VERSLAG VAN DIE GARS LYNEVALUASIE PROEWE IN DIE RûENS

REPORT ON THE BARLEY LINE EVALUATION TRIALS IN THE RûENS

SEISOEN 2011 SEASON

Programme executed by:

SOUTH AFRICAN BARLEY BREEDING INSTITUTE
SMALL GRAIN INSTITUTE
SAB MALTINGS

GARS LYN EVALUASIE IN DIE RûENS
BARLEY LINE EVALUATION IN THE RûENS

INDEX

		Page
1.	Introduction	1
2.	Summary	1
3.	Localities	1
4.	Materials and Methods	1
5.	Climatic Conditions	2
6.	Results	2
6.1	Average yield	2
6.2	Grading characteristics	3
6.3	Disease readings	3
6.4	General appearance	3
6.5	Maturity	3
6.6	Straw length	3
6.7	Straw height (cm)	3
6.8	Straw strength	3

INDEX OF TABLES AND FIGURES

SUMMARY

Table 1	Mean yields of entries for the Rûens	4
Table 2	Mean yields of entries for the Western Rûens	5
Table 3	Mean yields of entries for the Southern Rûens	6
Table 4	Mean yields of entries for the Eastern Rûens	7
Table 5	Mean plumpness of entries for the Rûens	8
Table 6	Mean plumpness of entries for the Western Rûens	9
Table 7	Mean plumpness of entries for the Southern Rûens	10
Table 8	Mean plumpness of entries for the Eastern Rûens	11
Table 9	Mean screenings of entries for the Rûens	12
Table 10	Mean kernel nitrogen of entries for the Rûens	13
Table 11	Mean kernel nitrogen of entries for the Western Rûens	14
Table 12	Mean kernel nitrogen of entries for the Southern Rûens	15
Table 13	Mean kernel nitrogen of entries for the Eastern Rûens	16
Table 14	Mean germination energy (4ml) of entries for the Rûens	17
Table 15	Mean germination energy (8ml) of entries for the Rûens	18
Table 16	Agronomic characteristics for the Western Rûens	19
Table 17	Agronomic characteristics for the Southern Rûens	20
Table 18	Agronomic characteristics for the Eastern Rûens	21
Table 19	Disease readings at Caledon	22
Table 20	Disease readings at Riviersonderend	23
Table 21	Disease readings at Heidelberg	24
Table 22	Production statistics	25
Table 23	List of entries in the LE trial	26
Figure 1	Rainfall patterns for the Western Rûens: Dunghye Park	27
Figure 2	Average grain yield and quality parameters for the LE trials in the Rûens, 2011	28
Figure 3	Long-term relative performance of lines in the LE trial 2011 (2nd yrs.)	29

1. INTRODUCTION

The main objective of the line evaluation program is to plant the best lines from the two different breeding programmes under the exact same conditions (soil, climate and management) in order to ensure that the yield, grading characteristics and malting quality results of the lines from the different breeding programmes could be evaluated on a more comparative basis.

During the 2011 season, 12 trials were planted under dry land conditions in the Southern Cape. All the trials were harvested and, and used, for evaluation of the lines.

This report will cover all the line evaluation trials as executed by Sabbi, SGI and SABM during the 2011 season. The relevant climatic data, agronomic data, grading characteristics and yield results will be represented.

2. SUMMARY

As a summary **Figures 2** shows the average grain yield and quality parameters for the LE trials in the Rûens for the 2011 season. .

3. LOCALITIES

The present barley production area (Rûens) was divided into three sub areas, namely Western Rûens (Caledon, Rietpoel, Greyton and Riviersonderend), Southern Rûens (Napier, Bredasdorp, Klipdale and Protem) and Eastern Rûens (Napky, Swellendam, Heidelberg and Heidelberg Vlakte). Each of these three sub areas was covered by four localities that are representative of the different homogeneous agricultural areas in the respective sub areas.

The different sub areas with their respective localities and some information on the co-workers are listed in ***Table 21***.

4. MATERIAL AND METHODS

The trial in the Rûens consisted of 25 entries (3 replicates) all from SABBI from which three are commercially grown cultivars (controls); three are provisionally released lines, eight second year lines and eleven new lines. All the entries for the Rûens are listed in ***Table 23***.

All the trials were laid out according to the nearest neighbour design and the data analysed with Agrobase Generation II software. In order to standardise the trials, all were planted by Sabbi with an Agri-Phyto trial plot planter. The individual plots consisted of 5 rows with an inter row spacing of 25 cm. Plots were planted at 6m in length and just before harvesting trimmed back to a plot of 5m in length. The seeding density of the different lines used in the trials varied according to their thousand-kernel weight. The aim was therefore to establish the same quantity of plants per unit area in a trial for a specific area.

Fertilisation of all the trials was applied according to the area, rotation system and individual recommendations obtained from soil analysis. The source used for fertilisation with sowing was 2:1:0 (30), depending on the soil analysis. All trials, except for Caledon received nitrogen top dressing KAN (28) 50kg/ha during the season. The exact amount of nitrogen and phosphate applied at the individual trials are listed in ***Table 22***.

Weed, pest and disease control were applied optimally as required in order to ensure a competitive free environment for the barley plants throughout the growing season. Weed control was applied directly after planting with Boxer at 300 ml/ha and Logran at 30 ml/ha. All the trials received two applications of fungicide. A mixture of Abacus (3ll/ha) and Cyperfos (800ml/ha) were applied 5 weeks after planting and a mixture of Acanto (300ml/ha), Capitan (400ml/ha) and Cyperfos (800ml/ha) at the flag leaf stage.

At the end of the growing season all trials were firstly swathed as the individual lines reached maturity and later threshed with a Hege trial plot harvester. The net trial plots consisted of 6 rows of 5 m length (5.7 m^2). Yield in kg/ha was determined and a complete

grading was done on the harvested samples with a Steinecker grading apparatus and nitrogen content of the kernels was determined with an Infratec 1221 whole grain analyser. For the purpose of this report, only yield, percentage plumpness (> 2.5 mm), waste (< 2.0 mm) and percentage kernel nitrogen will be represented.

5. CLIMATIC CONDITIONS

The 2011 and long term average rainfall figures for the representative weather stations in the Rûens are indicated in ***Figure 1***.

6. RESULTS

No trials were excluded from the results.

The following set of data will be presented for all the other trials:

6.1 Average Yield

The average yield is expressed in kg/ha. Yield data is presented for each individual trial as well as averages for regions so that evaluation can also be done on a regional basis.

To simplify evaluation all tables will also include the following statistical measurements:

LSD($T_{0.05}$): Least significant difference that is significant at a 5% level

LSD($T_{0.10}$): Least significant difference that is significant at a 10% level

CV: Coefficient of variance

6.2 Grading characteristics

The following grading characteristics are presented:

Percentage plumpness (kernels > 2.5 mm)

Percentage screenings (kernels < 2.0 mm)

Percentage total kernel nitrogen

The same statistical measurements as mentioned under average yield are also used for these parameters.

6.3 Disease Readings

All the disease readings were executed on an additional untreated replicate at one of the localities in each area under dry land conditions. The disease readings were executed by representatives of Sabbi at Heidelberg (Eastern Rûens) and Caledon (Western Rûens). Readings for leaf rust (*Puccinia hordei*), net blotch (*Pyrenophera spp*) and leaf blotch (*Rhyncosporium)* could be assessed and are summarised in ***Tables 19 to 20***.

6.4 General appearance

As determined on all trials throughout the season and indicated on a scale of 1 to 9. A figure of 9 indicates line with the best general performance.

6.5 Stage of ripeness

Determined on a scale of 1 to 5, where 1 indicates the early maturing lines and 5 the late maturing lines.

6.6 Straw length

Gives an indication of the average straw length as observed throughout all the LE trials. Straw length is expressed in categories ranging from short to long.

6.7 Straw height (cm)

This is the general height of an individual line measured from at least two points in the plot chosen at random. The measurement is from ground level to the top of the ear, ignoring awns.

6.8 Straw strength

Determined on a scale of 1 to 5, where 5 indicate total resistance to lodging and 1 no resistance to lodging.

TABEL 1: Gemiddelde opbrengste en opbrengsrangordes van inskrywings in die LE proef vir die Rûens, 2011

TABLE 1: Mean yields and yield rankings of entries in the LE trial for the Rûens, 2011

Insk.nr.	Inskrywing	Gem.rel. opb. % van std.	Rûens Gemiddelde		Lokaliteite/Localities																							
		Mean rel.	*Mean*		CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		BREDASDORP		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG H/B		VLAKTE	
Entr.no.	*Entry*	*yield % of std.*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*
1	SSG 564	86.5	5794	23	6900	12	6246	10	6612	13	5915	25	6640	22	5052	24	5240	23	3907	15	5802	21	5812	24	5482	25	5922	23
2	Sabbi Erica	100.0	6696	5	7067	9	6160	12	6092	19	8607	2	7060	17	6453	9	6403	6	4961	9	6745	5	7433	4	7171	9	6202	21
3	Sabbi Nemesia	95.7	6411	14	6945	11	5590	21	6986	8	7196	18	7608	3	5916	16	5908	14	3717	18	6279	15	6547	18	7074	11	7173	4
4	S5	95.5	6394	16	6524	18	6421	7	6526	14	6481	23	7072	16	6569	6	7147	1	3746	17	6046	18	6582	17	6555	17	7059	8
5	S6	94.4	6323	18	7179	6	5532	22	6887	9	7472	15	6892	20	6251	10	6015	11	5410	4	5421	24	6039	22	6265	21	6518	18
6	S9	99.1	6637	7	7134	7	5605	20	7124	6	7113	20	7541	6	6119	14	6386	8	4859	10	6701	8	7543	3	6412	20	7112	6
7	02-035-07	108.8	7287	1	8352	1	6943	3	7757	2	7811	8	7563	5	6684	3	5613	18	6314	3	6971	3	7784	1	7676	1	7971	1
8	02-035-08	108.3	7250	2	7889	3	6562	5	8039	1	8564	3	7340	10	6650	4	5754	15	7230	1	7191	1	7584	2	7055	12	7139	5
9	02-045-03	86.5	5794	24	6353	21	4658	24	5974	21	7217	17	5749	25	5743	21	4642	25	5399	5	5883	19	5989	23	6194	22	5720	24
10	02-055-01	91.8	6150	20	6660	15	6566	4	5825	23	7017	21	7194	14	5707	22	4905	24	3087	24	6619	9	6959	8	6471	19	6793	11
11	02-055-02	95.2	6372	17	6221	23	6347	9	6377	15	7726	9	7739	2	5967	15	5377	20	3684	22	6543	11	6701	14	7249	8	6534	17
12	02-056-02	98.8	6615	8	6702	14	5710	18	6813	10	8010	5	7403	8	6554	7	6398	7	4476	12	6222	16	7175	7	7377	3	6535	16
13	04-031-05D	87.4	5850	22	6447	19	4360	25	6272	17	6606	22	5931	24	5781	20	5613	19	5020	8	5281	25	6225	20	7255	7	5406	25
14	07-900-03	107.7	7211	3	8075	2	7032	1	7603	4	9246	1	6990	18	6206	11	6801	3	6395	2	6846	4	7191	6	6684	15	7462	3
15	03-030-01	95.6	6403	15	6534	17	6177	11	6283	16	7519	14	7263	12	6191	12	5720	16	3716	19	7144	2	6302	19	7262	6	6725	12
16	03-046-07	97.0	6494	12	6111	24	5387	23	5856	22	8372	4	7604	4	7008	2	6891	2	3685	21	6569	10	6739	13	7343	4	6364	19
17	03-046-12	97.7	6541	10	6327	22	6037	16	5769	24	7880	6	7903	1	6537	8	5935	13	4487	11	6726	6	6809	11	7010	13	7070	7
18	03-047-02	97.5	6528	11	6639	16	6959	2	6674	11	7546	13	7335	11	7020	1	6153	9	3691	20	5710	22	6811	10	7091	10	6700	13
19	03-047-03	98.2	6577	9	6758	13	6520	6	7044	7	7170	19	7162	15	6624	5	6511	4	3789	16	6295	13	6888	9	7615	2	6544	15
20	03-047-05	83.0	5561	25	5145	25	5860	17	6115	18	6327	24	7207	13	4268	25	5351	21	2983	25	5504	23	6099	21	5724	24	6146	22
21	03-054-06	101.6	6804	4	7431	4	6384	8	7676	3	7826	7	7443	7	5791	19	6431	5	4404	13	6704	7	7319	5	7268	5	6968	9
22	03-055-06	87.9	5888	21	6358	20	6043	15	5591	25	7436	16	6639	23	5088	23	5315	22	3499	23	6290	14	5370	25	6478	18	6552	14
23	03-055-07	92.4	6186	19	7071	8	6158	13	6075	20	7553	12	6921	19	5915	17	5683	17	4157	14	5809	20	6739	12	5890	23	6256	20
24	03-059-02	99.8	6682	6	7409	5	6146	14	7311	5	7636	11	7397	9	6131	13	6031	10	5245	6	6052	17	6673	15	6652	16	7499	2
25	03-059-04	96.4	6457	13	6994	10	5699	19	6639	12	7651	10	6870	21	5872	18	5980	12	5021	7	6494	12	6615	16	6745	14	6911	10
GEMIDD/AVERAGE			6436		6849		6044		6637		7516		7139		6084		5928		4515		6314		6717		6800		6691	
KV/CV			6.2		5.8		5.2		6.2		6.1		5.6		7.0		6.7		9.2		6.4		5.1		4.9		6.5	
KBV/LSD (0.10)			326		434		344		455		499		440		468		435		439		441		379		363		475	
KBV/LSD (0.05)			419		598		473		626		687		605		644		599		604		607		521		499		654	

TABEL 2: Gemiddelde opbrengste en opbrengsrangordes van inskrywings in die LE proef vir die Wes-Rûens
TABLE 2: Mean yields and yield rankings of entries in the LE trial for the Western Rûens

Insk.nr.	Inskrywing	Gem.rel. opb. % van std.	*Western Rûens* Gemiddelde		CALEDON		GREYTON		RIETPOEL		TYGERH	
Entr.no.	*Entry*	*Mean rel. yield % of std.*	*Mean Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*
1	SSG 564	91.9	6418	21	6900	12	6246	10	6612	10	5915	25
2	SabbiErica	100.0	6981	6	7067	9	6160	12	6092	12	8607	2
3	SabbiNemesia	95.7	6679	14	6945	11	5590	21	6986	21	7196	18
4	S5	92.9	6488	19	6524	18	6421	7	6526	7	6481	23
5	S6	96.9	6767	10	7179	6	5532	22	6887	22	7472	15
6	S9	96.6	6744	12	7134	7	5605	20	7124	20	7113	20
7	02-035-07	110.5	7716	3	8352	1	6943	3	7757	3	7811	8
8	02-035-08	111.2	7763	2	7889	3	6562	5	8039	5	8564	3
9	02-045-03	86.7	6051	23	6353	21	4658	24	5974	24	7217	17
10	02-055-01	93.3	6517	17	6660	15	6566	4	5825	4	7017	21
11	02-055-02	95.5	6668	15	6221	23	6347	9	6377	9	7726	9
12	02-056-02	97.5	6809	9	6702	14	5710	18	6813	18	8010	5
13	04-031-05D	84.8	5921	24	6447	19	4360	25	6272	25	6606	22
14	07-900-03	114.4	7989	1	8075	2	7032	1	7603	1	9246	1
15	03-030-01	94.9	6628	16	6534	17	6177	11	6283	11	7519	14
16	03-046-07	92.1	6432	20	6111	24	5387	23	5856	23	8372	4
17	03-046-12	93.1	6503	18	6327	22	6037	16	5769	16	7880	6
18	03-047-02	99.6	6955	7	6639	16	6959	2	6674	2	7546	13
19	03-047-03	98.4	6873	8	6758	13	6520	6	7044	6	7170	19
20	03-047-05	84.0	5862	25	5145	25	5860	17	6115	17	6327	24
21	03-054-06	105.0	7329	4	7431	4	6384	8	7676	8	7826	7
22	03-055-06	91.1	6357	22	6358	20	6043	15	5591	15	7436	16
23	03-055-07	96.2	6714	13	7071	8	6158	13	6075	13	7553	12
24	03-059-02	102.1	7125	5	7409	5	6146	14	7311	14	7636	11
25	03-059-04	96.6	6746	11	6994	10	5699	19	6639	19	7651	10
GEMIDD/AVERAGE			6761		6849		6044		6637		7516	
KV/CV			5.9		5.8		5.2		6.2		6.1	
KBV/LSD (90)			558		434		344		455		499	
KBV/LSD (95)			718		598		473		626		687	

TABEL 3: Gemiddelde opbrengste en opbrengsrangordes van inskrywings in die LE proef vir die Suid-Rûens
TABLE 3: Mean yields and yield rankings of entries in the LE trial for the Southern Rûens

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Gem.rel. opb. % van std. *Mean rel. yield % of std.*	*Southern Rûens* Gemiddelde *Mean*		NAPIER		BREDASDORP		KLIPDALE		PROTEM	
			Yield	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*
1	SSG 564	83.8	5210	23	6640	22	5052	24	5240	23	3907	15
2	SabbiErica	100.0	6220	6	7060	17	6453	9	6403	6	4961	9
3	SabbiNemesia	93.0	5787	16	7608	3	5916	16	5908	14	3717	18
4	S5	98.6	6133	11	7072	16	6569	6	7147	1	3746	17
5	S6	98.8	6142	10	6892	20	6251	10	6015	11	5410	4
6	S9	100.1	6226	5	7541	6	6119	14	6386	8	4859	10
7	02-035-07	105.2	6543	3	7563	5	6684	3	5613	18	6314	3
8	02-035-08	108.4	6743	1	7340	10	6650	4	5754	15	7230	1
9	02-045-03	86.6	5383	21	5749	25	5743	21	4642	25	5399	5
10	02-055-01	84.0	5223	22	7194	14	5707	22	4905	24	3087	24
11	02-055-02	91.5	5692	18	7739	2	5967	15	5377	20	3684	22
12	02-056-02	99.8	6208	8	7403	8	6554	7	6398	7	4476	12
13	04-031-05D	89.8	5586	20	5931	24	5781	20	5613	19	5020	8
14	07-900-03	106.1	6598	2	6990	18	6206	11	6801	3	6395	2
15	03-030-01	92.0	5723	17	7263	12	6191	12	5720	16	3716	19
16	03-046-07	101.2	6297	4	7604	4	7008	2	6891	2	3685	21
17	03-046-12	99.9	6216	7	7903	1	6537	8	5935	13	4487	11
18	03-047-02	97.3	6050	12	7335	11	7020	1	6153	9	3691	20
19	03-047-03	96.8	6021	13	7162	15	6624	5	6511	4	3789	16
20	03-047-05	79.6	4952	25	7207	13	4268	25	5351	21	2983	25
21	03-054-06	96.7	6017	14	7443	7	5791	19	6431	5	4404	13
22	03-055-06	82.6	5136	24	6639	23	5088	23	5315	22	3499	23
23	03-055-07	91.1	5669	19	6921	19	5915	17	5683	17	4157	14
24	03-059-02	99.7	6201	9	7397	9	6131	13	6031	10	5245	6
25	03-059-04	95.4	5936	15	6870	21	5872	18	5980	12	5021	7
GEMIDD/AVERAGE			5916		7139		6084		5928		4515	
KV/CV			7.0		5.6		7.0		6.7		9.2	
KBV/LSD (90)			715		440		468		435		439	
KBV/LSD (95)			921		605		644		599		604	

TABEL 4: Gemiddelde opbrengste en opbrengsrangordes van inskrywings in die LE proef vir die Oos-Rûens
TABLE 4: Mean yields and yield rankings of entries in the LE trial for the Eastern Rûens

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Gem.rel. opb. % van std. *Mean rel. yield % of std.*	*Eastern Rûens* Gemiddelde *Mean*		Lokaliteite/Localities NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
			Yield	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*	*Yield*	*Rk*
1	SSG 564	83.5	5754	25	5802	21	5812	24	5482	25	5922	23
2	SabbiErica	100.0	6888	7	6745	5	7433	4	7171	9	6202	21
3	SabbiNemesia	98.3	6768	11	6279	15	6547	18	7074	11	7173	4
4	S5	95.3	6561	18	6046	18	6582	17	6555	17	7059	8
5	S6	88.0	6060	21	5421	24	6039	22	6265	21	6518	18
6	S9	100.8	6942	5	6701	8	7543	3	6412	20	7112	6
7	02-035-07	110.3	7601	1	6971	3	7784	1	7676	1	7971	1
8	02-035-08	105.1	7242	2	7191	1	7584	2	7055	12	7139	5
9	02-045-03	86.3	5947	23	5883	19	5989	23	6194	22	5720	24
10	02-055-01	97.4	6711	15	6619	9	6959	8	6471	19	6793	11
11	02-055-02	98.1	6757	12	6543	11	6701	14	7249	8	6534	17
12	02-056-02	99.1	6827	10	6222	16	7175	7	7377	3	6535	16
13	04-031-05D	87.7	6042	22	5281	25	6225	20	7255	7	5406	25
14	07-900-03	102.3	7046	4	6846	4	7191	6	6684	15	7462	3
15	03-030-01	99.6	6858	8	7144	2	6302	19	7262	6	6725	12
16	03-046-07	98.1	6754	13	6569	10	6739	13	7343	4	6364	19
17	03-046-12	100.2	6904	6	6726	6	6809	11	7010	13	7070	7
18	03-047-02	95.5	6578	17	5710	22	6811	10	7091	10	6700	13
19	03-047-03	99.2	6835	9	6295	13	6888	9	7615	2	6544	15
20	03-047-05	85.2	5868	24	5504	23	6099	21	5724	24	6146	22
21	03-054-06	102.6	7065	3	6704	7	7319	5	7268	5	6968	9
22	03-055-06	89.6	6173	20	6290	14	5370	25	6478	18	6552	14
23	03-055-07	89.6	6173	19	5809	20	6739	12	5890	23	6256	20
24	03-059-02	97.5	6719	14	6052	17	6673	15	6652	16	7499	2
25	03-059-04	97.1	6691	16	6494	12	6615	16	6745	14	6911	10
GEMIDD/AVERAGE			6631		6314		6717		6800		6691	
KV/CV			5.8		6.4		5.1		4.9		6.5	
KBV/LSD (90)			435		441		379		363		475	
KBV/LSD (95)			560		607		521		499		654	

TABEL 5: Gemiddelde vetkorrel (>2,5mm) van inskrywings in die LE proef vir die Rûens, 2011

TABLE 5: Mean plumpness (>2,5mm) of entries in the LE trial for the Rûens, 2011

Insk.nr.	Inskrywing	Gem.rel. opb. % van std.	Rûens Gemiddelde		Lokaliteite/Localities																					
					CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		BREDASDORP		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*	*Mean rel. yield % of std.*	*Mean Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*
1	SSG 564	103.4	83.3	16	91.8	8	96.2	2	90.8	4	93.9	3	94.5	8	87.7	14	51.5	25	66.8	10	87.6	25	83.3	23	72.8	25	87.4	25
2	Sabbi Erica	100.0	80.6	19	84.6	19	83.3	17	74.0	19	83.2	20	92.2	17	85.9	16	59.9	22	59.1	17	92.0	13	85.0	20	87.2	17	92.7	19
3	Sabbi Nemesia	106.9	86.2	13	86.2	17	96.8	1	82.3	11	91.2	8	93.8	13	91.4	10	73.1	13	62.8	13	90.9	19	87.5	18	91.7	8	96.4	5
4	S5	110.7	89.2	3	88.5	11	86.6	14	78.2	16	93.2	4	94.0	11	105.3	1	82.8	3	69.7	9	96.1	1	93.0	6	93.9	3	97.0	3
5	S6	113.2	91.2	1	98.3	1	94.9	3	94.0	1	91.8	7	95.7	1	92.9	7	76.8	9	81.4	4	87.9	24	95.5	2	93.9	2	97.2	2
6	S9	102.2	82.4	17	86.2	16	72.1	25	83.6	10	87.5	16	89.9	23	89.7	12	70.3	17	61.3	16	92.4	9	87.6	17	85.3	20	92.1	21
7	02-035-07	106.2	85.5	15	93.6	5	82.1	20	93.9	2	93.2	5	92.4	16	58.5	25	72.8	15	82.8	3	90.9	18	92.1	7	88.7	16	97.7	1
8	02-035-08	107.7	86.8	10	92.9	6	84.1	16	87.9	9	91.9	6	88.8	24	84.9	18	74.2	12	82.8	2	92.1	11	89.1	14	85.7	18	95.4	10
9	02-045-03	110.7	89.2	4	95.3	3	89.2	11	90.6	5	89.1	12	92.0	19	93.5	6	75.5	11	83.3	1	92.7	7	88.7	16	90.9	13	87.8	24
10	02-055-01	95.3	76.8	23	82.6	21	89.1	12	68.0	23	86.8	18	93.8	12	80.3	21	58.8	23	31.9	25	91.5	15	84.0	22	77.6	24	88.9	23
11	02-055-02	93.7	75.5	25	72.2	23	82.6	19	75.9	18	74.3	24	91.5	20	76.7	22	62.4	20	37.7	24	89.1	23	82.7	24	85.3	19	94.5	16
12	02-056-02	96.2	77.5	22	79.6	22	83.0	18	66.7	24	71.5	25	92.6	15	82.9	20	65.4	19	43.0	23	91.1	17	85.3	19	91.5	9	94.7	15
13	04-031-05D	107.0	86.2	12	89.9	9	92.1	9	88.3	8	89.5	11	94.1	10	88.7	13	56.9	24	75.8	5	92.1	12	89.5	12	91.3	10	94.9	14
14	07-900-03	108.4	87.3	8	95.6	2	92.5	8	92.7	3	96.2	2	87.8	25	95.9	3	77.7	8	53.8	21	91.8	14	93.8	4	82.6	23	95.9	7
15	03-030-01	102.0	82.2	18	84.1	20	81.7	21	71.6	21	82.4	22	94.4	9	91.5	9	72.8	16	56.8	18	93.4	5	84.1	21	91.0	12	93.3	18
16	03-046-07	106.2	85.6	14	86.6	14	79.2	24	76.1	17	87.8	14	95.2	3	93.9	5	82.7	4	61.8	15	94.4	2	89.4	13	94.2	1	95.1	13
17	03-046-12	107.0	86.2	11	85.7	18	93.4	6	72.9	20	90.3	10	94.7	7	91.7	8	78.9	7	65.6	12	93.2	6	91.5	8	90.8	14	95.6	9
18	03-047-02	109.9	88.5	5	88.6	10	94.3	5	81.7	12	87.6	15	95.0	5	95.6	4	81.1	5	70.9	7	90.3	21	95.6	1	93.4	4	97.0	4
19	03-047-03	109.5	88.2	6	87.5	13	94.8	4	79.0	14	86.9	17	94.7	6	96.3	2	83.2	2	70.3	8	91.2	16	93.4	5	93.0	5	96.1	6
20	03-047-05	98.4	79.3	21	66.8	25	85.5	15	79.0	15	81.3	23	92.1	18	75.0	23	72.9	14	52.4	22	92.4	10	91.0	9	83.5	22	95.3	12
21	03-054-06	108.6	87.5	7	88.5	12	91.1	10	90.5	6	87.8	13	95.4	2	86.5	15	76.5	10	66.8	11	92.7	8	94.2	3	92.4	6	95.4	11
22	03-055-06	94.4	76.1	24	67.2	24	80.7	23	61.1	25	83.4	19	90.5	21	74.4	24	61.8	21	54.3	19	90.6	20	81.5	25	91.2	11	90.7	22
23	03-055-07	99.1	79.9	20	86.5	15	80.9	22	71.0	22	82.5	21	90.0	22	83.0	19	67.2	18	54.1	20	89.8	22	89.7	10	83.8	21	92.4	20
24	03-059-02	110.9	89.3	2	93.8	4	93.2	7	90.1	7	96.2	1	93.6	14	85.7	17	84.2	1	71.7	6	94.2	3	89.7	11	90.3	15	94.2	17
25	03-059-04	107.7	86.8	9	92.8	7	89.0	13	79.5	13	90.4	9	95.1	4	90.3	11	80.1	6	62.8	14	93.6	4	88.9	15	92.0	7	95.7	8
GEMIDD/AVERAGE			84.3		86.6		87.5		80.8		87.6		92.9		87.1		72.0		63.2		91.8		89.0		88.5		94.1	
KV/CV			5.9		3.7		5.6		7.1		5.6		1.7		10.7		10.4		9.4		2.0		3.6		3.9		1.8	
KBV/LSD (0.10)			3.9		3.5		5.4		6.3		5.4		1.7		10.2		8.0		6.5		2.0		3.5		3.7		1.9	
KBV/LSD (0.05)			5.0		4.8		7.4		8.7		7.4		2.3		14.0		10.9		8.9		2.7		4.8		5.1		2.5	

TABEL 6: Gemiddelde vetkorrel (>2,5mm) van inskrywings in die LE proef vir die Wes-Rûens
TABLE 6: Mean plumpness (>2,5mm) of entries in the LE trial for the Western Rûens

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Gem.rel. vetk. % van std. *Mean rel. Plump % of std.*	*Western Rûens* Gemiddelde *Mean*		Lokaliteite/Localities CALEDON		GREYTON		RIETPOEL		TYGERH	
			Plump	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*
1	SSG 564	100.0	92.1	5	91.8	8	96.2	2	90.8	2	93.9	3
2	Sabbi Erica	87.5	80.6	18	84.6	19	83.3	17	74.0	17	83.2	20
3	Sabbi Nemesia	94.0	86.6	12	86.2	17	96.8	1	82.3	1	91.2	8
4	S5	94.1	86.6	11	88.5	11	86.6	14	78.2	14	93.2	4
5	S6	102.8	94.7	2	98.3	1	94.9	3	94.0	3	91.8	7
6	S9	93.1	85.8	14	86.2	16	72.1	25	83.6	25	87.5	16
7	02-035-07	101.5	93.6	3	93.6	5	82.1	20	93.9	20	93.2	5
8	02-035-08	98.7	90.9	7	92.9	6	84.1	16	87.9	16	91.9	6
9	02-045-03	99.5	91.7	6	95.3	3	89.2	11	90.6	11	89.1	12
10	02-055-01	85.9	79.1	21	82.6	21	89.1	12	68.0	12	86.8	18
11	02-055-02	80.5	74.1	23	72.2	23	82.6	19	75.9	19	74.3	24
12	02-056-02	78.8	72.6	24	79.6	22	83.0	18	66.7	18	71.5	25
13	04-031-05D	96.9	89.2	8	89.9	9	92.1	9	88.3	9	89.5	11
14	07-900-03	102.9	94.8	1	95.6	2	92.5	8	92.7	8	96.2	2
15	03-030-01	86.2	79.4	20	84.1	20	81.7	21	71.6	21	82.4	22
16	03-046-07	90.6	83.5	16	86.6	14	79.2	24	76.1	24	87.8	14
17	03-046-12	90.1	83.0	17	85.7	18	93.4	6	72.9	6	90.3	10
18	03-047-02	93.3	85.9	13	88.6	10	94.3	5	81.7	5	87.6	15
19	03-047-03	91.7	84.5	15	87.5	13	94.8	4	79.0	4	86.9	17
20	03-047-05	82.2	75.7	22	66.8	25	85.5	15	79.0	15	81.3	23
21	03-054-06	96.6	89.0	9	88.5	12	91.1	10	90.5	10	87.8	13
22	03-055-06	76.6	70.6	25	67.2	24	80.7	23	61.1	23	83.4	19
23	03-055-07	86.8	80.0	19	86.5	15	80.9	22	71.0	22	82.5	21
24	03-059-02	101.4	93.4	4	93.8	4	93.2	7	90.1	7	96.2	1
25	03-059-04	95.1	87.6	10	92.8	7	89.0	13	79.5	13	90.4	9
GEMIDD/AVERAGE			85.0		86.6		87.5		80.8		87.6	
KV/CV			5.7		3.7		5.6		7.1		5.6	
KBV/LSD (90)			5.5		3.5		5.4		6.3		5.4	
KBV/LSD (95)			7.1		4.8		7.4		8.7		7.4	

TABEL 7: Gemiddelde vetkorrel (>2,5mm) van inskrywings in die LE proef vir die Suid-Rûens
TABLE 7: Mean plumpness (>2,5mm) of entries in the LE trial for the Southern Rûens

Insk.nr.	Inskrywing	Gem.rel. vetk. % van std. *Mean rel. Plump % of std.*	*Southern Rûens* Gemiddelde *Mean*		NAPIER		BREDASDORP		KLIPDALE		PROTEM	
Entr.no.	*Entry*		*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*
1	SSG 564	101.2	75.1	18	94.5	8	87.7	14	51.5	25	66.8	10
2	Sabbi Erica	100.0	74.3	19	92.2	17	85.9	16	59.9	22	59.1	17
3	Sabbi Nemesia	108.1	80.3	12	93.8	13	91.4	10	73.1	13	62.8	13
4	S5	118.5	88.0	1	94.0	11	105.3	1	82.8	3	69.7	9
5	S6	116.7	86.7	2	95.7	1	92.9	7	76.8	9	81.4	4
6	S9	104.8	77.8	16	89.9	23	89.7	12	70.3	17	61.3	16
7	02-035-07	103.2	76.6	17	92.4	16	58.5	25	72.8	15	82.8	3
8	02-035-08	111.3	82.7	9	88.8	24	84.9	18	74.2	12	82.8	2
9	02-045-03	115.9	86.1	4	92.0	19	93.5	6	75.5	11	83.3	1
10	02-055-01	89.1	66.2	25	93.8	12	80.3	21	58.8	23	31.9	25
11	02-055-02	90.3	67.1	24	91.5	20	76.7	22	62.4	20	37.7	24
12	02-056-02	95.5	70.9	22	92.6	15	82.9	20	65.4	19	43.0	23
13	04-031-05D	106.2	78.9	14	94.1	10	88.7	13	56.9	24	75.8	5
14	07-900-03	106.2	78.8	15	87.8	25	95.9	3	77.7	8	53.8	21
15	03-030-01	106.2	78.9	13	94.4	9	91.5	9	72.8	16	56.8	18
16	03-046-07	112.3	83.4	7	95.2	3	93.9	5	82.7	4	61.8	15
17	03-046-12	111.4	82.7	8	94.7	7	91.7	8	78.9	7	65.6	12
18	03-047-02	115.3	85.6	5	95.0	5	95.6	4	81.1	5	70.9	7
19	03-047-03	116.0	86.1	3	94.7	6	96.3	2	83.2	2	70.3	8
20	03-047-05	98.4	73.1	21	92.1	18	75.0	23	72.9	14	52.4	22
21	03-054-06	109.5	81.3	11	95.4	2	86.5	15	76.5	10	66.8	11
22	03-055-06	94.6	70.3	23	90.5	21	74.4	24	61.8	21	54.3	19
23	03-055-07	99.1	73.6	20	90.0	22	83.0	19	67.2	18	54.1	20
24	03-059-02	112.8	83.8	6	93.6	14	85.7	17	84.2	1	71.7	6
25	03-059-04	110.5	82.1	10	95.1	4	90.3	11	80.1	6	62.8	14
GEMIDD/AVERAGE			78.8		92.9		87.1		72.0		63.2	
KV/CV			8.6		1.7		10.7		10.4		9.4	
KBV/LSD (90)			9.0		1.7		10.2		8.0		6.5	
KBV/LSD (95)			11.7		2.3		14.0		10.9		8.9	

TABEL 8: Gemiddelde vetkorrel (>2,5mm) van inskrywings in die LE proef vir die Oos-Rûens
TABLE 8: Mean plumpness (>2,5mm) of entries in the LE trial for the Eastern Rûens

Insk.nr.	Inskrywing	Gem.rel. vetk. % van std. *Mean rel. Plump % of std.*	*Eastern Rûens* Gemiddelde *Mean*		Lokaliteite/Localities NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*		*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*	*Plump*	*Rk*
1	SSG 564	92.8	82.8	25	87.6	25	83.3	23	72.8	25	87.4	25
2	Sabbi Erica	100.0	89.2	20	92.0	13	85.0	20	87.2	17	92.7	19
3	Sabbi Nemesia	102.7	91.6	12	90.9	19	87.5	18	91.7	8	96.4	5
4	S5	106.5	95.0	1	96.1	1	93.0	6	93.9	3	97.0	3
5	S6	104.9	93.6	4	87.9	24	95.5	2	93.9	2	97.2	2
6	S9	100.2	89.3	19	92.4	9	87.6	17	85.3	20	92.1	21
7	02-035-07	103.5	92.3	9	90.9	18	92.1	7	88.7	16	97.7	1
8	02-035-08	101.6	90.6	15	92.1	11	89.1	14	85.7	18	95.4	10
9	02-045-03	100.9	90.0	18	92.7	7	88.7	16	90.9	13	87.8	24
10	02-055-01	95.8	85.5	24	91.5	15	84.0	22	77.6	24	88.9	23
11	02-055-02	98.5	87.9	23	89.1	23	82.7	24	85.3	19	94.5	16
12	02-056-02	101.6	90.6	14	91.1	17	85.3	19	91.5	9	94.7	15
13	04-031-05D	103.1	92.0	11	92.1	12	89.5	12	91.3	10	94.9	14
14	07-900-03	102.0	91.0	13	91.8	14	93.8	4	82.6	23	95.9	7
15	03-030-01	101.4	90.4	17	93.4	5	84.1	21	91.0	12	93.3	18
16	03-046-07	104.6	93.3	6	94.4	2	89.4	13	94.2	1	95.1	13
17	03-046-12	104.0	92.8	7	93.2	6	91.5	8	90.8	14	95.6	9
18	03-047-02	105.5	94.1	2	90.3	21	95.6	1	93.4	4	97.0	4
19	03-047-03	104.7	93.4	5	91.2	16	93.4	5	93.0	5	96.1	6
20	03-047-05	101.5	90.5	16	92.4	10	91.0	9	83.5	22	95.3	12
21	03-054-06	105.0	93.7	3	92.7	8	94.2	3	92.4	6	95.4	11
22	03-055-06	99.2	88.5	22	90.6	20	81.5	25	91.2	11	90.7	22
23	03-055-07	99.7	88.9	21	89.8	22	89.7	10	83.8	21	92.4	20
24	03-059-02	103.2	92.1	10	94.2	3	89.7	11	90.3	15	94.2	17
25	03-059-04	103.7	92.5	8	93.6	4	88.9	15	92.0	7	95.7	8
GEMIDD/AVERAGE			90.9		91.8		89.0		88.5		94.1	
KV/CV			3.0		2.0		3.6		3.9		1.8	
KBV/LSD (90)			3.3		2.0		3.5		3.7		1.9	
KBV/LSD (95)			4.2		2.7		4.8		5.1		2.5	

TABEL 9: Gemiddelde sifselsl (>2,5mm) van inskrywings in die LE proef vir die Rûens, 2011

TABLE 9: Mean Screen (>2,5mm) of entries in the LE trial for the Rûens, 2011

Insk.nr.	Inskrywing	Gem.rel. sifsels % van std.	Rûens Gemiddelde		Lokaliteite/Localities																					
					CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		BREDASDORP		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG H/B		VLAKTE	
Entr.no.	*Entry*	*Mean rel. Screen % of std.*	*Mean Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*	*Screen*	*Rk*
1	SSG 564	114.7	5.7	18	1.8	9	1.0	2	3.2	9	0.7	1	1.2	8	7.6	23	14.0	24	14.3	12	4.2	24	6.0	25	8.5	25	3.5	25
2	Sabbi Erica	100.0	5.0	15	2.8	20	3.0	10	7.2	18	3.7	21	1.2	9	5.6	21	12.5	23	8.3	5	2.9	14	4.0	22	3.4	17	1.9	23
3	Sabbi Nemesia	87.4	4.3	13	2.4	16	1.1	3	5.6	12	2.0	8	1.1	6	3.9	16	7.9	16	14.2	11	3.3	20	3.3	14	2.8	14	1.1	13
4	S5	85.8	4.3	12	2.4	14	2.1	5	7.0	17	2.1	9	1.3	15	3.2	12	4.9	3	18.3	16	1.2	1	2.1	8	2.2	10	1.0	10
5	S6	44.2	2.2	1	0.4	1	0.9	1	3.0	8	1.5	6	0.9	3	2.0	2	4.8	2	3.2	2	4.3	25	1.4	1	1.9	6	0.6	1
6	S9	106.8	5.3	17	2.3	13	5.6	20	4.3	10	2.5	14	1.8	22	2.9	8	7.8	15	21.4	21	1.3	2	3.6	18	4.7	21	1.5	20
7	02-035-07	53.5	2.7	2	1.2	5	3.9	13	2.2	2	1.3	4	1.3	13	3.3	14	6.9	9	0.7	1	3.2	18	2.1	6	3.2	15	1.1	11
8	02-035-08	78.7	3.9	7	1.1	4	6.4	22	2.8	7	1.5	7	1.7	19	3.1	11	7.4	12	11.4	10	1.8	3	2.1	7	3.7	18	1.1	15
9	02-045-03	73.0	3.6	5	1.1	3	6.1	21	2.6	5	2.7	15	1.6	18	2.4	5	6.1	6	8.8	6	2.2	6	3.9	20	2.4	12	1.2	17
10	02-055-01	141.4	7.0	23	3.0	21	7.0	24	9.0	21	2.3	11	1.2	10	2.2	4	7.0	10	32.4	25	3.3	19	3.9	19	5.8	23	2.7	24
11	02-055-02	121.4	6.0	20	4.5	23	4.2	16	6.0	14	6.1	25	1.3	14	3.3	15	10.3	21	21.0	19	2.9	15	4.0	21	2.4	11	0.7	4
12	02-056-02	139.8	6.9	22	2.7	18	4.1	15	9.1	22	5.6	24	1.0	4	4.9	20	10.0	19	31.7	24	2.3	9	3.5	17	1.4	1	0.7	2
13	04-031-05D	85.4	4.2	11	1.6	8	5.1	19	2.2	3	1.4	5	1.1	5	3.0	10	14.5	25	10.8	9	3.0	16	2.3	9	1.6	4	1.1	14
14	07-900-03	84.2	4.2	10	0.7	2	2.4	7	1.6	1	0.7	2	2.2	24	4.2	18	6.9	8	18.6	18	2.1	5	1.7	3	4.8	22	1.1	12
15	03-030-01	120.2	6.0	19	3.0	22	3.8	12	9.5	24	3.6	20	1.5	17	3.0	9	8.3	17	22.8	22	2.2	8	4.4	23	3.2	16	1.5	21
16	03-046-07	89.8	4.4	14	2.6	17	4.6	17	7.7	19	2.8	16	1.3	12	2.4	6	5.5	4	15.6	13	2.0	4	3.0	12	1.5	3	0.7	6
17	03-046-12	83.5	4.1	9	2.8	19	2.8	9	8.0	20	2.4	13	1.7	20	3.2	13	8.9	18	8.9	7	2.7	13	2.0	5	2.1	9	0.9	8
18	03-047-02	67.2	3.3	4	2.0	12	2.7	8	6.0	13	2.8	17	1.3	16	2.9	7	7.1	11	4.0	3	4.0	23	1.8	4	2.0	7	0.9	9
19	03-047-03	73.1	3.6	6	2.4	15	1.3	4	5.3	11	3.5	19	0.9	2	1.0	1	7.6	13	9.4	8	3.3	21	3.4	16	1.6	5	0.7	3
20	03-047-05	164.9	8.2	25	9.4	25	6.5	23	6.3	15	3.9	23	1.8	21	11.3	24	10.9	22	28.5	23	2.3	10	2.9	11	6.0	24	0.7	5
21	03-054-06	60.4	3.0	3	1.9	10	3.5	11	2.7	6	2.3	12	1.2	7	4.8	19	2.7	1	7.8	4	2.3	11	1.6	2	2.1	8	0.8	7
22	03-055-06	146.8	7.3	24	5.6	24	8.5	25	12.9	25	3.3	18	2.3	25	12.0	25	6.9	7	16.1	14	3.0	17	5.0	24	4.4	20	1.3	19
23	03-055-07	122.2	6.1	21	1.9	11	4.1	14	9.2	23	3.8	22	2.2	23	6.8	22	10.2	20	18.3	17	3.4	22	2.7	10	3.8	19	1.6	22
24	03-059-02	79.8	4.0	8	1.4	6	2.3	6	2.3	4	0.9	3	1.3	11	3.9	17	5.9	5	17.6	15	2.2	7	3.3	13	2.4	13	1.2	18
25	03-059-04	100.0	5.0	15	1.5	7	5.0	18	6.6	16	2.1	10	0.8	1	2.2	3	7.7	14	21.2	20	2.4	12	3.4	15	1.5	2	1.1	16
GEMIDD/AVERAGE			4.8		2.5		3.9		5.7		2.6		1.4		4.2		8.1		15.4		2.7		3.1		3.2		1.2	
KV/CV			53.1		24.9		69.6		38.2		54.5		37.0		44.2		32.3		40.3		27.7		31.0		42.6		36.6	
KBV/LSD (0.10)			1.7		0.7		3.0		2.4		1.6		0.6		2.0		2.9		6.8		0.8		1.1		1.5		0.5	
KBV/LSD (0.05)			2.2		0.93		4.10		3.27		2.15		0.76		2.79		3.94		9.33		1.13		1.44		2.04		0.68	

TABEL 10: Gemiddelde korrelstikstof van inskrywings in die LE proef vir die Rûens, 2011

TABLE 10: Mean kernel nitrogen of entries in the LE trial for the Rûens, 2011

		Gem.rel. vetk. % van std.	Rûens Gemiddelde		Lokaliteite/Localities																					
Insk.nr.	Inskrywing	*Mean rel.*	*Mean*		CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		3REDASDORF		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*	*TN % of std.*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*
1	SSG 564	101.0	2.03	13	1.85	12	1.76	11	1.90	10	2.38	4	1.70	19	2.00	17	2.34	15	2.29	23	1.84	7	2.17	5	2.06	23	1.91	12
2	Sabbi Erica	100.0	2.01	20	1.83	14	1.82	6	1.93	4	2.21	20	1.69	21	2.02	15	2.25	23	2.42	9	1.68	25	2.04	18	2.19	14	1.84	20
3	Sabbi Nemesia	100.8	2.02	14	1.91	5	1.38	25	1.90	9	2.24	16	1.70	20	2.07	10	2.53	2	2.50	6	1.79	14	2.04	17	2.20	12	1.90	15
4	S5	100.1	2.01	18	1.75	25	1.89	1	1.92	5	2.22	18	1.73	16	1.94	24	2.35	14	2.36	19	1.76	17	2.10	13	2.08	22	1.84	21
5	S6	99.8	2.00	22	1.81	20	1.75	13	1.91	6	2.26	14	1.73	13	1.96	22	2.45	5	2.27	24	1.82	9	2.11	12	1.97	25	1.85	19
6	S9	101.4	2.03	11	1.88	9	1.86	3	1.83	19	2.50	2	1.72	17	2.08	9	2.36	12	2.27	25	1.69	24	2.03	20	2.16	15	1.82	23
7	02-035-07	100.8	2.02	15	1.88	8	1.66	21	1.86	17	2.35	8	1.76	9	1.93	25	2.36	13	2.41	12	1.82	11	2.11	11	2.11	20	1.96	3
8	02-035-08	102.1	2.05	10	2.01	2	1.63	22	1.89	11	2.36	7	1.75	10	2.03	14	2.27	19	2.41	11	1.94	3	2.13	8	2.13	17	1.96	4
9	02-045-03	102.5	2.06	6	1.87	10	1.83	5	1.87	14	2.37	6	1.89	1	2.06	12	2.26	22	2.40	13	1.83	8	2.17	2	2.09	21	1.95	5
10	02-055-01	103.6	2.08	5	1.82	17	1.57	23	1.91	8	2.38	5	1.79	6	2.15	4	2.48	3	2.55	3	1.80	12	2.21	1	2.21	11	2.07	2
11	02-055-02	102.5	2.06	7	1.83	13	1.68	20	1.72	24	2.32	9	1.73	14	2.16	3	2.53	1	2.44	7	1.99	1	2.01	21	2.23	7	1.87	17
12	02-056-02	100.6	2.02	16	1.80	21	1.82	7	1.76	23	2.29	11	1.75	11	2.07	11	2.33	17	2.37	16	1.82	10	2.09	14	2.12	19	1.92	10
13	04-031-05D	103.9	2.09	4	1.99	3	1.70	18	1.80	22	2.41	3	1.83	3	2.14	5	2.41	9	2.39	14	1.96	2	2.09	15	2.22	10	2.11	1
14	07-900-03	104.5	2.10	2	1.92	4	1.81	8	2.08	1	2.21	21	1.80	5	2.22	2	2.42	7	2.35	20	1.84	6	2.17	4	2.26	2	1.95	6
15	03-030-01	100.1	2.01	17	1.81	19	1.74	15	1.86	16	2.19	24	1.78	8	1.99	18	2.34	16	2.39	15	1.75	18	2.13	9	2.13	18	1.82	22
16	03-046-07	99.5	2.00	23	1.78	22	1.72	17	1.81	21	2.23	17	1.74	12	1.96	21	2.31	18	2.33	22	1.90	4	2.05	16	2.14	16	1.81	24
17	03-046-12	99.9	2.01	21	1.82	18	1.73	16	1.89	12	2.26	13	1.65	24	1.97	19	2.26	21	2.42	8	1.77	15	2.04	19	2.25	4	1.90	14
18	03-047-02	100.1	2.01	19	1.83	16	1.68	19	1.87	13	2.17	25	1.67	22	2.02	16	2.38	11	2.57	2	1.71	21	1.98	22	2.22	9	1.90	16
19	03-047-03	98.9	1.99	24	1.77	23	1.75	14	1.83	20	2.20	22	1.67	23	1.95	23	2.17	25	2.52	5	1.79	13	1.96	25	2.23	5	1.85	18
20	03-047-05	106.9	2.15	1	2.02	1	1.83	4	1.87	15	2.51	1	1.86	2	2.34	1	2.42	8	2.60	1	1.70	23	2.11	10	2.34	1	1.91	11
21	03-054-06	95.2	1.91	25	1.75	24	1.54	24	1.69	25	2.20	23	1.63	25	1.97	20	2.18	24	2.34	21	1.73	19	1.96	24	2.02	24	1.74	25
22	03-055-06	102.2	2.05	9	1.91	6	1.75	12	1.85	18	2.26	15	1.70	18	2.10	8	2.43	6	2.41	10	1.77	16	2.16	6	2.23	6	1.90	13
23	03-055-07	101.1	2.03	12	1.85	11	1.78	10	1.98	3	2.22	19	1.73	15	2.12	7	2.39	10	2.37	17	1.71	22	1.96	23	2.22	8	1.95	7
24	03-059-02	102.5	2.06	8	1.89	7	1.81	9	1.91	7	2.27	12	1.79	7	2.04	13	2.46	4	2.36	18	1.71	20	2.13	7	2.26	3	1.93	9
25	03-059-04	104.0	2.09	3	1.83	15	1.87	2	1.98	2	2.31	10	1.81	4	2.14	6	2.27	20	2.54	4	1.85	5	2.17	3	2.19	13	1.93	8
GEMIDD/AVERAGE			2.03		1.86		1.73		1.87		2.29		1.74		2.06		2.36		2.41		1.80		2.08		2.17		1.90	
KV/CV			4.5		2.7		8.1		3.0		3.4		2.7		5.1		6.2		3.2		5.8		3.3		3.4		3.7	
KBV/LSD (0.10)			0.05		0.05		0.15		0.06		0.08		0.05		0.11		0.16		0.09		0.11		0.08		0.08		0.08	
KBV/LSD (0.05)			0.06		0.07		0.21		0.08		0.12		0.07		0.16		0.22		0.12		0.16		0.10		0.11		0.11	

TABEL 11: Gemiddelde korrelstikstof van inskrywings in die LE proef vir die Wes-Rûens
TABLE 11: Mean kernel nitrogen of entries in the LE trial for the Western Rûens

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Gem.rel. vetk. % van std. *Mean rel. TN % of std.*	*Western Rûens* Gemiddelde *Mean* *TN*	*Rk*	CALEDON *TN*	*Rk*	GREYTON *TN*	*Rk*	RIETPOEL *TN*	*Rk*	TYGERH *TN*	*Rk*
1	SSG 564	101.3	1.97	7	1.85	12	1.76	11	1.90	10	2.38	4
2	Sabbi Erica	100.0	1.95	11	1.83	14	1.82	6	1.93	4	2.21	20
3	Sabbi Nemesia	95.4	1.86	24	1.91	5	1.38	25	1.90	9	2.24	16
4	S5	99.9	1.95	12	1.75	25	1.89	1	1.92	5	2.22	18
5	S6	99.2	1.93	15	1.81	20	1.75	13	1.91	6	2.26	14
6	S9	103.6	2.02	2	1.88	9	1.86	3	1.83	19	2.50	2
7	02-035-07	99.5	1.94	14	1.88	8	1.66	21	1.86	17	2.35	8
8	02-035-08	101.3	1.97	8	2.01	2	1.63	22	1.89	11	2.36	7
9	02-045-03	101.9	1.99	5	1.87	10	1.83	5	1.87	14	2.37	6
10	02-055-01	98.6	1.92	17	1.82	17	1.57	23	1.91	8	2.38	5
11	02-055-02	96.9	1.89	22	1.83	13	1.68	20	1.72	24	2.32	9
12	02-056-02	98.5	1.92	18	1.80	21	1.82	7	1.76	23	2.29	11
13	04-031-05D	101.4	1.98	6	1.99	3	1.70	18	1.80	22	2.41	3
14	07-900-03	103.0	2.01	3	1.92	4	1.81	8	2.08	1	2.21	21
15	03-030-01	97.6	1.90	19	1.81	19	1.74	15	1.86	16	2.19	24
16	03-046-07	96.8	1.89	23	1.78	22	1.72	17	1.81	21	2.23	17
17	03-046-12	98.8	1.93	16	1.82	18	1.73	16	1.89	12	2.26	13
18	03-047-02	96.9	1.89	20	1.83	16	1.68	19	1.87	13	2.17	25
19	03-047-03	96.9	1.89	20	1.77	23	1.75	14	1.83	20	2.20	22
20	03-047-05	105.6	2.06	1	2.02	1	1.83	4	1.87	15	2.51	1
21	03-054-06	92.2	1.80	25	1.75	24	1.54	24	1.69	25	2.20	23
22	03-055-06	99.7	1.94	13	1.91	6	1.75	12	1.85	18	2.26	15
23	03-055-07	100.5	1.96	10	1.85	11	1.78	10	1.98	3	2.22	19
24	03-059-02	101.2	1.97	9	1.89	7	1.81	9	1.91	7	2.27	12
25	03-059-04	102.6	2.00	4	1.83	15	1.87	2	1.98	2	2.31	10
GEMIDD/AVERAGE			1.9		1.86		1.73		1.87		2.29	
KV/CV			4.8		2.7		8.1		3.0		3.4	
KBV/LSD (90)			0.08		0.05		0.15		0.06		0.08	
KBV/LSD (95)			0.10		0.07		0.21		0.08		0.12	

TABEL 12: Gemiddelde korrelstikstof van inskrywings in die LE proef vir die Suid-Rûens
TABLE 12: Mean kernel nitrogen of entries in the LE trial for the Southern Rûens

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Gem.rel. vetk. % van std. *Mean rel. TN % of std.*	*Southern Rûens* Gemiddelde *Mean*		NAPIER		BREDASDORP		KLIPDALE		PROTEM	
			TN	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*
1	SSG 564	99.4	2.08	22	1.70	19	2.00	17	2.34	15	2.29	23
2	Sabbi Erica	100.0	2.10	19	1.69	21	2.02	15	2.25	23	2.42	9
3	Sabbi Nemesia	105.0	2.20	4	1.70	20	2.07	10	2.53	2	2.50	6
4	S5	100.0	2.10	19	1.73	16	1.94	24	2.35	14	2.36	19
5	S6	100.4	2.10	18	1.73	13	1.96	22	2.45	5	2.27	24
6	S9	100.6	2.11	17	1.72	17	2.08	9	2.36	12	2.27	25
7	02-035-07	101.0	2.12	15	1.76	9	1.93	25	2.36	13	2.41	12
8	02-035-08	101.0	2.12	15	1.75	10	2.03	14	2.27	19	2.41	11
9	02-045-03	102.7	2.15	11	1.89	1	2.06	12	2.26	22	2.40	13
10	02-055-01	107.0	2.24	2	1.79	6	2.15	4	2.48	3	2.55	3
11	02-055-02	105.7	2.22	3	1.73	14	2.16	3	2.53	1	2.44	7
12	02-056-02	101.7	2.13	13	1.75	11	2.07	11	2.33	17	2.37	16
13	04-031-05D	104.7	2.19	6	1.83	3	2.14	5	2.41	9	2.39	14
14	07-900-03	104.9	2.20	5	1.80	5	2.22	2	2.42	7	2.35	20
15	03-030-01	101.4	2.13	14	1.78	8	1.99	18	2.34	16	2.39	15
16	03-046-07	99.5	2.09	21	1.74	12	1.96	21	2.31	18	2.33	22
17	03-046-12	99.0	2.08	24	1.65	24	1.97	19	2.26	21	2.42	8
18	03-047-02	103.1	2.16	9	1.67	22	2.02	16	2.38	11	2.57	2
19	03-047-03	99.2	2.08	23	1.67	23	1.95	23	2.17	25	2.52	5
20	03-047-05	110.0	2.31	1	1.86	2	2.34	1	2.42	8	2.60	1
21	03-054-06	96.9	2.03	25	1.63	25	1.97	20	2.18	24	2.34	21
22	03-055-06	103.1	2.16	9	1.70	18	2.10	8	2.43	6	2.41	10
23	03-055-07	102.7	2.15	11	1.73	15	2.12	7	2.39	10	2.37	17
24	03-059-02	103.2	2.16	8	1.79	7	2.04	13	2.46	4	2.36	18
25	03-059-04	104.5	2.19	7	1.81	4	2.14	6	2.27	20	2.54	4
GEMIDD/AVERAGE			2.1		1.74		2.06		2.36		2.41	
KV/CV			4.8		2.7		5.1		6.2		3.2	
KBV/LSD (90)			0.08		0.05		0.11		0.16		0.09	
KBV/LSD (95)			0.10		0.07		0.16		0.22		0.12	

TABEL 13: Gemiddelde korrelstikstof van inskrywings in die LE proef vir die Oos-Rûens
TABLE 13: Mean kernel nitrogen of entries in the LE trial for the Eastern Rûens

Insk.nr.	Inskrywing	Gem.rel. vetk. % van std.	*Eastern Rûens* Gemiddelde		Lokaliteite/Localities							
		Mean rel.	*Mean*		NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*	*TN % of std.*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*	*TN*	*Rk*
1	SSG 564	103.0	2.00	12	1.84	7	2.17	5	2.06	23	1.91	12
2	Sabbi Erica	100.0	1.94	22	1.68	25	2.04	18	2.19	14	1.84	20
3	Sabbi Nemesia	102.3	1.98	15	1.79	14	2.04	17	2.20	12	1.90	15
4	S5	100.4	1.95	21	1.76	17	2.10	13	2.08	22	1.84	21
5	S6	100.0	1.94	22	1.82	9	2.11	12	1.97	25	1.85	19
6	S9	99.4	1.93	24	1.69	24	2.03	20	2.16	15	1.82	23
7	02-035-07	103.2	2.00	11	1.82	11	2.11	11	2.11	20	1.96	3
8	02-035-08	105.3	2.04	4	1.94	3	2.13	8	2.13	17	1.96	4
9	02-045-03	103.7	2.01	9	1.83	8	2.17	2	2.09	21	1.95	5
10	02-055-01	107.0	2.07	2	1.80	12	2.21	1	2.21	11	2.07	2
11	02-055-02	104.5	2.03	6	1.99	1	2.01	21	2.23	7	1.87	17
12	02-056-02	102.6	1.99	14	1.82	10	2.09	14	2.12	19	1.92	10
13	04-031-05D	108.1	2.10	1	1.96	2	2.09	15	2.22	10	2.11	1
14	07-900-03	106.1	2.06	3	1.84	6	2.17	4	2.26	2	1.95	6
15	03-030-01	101.0	1.96	18	1.75	18	2.13	9	2.13	18	1.82	22
16	03-046-07	101.9	1.98	16	1.90	4	2.05	16	2.14	16	1.81	24
17	03-046-12	102.7	1.99	13	1.77	15	2.04	19	2.25	4	1.90	14
18	03-047-02	100.8	1.95	20	1.71	21	1.98	22	2.22	9	1.90	16
19	03-047-03	101.0	1.96	18	1.79	13	1.96	25	2.23	5	1.85	18
20	03-047-05	104.0	2.02	8	1.70	23	2.11	10	2.34	1	1.91	11
21	03-054-06	96.1	1.86	25	1.73	19	1.96	24	2.02	24	1.74	25
22	03-055-06	104.0	2.02	7	1.77	16	2.16	6	2.23	6	1.90	13
23	03-055-07	101.2	1.96	17	1.71	22	1.96	23	2.22	8	1.95	7
24	03-059-02	103.6	2.01	10	1.71	20	2.13	7	2.26	3	1.93	9
25	03-059-04	105.0	2.04	5	1.85	5	2.17	3	2.19	13	1.93	8
GEMIDD/AVERAGE			2.0		1.80		2.08		2.17		1.90	
KV/CV			4.1		5.8		3.3		3.4		3.7	
KBV/LSD (90)			0.08		0.11		0.08		0.08		0.08	
KBV/LSD (95)			0.10		0.16		0.10		0.11		0.11	

TABEL 14: Gemiddelde ontkiemingsenergie (4ml) en rangordes van inskrywings in die LE proef vir die Rûens, 2011

TABLE 14: Mean germinative energey (4ml) and rankings of entries in the LE trial for the Rûens, 2011

Insk.nr.	Inskrywing	Gem.rel. opb. % van std. *Mean rel. yield %*	Rûens Gemiddelde *Mean*		Lokaliteite/Localities																							
			CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		3REDASDORF		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*	*of std.*	*Yield*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*	*4ml72h*	*Rk*
1	SSG 564	102.7	93	12	96	8	99	1	98	1	97	15	100	6	90	21	76	24	99	4	92	18	90	10	95	16	85	21
2	Sabbi Erica	100.0	91	22	87	23	98	3	94	3	97	13	93	24	91	18	86	18	77	22	85	24	90	9	95	14	95	8
3	Sabbi Nemesia	101.7	92	16	90	20	95	18	97	18	97	7	95	19	93	15	89	11	67	23	96	8	95	3	94	18	99	3
4	S5	104.8	95	5	94	11	96	13	102	13	100	3	94	20	97	5	87	16	93	8	92	17	88	15	99	4	98	4
5	S6	64.9	59	25	60	25	49	25	42	25	89	25	42	25	79	25	58	25	60	24	59	25	51	25	53	25	64	25
6	S9	105.2	95	3	93	16	97	7	96	7	98	5	98	11	93	14	90	8	100	3	91	20	99	1	101	2	89	16
7	02-035-07	102.6	93	13	98	4	88	23	98	23	100	4	97	13	92	17	85	20	87	13	93	15	89	11	97	7	92	13
8	02-035-08	100.3	91	21	72	24	97	10	92	10	97	12	96	18	97	6	83	21	86	15	97	5	86	19	93	19	95	11
9	02-045-03	104.0	94	7	92	17	97	8	96	8	97	11	97	12	98	3	86	17	96	5	95	9	89	13	99	3	89	15
10	02-055-01	101.1	92	17	99	1	87	24	98	24	97	16	98	9	93	12	83	22	93	7	94	12	86	18	87	24	85	22
11	02-055-02	103.4	94	10	96	9	97	5	94	5	96	17	98	8	96	9	88	15	85	17	93	14	85	21	101	1	96	7
12	02-056-02	101.1	92	17	90	21	95	16	92	16	93	23	99	7	92	16	89	12	87	14	91	21	85	20	98	5	89	18
13	04-031-05D	101.0	92	19	94	14	98	4	92	4	94	21	98	10	81	24	92	6	83	19	93	16	83	23	97	9	94	12
14	07-900-03	98.6	89	23	89	22	96	12	86	12	97	9	97	15	90	19	85	19	60	25	92	19	89	12	95	15	97	6
15	03-030-01	101.8	92	15	90	19	95	17	82	17	97	10	93	23	89	22	90	9	82	20	106	1	92	6	94	17	98	5
16	03-046-07	107.4	97	1	97	7	97	9	95	9	100	2	102	1	96	8	88	13	114	1	95	11	91	7	98	6	95	9
17	03-046-12	103.3	94	11	94	12	93	21	97	21	97	8	100	4	97	4	96	1	82	21	90	22	88	14	95	13	95	10
18	03-047-02	103.5	94	9	94	13	99	2	99	2	98	6	94	21	90	20	89	10	84	18	94	13	91	8	91	23	103	1
19	03-047-03	105.1	95	4	93	15	96	11	97	11	94	22	100	5	99	1	95	3	93	6	95	10	93	5	96	11	92	14
20	03-047-05	105.3	96	2	98	3	95	14	99	14	95	20	101	2	96	7	94	4	106	2	97	6	86	17	93	22	86	20
21	03-054-06	102.6	93	13	99	2	94	19	92	19	101	1	96	17	93	11	91	7	88	10	97	4	83	24	93	21	89	17
22	03-055-06	100.9	92	20	94	10	94	20	95	20	90	24	93	22	94	10	94	5	88	11	87	23	93	4	93	20	83	23
23	03-055-07	97.8	89	24	97	5	91	22	78	22	96	18	97	16	87	23	81	23	88	12	96	7	87	16	95	12	71	24
24	03-059-02	104.6	95	6	92	18	97	6	90	6	97	14	97	14	98	2	88	14	86	16	99	3	97	2	97	8	100	2
25	03-059-04	103.8	94	8	97	6	95	15	93	15	95	19	101	3	93	13	96	2	90	9	102	2	83	22	97	10	87	19
GEMIDD/AVERAGE			92		92		93		92		96		95		93		87		87		93		88		94		91	
KV/CV			8.6		8.9		5.4		6.2		2.3		4.1		5.5		7.0		20.6		9.7		6.2		5.3		8.6	
KBV/LSD (0.10)			4		9		5		6		2		4		6		7		20		10		6		5		9	
KBV/LSD (0.05)			5		12		7		9		3		6		8		9		27		14		8		8		12	

TABEL 15: Gemiddelde ontkiemingsenergie (8ml) en rangordes van inskrywings in die LE proef vir die Rûens, 2011

TABLE 15: Mean germinative energy (8ml) and rankings of entries in the LE trial for the Rûens, 2011

Insk.nr.	Inskrywing	Gem.rel. opb. % van std. *Mean rel. yield %*	Rûens Gemiddelde *Mean*		Lokaliteite/Localities CALEDON		GREYTON		RIETPOEL		TYGERH		NAPIER		3REDASDORF		KLIPDALE		PROTEM		NAPKEI		SWELLEND		HEIDELBERG		H/B VLAKTE	
Entr.no.	*Entry*	*of std.*	*Yield*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*	*8ml72h*	*Rk*
1	SSG 564	98.2	68	10	81	8	70	9	61	9	74	11	77	14	69	6	42	24	80	4	88	4	63	10	56	10	60	17
2	Sabbi Erica	100.0	70	7	64	20	70	11	70	11	84	3	89	5	62	16	65	9	71	13	77	16	60	12	57	7	67	11
3	Sabbi Nemesia	95.7	67	16	67	19	71	8	53	8	78	8	94	1	66	13	54	17	54	21	83	7	66	7	61	4	53	22
4	S5	87.9	61	20	59	23	49	21	57	21	72	14	88	6	67	10	39	25	70	14	75	17	50	22	52	14	57	19
5	S6	59.0	41	25	50	25	24	25	26	25	53	25	42	25	28	25	59	13	48	24	56	25	35	25	34	25	38	25
6	S9	115.3	80	1	94	1	78	1	78	1	81	6	90	3	85	1	58	15	82	2	86	6	84	2	64	2	84	1
7	02-035-07	73.4	51	23	61	22	43	23	41	23	57	24	50	23	51	24	53	19	46	25	57	24	47	23	40	24	68	9
8	02-035-08	72.6	51	24	54	24	32	24	39	24	62	23	49	24	57	21	48	23	60	18	60	23	45	24	43	21	58	18
9	02-045-03	104.5	73	3	84	6	61	16	82	16	74	12	83	9	72	3	54	18	81	3	81	10	65	8	60	5	77	6
10	02-055-01	97.4	68	12	74	16	68	12	55	12	69	19	71	17	64	14	62	11	79	5	82	9	68	6	44	20	78	5
11	02-055-02	104.5	73	3	88	3	70	10	64	10	82	4	92	2	54	22	70	5	61	16	82	8	74	4	61	3	76	7
12	02-056-02	98.9	69	9	86	4	72	7	55	7	86	1	77	13	70	5	52	20	73	9	81	13	55	18	56	9	64	12
13	04-031-05D	84.1	59	21	70	17	52	20	39	20	70	17	63	19	59	19	60	12	53	22	69	20	62	11	53	11	53	24
14	07-900-03	105.6	74	2	84	5	64	13	70	13	71	16	74	16	52	23	67	6	86	1	94	1	88	1	57	8	76	8
15	03-030-01	103.1	72	6	75	14	62	15	63	15	86	2	82	12	67	11	65	8	76	7	90	2	76	3	53	12	67	10
16	03-046-07	97.6	68	11	79	9	63	14	51	14	74	13	87	7	72	4	58	14	55	19	79	14	68	5	49	15	81	2
17	03-046-12	99.8	70	8	75	15	58	18	54	18	68	20	90	4	81	2	66	7	64	15	89	3	64	9	47	16	78	3
18	03-047-02	94.5	66	17	76	13	75	4	64	4	72	15	82	10	59	18	73	4	49	23	74	18	56	17	46	18	64	13
19	03-047-03	97.0	68	13	68	18	76	3	60	3	70	18	83	8	67	12	64	10	60	17	81	12	60	13	60	6	62	16
20	03-047-05	103.6	72	5	79	11	76	2	66	2	82	5	74	15	69	7	75	3	77	6	87	5	57	16	46	19	78	4
21	03-054-06	92.1	64	18	79	10	73	5	59	5	78	7	66	18	61	17	56	16	76	8	63	22	55	19	40	23	64	14
22	03-055-06	96.7	67	15	93	2	73	6	51	6	78	9	62	20	62	15	77	1	73	10	81	11	51	21	52	13	55	21
23	03-055-07	88.4	62	19	81	7	54	19	53	19	64	21	57	21	67	9	51	21	71	12	79	15	57	15	43	22	62	15
24	03-059-02	79.4	55	22	62	21	48	22	42	22	63	22	56	22	58	20	49	22	54	20	74	19	55	20	46	17	57	20
25	03-059-04	97.0	68	13	77	12	58	17	54	17	78	10	82	11	67	8	76	2	73	11	68	21	57	14	68	1	53	23
GEMIDD/AVERAGE			65		74		62		56		73		74		63		60		67		77		61		52		65	
KV/CV			8.6		15.9		21.1		13.4		11.2		10.3		16.8		20.7		12.6		9.1		11.5		16.8		12.6	
KBV/LSD (0.10)			4		13		14		8		9		8		12		14		9		8		8		10		9	
KBV/LSD (0.05)			5		17		19		11		12		12		16		19		13		11		11		13		12	

TABEL 16: Agronomiese eienskappe van die inskrywings in die LE proef vir die Wes-Rûens, 2011
TABLE 16: Agronomic characteristics of the entries in the Line Evaluation Trial in the Western Rûens, 2011

Insk.nr. *Entry no.*	Inskrywing *Entry*	*General appearance*	*Stage of Ripeness*	*Straw*		*Peduncle strength and ear loss*
				Height (cm)	*Strength*	
1	SSG 564	6.1	3.0	100	4.0	4.8
2	SabbiErica	6.8	3.4	92	4.8	5.0
3	SabbiNemesia	6.7	3.4	82	4.9	5.0
4	S5	6.4	3.3	78	4.9	5.0
5	S6	7.3	3.6	90	5.0	5.0
6	S9	6.7	3.2	88	4.9	5.0
7	02-035-07	7.1	3.5	89	5.0	5.0
8	02-035-08	7.1	3.6	89	5.0	5.0
9	02-045-03	6.3	2.9	99	4.4	4.5
10	02-055-01	6.4	3.1	87	4.9	5.0
11	02-055-02	6.3	3.4	84	4.9	5.0
12	02-056-02	6.8	3.3	87	5.0	5.0
13	04-031-05D	6.4	2.7	82	4.9	5.0
14	07-900-03	6.9	3.3	87	5.0	5.0
15	03-030-01	6.6	3.3	85	4.9	5.0
16	03-046-07	6.1	3.2	80	4.9	5.0
17	03-046-12	6.2	3.5	83	4.9	5.0
18	03-047-02	6.3	3.1	79	4.9	5.0
19	03-047-03	6.2	3.3	82	5.0	5.0
20	03-047-05	6.0	3.2	92	4.7	5.0
21	03-054-06	6.7	3.3	88	4.8	5.0
22	03-055-06	6.4	3.6	90	4.8	5.0
23	03-055-07	6.5	3.3	95	4.8	5.0
24	03-059-02	6.7	3.3	84	4.9	5.0
25	03-059-04	6.6	3.5	87	4.8	5.0

(Localities: Caledon, Rietpoel, Greyton, Tygerhoek)

Legend:

General appearance
9 - Good
1 - Bad

Straw Length
S - Short
MS - Medium short
M - Medium
ML - Medium long
L - Long

Peduncle strength and Ear loss
1 - Very weak peduncle
5 - Very strong peduncle

Stage of Ripeness
1 - Early
5 - Late

Straw strength
1 - No resistance to lodging
5 - Total resistance to lodging

TABEL 17: Agronomiese eienskappe van die inskrywings in die LE proef vir die Suid-Rûens, 2011
TABLE 17: Agronomic characteristics of the entries in the LE trial in the Southern Rûens, 2011

Insk.nr. *Entry no.*	Inskrywing *Entry*	*General appearance*	*Stage of Ripeness*	*Straw*		*Peduncle strength and ear loss*
				Height (cm)	*Strength*	
1	SSG 564	5.0	3.0	98	3.2	4.7
2	SabbiErica	5.9	3.3	91	4.3	5.0
3	SabbiNemesia	6.3	3.2	85	4.7	5.0
4	S5	5.9	3.3	81	4.6	5.0
5	S6	6.6	3.4	93	4.7	5.0
6	S9	6.8	2.9	91	4.6	5.0
7	02-035-07	7.3	2.9	95	4.6	5.0
8	02-035-08	7.4	3.4	96	4.7	5.0
9	02-045-03	6.1	3.0	104	4.4	5.0
10	02-055-01	6.0	3.3	94	4.6	5.0
11	02-055-02	6.1	3.7	86	4.1	5.0
12	02-056-02	6.1	3.5	91	4.7	5.0
13	04-031-05D	6.3	2.6	85	4.9	4.7
14	07-900-03	6.3	3.8	87	4.7	5.0
15	03-030-01	6.4	3.0	89	4.5	5.0
16	03-046-07	6.3	2.8	80	4.3	5.0
17	03-046-12	6.3	3.2	81	4.3	5.0
18	03-047-02	6.3	3.0	80	4.3	5.0
19	03-047-03	6.3	3.2	83	4.2	5.0
20	03-047-05	5.8	3.5	93	4.2	5.0
21	03-054-06	6.5	3.4	90	4.7	5.0
22	03-055-06	5.8	3.6	92	4.8	5.0
23	03-055-07	6.1	3.7	97	4.3	5.0
24	03-059-02	6.4	3.2	83	4.5	5.0
25	03-059-04	6.5	2.9	86	4.8	5.0

(Localities: Napier, Klipdale, Bredasdorp, Protem)

TABEL 18: Agronomiese eienskappe van die inskrywings in die LE proef vir die Oos-Rûens, 2011
TABLE 18: Agronomic characteristics of the entries in the Line Evaluation Trial in the Eastern Rûens, 2011

Insk.nr.	Inskrywing	*General*	*Stage of*	*Straw*		*Peduncle strength*
Entry no.	*Entry*	*appearance*	*Ripeness*	*Height (cm)*	*Strength*	*and ear loss*
1	SSG 564	5.6	3.1	97	3.8	4.7
2	SabbiErica	6.7	3.2	88	7.3	5.0
3	SabbiNemesia	6.4	3.2	83	4.7	5.0
4	S5	6.6	3.2	84	4.8	5.0
5	S6	6.2	3.4	93	4.7	5.0
6	S9	7.2	2.8	88	4.7	5.0
7	02-035-07	7.1	3.1	90	7.5	5.0
8	02-035-08	6.7	3.7	90	4.9	5.0
9	02-045-03	5.5	3.2	98	4.3	5.0
10	02-055-01	5.6	3.3	84	4.4	5.0
11	02-055-02	6.4	3.4	86	4.8	5.0
12	02-056-02	6.4	2.9	88	4.7	5.0
13	04-031-05D	6.1	2.5	85	4.9	5.0
14	07-900-03	6.4	3.4	91	4.8	5.0
15	03-030-01	6.4	2.7	91	4.5	5.0
16	03-046-07	6.9	2.9	83	4.8	5.0
17	03-046-12	6.9	3.3	87	4.8	5.0
18	03-047-02	6.9	3.0	82	4.9	5.0
19	03-047-03	6.8	3.3	85	4.6	5.0
20	03-047-05	6.8	2.8	91	4.5	4.7
21	03-054-06	6.9	3.4	92	4.8	5.0
22	03-055-06	6.6	3.5	97	4.8	5.0
23	03-055-07	6.6	3.5	99	4.8	4.7
24	03-059-02	6.9	3.2	86	4.8	5.0
25	03-059-04	7.3	2.8	87	4.9	5.0

(Localities: Napkei, Swellendam, Heidelberg, Heidelberg Vlakte)

Legend:

General appearance
9 - Good
1 - Bad

Straw Length
S - Short
MS - Medium short
M - Medium
ML - Medium long
L - Long

Peduncle strength and Ear loss
1 - Very weak peduncle
5 - Very strong peduncle

Stage of Ripeness
1 - Early
5 - Late

Straw strength
1 - No resistance to lodging
5 - Total resistance to lodging

TABEL 19: Siektelesings van inskrywings in die LE Rûens Caledon proef, 2011
TABLE 19: Disease readings of entries in the LE Rûens Caledon trial, 2011

Insk.nr.	Inskrywing	CALEDON		
Entr.no.	*Entry*	*Scald*	*Net form Net Blotch*	*Spot form Net Blotch*
1	SSG 564	3	4	0
2	SabbiErica	9	-	-
3	SabbiNemesia	9	-	-
4	S5	7	-	-
5	S6	0	3	2.1
6	S9	6	1	-
7	02-035-07	0	4	2.1
8	02-035-08	7	2	2.1
9	02-045-03	6	2	2.1
10	02-055-01	8	2	-
11	02-055-02	8	2	-
12	02-056-02	9	9	-
13	04-031-05D	8	7	-
14	07-900-03	9	-	-
15	03-030-01	9	-	-
16	03-046-07	9	-	-
17	03-046-12	8	-	-
18	03-047-02	9	-	-
19	03-047-03	9	-	-
20	03-047-05	7	-	-
21	03-054-06	6	3	-
22	03-055-06	7	7	-
23	03-055-07	6	7	-
24	03-059-02	9	-	
25	03-059-04	8	-	-

Scald and Netblotch

1 = lightly infested

9 = heavily infested

- = no reading possible

TABEL 20: Siektelesings van inskrywings in die LE Rûens Riviersonderend proef, 2011
TABLE 20: Disease readings of entries in the LE Rûens Riviersonderend trial, 2011

Insk.nr.	Inskrywing	RIVIERSONDEREND		
Entr.no.	*Entry*	*Scald*	*Net form Net Blotch*	*Spot form Net Blotch*
1	SSG 564	0	7	0
2	SabbiErica	7	6	1.1
3	SabbiNemesia	7	3	1.1
4	S5	7	2	1.1
5	S6	0	2	1.2
6	S9	3	2	1.4
7	02-035-07	1	1	1.3
8	02-035-08	1	1	1.1
9	02-045-03	3	1	1.1
10	02-055-01	9	-	-
11	02-055-02	9	-	-
12	02-056-02	9	-	-
13	04-031-05D	7	4	-
14	07-900-03	0	7	-
15	03-030-01	9	-	-
16	03-046-07	9	-	-
17	03-046-12	9	-	-
18	03-047-02	8	-	-
19	03-047-03	9	-	-
20	03-047-05	9	-	-
21	03-054-06	9	-	-
22	03-055-06	9	-	-
23	03-055-07	9	-	-
24	03-059-02	9	-	-
25	03-059-04	9	-	-

Scald and Netblotch

1 = lightly infested

9 = heavily infested

- = no reading possible

TABEL 21: Siektelesings van inskrywings in die LE Rûens Heidelberg proef, 2011
TABLE 21: Disease readings of entries in the LE Rûens Heidelberg trial, 2011

Insk.nr.	Inskrywing	HEIDELBERG	
Entr.no.	*Entry*	*Leaf Rust*	*Spot form Net Blotch*
1	SSG 564	-	2.1
2	SabbiErica	80MS	2.1
3	SabbiNemesia	0	2.1
4	S5	0	3.1
5	S6	15MR	0.5
6	S9	5MR	0.5
7	02-035-07	5MR	0.5
8	02-035-08	5MR	2.1
9	02-045-03	5MR	0
10	02-055-01	-	-
11	02-055-02	80MS	0.5
12	02-056-02	60MS	0
13	04-031-05D	80MS	0.5
14	07-900-03	100MS	0
15	03-030-01	100MS	3.1
16	03-046-07	25MR	3.1
17	03-046-12	15MR	2.1
18	03-047-02	40MS	2.3
19	03-047-03	60MS	2.2
20	03-047-05	40MS	-
21	03-054-06	5MR	2.1
22	03-055-06	80MS	1.1
23	03-055-07	5MR	0.5
24	03-059-02	40MS	2.1
25	03-059-04	40MS	2.1

Scald and Netblotch
1 = lightly infested
9 = heavily infested
- = no reading possible

Leaf Rust
S = Susceptible
R = Resistant
MS = Moderately Susceptible
MR = Moderately resistant

Table 22: Production statistics of the trial localities for the 2011 Line Evaluation Trial in the Rûens.

AREA	LOKALITEIT	PLAASNAAM	VERANTW	ROTASIE 2010	BEMESTING (Kg/Ha)		PLANT DATUM	PLANT DIGTHEID
					N	P		
Wes-Rûens (OA)	Caledon	Dunghye Park	SABBI	Braak	37 + 10	18 + 5	11.05.11	200
	Greyton	Serjeantsrivier	SABBI	Koring	28 + 14	14	17.05.11	200
	Rietpoel	Rietkuil	SABBI	Gars	28 + 14	14	10.05.11	200
	Tygerhoek	Tygerhoek Proefplaas	SABBI	Canola	28 + 14	14	10.05.11	200
Suid-Rûens (OA)	Napier	Panorama	SABBI	Koring	28 +14	14	19.05.11	200
	Bredasdorp	Môrelig	SABBI	Koring	18 + 14	9	05.05.11	200
	Klipdale	Hermanusheuwel	SABBI	Koring	28 + 14	14	09.05.11	200
	Protem	Adowa	SABBI	Koring	18 + 14	9	29.04.11	200
Oos-Rûens (SSK)	Napky	Mopama	SABBI	Gars	20 + 7	10	09.05.11	200
	Swellendam	Kosani	SABBI	Koring	20 + 14	10	27.04.11	200
	Heidelberg	Voorstekop	SABBI	Koring	24 + 14	12	28.04.11	200
	Heidelberg Vlakte	Duinerug	SABBI	Koring	18 + 7	9	28.04.11	200

TABEL 23: Lys van inskrywings in die Lyn Evaluasieproef in die Rûens, 2011
TABLE 23: List of entries in the Line Evaluation trial in the Rûens, 2011

Insk.nr. *Entr.no.*	Inskrywing *Entry*	Jare in LE proef *Years in LE trial*	Program *Program*
1	SSG 564	Control	Sabbi
2	Sabbi Erica	Control	Sabbi
3	Sabbi Nemesia	Control	Sabbi
4	S5	Experimental	Sabbi
5	S6	Experimental	Sabbi
6	S9	Experimental	Sabbi
7	02-035-07	2	Sabbi
8	02-035-08	2	Sabbi
9	02-045-03	2	Sabbi
10	02-055-01	2	Sabbi
11	02-055-02	2	Sabbi
12	02-056-02	2	Sabbi
13	04-031-05D	2	Sabbi
14	07-900-03	2	Sabbi
15	03-030-01	1	Sabbi
16	03-046-07	1	Sabbi
17	03-046-12	1	Sabbi
18	03-047-02	1	Sabbi
19	03-047-03	1	Sabbi
20	03-047-05	1	Sabbi
21	03-054-06	1	Sabbi
22	03-055-06	1	Sabbi
23	03-055-07	1	Sabbi
24	03-059-02	1	Sabbi
25	03-059-04	1	Sabbi

Figure 1: Rainfall patterns for Western Rûens: Long term vs. 2011

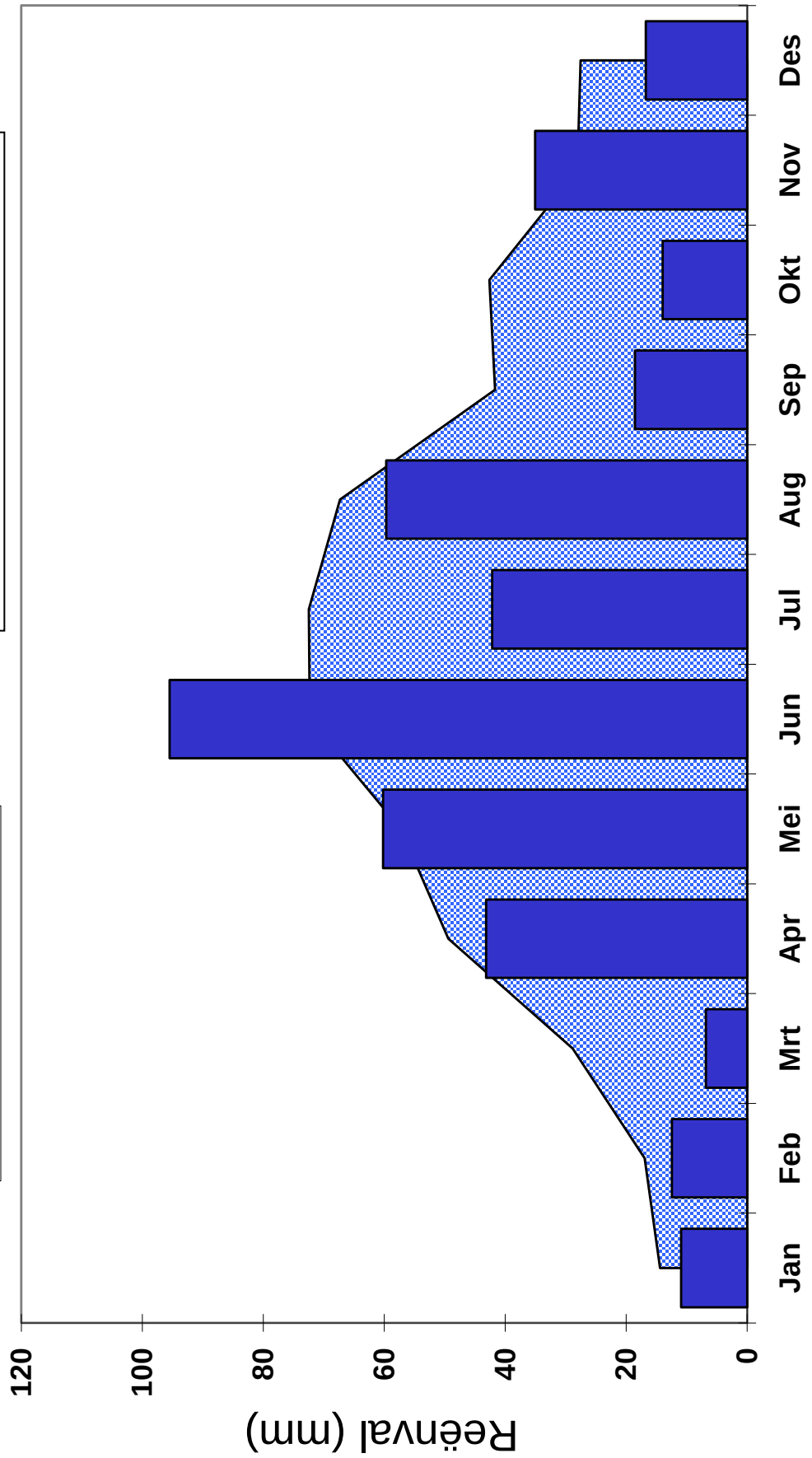

Figure 2: Average grain yield and quality parameters for the LE trials in the Rûens, 2011.