peak time, min	4.9	-	-	-	-	3.2	-	-	-	3.3
l	1			1						
100 g BAKING TEST	4054					1170				4457
Loaf volume, cm ³ Evaluation (see page 74)	1251 0			+ -	+ -	1172 0	-	-	-	1157
Lvaluation (see page 74)						U				1 0

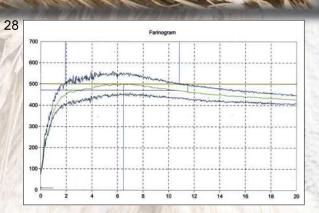
MIXOGRAM



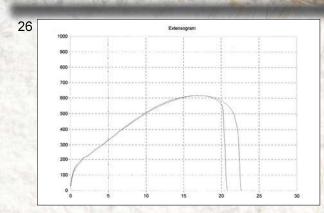


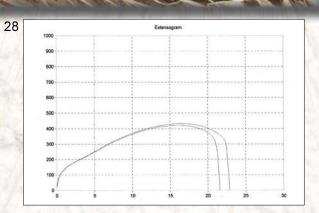
FARINOGRAM

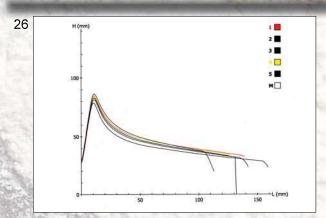


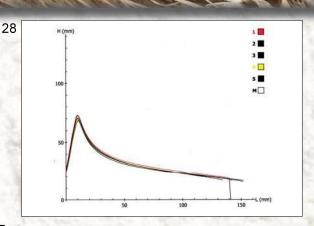


EXTENSOGRAM



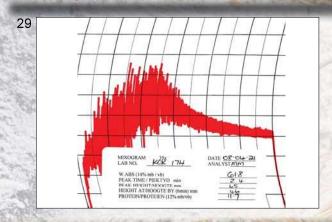


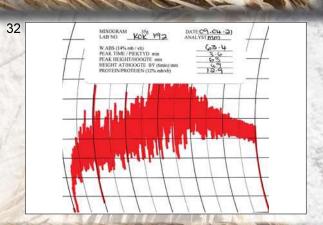




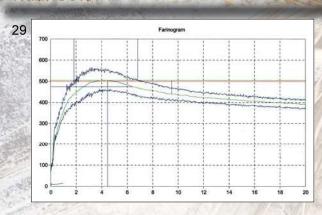
IKRIGATION WHEAT	7 1 1 1 1 1 1	200		5. 34.4	127	1.000		25281 X G /	N 2011/1	11/5/6
PRODUCTION REGION	(29) Mpumalar Southern					(32) Mpumalar Western R				
WHEAT	_									
	ave	mir	1	max	stdev	ave	mir	1	max	stdev
Protein (12% mb), %	12.7	-		-	-	12.9	11.5		14.2	1.36
Falling number, sec	345	-		-	-	271	210		329	59.53
Moisture, %	11.8	-		-	-	11.9	11.3	3	12.5	0.60
1000 Kernel mass (13% mb), g	46.2	-		-	-	40.2	37.1		42.5	2.77
Hectolitre mass (dirty), kg/hl	83.3	-		-	-	79.4	77.8		80.8	1.50
Screenings (<1.8 mm sieve), %	0.42	-		-	-	0.60	0.19		0.93	0.38
Total damaged kernels, %	0.72	-		-	-	1.17	0.84		1.66	0.43
Combined deviations, % Number of samples	1.42	-	1	-	-	2.06	1.00	3 3	2.77	0.91
·			,					<u> </u>		
CULTIVARS		SST 884		54.0			SST 884		36.0	
Cultivara with highest 0/ conversa		PAN 347	1	32.0			SST 813	5	25.3	
Cultivars with highest % occurrence		SST 815	6	14.0			SST 815	6	19.3	
		-		-			SST 815	4	7.0	
N barrafaan ahaa	_	-		-			SST 843		7.0	
Number of samples	7		1					3		
MIXOGRAM (Quadromat Junior)	ave	mir	1	max	stdev	ave	mir	1	max	stdev
Peak time, min	2.4	-		-	-	3.7	3.3	ı	4.1	0.40
Tail height (6 min), mm	46	-		-	-	49	48		49	0.58
Number of samples			1					3		
						E SAMPLES				
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	COW
Bühler Extraction, %	77.2	-	-	-	-	75.9	74.0	-	-	-
	1									
FLOUR									1	
Protein (12% mb), %	11.7	-	-	-	-	12.0	10.8	-	-	-
Moisture, %	13.9	-	-	i -	-	13.5	13.3	-	-	-
Ash (db), %	0.63	-	-	i -	-	0.60	0.61	-	-	-
Colour, KJ (wet)	-5.0	-	-	† -	i -	-3.9	-4.6	-	† -	<u> </u>
Colour, Konica Minolta CM5 (dry)	-			†	i	111	,,,,		i i	†
*	94.29	_	_	-	l -	93.38	93.73	_	l <u>-</u>	_
= a*	0.45	-	-	† -	<u> </u>	0.42	0.42	-	 -	 -
o*	8.22	-	-	† -	<u> </u>	9.11	9.71	-	<u> </u>	-
·				İ		0.,,	017 1			1
RVA				1	1				1	
Peak Viscosity, cP	2249	_	_	-	_	1959	1401	_	_	_
Minimum viscosity (Trough), cP	1781	_	_	-	<u> </u>	1671	1182		 	 -
Final Viscosity, cP	2441	_		-	-	2070	1518			
Peak Time, min	7.00				 	6.93	6.47			
reak IIIIle, IIIIII	7.00	_	-	-	-	0.93	0.47	-	 	
GLUTEN				1						
	22.4			1		21.6	20.7			
Wet gluten (14% mb), %	33.4	-	-	-	-	31.6	28.7	-	 -	- -
Dry gluten (14% mb), %	11.5	-	-	-	-	11.0	9.5	-	-	-
Gluten Index	94	-	-	-	-	96	94	-	-	-
TADINOCDAR*									1	1
FARINOGRAM	50.0			1		50.0	500		1	
Water absorption (14% mb), %	59.2	-	-	-	-	58.9	58.2	-	-	-
Development time, min	4.5	-	-	-	-	5.7	3.5	-	-	-
Stability, min	5.0	-	-	 -	-	6.7	7.8	-	-	<u> </u>
Mixing tolerance index, BU	65	-	-	-	-	58	30	-	-	 -
EVTENROCDAM (45									1	1
EXTENSOGRAM (45 min pull)	25					400	400		1	
Area, cm ²	95	-	-	-	-	102	103	-	-	-
Maximum height, BU	300	-	-	<u> </u>	-	356	415	-	-	-
Extensibility, mm	223	-	-	-	-	208	188	-	-	-
ALVEOODAM				1					1	
ALVEOGRAM	24-					07.0	07.0		1	
Strength (S), cm ²	34.7	-	-	-	-	37.6	37.6	-	-	-
Stability (P), mm	58	-	-	-	-	61	75	-	-	-
Distensibility (L), mm	205	-	-	-	 -	170	116	-	-	<u> </u>
	0.28	-	-	-	-	0.36	0.65	-	-	-
Configuration ratio (P/L)		I		1	1				1	
		1								1
MIXOGRAM										
	2.3	-	-		_	3.0	3.2	-	_	-
MIXOGRAM Peak time, min	2.3	-	-	-	-	3.0	3.2	-	-	-
MIXOGRAM Peak time, min 100 g BAKING TEST		-	-	-	-			-	-	-
MIXOGRAM	2.3 1195 0	- -	- -	-	-	3.0 1196 0	3.2 1086 0	- -	-	-

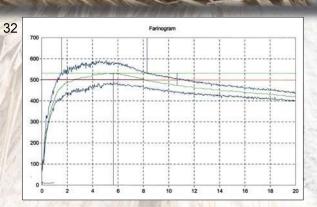
MIXOGRAM



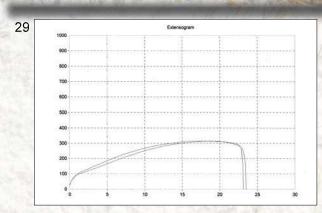


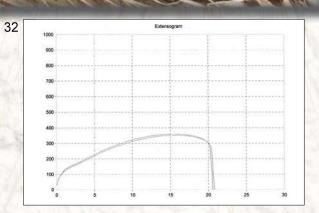
FARINOGRAM

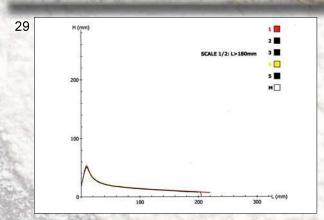


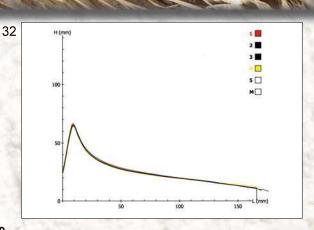


EXTENSOGRAM



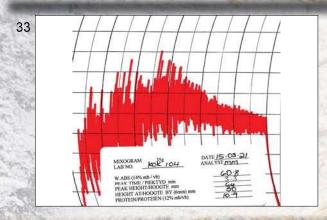


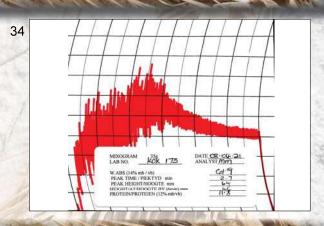




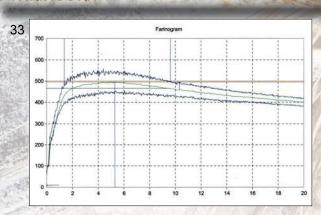
	(33)					(34)				
PRODUCTION REGION	Mpumalar Northern					Gauteng F	Region			
	_									
WHEAT	ave	mir	•	max	stdev	ave	mir		may	stdev
Protein (12% mb), %	12.1	10.6		13.0	0.96	12.9	-	!	max -	Stuev -
Falling number, sec	368	281		402	36.02	347	-		-	-
Moisture, %	11.0	10.4	4	11.4	0.43	12.0	-		-	-
1000 Kernel mass (13% mb), g	37.9	34.		42.8	2.39	44.0	-		-	-
Hectolitre mass (dirty), kg/hl	82.5	79.8		84.6	1.60	81.2	-		-	-
Screenings (<1.8 mm sieve), % Total damaged kernels, %	0.95 0.76	0.0		2.09 1.76	0.50 0.58	0.65	-		-	-
Combined deviations, %	2.00	0.00		3.03	0.56	1.28 1.93			-	
Number of samples	2.00	0.00	9	0.00	0.70	1.00		1		
CULTIVARS		SST 813	35	49.4			SST 884	. 1	100.0	
		SST 884		27.2			-		-	
Cultivars with highest % occurrence		SST 835		7.3			-		-	
		SST 895		7.0			-		-	
Number of complete	_	SST 843	9	3.6			-		-	
Number of samples			9			1		1		
MIXOGRAM (Quadromat Junior)										
	ave	mir		max	stdev	ave	mir	1	max	stdev
Peak time, min	3.3	2.5		3.8	0.42	2.7	-		-	-
Tail height (6 min), mm	48	38		55	5.12	46	-		-	-
Number of samples			9		COMPOSIT	I E SAMPLES	<u> </u>	1		
CLASS AND GRADE	Super	B1	B2	B3	cow	Super	B1	B2	B3	cow
Bühler Extraction, %	75.2	74.2	75.5	-	-	75.0	-	-	-	-
FLOUR										
Protein (12% mb), %	12.2	11.2	10.0	-	-	11.8	-	-	-	<u> </u>
Moisture, %	13.5	14.1	13.3	-	-	14.2	-	-	-	-
Ash (db), % Colour, KJ (wet)	0.59 -4.7	0.62 -4.9	0.65 -5.0	-	-	0.62 -4.7	-	-	-	 -
Colour, Konica Minolta CM5 (dry)	-4./	-4.9	-5.0	+ -	 -	-4.7	<u> </u>	-	<u> </u>	
L*	93.38	93.47	93.73	_	-	93.89	<u> -</u>	_	-	-
a*	0.51	0.58	0.50	<u> </u>	-	0.46	-	-	-	-
b*	9.78	10.30	9.90	-	-	8.54	-	-	-	-
RVA			0505			2007				
Peak Viscosity, cP	2088 1708	2408	2505 1955	-	-	2297	-	-	-	 -
Minimum viscosity (Trough), cP Final Viscosity, cP	2239	1831 2667	2725	-	-	1849 2461	-	-	-	-
Peak Time, min	7.00	7.00	7.00	 		7.00				
		,,,,,,				1.100				
GLUTEN										
Wet gluten (14% mb), %	32.9	30.5	27.1	-	-	32.7	-	-	-	-
Dry gluten (14% mb), %	11.5	10.1	8.9	-	-	11.6	-	-	-	-
Gluten Index	98	95	97	-	-	94	- 	-	-	-
FARINOGRAM					1					
Water absorption (14% mb), %	60.0	59.3	58.1	_	-	58.2	_	_	_	_
Development time, min	5.3	5.7	5.5	-	-	4.2	i -	-	i -	-
Stability, min	8.3	7.7	6.9	-	-	5.4	-	-	-	-
Mixing tolerance index, BU	37	40	47	-	-	58	-	-	-	-
EXTENSOGRAM (45 min pull)	1									
Area, cm ²	116	98	83	_	l .	89	_	_	_	_
Maximum height, BU	400	373	351	+ -	 -	278	-	-	 -	 -
Extensibility, mm	218	197	171	-	-	228	-	-	-	-
ALVEOGRAM		l								
Strength (S), cm ²	43.6	37.2	30.0	-	<u> </u>	31.4	-	-	-	<u> </u>
Stability (P), mm Distensibility (L), mm	75 144	73 122	69 107	-	<u> </u>	49 218	-	-	-	-
Configuration ratio (P/L)	0.52	0.60	0.64	+ -	-	0.22	- -	<u>-</u>	<u> </u>	-
osiniguration ratio (172)	3.02	0.00	5.57	 	 	V.22	<u> </u>	_	 	
MIXOGRAM	1								1	1
Peak time, min	2.9	2.8	3.2	-	-	2.6	-	-	-	-
100 g BAKING TEST	1000	4400	404-			4455				
Loaf volume, cm ³	1229	1163	1017	-	-	1150	-	-	-	 -
Evaluation (see page 74)	0	0	0	-		0	-	-	<u> </u>	<u> </u>

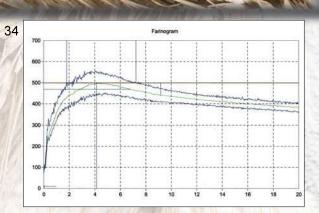
MIXOGRAM



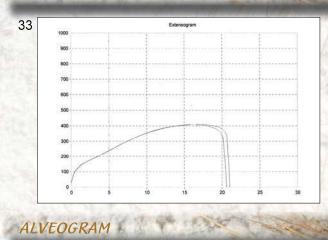


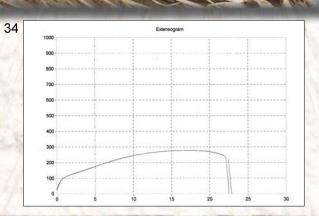
FARINOGRAM

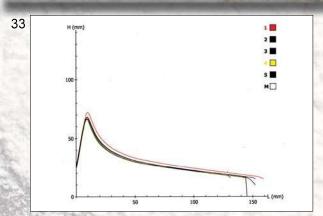


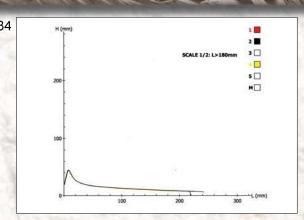


EXTENSOGRAM



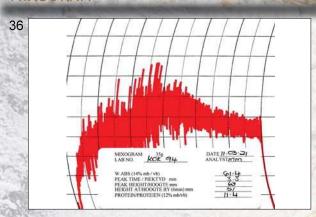




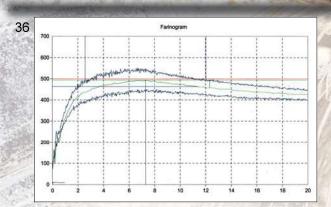


(36) RODUCTION REGION KwaZulu-Natal					
WHEAT	ave	min		max	stdev
Protein (12% mb), %	12.7	11.3		13.4	0.63
Falling number, sec	311	110		385	76.53
Moisture, %	11.1	10.7		11.6	0.28
1000 Kernel mass (13% mb), g	37.8	34.6		40.3	1.65
Hectolitre mass (dirty), kg/hl	80.2	74.6		83.2	2.66
Screenings (<1.8 mm sieve), %	2.06	0.76		8.92	2.42
Total damaged kernels, %	1.08	0.00		4.14	1.27
Combined deviations, % Number of samples	3.78	0.76	10	16.60	4.59
CULTIVARS					
		SST 8135	5	49.8	
Cultivars with highest % occurrence		SST 835		14.3	
Galara 6 Mari Mg. 1881 / 18 888 18 18 18 18 18 18 18 18 18 18 18	PAN 3400 11.9				
	SST 884 11.6				
Number of samples	SST 8154 7.8				
Number of samples			10		
MIXOGRAM (Quadromat Junior)	ave			max stdev	
Peak time, min	3.3	2.9		4.4	0.44
Tail height (6 min), mm Number of samples	50	43	10	55	3.50
Number of SampleS			10		
CLASS AND GRADE	Super	B1	B2	B3	cow
Bühler Extraction, %	75.5		75.5	<u> </u>	<u> </u>
FLOUR					
Protein (12% mb), %	12.2	-	9.9	-	-
Moisture, %	13.8	-	13.8	-	-
Ash (db), %	0.56	-	0.56	-	-
Colour, KJ (wet)	-5.0	-	-5.0	-	-
Colour, Konica Minolta CM5 (dry)					
L*	93.87	-	94.01	-	-
a*	0.46	-	0.36	-	-
b*	9.75	-	9.90	-	-
RVA					
Peak Viscosity, cP	1950	-	1761	-	-
Minimum viscosity (Trough), cP	1676	-	1548	-	-
Final Viscosity, cP	2091	-	1938	-	-
Peak Time, min	6.80	-	7.00	-	-
OLUTEN.					
GLUTEN	20.6		26.6		
Wet gluten (14% mb), %	32.6	-		 -	+ -
Dry gluten (14% mb), % Gluten Index	10.9	-	7.8 96	<u> </u>	+ -
Giuteii Iliuex	97	-	90	 	+
FARINOGRAM					
Water absorption (14% mb), %	59.9	- !	57.8	<u> </u>	-
Development time, min	7.3	-	5.2	-	-
Stability, min	9.5	-	6.9	 -	-
Mixing tolerance index, BU	36	-	47	<u> </u>	+ -
EXTENSOGRAM (45 min pull) Area, cm²	132	_	92	_	_
Maximum height, BU	426	- 1	340	<u> </u>	1 -
Extensibility, mm	230	-	196	-	-
ALVEOGRAM	45.		00.1		
Strength (S), cm ²	45.4	-	32.4	 -	-
Stability (P), mm	72	-	64	 -	+ -
Distensibility (L), mm Configuration ratio (P/L)	162 0.44	-	134 0.48	-	 -
Comiguration ratio (P/L)	0.44	-	0.40	 	
MIXOGRAM					
Peak time, min	3.2	-	2.9	-	-
100 g BAKING TEST					
					1
Loaf volume, cm ³	1208		1027		

MIXOGRAM



FARINOGRAM



EXTENSOGRAM

