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VERSLAG VAN DIE NASIONALE SOJABOON KULTIVARPROEWE/ 2014/15

REPORT OF THE NATIONAL SOYBEAN CULTIVAR TRIALS

Verantwoordelike beampte:
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BEDANKINGS

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INHOUD/INDEX

ONDERWERP **BLADSY**
SUBJECT **PAGE**

TABEL TABLE		BLADSY PAGE

1 INTRODUCTION

The National Soybean Cultivar Trials (project M101/62) were planted for the 37th successive year this past growing season. A total of 22 trials were planted at 20 localities, illustrated in the locality list.

1.1 AIM

The aim of the project was primarily the following:

(I) To compare cultivars for agronomic and economic performance;

(ii) to test the adaptability of cultivars and new releases for specific areas and cultivation practices.

2 MATERIALS AND METHODS

2.1 GENERAL

The trials were planted as randomized block designs (Rows & colums) using three replications with 30 cultivars. Cultivar characteristics are shown in Table 1.

Each trial plot consisted of four, 5 m rows. Four metres were harvested from each of the middle two rows, in order to avoid border effects. Soil form, fertilization and weed control are indicated together with row spacing in Table 2. All seeds were inoculated with Bradyrhizobium japonicum bacteria at planting.

The localities where trials were planted represent a wide range of climatic conditions. Trials were carried out on the ARC and Departmental Research Stations as well as on privately owned farms. Observations were recorded by responsible officers and collaborators as indicated in the list of collaborators. Planting time and cultivation practice were executed to correspond with that of commercial plantings in the specific areas. Rainfall and irrigation are indicated in Table 3. Note that rainfall is only recorded from October to April and not for the specific growing season of a trial.

2.2 OBSERVATIONS

A brief definition of some of the observations in the trials is as follow:

2.2.1 Date of flowering: The time at which one fully open flower per plant was observed across 50% of the plots.

2.2.2 Date of harvest maturity: When 95% of the pods for a given plot had turned brown.

2.2.3 Length of growing season: The number of days from date of planting to date of maturity.

2.2.4 Plant height: The average height in centimeter (cm) of plants from the soil surface to the growth point at maturity.

2.2.5 Pod height: The average height in centimeter (cm) of the lowest pods on the plant from soil surface at maturity.

2.2.6 Green stem: The percentage green stems at harvest rated on a 1 (normally mature) to 5 (more than 80% green stems) scale.

2.2.7 Lodging: Lodging at time of harvest was rated on the following scale:

1 = No lodging
2 = Few lodging, will not hamper mechanical harvesting
3 = Few lodging, lodging less than what will hamper mechanical harvesting
4 = Few lodging, will hamper mechanical harvesting, with yield loss
5 = Fair number of plants lodged, will hamper mechanical harvesting, with yield loss
6 = Many plants lodged, will hamper mechanical harvesting, with yield loss

7 = A large number of plants lodged, will hamper mechanical harvesting, with yield loss

8 = Nearly all plants lodged, will hamper mechanical harvesting, yield loss

9 = All plants lodged, will hamper mechanical harvesting, yield loss

2.2.8 Shattering: Measured at time of harvest and three weeks later. Shattering is reported on a scale of 1 (no shattering) to 5 (more than 91-100% pods shattered).

2.2.9 100 seeds mass: Determined on an air dry basis from a randomly selected sample retained on a 4,75 mm standard grading screen.

2.2.10 Undesirable seed: The mass of undesirable seed was determined in a random 100 g sample with seed size greater than 4,75 mm (excluding mechanical damaged seeds).

2.2.11 Protein and oil percentage: The determinations were done on a sample with whole seeds (moisture free) and a variation can be expected.

2.2.12 Seed yield: Four metres of the two centre rows were harvested by hand at soil level and threshed. Seed moisture was determined and seed yield calculated on a basis of 12,5% moisture content.

2.3 THE EVALUATION OF TRIALS

The yield data of the individual trials were subjected to analysis of variance (ANOVA) with a randomized complete block design used. From the components of variance the following parameters were calculated, *viz*: Ce, (error coefficient of variation); Cg, (genetic coefficient of variation); t, (repeatability of plot yield or intra class correlation coefficient) and tn, (repeatability of mean yield).

The diagnostic value of these parameters may be illustrated as follows:

The t parameter as defined above relates to the repeatability of plot means over replications, and is interpreted in the same way as the normal correlation coefficient, i.e. the greater the concurrence of plot values per entry over replications the closer t will strive towards unity. The standard error SE(t) calculated for a particular t-value indicates the accuracy for the estimate of t.

The tn parameter relates to the repeatability of entry cultivar means, and can be defined as the relationship of genetic variance (the variance of true yield of entries) to the total variance of observed means. In cultivar trials this parameter is useful only when the number of replications between trials varies, where this is not the case, the t-value is sufficient.

The localities with coefficient of variance higher than 25% were rejected from the analysis.

The trial means versus the cultivar means is plotted. A regression line is then fitted with the trial means as x variable and cultivar means as predictor variable. Out of the regression estimates the yield probability percentage above the mean for each cultivar at different yield potentials is then calculated and presented in a table as a guideline for the use of different cultivars under different circumstances.

3 DISCUSSION OF RESULTS

3.1 GENERAL

The rainfall and irrigation data are shown in Table 3. Sporadic early rains limited the ideal planting period. Most of the soybean production areas also experienced sporadic hail storms resulted in the replanting of four (4) trials. Drought during the pod filling stage also contributed to below average yield.

A total of four (4) of the 22 trials (18%) could not be included in the report compared to the five (5) out of 21 trials (23.8%) in the 2013/14 season.

The following trials could not be included in the report for the following reasons:

1 Hoopstad – High CV due to hail during harvesting.

2 Greytown – Destroyed by a hail storm.

3 Koedoeskop – Low yield due to a low plant count caused by malfunctional planter.

4 Stoffberg – First and replanting destroyed by hail.

As in the previous seasons the evaluation of the trials was based on a number of parameters. No conclusion can be made on a single parameter.

3.2 DISCUSSION OF TABLES

3.2.1 Days to flowering (Table 4), physiologically mature (Table 5) and length of the growing season (Table 6)

The number of days from planting to flowering (Table 4) is an effective measure for the grouping of cultivars because the relative order of rank for this characteristic is repeated to a great extent over localities and years. As expected the average days to flowering was the shortest in the warm areas (40 days at Atlanta and 46 in Brits) and the longest in the cooler areas (82 days at Kokstad).

The number of days to physiological maturity is shown in Table 5. The longest average days to maturity was experienced at Delmas (157 days).

The number of days to harvest maturity (Table 6) was used to determine the length of the growing season of a cultivar. The number of days to harvest maturity is however, more dependent on climatic changes and planting date for soybeans and, the number of days to flowering is therefore a more reliable maturity grouping criterion.

3.2.2 Plant height (Table 7)

The indeterminate cultivar DM 6.8i RR (MG 6.8) showed a mean plant height of 106 cm (highest) in the cool area compared to 57 cm (lowest) of the semi-determinate cultivar LS 6444 R (MG 4) in the moderate region and LS 6261 R (MG 6.0) in the

warm area. Plant height for cultivars with an indeterminate growth habit was in general higher than those with a determinate growth habit.

The average plant height between localities varied from a mean of 48 cm at Migdol to 101 cm at Delmas.

3.2.3 Pod height (Table 8)

The variation in pod and plant height between cultivars is linked with the length of the growing season of a cultivar. The determinate cultivars PHB 95 Y 20 R (MG 5.2) and LS 6466 R (MG 6.0) and PAN 1614 R (MG 6.2) an indeterminate cultivar showed a mean pod height of 13 cm in the moderate area, while PAN 6164 R (MG 6.0) also had an average pod height of 13 cm in the cool areas.

LS 6444 R (MG 4) (semi-determinate) who as for the third (3) season had the lowest reading of 6 in the cool, moderate and warm regions. Considerable harvest losses can occur due to low pod height; thus pod height is an important factor influencing cultivar choice. Differences in pod height between localities can mainly be attributed to differences in row width and climate. The fact that the trials are being harvested by hand, it might favour the yield figures, and may be worth while looking at the yield percentage above the 7.5 cm combine harvesting height.

3.2.4 Lodging (Table 9)

The highest lodging occurred in the trial for the second (2) concessive year at Delmas. The highest lodging figures was reported for PAN 1623 R, DM 6.2i RR, LS 6164 R and DM 6.8i RR in the cool and moderate production areas with the highest number of 5.

3.2.5 Green stem (Table 10)

A lot of green stem was reported for the third consecutive year at Groblersdal. The cultivar NS 5909 R, showed a high tendency for green stem, across all three climatic regions. Plants also retained their leaves that could hamper the harvesting process.

3.2.6 Shattering 3 weeks after harvesting (Table 11)

The highest shattering occurred on the Potchefstroom Irrigation and Potchefstroom PD1 Dryland trials in the moderate production area. Limited shattering were recorded at Middelburg, Brits and Kinross.

3.2.7 Number of plants (Table 12)

Enough certified seed was provided to establish 400 000 plants ha^{-1} for the irrigation and high rainfall areas and 350 000 for dryland. The low plant numbers at Groblersdal were due to pigeon damage and very high temperatures just after planting.

3.2.8 Percentage undesirable seed (Table 13)

The lowest mean of 0.58% undesirable seeds was recorded for the cool region. The range varied from1.35% at Brits to 0.10% at Cedara.

3.2.9 Mass (g) 100^{-1} seeds (Table 14)

The variation in seed mass among localities ranged between 12.97 g 100^{-1} seeds at Dundee to 19.06 g 100^{-1} seeds at Groblersdal. The highest seed mass was recorded for PAN 6240 R across all climatic regions, while LS 6444 R as last season had the smallest seed for the most part across all areas.

3.2.10 Oil percentage (Table 15)

LS 6146 R had, like the three previous seasons, the highest average oil percentage for all the regions (21.63% cool, 21.66% moderate, 23.54% warm) The lowest oil percentage was recorded for PHB 95 Y 20 R for the cool (18.13%) and moderate (20.18%) areas.

3.2.11 Crude Protein percentage (Table 16)

The crude protein is negatively correlated to the oil percentage thus LS 6444 R had

had for the past two seasons the lowest crude protein for all regions (36.87% cool, 36.85% moderate and 38.37% warm). PHB 95 Y 20 R had the highest figure for the cool area (40.13%) and (38.29%) for the moderate area.

3.2.12 Profat (Table 17)

The inclusion of this table in the report was requested by Dr Erhard Bredenham as the total value of oil and protein is a much better indicator for the selection of a cultivar than the single oil or protein factor. PHB 94 Y 80 R had the highest average profat value for all the regions. PHB 95 Y 20 R 00 had a percentage above 64% in the warm regions.

3.2.13 Yield (Table 18)

Due to the sensitivity of soybean cultivars to environmental conditions, it is preferable to divide the soybean production areas into cool, moderate and warm regions. A better yield can be established by choosing a cultivar suitably adapted for a specific region. It is also necessary to use data from more than one year to select between cultivars. Due to the significant cultivar and locality interaction, conclusions on cultivar performance should not be made from average yield data alone. The mean yield over localities has therefore been omitted.

4 INTERPRETATION OF YIELD RESULTS

4.1 INTRODUCTION

A stated aim of the national soybean cultivar trials is the evaluation of cultivars for their adaptability to a potential production area, and for their yield performance. Adaptability is especially important because of the fact that soybean cultivars are known to be restricted in terms of recommended production area. This fact is also demonstrated by the results discussed in this report.

Because of genotypic restriction in adaptability the statistical analysis of data over all trial entries and localities tend to demonstrate strong interaction components which

confound interpretation. Interaction makes genotype rankings at one site inapplicable to another site. The larger the interaction the more information is lost if interaction is not analysed effectively. This will be a lesser problem for homogeneous areas than for non-homogeneous areas. However, a purpose of the national trials is to identify homogeneous areas or homogeneous growing conditions based on cultivar performance. Localities were therefore grouped together based on past research experience and with the assistance of photo thermal charts provided by the Institute for Soil, Climate and Water. Localities were grouped in cool, moderate and warm production areas.

4.2 YIELD PROBABILITY AND YIELD (Tables 19, 20, 21, 22, 23 & 24)

A minimum number of successful trials per climatic area are needed to calculate saved yield probability values. Yield probability tables are set up for cool-, moderate and warm regions, if enough data is available.

Yield probability of a cultivar is the chance to get an above average yield at a particular yield potential. For instance, if the yield probability of a cultivar, at a particular yield potential equals 60%, the chance to get a yield above the mean of all cultivars is 60% with a 40% chance of obtaining a yield below the mean.

PAN 1454 R and LS 6453 R showed an above average yield probability (Table 19) for the low to medium yield potential, (cool area), while LS 6248 R and PAN 1583 R had an above average yield probability in the medium to high yield potential range for the same climatic region. For the moderate area PAN 1583 R and LS 6161 R showed above average figures over the whole production potential range. LS 6161 R also performed above average for the warm areas.

Lokaliteite, medewerkers en adresse van kultivarproewe soos beplan vir, 2014/15
Localities, co-operators and addresses of the cultivar trials , 2014/15

Nr No	Lokaliteit Locality	Adres van proeflokaliteit Adress of trial locality	Tel. no. Tel. nr.	Verantwoordelike beampte Responsible officer
1	Atlanta	JH Steenkamp P/bus 1022 Atlanta Slagkraal Brits 0250	072 606 5094	G Engelbrecht
2	Bethlehem	Kleingraan Instituut Bethlehem 9700	082 375 8999	L Bronkhorst & E Maree
3	Brits	Hartebeespoort Nav. Stasie Posbus 1261 Brits 0250	082 375 8999	L Bronkhorst & T Kruger
4	Cedara	Cedara P/bag X9059 Pietermaritzburg 3200	033-355 9495/072 241 9182	J Arathoon
5	Clocolan	G Hugo van Niekerk Kroon Clocolan 9735	082 375 8999	L Bronkhorsten & E Maree
6	Delmas-Pannar	Pannar Saad Navorsingsplaas Posbus 439 Delmas 2210	013-665 8524/082 969 1981	A Mathebula
7	Dundee	Dundee Navorsingstasie Posbus 626 Dundee 3000	034 212 479/076 953 3587	M Buthelezi
8	Glen	Glen Proefplaas Bloemfontein 9300	082 375 8999	L Bronkhorst, J Richter & E Maree
9	Greytown	Pannar Proefplaas Posbus 19 Greytown 3250	033-413 9639	A Jarvie
10	Greytown Kranskop	Umvoyuna Farm Posbus 755 Greytown 3250	033-417 1494(6)/082 558 1766	P Herbst
11	Groblersdal-Loskop	Loskopproefplaas Posbus 1367 Groblersdal 0470	013-262 3042/083 274 1951	C Fourie
12	Hoopstad	R Taljaard Posbus 120 Hoopstad 9479	082 375 8999	L Bronkhorst
13	Kinross	Vosstoffel Boerdery Posbus 80 Kinross 2270	082 375 8999	L Bronkhorst
14	Koedoeskop	Sanleohan Trust Plaas Rietfontein Koedoeskop 0361	083 625 4906	R van Niekerk
15	Kokstad	Research Station P/Bag X501 Kokstad 4700	039 727 2105/072 778 8785	MP Skhakhane
16	Kroonstad	Hoërskool Kroonstad Kroonstad 9500	082 375 8999	L Bronkhorst, N Schultz & E Maree
17	Middelburg	G Anderson Postnet Suite 15 P/Bag 1866 Middelburg 1050	082 375 8999	L Bronkhorst
18	Migdol	Koos Bezuidenhout Posbus 90 Migdol 2775	082 375 8999	L Bronkhorst
19-21	Potchefstroom	IGG Proefplaas Privaatsak X1251 Potchefstroom 2520	018-299 6366/082 375 8999	L Bronkhorst
22	Stoffberg	Piet Prinsloo Posbus 107 Stoffberg 1056	082 375 8999	L Bronkhorst

Tabel 1 Sojaboonsaad eienskappe en inligting oor verskaffers, 2014/15
Table 1 Soybean seed characteristics and information about agents, 2014/15

Kultivar Cultivar	Volwassenheids-groeperings Maturity Group	Groeiwyse Growth habit *1	Hilum kleur Hilum colour *2	Blomkleur Flower colour *3	Haarkleur Pubescence *4	Op varieteits lys On variety list	Verskaffer Agent	Telersregte Breeding rights
LS 6240 R	4.0	SD	BL	W	W	JA/YES	Linkseed	JA/YES
LS 6444 R	4.0	SD	BL	W	G	JA/YES	Link Seed	JA/YES
PAN 1454 R	4.3	I	BL	P	B	JA/YES	Pannar	JA/YES
LS 6146 R	4.4	I	BL	P	G	JA/YES	Link Seed	JA/YES
PHB 94 Y 80 R	4.8	I	LB	P	W	JA/YES	Pioneer	JA/YES
LS 6248 R	4.8	SD	BL	W	W	JA/YES	Link Seed	JA/YES
NS 5009 R	5.0	I	B	W	T	JA/YES	K2	NEE/NO
DM 5.1i RR	5.1	I	S	W	W	JA/YES	GDM Seeds	JA/YES
PHB 95 Y 20 R	5.2	D	BL	P	G	JA/YES	Pioneer	JA/YES
PAN 1583 R	5.0	D	LB	P	G	JA/YES	Pannar	JA/YES
PAN 1664 R	5.3	D	LB	P	G	JA/YES	Pannar	JA/YES
DM 5953 RSF	5.3	I	IB	P	W	JA/YES	GDM Seeds	JA/YES
LS 6453 R	5.0	SD	BL	W	T	JA/YES	Link Seed	JA/YES
PAN 1521 R	5.7	I	IB	P	G	JA/YES	Pannar	JA/YES
PAN 1500 R	5.8	I	IB	P	G	JA/YES	Pannar	JA/YES
NS 5909 R	5.9	I	IB	P	G	JA/YES	K2	NEE/NO
PHB 96 T 06 R	6.0	I	KL	W	G	JA/YES	Pannar	NEE/NO
LS 6466 R	6.0	D	B	P	G	JA/YES	Link Seed	JA/YES
PAN 1666 R	6.1	I	BL	W	B	JA/YES	Pannar	JA/YES
PAN 1623 R	6.1	I	KL	W	G	JA/YES	Pannar	JA/YES
LS 6261 R	6.0	SD	BL	P	T	JA/YES	Link Seed	JA/YES
DM 6.2i RR	6.2	I	LB	P	G	JA/YES	GDM Seeds	JA/YES
LS 6164 R	6.0	D	LB	W	G	JA/YES	Link Seed	JA/YES
LS 6161 R	6.3	D	IB	P	B	JA/YES	Link Seed	JA/YES
PAN 1614 R	6.2	I	B	W	G	JA/YES	Pannar	NEE/NO
NS 6448 R	6.4	SD	LB	P	G	JA/YES	K2	NEE/NO
DM 6.8i RR	6.8	I	B	P	G	JA/YES	GDM Seeds	JA/YES
NS 7211 R	7.2	D	LB	W	G	JA/YES	K2	NEE/NO
PAN 1729 R	7.3	I	KL	W	G	JA/YES	Pannar	JA/YES

*1	D - Bepaald/determinate	I - Onbepaald/indeterminate	SD - Semi-Bepaald/semi deteminate
*2	BL - Swart/black LB - Ligbruin/buff	IB - Onvollodig swart/imperfect black G - Grys/grey	B - Bruin/brown KL - Kleurloos/buff
*3	P - Pers/purple	W - Wit/white	
*4	B - Bruin/brown T – Geelbruin/Tawny	G - Grys/grey	W - Wit/white

Tabel 2 Algemene inligting aangaande grond en verbouiingpraktyke by die onderskeie proeflokaliteite van die kultivarproewe, 2014/15
Table 2 General information in connection with soil and cultivation practices at the different trial localities, 2014/15

Lokaliteit Locality	Plantdatum Date of planting	Grondvorm Soil type	Grond ontleding Soil analysis			Bemesting Fertilization			Spasiëring Spacing (cm)	Onkruid beheer Weed control	Koördinate van lokaliteite Co-ordinate of localities	
			pH (H_2O)	P	K	N	P	K				
Atlanta/B	03/12/14	-	-	-	-	-	-	-	45	-	S25.37851	E27.57087
Bethlehem/D	30/10/14 28/11/14	Avalon	6.51	62	125	4.2	2.52	0	90	Strongarm, Agill, Round-up, skoffel	S28.16378	E28.30721
Brits/B	02/12/14	Arcadia	7.56	12	248	0	15.2	0	75	Strongarm, Agill, Round-up, skoffel	S25.59088	E27.76057
Cedara/D	04/11/14	Hutton	5.53	12	208	0	2.1	0	45	Hammer, Metalochlor 800, skoffel	S29.54846	E30.26421
Clocolan/D	07/11/14	-	5.02	9	103	5.32	11.45	9	90	Strongarm, Agill, Round-up, skoffel	S28.90864	E27.60007
Delmas/D	04/11/14	Hutton	6.00	35	185	No fertilization done			91	Metolachlor 960, Broadstrike	S26.14488	E28.70768
Dundee/D	05/12/14	Hutton	5.35	41	278	0	3.8	0	45	Dual Gold, Basagran, Agill	S28.14398	E30.30740
Glen/B	25/11/14	Hutton	7.76	21	135	3.92	12.81	0	75	Strongarm, Agill, Round-up	S28.92912	E26.32643
Greytown/D	25/11/14	Hutton	-	-	-	-	-	-	75	-	S29.06227	E30.58662
Greytown Kranskop/D	14/11/14	Hutton	5.14	17	20	0	21	0	90	Felgan Gold, Classic	S28.96683	E30.86403
Groblersdal/B	03/12/14 17/12/14	Avalon	6.59	9	270	-	-	-	75	Strongarm, Agill, Round-up	S25.17845	E29.38762
Hoopstad	08/11/14	-	7.09	23	168	6.72	7.14	0	75	Strongarm, Agill, Round-up, skoffel	S27.89980	E25.82096
Kinross/D	12/11/14	-	5.62	52	230	2.8	2.31	-	75	Strongarm, Agill, Round-up, skoffel	S26.36788	E29.12537
Koedoeskop/B	10/12/14	-	7.36	34	395	-	-	-	75	-	S24.89571	E27.50410
Kokstad/D	04/11/14	-	4.90	14	183	-	-	-	45	Dual Gold	S30.54817	E29.41589
Kroonstad/D	24/11/14	-	-	-	-	-	-	-	90	Strongarm, Agill, Round-up, skoffel	S27.60994	E27.22540
Middelburg/D	19/11/14	-	Boer werk op globale monster			-	-	-	75	Strongarm, Agill, Round-up, skoffel	S25.68314	E29.73461
Migdol/D	07/11/14 22/12/14	-	6.13	32	180	5.32	2.52	0	90	-	S26.97137	E25.61150
Potchefstroom/B	14/11/14	Hutton	6.59	6	350	0	18.27	0	75	Strongarm, Agill, Round-up, skoffel	S26.73633	E27.05886
Potchefstroom/D	14/11/14	Hutton	5.84	32	323	0.28	2.52	0	90	Strongarm, Agill, Round-up, skoffel	S26.73633	E27.05886
Potchefstroom/D	05/12/14	Hutton	5.84	32	323	0.28	2.52	0	90	Strongarm, Agill, Round-up, skoffel	S26.73633	E27.05886
Stoffberg/D	20/11/14 19/12/14	-	5.81	14	145	0	10.61	0	75	Strongarm, Agill, Round-up, skoffel	S25.43707	E29.85423

- Inligting nie beskikbaar/information not available

Tabel 3 Reënval en besproeiing vir die verskillende lokaliteite (mm), 2014/15
Table 3 Rainfall and irrigation at the different localities (mm), 2014/15

Lokaliteit Locality	Maandelikse reënval (mm) Monthly rainfall (mm)							Totaal Total *	Besproeiing Irrigation	Totaal Total **
	Okt	Nov	Des	Jan	Feb	Mrt	Apr			
Bethlehem	12.7	186.18	102.87	134.62	29.72	145.03	27.43	638.55	0	638.55
Brits	12	110	123	80	50	40	14	429	300	729
Cedara	88	133	125	119	72	83	58	678	0	678
Delmas	62.6	90.6	25.1	81	58.8	65.8	36.6	420.5	0	420.5
Dundee	17.5	78	214.5	149	40	41.5	10.5	551	0	551
Glen	13	181	79	88	36	74	22	493	416	909
Greytown Kranskop	48	66	73	133	132	43	27	522	0	522
Groblersdal	49	56.5	168.5	215	56	45	8	598	315	913
Kokstad	86.5	101	83.6	96	139.5	65.7	59.5	631.8	0	631.8
Middelburg	54.86	131.83	267.72	100.84	103.38	113.54	11.94	784.11	0	784.11
Potchefstroom B	14.48	90.17	114.55	139.19	55.63	104.65	28.96	547.63	420	967.63
Potchefstroom Drg PD1	14.48	90.17	114.55	139.19	55.63	104.65	28.96	547.63	0	547.63
Potchefstroom Drg PD2	14.48	90.17	114.55	139.19	55.63	104.65	28.96	547.63	0	547.63

* Vir reënval/For rainfall
* Vir reënval en besproeiing/For rainfall and irrigation

Tabel 4 Die aantal dae vanaf plant tot 50% blomstadium van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 4 The number of days from planting to 50% flowering stage of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate								Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Gem/Mean
LS 6240 R	56	60	57	57	62	55	58	56	44	51	34	49	50	43	47	32	37	35
LS 6444 R	49	61	57	55	62	49	56	56	42	52	34	48	48	41	46	33	37	35
PAN 1454 R	50	62	58	64	62	49	58	56	44	54	48	48	47	39	48	33	37	35
LS 6146 R	51	59	61	55	62	49	56	56	42	51	34	48	46	42	46	32	37	35
PHB 94 Y 80 R	55	61	64	64	62	55	60	56	49	51	34	51	51	45	48	34	39	37
LS 6248 R	68	83	78	77	90	71	78	69	65	68	53	66	62	53	62	35	48	42
NS 5009 R	55	63	59	64	62	55	60	60	42	52	34	52	51	40	47	34	37	36
DM 5.1i RR	50	57	58	55	62	49	55	56	42	51	50	49	46	40	48	34	37	36
PHB 95 Y 20 R	72	86	84	81	94	76	82	69	71	69	34	64	67	64	63	37	50	44
PAN 1583 R	69	84	78	77	87	70	78	69	63	59	50	61	60	53	59	36	47	42
PAN 1664 R	60	85	79	77	87	69	76	69	62	59	50	61	60	52	59	36	47	42
DM 5953 RSF	55	61	66	64	62	55	61	56	47	52	45	50	48	42	49	34	37	36
LS 6453 R	67	78	78	77	85	69	76	69	62	59	53	62	60	51	59	41	47	44
PAN 1521 R	69	87	79	78	90	76	80	69	65	68	55	64	65	60	64	40	49	45
PAN 1500 R	66	86	83	79	90	76	80	69	71	70	55	65	65	60	65	44	49	46
NS 5909 R	60	86	86	83	90	76	80	60	74	59	55	66	66	62	63	45	50	48
PHB 96 T 06 R	73	82	85	83	90	76	81	69	74	69	42	66	68	62	64	42	45	44
LS 6466 R	69	83	83	77	85	71	78	69	65	70	57	64	65	56	64	42	51	46
PAN 1666 R	69	83	82	77	87	70	78	69	71	68	57	65	65	58	65	44	49	47
PAN 1623 R	67	83	82	77	90	76	79	69	68	70	50	65	65	61	64	45	49	47
LS 6261 R	69	77	79	77	94	69	78	65	65	67	50	65	61	51	60	40	45	43
DM 6.2i RR	70	83	83	77	87	76	79	69	69	70	50	65	63	50	62	46	49	48
LS 6164 R	65	83	78	77	87	76	78	69	65	67	53	63	63	53	62	42	47	45
LS 6161 R	67	87	79	83	90	76	80	69	69	69	52	64	65	54	63	42	48	45
PAN 1614 R	74	84	83	81	90	85	83	69	69	68	57	66	67	62	65	46	49	48
NS 6448 R	71	87	83	77	90	85	82	69	65	70	45	62	65	62	63	-	49	49
DM 6.8i RR	71	82	83	78	92	85	82	69	75	70	48	66	64	57	64	47	48	47
NS 7211 R	71	83	84	77	92	76	81	69	69	70	50	65	66	60	64	47	48	48
PAN 1729 R	75	89	87	83	101	85	87	74	75	71	57	71	73	64	69	46	53	50
Standaard	68	83	82	77	90	69	78	69	69	71	52	63	64	62	64	47	50	49
Gem/Mean	64	78	76	74	82	69	74	65	62	63	48	60	60	53	59	40	46	43

Tabel 5 Die aantal dae vanaf plant tot fisiologiesrypstadium van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 5 The number of days from planting to physiological maturity of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate									Warm	
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Gem/Mean
LS 6240 R	112	124	154	125	134	88	123	143	89	120	109	81	116	116	111	111	101	101
LS 6444 R	109	124	132	125	132	117	123	143	88	118	109	81	125	116	111	111	93	93
PAN 1454 R	109	130	146	128	134	119	128	149	93	120	112	100	124	116	108	115	135	135
LS 6146 R	109	124	131	125	134	117	123	145	90	118	109	105	124	116	111	115	98	98
PHB 94 Y 80 R	109	129	134	125	132	117	124	144	92	116	109	81	116	116	111	111	98	98
LS 6248 R	126	146	160	140	156	132	143	151	98	130	129	115	125	129	124	125	107	107
NS 5009 R	112	126	135	125	134	117	125	143	90	118	112	81	124	116	108	112	98	98
DM 5.1i RR	112	124	136	125	134	117	125	142	90	120	109	100	124	116	108	114	98	98
PHB 95 Y 20 R	138	158	171	154	158	117	149	156	96	130	143	118	132	145	124	131	118	118
PAN 1583 R	126	158	164	154	154	146	150	151	98	130	143	118	136	116	124	127	107	107
PAN 1664 R	137	154	162	154	152	146	151	152	100	130	143	109	138	116	124	127	107	107
DM 5953 RSF	112	130	133	125	132	117	125	148	91	120	112	100	116	116	111	114	98	98
LS 6453 R	109	144	156	140	154	132	139	153	96	125	143	115	124	124	124	125	107	107
PAN 1521 R	124	144	162	142	156	132	143	155	97	131	129	112	132	132	124	127	101	101
PAN 1500 R	138	154	158	154	154	146	151	154	98	130	131	119	138	132	124	128	107	107
NS 5909 R	137	158	161	154	156	146	152	163	98	135	143	114	138	132	128	131	135	135
PHB 96 T 06 R	138	158	166	154	158	146	153	164	98	139	143	109	132	145	120	131	107	107
LS 6466 R	126	158	164	154	156	146	151	156	98	125	112	117	136	141	124	126	135	135
PAN 1666 R	138	116	166	142	156	135	142	156	98	130	127	115	132	132	124	127	108	108
PAN 1623 R	109	146	163	140	163	132	142	158	98	125	127	109	136	145	124	128	118	118
LS 6261 R	124	146	161	140	160	132	144	158	98	130	116	111	136	132	124	126	98	98
DM 6.2i RR	126	144	164	154	158	132	146	158	97	127	129	111	141	132	124	127	118	118
LS 6164 R	138	144	169	142	158	146	150	159	97	137	133	115	138	132	124	129	107	107
LS 6161 R	138	158	162	154	154	146	152	160	98	127	143	115	132	145	124	131	135	135
PAN 1614 R	138	154	171	154	158	132	151	159	96	133	143	112	136	143	124	131	118	118
NS 6448 R	124	158	163	154	160	146	151	143	98	136	143	112	132	145	120	129	135	135
DM 6.8i RR	124	158	164	140	164	156	151	165	99	139	143	103	136	145	136	133	135	135
NS 7211 R	138	130	161	154	163	146	149	162	96	136	143	109	141	145	128	132	135	135
PAN 1729 R	138	130	164	154	165	132	147	165	98	141	143	115	138	145	136	135	135	135
Standaard	124	158	162	140	156	135	146	158	97	131	127	113	132	141	124	128	101	101
Gem/Mean	125	143	157	142	151	132	142	154	96	128	129	107	131	131	121	125	113	113

Tabel 6 Die aantal dae vanaf plant tot oesstadium van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 6 The number of days from planting to maturity of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	124	144	157	140	146	132	141	171	113	135	131	129	112	129	124	133	131	124	126	125
LS 6444 R	124	144	157	140	146	132	141	171	131	135	130	129	112	129	131	119	132	107	129	118
PAN 1454 R	129	144	168	140	146	137	144	171	128	135	130	129	112	127	124	128	132	124	129	126
LS 6146 R	124	144	157	140	146	132	141	171	120	135	130	129	118	127	143	114	132	114	140	127
PHB 94 Y 80 R	124	144	147	140	146	132	139	171	124	135	130	129	112	127	124	133	132	129	126	128
LS 6248 R	145	177	178	154	176	153	164	171	129	155	149	143	123	153	146	137	145	147	149	148
NS 5009 R	124	144	157	140	146	132	141	171	115	135	131	129	123	132	131	133	133	118	147	133
DM 5.1i RR	124	144	157	140	146	132	141	171	122	135	131	129	112	134	131	133	133	118	129	123
PHB 95 Y 20 R	159	178	178	165	185	160	171	178	129	170	151	162	139	149	154	137	152	153	147	150
PAN 1583 R	159	178	178	165	176	153	168	171	135	163	149	162	129	157	150	137	150	135	144	140
PAN 1664 R	159	178	178	165	157	160	166	171	129	163	149	162	123	149	150	137	148	135	156	145
DM 5953 RSF	138	144	157	147	146	137	145	171	120	135	130	129	114	132	124	133	132	124	131	128
LS 6453 R	138	158	178	154	157	141	154	171	129	148	149	143	129	145	150	137	145	124	138	131
PAN 1521 R	152	178	178	154	176	146	164	171	132	170	149	143	129	145	154	137	148	129	147	138
PAN 1500 R	159	178	178	165	176	153	168	174	132	163	151	162	134	157	154	137	152	141	160	151
NS 5909 R	159	178	178	175	176	167	172	181	135	170	152	162	129	157	154	137	153	153	160	157
PHB 96 T 06 R	159	178	168	175	176	167	170	181	138	170	151	162	129	157	154	137	153	147	138	143
LS 6466 R	159	178	178	175	176	167	172	171	132	163	151	143	126	157	154	137	148	153	147	150
PAN 1666 R	159	178	178	175	176	160	171	174	135	153	149	143	129	153	158	137	148	147	144	146
PAN 1623 R	159	178	178	165	176	153	168	174	132	148	151	149	129	153	154	137	148	141	151	146
LS 6261 R	145	178	178	154	176	146	163	174	129	155	152	143	129	149	150	137	147	124	156	140
DM 6.2i RR	159	178	178	175	176	153	170	174	138	170	151	162	134	157	158	137	153	147	160	154
LS 6164 R	159	178	178	175	176	160	171	171	132	160	152	162	129	157	154	137	150	147	143	145
LS 6161 R	159	178	178	165	157	167	167	178	135	163	151	156	129	157	150	137	151	141	138	140
PAN 1614 R	159	178	178	165	176	160	169	181	130	170	152	156	129	153	154	137	151	129	156	143
NS 6448 R	159	178	178	175	176	160	171	171	132	170	152	162	129	157	158	138	152	147	156	151
DM 6.8i RR	159	178	178	175	185	167	174	181	138	170	151	162	144	157	158	151	157	153	156	154
NS 7211 R	159	178	178	175	185	167	174	181	140	160	152	162	139	157	158	145	155	153	156	154
PAN 1729 R	159	178	178	175	185	167	174	181	138	170	151	162	144	157	158	151	157	153	156	154
Standaard	152	178	178	154	176	167	168	171	129	155	149	162	129	145	146	137	147	129	151	140
Gem/Mean	148	168	172	160	167	152	161	174	130	155	145	149	127	147	147	136	146	136	145	141

Tabel 7 Die planthoogte (cm) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 7 The plant height (cm) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	65	63	79	70	70	67	69	42	62	63	53	70	38	68	61	62	58	68	50	59
LS 6444 R	53	63	71	68	64	73	65	42	65	68	45	58	44	68	65	58	57	67	53	60
PAN 1454 R	82	85	96	84	90	83	87	57	78	87	55	85	51	85	73	73	72	83	65	74
LS 6146 R	83	72	84	85	90	75	82	52	66	80	53	78	49	82	65	78	67	73	56	65
PHB 94 Y 80 R	63	63	78	63	65	65	66	48	60	72	45	60	43	75	62	63	59	78	58	68
LS 6248 R	82	63	114	74	105	81	87	59	56	82	60	87	54	83	73	79	70	86	58	72
NS 5009 R	65	63	76	70	72	60	68	46	59	68	50	65	48	73	67	69	61	72	56	64
DM 5.1i RR	65	57	76	55	74	57	64	38	59	75	40	62	40	80	63	70	59	77	64	71
PHB 95 Y 20 R	80	70	89	80	105	80	84	39	69	87	80	60	53	83	80	80	70	75	61	68
PAN 1583 R	67	77	109	59	100	83	82	37	66	78	72	52	37	83	70	69	63	72	51	61
PAN 1664 R	65	68	85	75	90	67	75	35	63	77	65	45	38	73	69	72	60	72	49	60
DM 5953 RSF	70	68	82	60	65	67	69	48	57	85	53	68	42	77	66	67	63	85	64	74
LS 6453 R	73	70	100	78	110	77	85	58	62	82	62	78	48	78	68	70	67	78	62	70
PAN 1521 R	77	67	100	72	95	79	82	66	65	98	72	80	47	85	68	80	73	93	63	78
PAN 1500 R	72	72	98	77	90	78	81	50	57	92	70	63	42	75	73	69	66	82	44	63
NS 5909 R	82	78	110	60	95	88	86	56	59	95	65	65	52	91	77	80	71	88	66	77
PHB 96 T 06 R	80	80	113	78	120	87	93	54	65	88	75	70	57	89	74	87	73	83	64	74
LS 6466 R	80	82	126	85	125	87	98	69	68	100	80	90	40	95	85	85	79	98	78	88
PAN 1666 R	80	73	120	76	115	93	93	60	63	88	68	88	44	95	68	65	71	81	68	75
PAN 1623 R	83	77	109	72	95	81	86	62	53	98	70	83	43	89	69	78	72	85	63	74
LS 6261 R	60	60	92	45	85	69	69	47	45	75	60	60	45	68	67	61	59	63	50	57
DM 6.2i RR	77	73	102	78	100	80	85	54	71	95	70	70	53	91	69	76	72	93	61	77
LS 6164 R	75	75	122	73	120	83	91	56	63	98	75	67	50	90	81	74	73	97	62	79
LS 6161 R	75	65	106	74	110	82	85	62	48	95	70	77	52	78	70	74	70	87	60	73
PAN 1614 R	95	80	116	73	105	81	92	64	67	103	80	73	52	86	75	81	76	83	63	73
NS 6448 R	85	67	107	63	100	73	82	41	55	90	80	67	50	79	68	85	68	82	53	68
DM 6.8i RR	90	98	133	85	140	93	106	71	70	112	70	87	57	104	82	98	83	102	81	92
NS 7211 R	68	68	93	80	100	72	80	41	68	87	80	63	48	80	79	82	70	88	48	68
PAN 1729 R	95	83	123	73	110	87	95	61	71	100	85	75	58	93	88	97	81	95	56	75
Standaard	77	70	111	82	90	80	85	58	60	103	67	72	57	92	77	68	73	98	71	85
Gem/Mean	75	72	101	72	97	78	82	52	62	87	66	71	48	83	72	75	68	83	60	71

Tabel 8 Die peulhoogte (cm) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 8 The pod height (cm) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	9	8	11	9	7	8	9	5	4	10	8	9	5	9	10	8	8	8	2	5
LS 6444 R	5	8	7	8	4	7	6	6	6	9	5	5	6	7	7	6	6	9	3	6
PAN 1454 R	12	14	12	9	5	9	10	9	11	11	5	13	5	13	8	9	9	10	4	7
LS 6146 R	10	10	10	11	5	7	9	6	5	12	5	12	6	9	8	10	8	7	2	5
PHB 94 Y 80 R	9	7	11	8	4	8	8	5	4	9	6	6	5	10	8	7	7	9	4	6
LS 6248 R	12	9	17	11	5	10	11	10	17	13	14	11	7	10	10	11	11	10	3	7
NS 5009 R	8	8	9	9	3	9	8	6	3	9	10	9	4	9	9	8	7	8	4	6
DM 5.1i RR	8	6	9	9	5	8	8	5	7	31	4	9	7	8	7	8	10	8	3	6
PHB 95 Y 20 R	11	10	14	11	6	10	10	8	23	16	25	7	8	11	9	8	13	9	3	6
PAN 1583 R	8	10	20	9	4	9	10	8	20	11	16	2	2	10	6	9	9	9	3	6
PAN 1664 R	7	9	13	8	7	9	9	7	20	12	16	1	3	9	7	8	9	9	3	6
DM 5953 RSF	10	8	8	9	4	8	8	6	8	12	7	8	4	11	7	9	8	8	2	5
LS 6453 R	9	10	10	11	3	10	9	8	14	12	12	9	6	10	9	9	10	9	4	7
PAN 1521 R	9	9	17	9	5	9	10	10	18	17	18	10	9	9	9	8	12	13	4	8
PAN 1500 R	9	10	15	9	6	9	10	10	17	16	15	8	4	8	10	8	11	10	3	7
NS 5909 R	10	12	18	8	6	12	11	10	18	19	15	8	7	11	9	11	12	7	4	6
PHB 96 T 06 R	8	12	11	8	6	7	9	8	17	13	15	9	9	11	9	8	11	8	4	6
LS 6466 R	10	12	12	7	6	9	9	11	22	16	15	11	5	12	12	12	13	12	4	8
PAN 1666 R	9	9	18	8	6	12	10	10	16	15	15	12	6	12	8	8	11	10	4	7
PAN 1623 R	10	10	9	10	6	9	9	8	18	13	15	9	5	10	8	10	11	10	3	6
LS 6261 R	6	7	10	7	5	9	7	8	17	12	14	8	6	10	10	9	10	12	3	8
DM 6.2i RR	11	9	8	9	6	11	9	9	20	15	15	9	8	12	10	10	12	9	4	6
LS 6164 R	10	12	29	10	4	11	13	8	20	16	15	8	7	9	10	9	11	10	4	7
LS 6161 R	9	7	10	10	5	11	9	10	16	14	15	10	8	8	9	11	11	10	3	7
PAN 1614 R	13	12	20	8	8	10	12	9	20	18	23	9	8	8	11	10	13	14	4	9
NS 6448 R	9	9	22	8	7	10	11	6	17	16	25	9	8	10	10	10	12	9	4	6
DM 6.8i RR	13	15	17	8	8	9	12	13	15	18	14	10	5	13	9	10	12	7	4	6
NS 7211 R	9	9	10	9	7	8	9	8	22	15	11	7	6	10	10	10	11	9	3	6
PAN 1729 R	13	12	20	8	7	11	12	8	20	17	20	10	6	9	11	10	12	9	4	7
Standaard	10	9	19	11	6	9	11	8	15	15	14	9	9	10	8	10	11	15	4	10
Gem/Mean	10	10	14	9	5	9	9	8	15	14	14	9	6	10	9	9	10	10	3	7

Tabel 9 Omvalwaarnemings (1-5) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15
Tablle 9 Lodging dat (1-5) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool						Matig/Moderate									Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Kroonstad	Migdol	Potchefstroom Bespr	Potchestroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	1.00	1.00	1.67	1.00	1.00	1.13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6444 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1454 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6146 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHB 94 Y 80 R	1.00	1.00	2.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6248 R	1.00	1.00	4.67	1.00	1.00	1.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NS 5009 R	1.00	1.00	1.33	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DM 5.1i RR	1.00	1.00	2.67	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHB 95 Y 20 R	1.00	1.00	3.33	1.00	1.00	1.47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1583 R	1.00	1.00	1.67	1.00	1.00	1.13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1664 R	1.00	1.00	1.67	1.50	1.00	1.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DM 5953 RSF	1.00	1.00	2.67	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6453 R	1.00	1.00	3.67	1.00	1.00	1.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1521 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.13	1.00	1.00	1.00
PAN 1500 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NS 5909 R	1.00	1.00	3.33	1.00	1.00	1.47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHB 96 T 06 R	1.00	1.00	2.67	1.00	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00
LS 6466 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00
PAN 1666 R	1.00	1.00	2.67	1.50	1.00	1.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1623 R	1.00	1.00	5.00	1.00	1.00	1.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6261 R	1.00	1.00	2.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DM 6.2i RR	1.00	1.00	5.00	1.00	1.00	1.80	1.00	1.00	1.67	1.00	1.00	1.00	1.00	1.00	1.08	1.00	1.00	1.00
LS 6164 R	1.00	1.00	5.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LS 6161 R	1.00	1.00	3.33	1.50	1.00	1.57	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1614 R	1.00	1.00	2.67	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NS 6448 R	1.00	1.00	2.33	1.50	1.00	1.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DM 6.8i RR	1.00	1.00	5.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NS 7211 R	1.00	1.00	2.33	1.50	1.00	1.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PAN 1729 R	1.00	1.00	3.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standaard	1.00	1.00	4.00	1.00	1.00	1.60	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00
Gem/Mean	1.00	1.00	2.86	1.17	1.00	1.40	1.00	1.00	1.09	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00

Tabel 10 Groenstam (1-5) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 10 Greenstem (1-5) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool						Matig/Moderate									Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	1.67	2.33	1.00	1.67	1.67	1.67	1.00	1.00	2.33	2.33	1.33	1.67	2.33	3.33	1.92	1.00	1.33	1.17
LS 6444 R	1.00	2.33	1.00	3.00	1.00	1.67	1.00	1.00	1.00	2.33	1.00	2.00	2.33	3.67	1.79	1.67	3.67	2.67
PAN 1454 R	1.33	3.00	1.33	1.67	2.67	2.00	1.00	1.00	1.00	2.67	1.00	4.00	2.33	3.33	2.04	3.00	5.00	4.00
LS 6146 R	1.33	1.67	1.00	2.33	1.00	1.47	1.00	1.00	1.00	1.67	1.33	3.33	2.00	2.00	1.67	1.67	2.33	2.00
PHB 94 Y 80 R	1.33	2.67	2.67	3.33	2.00	2.40	1.33	1.00	1.00	4.00	1.00	3.33	2.67	4.67	2.38	3.33	5.00	4.17
LS 6248 R	1.67	1.00	1.00	3.67	1.33	1.73	1.00	1.00	1.67	3.33	1.67	5.00	4.33	3.33	2.67	3.33	5.00	4.17
NS 5009 R	2.00	3.00	1.67	3.33	2.33	2.47	1.67	1.00	3.00	2.33	1.00	4.00	4.33	5.00	2.79	1.33	5.00	3.17
DM 5.1i RR	1.33	2.67	1.00	3.00	2.00	2.00	1.00	1.00	3.00	2.67	1.00	3.33	3.33	4.67	2.50	1.33	5.00	3.17
PHB 95 Y 20 R	1.00	1.00	1.00	2.33	2.00	1.47	1.00	1.00	2.33	2.33	3.00	3.67	4.67	3.33	2.67	4.67	3.67	4.17
PAN 1583 R	1.00	1.00	1.00	3.33	2.00	1.67	1.00	1.00	1.33	3.33	1.67	5.00	4.33	3.00	2.58	2.33	5.00	3.67
PAN 1664 R	1.00	1.00	1.00	3.00	1.33	1.47	1.33	1.00	1.33	3.67	1.67	4.00	4.67	3.33	2.63	2.00	2.67	2.33
DM 5953 RSF	1.00	3.00	1.00	2.67	1.33	1.80	1.00	1.00	1.67	2.00	1.00	3.67	2.67	4.33	2.17	1.33	5.00	3.17
LS 6453 R	1.67	3.00	1.00	3.00	1.67	2.07	1.00	1.00	2.67	2.67	1.00	3.67	4.00	3.67	2.46	2.33	2.67	2.50
PAN 1521 R	1.00	1.33	1.00	2.33	1.33	1.40	1.00	1.00	2.67	3.33	1.33	4.67	5.00	2.33	2.67	2.33	5.00	3.67
PAN 1500 R	1.00	1.00	1.00	3.67	2.67	1.87	1.00	1.00	3.67	3.00	2.00	4.67	5.00	4.67	3.13	3.00	5.00	4.00
NS 5909 R	1.00	1.67	1.00	3.33	3.67	2.13	1.00	1.00	2.67	2.00	2.33	5.00	5.00	4.00	2.88	4.67	5.00	4.83
PHB 96 T 06 R	1.00	1.00	1.33	3.33	1.67	1.67	1.00	1.00	2.67	1.67	1.67	4.67	4.67	3.67	2.63	2.33	5.00	3.67
LS 6466 R	1.00	1.00	1.00	3.67	2.67	1.87	1.00	1.00	1.67	4.00	1.67	4.67	4.67	4.00	2.83	5.00	3.67	4.33
PAN 1666 R	1.00	1.67	1.00	4.00	2.00	1.93	1.00	1.00	1.33	3.67	1.67	5.00	5.00	5.00	2.96	4.33	5.00	4.67
PAN 1623 R	1.00	1.00	1.00	2.67	3.00	1.73	1.00	1.00	1.33	3.33	1.33	5.00	5.00	4.67	2.83	2.67	5.00	3.83
LS 6261 R	1.67	1.00	1.00	3.33	2.00	1.80	1.00	1.00	2.33	3.67	1.00	4.67	5.00	4.00	2.83	2.33	5.00	3.67
DM 6.2i RR	1.00	1.33	1.00	1.33	3.00	1.53	1.00	1.00	3.33	3.67	1.67	5.00	5.00	4.67	3.17	4.00	5.00	4.50
LS 6164 R	1.00	1.33	1.00	2.67	3.33	1.87	1.00	1.00	3.33	2.00	1.00	4.67	4.33	3.33	2.58	3.67	3.67	3.67
LS 6161 R	1.00	1.00	1.00	2.67	1.00	1.33	1.00	1.00	3.33	2.00	1.67	5.00	4.67	4.67	2.92	3.67	3.67	3.67
PAN 1614 R	1.00	1.33	1.00	1.67	3.67	1.73	1.00	1.00	2.33	2.33	1.33	5.00	5.00	4.67	2.83	2.67	2.67	2.67
NS 6448 R	1.00	1.67	1.00	2.67	1.33	1.53	1.00	1.00	2.33	1.67	1.33	4.33	4.67	3.00	2.42	3.33	4.00	3.67
DM 6.8i RR	1.67	1.67	1.00	1.67	3.67	1.93	1.00	1.00	1.33	2.67	2.00	4.67	4.67	4.00	2.67	4.33	4.00	4.17
NS 7211 R	1.00	1.33	1.00	1.33	3.33	1.60	1.00	1.00	2.00	2.67	2.00	5.00	5.00	3.33	2.75	4.00	3.67	3.83
PAN 1729 R	1.00	1.67	1.33	2.33	3.00	1.87	1.00	1.00	3.33	1.67	1.00	4.33	4.67	3.00	2.50	5.00	3.67	4.33
Standaard	1.00	1.00	1.00	1.00	1.33	1.07	1.00	1.00	3.00	1.00	1.00	3.33	4.00	3.67	2.25	2.00	4.00	3.00
Gem/Mean	1.19	1.66	1.11	2.67	2.17	1.76	1.04	1.00	2.20	2.66	1.46	4.21	4.18	3.81	2.57	2.96	4.14	3.55

Tabel 11 Oopspring (1-5) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 11 Shattering (1-5) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool					Matig/Moderate						Warm	
Kultivar Cultivar	Bethlehem	Clocolan	Kinross	Middelburg	Gem/Mean	Glen	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Gem/Mean
LS 6240 R	4.00	2.00	1.00	1.00	2.00	1.33	5.00	5.00	4.00	4.00	3.87	1.00	1.00
LS 6444 R	5.00	5.00	2.00	2.00	3.50	1.67	5.00	5.00	5.00	5.00	4.33	2.00	2.00
PAN 1454 R	4.00	3.00	1.00	1.00	2.25	2.00	5.00	5.00	5.00	5.00	4.40	1.00	1.00
LS 6146 R	1.00	3.00	1.00	1.00	1.50	1.00	4.00	5.00	5.00	4.00	3.80	1.00	1.00
PHB 94 Y 80 R	3.00	5.00	1.00	1.00	2.50	1.67	5.00	5.00	5.00	5.00	4.33	1.00	1.00
LS 6248 R	5.00	2.00	1.00	1.00	2.25	1.67	5.00	5.00	5.00	5.00	4.33	1.00	1.00
NS 5009 R	5.00	1.00	1.00	1.00	2.00	1.00	5.00	5.00	5.00	4.00	4.00	1.00	1.00
DM 5.1i RR	5.00	5.00	2.00	1.00	3.25	3.00	5.00	5.00	5.00	5.00	4.60	1.00	1.00
PHB 95 Y 20 R	1.00	1.00	1.00	1.00	1.00	1.00	4.00	5.00	2.00	1.00	2.60	1.00	1.00
PAN 1583 R	1.00	1.00	1.00	1.00	1.00	1.00	5.00	2.00	3.00	2.00	2.60	2.00	2.00
PAN 1664 R	1.00	1.00	1.00	1.00	1.00	1.00	5.00	2.00	5.00	4.00	3.40	1.00	1.00
DM 5953 RSF	2.00	2.00	1.00	1.00	1.50	1.00	5.00	4.00	4.00	5.00	3.80	1.00	1.00
LS 6453 R	5.00	1.00	3.00	1.00	2.50	1.00	4.00	4.00	5.00	5.00	3.80	2.00	2.00
PAN 1521 R	1.00	3.00	1.00	1.00	1.50	1.00	1.00	1.00	2.00	2.00	1.40	1.00	1.00
PAN 1500 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	4.00	2.00	2.00	2.00	1.00	1.00
NS 5909 R	1.00	1.00	1.00	1.00	1.00	1.00	4.00	4.00	5.00	2.00	3.20	1.00	1.00
PHB 96 T 06 R	1.00	1.00	1.00	1.00	1.00	1.00	2.00	4.00	3.00	1.00	2.20	1.00	1.00
LS 6466 R	3.00	3.00	1.00	1.00	2.00	1.33	5.00	5.00	5.00	5.00	4.27	1.00	1.00
PAN 1666 R	1.00	5.00	1.00	1.00	2.00	1.00	3.00	3.00	3.00	4.00	2.80	1.00	1.00
PAN 1623 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	2.00	1.60	1.00	1.00
LS 6261 R	5.00	4.00	1.00	2.00	3.00	1.33	4.00	5.00	5.00	5.00	4.07	2.00	2.00
DM 6.2i RR	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	1.00	1.60	1.00	1.00
LS 6164 R	1.00	1.00	1.00	1.00	1.00	1.00	3.00	5.00	5.00	5.00	3.80	1.00	1.00
LS 6161 R	1.00	3.00	1.00	1.00	1.50	2.00	3.00	4.00	5.00	5.00	3.80	1.00	1.00
PAN 1614 R	1.00	1.00	1.00	1.00	1.00	1.33	4.00	2.00	2.00	1.00	2.07	1.00	1.00
NS 6448 R	1.00	1.00	1.00	1.00	1.00	1.67	5.00	5.00	5.00	2.00	3.73	1.00	1.00
DM 6.8i RR	1.00	1.00	1.00	1.00	1.00	1.00	5.00	2.00	3.00	1.00	2.40	1.00	1.00
NS 7211 R	4.00	3.00	1.00	1.00	2.25	1.00	5.00	5.00	5.00	3.00	3.80	1.00	1.00
PAN 1729 R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.00	1.00	1.00	1.80	1.00	1.00
Standaard	1.00	3.00	1.00	1.00	1.50	1.00	1.00	3.00	3.00	2.00	2.00	1.00	1.00
Gem/Mean	2.27	2.20	1.13	1.07	1.67	1.27	3.70	3.90	3.93	3.27	3.21	1.13	1.13

Tabel 12 Die planttelling (x 1000) van die verskillende sojaboonkultivars by die verskillende proeflokaliteite, 2014/15

Table 12 The number of plants (x 1000) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm		
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Brits	Groblersdal	Gem/Mean
LS 6240 R	203	207	191	290	243	266	233	176	164	281	315	208	111	232	128	214	203	264	75	170
LS 6444 R	202	200	234	289	220	307	242	143	198	299	311	192	144	254	185	219	216	286	113	199
PAN 1454 R	201	228	228	266	281	240	241	192	221	311	330	223	156	233	171	235	230	292	87	189
LS 6146 R	230	209	212	294	231	299	246	196	198	284	319	211	143	236	193	234	224	236	105	170
PHB 94 Y 80 R	218	219	232	249	265	306	248	203	190	285	307	231	166	263	140	235	224	282	86	184
LS 6248 R	200	213	228	264	256	287	241	184	232	228	315	231	162	286	224	260	236	251	138	194
NS 5009 R	209	219	198	263	241	297	238	220	170	249	330	199	117	213	175	234	212	269	94	182
DM 5.1i RR	203	214	168	140	204	287	203	124	165	293	267	209	165	273	169	210	208	261	111	186
PHB 95 Y 20 R	207	215	240	271	224	289	241	155	170	222	315	193	161	281	222	234	217	192	141	166
PAN 1583 R	207	181	226	267	243	266	231	152	182	223	285	204	175	299	232	246	222	240	106	173
PAN 1664 R	219	213	207	275	206	234	225	135	208	219	293	184	129	325	235	243	219	227	113	170
DM 5953 RSF	230	225	211	266	264	268	244	158	186	339	385	217	190	272	172	243	240	288	88	188
LS 6453 R	201	223	233	279	231	298	244	169	188	256	311	225	134	272	231	213	222	251	99	175
PAN 1521 R	194	235	230	260	260	292	245	190	198	212	330	203	194	286	217	258	232	299	106	203
PAN 1500 R	188	242	277	265	271	274	253	173	194	240	356	210	128	283	230	245	229	261	67	164
NS 5909 R	247	243	204	259	264	286	251	115	174	268	333	181	161	307	230	240	223	273	147	210
PHB 96 T 06 R	194	203	193	274	181	266	218	115	156	186	267	206	128	268	226	215	196	271	61	166
LS 6466 R	213	223	200	247	271	272	238	169	199	257	352	255	153	298	235	266	243	316	119	218
PAN 1666 R	238	217	186	275	217	266	233	146	181	200	341	213	135	294	244	239	222	227	101	164
PAN 1623 R	196	234	190	272	257	269	236	170	200	223	374	199	133	287	242	249	231	275	100	188
LS 6261 R	182	212	226	125	243	238	204	148	187	226	393	217	180	278	234	226	232	272	138	205
DM 6.2i RR	231	221	228	287	275	283	254	131	183	263	300	181	126	306	231	229	217	293	128	211
LS 6164 R	214	210	334	228	277	277	257	157	206	213	370	180	180	291	231	240	230	276	93	185
LS 6161 R	180	193	172	283	215	266	218	152	189	294	319	210	153	266	217	233	226	256	93	175
PAN 1614 R	233	245	242	271	272	283	258	132	207	229	404	201	197	297	225	220	235	278	118	198
NS 6448 R	226	239	245	252	271	254	248	150	163	229	404	211	202	297	223	263	238	296	158	227
DM 6.8i RR	242	255	232	282	265	278	259	187	143	242	304	184	152	299	219	240	219	249	97	173
NS 7211 R	237	224	245	273	289	237	251	193	187	242	367	214	124	288	240	230	232	295	107	201
PAN 1729 R	212	240	356	208	241	277	256	141	173	229	374	213	125	281	240	231	223	274	86	180
Standaard	227	213	259	209	241	220	228	135	197	227	341	201	197	291	246	220	228	279	116	198
Gem/Mean	213	220	228	256	247	273	239	160	187	249	334	207	154	279	214	235	224	268	106	187

*Groblersdal se ondergemiddelde syfers kan toegeskryf word aan 'n baie laat aanplanting in Desember en lae plantestand.

*Below average figures for Groblersdal due to late planting and low plant population.

Tabel 13 Persentasie ongewenste sade van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 13 Percentage undesirable seed of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm			
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	0.70	1.50	0.00	0.00	0.00	0.80	0.50	0.00	1.50	0.40	0.70	2.00	0.80	1.00	1.30	1.40	1.01	0.30	1.60	0.50	0.80
LS 6444 R	1.40	1.90	0.00	0.70	0.10	0.30	0.73	0.00	1.90	0.10	1.00	1.10	0.30	1.40	0.90	0.80	0.83	0.60	1.40	0.10	0.70
PAN 1454 R	1.00	1.10	0.30	0.30	0.00	0.20	0.48	0.23	1.19	1.20	1.00	1.90	1.00	0.40	2.00	1.20	1.12	0.50	0.70	0.50	0.57
LS 6146 R	0.90	1.50	0.20	1.00	0.00	0.30	0.65	0.09	0.70	0.50	0.80	2.10	0.90	2.00	2.50	1.10	1.19	0.30	0.60	1.30	0.73
PHB 94 Y 80 R	0.30	0.60	0.10	0.80	0.00	0.50	0.38	0.00	1.20	0.30	0.50	1.80	0.90	1.10	2.70	2.10	1.18	0.90	1.30	0.60	0.93
LS 6248 R	0.10	0.80	0.70	0.20	0.50	0.20	0.42	0.00	2.80	0.50	0.00	0.60	0.60	0.60	1.80	0.60	0.83	0.50	3.50	1.80	1.93
NS 5009 R	0.70	0.30	0.20	0.00	0.10	0.30	0.27	0.00	0.70	0.90	0.80	1.70	0.40	1.10	0.90	2.20	0.97	0.70	0.80	0.60	0.70
DM 5.1i RR	1.30	1.50	0.00	0.00	0.00	0.10	0.48	0.30	0.40	0.90	1.90	1.50	0.70	1.60	1.30	0.30	0.99	0.50	0.60	1.80	0.97
PHB 95 Y 20 R	0.40	0.80	0.40	0.30	0.30	0.80	0.50	0.45	0.80	1.20	0.90	0.20	0.20	1.40	1.10	0.20	0.72	0.90	2.10	1.10	1.37
PAN 1583 R	0.30	0.20	0.40	1.20	0.60	0.10	0.47	0.00	1.20	0.80	1.20	0.30	0.50	0.40	1.90	0.60	0.77	1.00	0.70	0.80	0.83
PAN 1664 R	0.30	0.70	0.10	0.60	1.90	0.60	0.70	0.00	0.40	1.50	0.50	0.90	0.40	0.40	3.10	0.00	0.80	1.00	0.70	1.50	1.07
DM 5953 RSF	0.70	0.90	0.30	1.40	0.50	0.30	0.68	0.15	1.00	0.30	1.30	2.30	0.60	1.30	2.30	1.10	1.15	1.20	0.70	1.50	1.13
LS 6453 R	0.60	1.10	0.50	1.00	1.90	0.10	0.87	0.00	0.20	1.50	0.60	1.00	0.20	0.70	0.30	0.40	0.54	0.10	0.50	1.10	0.57
PAN 1521 R	0.10	0.30	0.40	4.40	1.00	0.30	1.08	0.10	1.20	0.30	1.30	1.70	0.10	1.00	1.70	0.60	0.89	0.90	0.90	1.30	1.03
PAN 1500 R	0.20	0.20	0.30	0.70	0.20	0.30	0.32	0.00	0.20	0.50	1.00	0.00	0.40	0.20	1.30	0.50	0.46	1.10	1.20	1.50	1.27
NS 5909 R	0.00	0.90	0.80	0.40	0.70	0.40	0.53	0.00	0.40	0.80	1.20	0.30	0.60	1.00	0.30	0.40	0.56	1.30	1.30	1.50	1.37
PHB 96 T 06 R	0.10	0.50	0.60	1.20	1.20	0.70	0.72	0.00	0.50	1.80	1.00	0.40	0.90	0.70	0.10	0.50	0.66	0.80	1.30	1.70	1.27
LS 6466 R	0.20	1.60	0.40	0.40	0.20	0.60	0.57	0.10	2.40	0.90	0.80	1.50	0.50	2.10	2.20	0.60	1.23	1.70	3.10	1.60	2.13
PAN 1666 R	0.20	0.60	0.00	0.90	0.30	0.50	0.42	0.00	1.00	1.30	1.20	1.40	6.00	0.80	1.90	0.80	1.60	0.30	1.10	0.20	0.53
PAN 1623 R	0.20	0.50	0.30	1.00	0.60	0.90	0.58	0.40	0.30	2.10	0.80	0.10	0.20	0.90	0.70	0.70	0.69	0.20	0.80	1.90	0.97
LS 6261 R	1.00	0.40	0.70	0.50	1.20	0.20	0.67	0.00	0.40	2.00	1.10	0.00	0.20	0.90	1.90	0.40	0.77	1.20	1.30	1.60	1.37
DM 6.2i RR	0.30	1.00	0.30	0.30	1.10	0.20	0.53	0.10	0.40	1.10	1.40	0.10	0.00	0.60	0.80	0.00	0.50	0.00	2.30	0.40	0.90
LS 6164 R	0.40	0.70	1.20	0.20	0.50	0.20	0.53	0.00	0.50	0.90	1.50	0.30	1.00	1.60	0.80	0.50	0.79	0.00	2.20	1.20	1.13
LS 6161 R	0.10	0.70	0.00	1.90	1.70	0.80	0.87	0.00	0.00	0.80	0.90	0.30	0.20	0.30	0.70	0.50	0.41	0.10	0.60	1.20	0.63
PAN 1614 R	0.00	0.50	0.10	1.20	0.40	0.30	0.42	0.20	0.71	0.40	1.00	0.30	0.00	0.40	0.80	0.20	0.45	0.00	1.60	1.00	0.87
NS 6448 R	0.50	0.60	1.20	1.10	1.00	0.00	0.73	0.30	0.40	1.60	1.90	0.30	0.10	0.90	2.00	0.70	0.91	-	1.20	2.30	1.75
DM 6.8i RR	0.30	1.10	0.00	0.60	0.20	0.60	0.47	0.00	0.90	1.90	1.60	0.20	0.40	1.50	0.70	0.60	0.87	0.70	1.70	0.80	1.07
NS 7211 R	0.30	0.90	1.60	0.90	0.50	0.30	0.75	0.60	0.50	1.80	2.40	0.00	0.70	1.20	0.30	1.00	0.94	0.90	1.80	1.80	1.50
PAN 1729 R	0.20	1.00	0.50	0.40	0.20	1.10	0.57	0.00	0.70	2.40	2.00	0.30	0.20	0.70	0.30	0.30	0.77	1.00	1.00	1.70	1.23
Standaard	0.90	0.10	0.50	1.10	0.50	0.50	0.60	0.10	0.00	1.30	1.00	0.40	0.50	1.40	1.10	0.80	0.73	0.70	1.80	1.60	1.37
Gem/Mean	0.46	0.82	0.40	0.82	0.58	0.42	0.58	0.10	0.82	1.07	1.11	0.83	0.65	0.99	1.32	0.70	0.84	0.67	1.35	1.22	1.09

Tabel 14 Massa van 100 sade (g) van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15
Table 14 Mass 100 seeds (g) of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm			
Kultivar Cultivar	Bethlehem	Ciocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	18.83	17.57	20.43	16.55	17.47	17.13	18.00	21.80	14.40	19.83	22.70	19.07	17.60	15.73	16.20	19.43	18.53	20.23	20.63	21.73	20.87
LS 6444 R	14.90	13.53	15.20	13.25	14.27	14.27	14.24	17.33	10.63	16.00	19.10	15.03	13.40	13.10	11.33	14.93	14.54	16.80	13.47	17.70	15.99
PAN 1454 R	17.23	15.23	17.83	15.45	15.53	16.20	16.25	20.00	13.77	18.67	20.50	15.90	14.17	14.93	14.00	17.37	16.59	20.23	18.27	18.17	18.89
LS 6146 R	14.73	13.87	15.07	13.85	13.97	13.67	14.19	17.13	11.27	16.33	19.60	14.43	15.03	13.37	12.17	15.07	14.93	16.07	15.23	15.97	15.76
PHB 94 Y 80 R	16.77	15.07	17.50	15.65	15.07	15.47	15.92	18.87	13.27	17.87	19.90	16.17	15.20	14.73	14.67	16.87	16.39	19.40	18.53	16.93	18.29
LS 6248 R	14.77	15.17	14.97	13.85	12.80	13.43	14.16	15.67	12.07	17.10	14.50	15.87	14.23	15.37	13.57	15.97	14.93	15.40	18.17	18.63	17.40
NS 5009 R	17.20	16.73	17.10	14.45	16.60	16.03	16.35	19.83	13.10	18.97	20.10	17.33	16.47	17.43	14.97	18.90	17.46	19.10	17.70	19.33	18.71
DM 5.1i RR	15.97	12.01	17.10	15.40	14.53	16.87	15.31	17.23	11.20	16.90	21.60	15.63	14.27	14.23	14.27	15.93	15.70	17.40	16.83	16.93	17.06
PHB 95 Y 20 R	15.50	14.37	16.20	13.15	14.97	14.50	14.78	18.30	12.97	15.90	15.20	16.33	14.70	14.43	15.97	17.20	15.67	16.60	20.47	18.30	18.46
PAN 1583 R	15.67	15.27	14.90	13.15	13.67	13.70	14.39	17.27	12.47	16.83	15.20	17.13	15.17	16.10	13.87	16.90	15.66	16.23	17.47	17.83	17.18
PAN 1664 R	15.67	15.87	14.73	12.75	13.90	14.03	14.49	17.90	12.17	17.33	15.90	18.30	15.73	15.00	13.60	16.80	15.86	16.83	17.37	20.50	18.23
DM 5953 RSF	16.60	16.30	15.73	14.20	13.60	14.23	15.11	17.57	11.53	17.50	17.20	14.57	14.33	15.17	12.97	16.87	15.30	15.90	17.37	17.83	17.03
LS 6453 R	14.00	14.67	15.03	12.95	12.80	14.17	13.94	17.27	11.67	15.10	14.80	14.17	14.50	14.57	13.50	15.50	14.56	15.77	16.30	17.30	16.46
PAN 1521 R	15.07	16.97	15.67	15.10	15.43	14.37	15.43	17.37	12.77	19.63	15.90	18.17	15.63	15.60	17.47	19.07	16.84	15.03	18.40	20.37	17.93
PAN 1500 R	16.23	16.20	16.43	14.30	14.40	14.40	15.33	16.93	12.53	17.70	16.40	17.13	14.90	17.47	15.63	17.77	16.27	14.90	19.03	20.20	18.04
NS 5909 R	16.70	15.53	16.93	13.65	15.17	15.50	15.58	18.03	13.60	17.43	15.50	16.30	15.13	16.43	17.30	17.10	16.31	15.47	18.20	21.07	18.24
PHB 96 T 06 R	13.80	14.47	15.87	13.65	13.20	14.83	14.30	18.37	13.83	16.70	15.00	15.93	15.77	15.93	16.63	16.40	16.06	15.30	19.07	20.37	18.24
LS 6466 R	17.60	17.07	17.77	15.15	14.77	18.13	16.75	18.90	12.90	18.37	16.70	16.07	15.50	16.87	15.60	17.77	16.52	16.17	20.53	20.27	18.99
PAN 1666 R	15.33	14.87	17.23	13.20	14.47	13.97	14.84	17.60	12.13	17.63	15.90	14.70	14.50	15.80	14.00	17.67	15.55	15.43	17.60	17.83	16.96
PAN 1623 R	14.03	14.83	16.77	13.25	14.87	13.90	14.61	15.30	13.13	15.03	14.80	15.40	15.27	16.53	16.30	17.90	15.52	15.47	17.20	16.80	16.49
LS 6261 R	14.70	15.13	16.33	14.60	15.27	14.30	15.06	18.73	13.33	17.93	17.70	17.00	15.87	16.63	15.43	18.33	16.77	16.80	17.07	18.30	17.39
DM 6.2i RR	17.30	16.47	17.63	15.85	15.30	17.00	16.59	18.63	16.03	19.03	18.00	18.33	16.17	18.20	17.00	19.13	17.84	17.93	19.57	20.13	19.21
LS 6164 R	14.43	14.57	15.23	13.80	13.90	13.67	14.27	15.63	12.70	16.30	15.80	16.30	14.03	15.93	15.03	16.57	15.37	14.87	16.50	17.97	16.44
LS 6161 R	13.23	14.23	15.77	12.70	13.10	13.90	13.82	16.70	13.73	14.90	14.90	14.80	12.83	15.67	14.87	16.13	14.95	13.57	18.37	16.97	16.30
PAN 1614 R	15.63	14.63	16.77	13.25	14.90	13.47	14.78	17.20	13.47	16.57	15.40	15.13	14.23	15.87	16.30	17.07	15.69	15.33	18.30	18.50	17.38
NS 6448 R	16.50	15.87	16.43	13.35	14.23	14.47	15.14	17.53	13.27	16.87	15.00	17.03	15.57	17.50	17.47	18.53	16.53	-	20.27	20.60	20.43
DM 6.8i RR	16.70	16.53	17.73	15.40	15.10	16.20	16.28	18.00	14.07	18.17	16.40	18.33	16.80	18.20	18.40	19.57	17.55	16.07	19.93	20.43	18.81
NS 7211 R	15.37	14.73	16.87	13.75	15.00	15.67	15.23	19.90	12.77	17.40	17.30	17.90	15.70	17.20	15.47	16.93	16.73	16.30	21.77	22.80	20.29
PAN 1729 R	14.50	14.00	16.77	14.00	13.13	15.17	14.59	17.20	14.60	17.00	15.20	16.33	14.90	17.10	18.17	17.30	16.42	15.23	23.33	21.03	19.87
Standaard	15.67	16.23	15.60	15.45	14.23	15.23	15.40	18.37	13.60	17.90	15.80	17.30	15.73	15.60	15.93	19.37	16.62	14.97	18.90	21.13	18.33
Gem/Mean	15.69	15.27	16.45	14.17	14.52	14.93	15.17	17.89	12.97	17.30	16.93	16.40	15.11	15.89	15.27	17.34	16.12	16.37	18.39	19.06	17.99

Tabel 15 Oliepersentasie op vogvrye basis van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 15 Oil percentage on moisture free basis of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate									Warm			
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	20.17	20.00	22.00	19.80	19.98	20.53	20.41	21.28	20.90	20.41	20.20	19.21	21.10	21.85	20.74	21.09	20.75	20.70	20.63	24.30	21.88
LS 6444 R	21.20	19.10	22.40	20.40	21.63	21.57	21.05	21.39	21.30	21.25	20.80	21.03	21.73	23.12	22.02	21.44	21.56	23.30	20.90	25.30	23.17
PAN 1454 R	20.03	20.20	21.60	20.10	20.84	21.39	20.69	20.51	22.00	20.26	20.80	20.75	21.57	22.56	22.26	21.07	21.31	22.80	21.12	23.90	22.61
LS 6146 R	21.49	20.40	24.00	21.20	21.51	21.16	21.63	21.83	22.60	21.69	20.80	20.34	21.87	22.58	21.02	22.25	21.66	23.40	21.92	25.30	23.54
PHB 94 Y 80 R	19.93	18.60	21.00	19.70	20.29	20.38	19.98	20.46	22.90	20.15	20.40	20.73	20.71	21.68	22.10	20.37	21.06	22.20	20.99	22.80	22.00
LS 6248 R	19.52	17.50	20.20	19.50	20.64	20.75	19.69	20.85	20.60	19.60	20.00	20.17	21.12	21.81	21.24	21.59	20.78	21.90	20.37	23.20	21.82
NS 5009 R	19.69	18.90	22.10	19.60	20.67	20.62	20.26	19.96	20.70	19.52	19.60	19.81	21.22	20.86	21.35	20.13	20.35	21.70	19.58	22.70	21.33
DM 5.1i RR	20.96	19.60	22.50	20.10	21.87	20.80	20.97	21.71	22.80	21.31	20.70	20.27	21.85	22.47	22.97	22.42	21.83	21.70	21.30	25.10	22.70
PHB 95 Y 20 R	18.70	15.50	19.40	18.20	18.06	18.90	18.13	19.35	22.20	18.61	20.00	20.08	20.42	21.02	19.53	20.43	20.18	23.10	20.90	22.30	22.10
PAN 1583 R	19.21	17.10	21.00	19.00	19.57	20.00	19.31	20.93	19.80	20.49	20.90	20.35	21.90	20.37	19.67	20.77	20.58	22.40	21.59	24.30	22.76
PAN 1664 R	19.37	17.60	20.40	20.10	19.50	19.96	19.49	20.35	20.60	20.50	20.60	20.70	21.43	20.18	19.87	20.34	20.51	20.30	20.87	22.80	21.32
DM 5953 RSF	20.75	19.50	21.50	20.90	20.73	21.16	20.76	21.28	19.10	20.39	21.60	21.15	21.38	23.17	21.93	21.14	21.24	20.80	20.24	22.80	21.28
LS 6453 R	19.31	18.40	20.60	19.30	19.88	20.57	19.68	19.54	23.00	19.80	19.50	20.84	21.80	21.23	21.19	20.55	20.83	20.00	20.58	23.70	21.43
PAN 1521 R	19.52	17.70	21.10	19.40	19.65	19.35	19.45	20.33	21.90	19.64	20.40	19.75	21.41	21.33	19.60	20.43	20.53	20.40	20.23	23.50	21.38
PAN 1500 R	19.23	18.10	19.90	19.30	19.29	19.24	19.18	19.22	21.30	19.37	19.70	19.95	21.41	20.97	20.76	20.44	20.35	19.80	20.40	23.10	21.10
NS 5909 R	19.94	18.70	21.10	19.10	20.52	20.28	19.94	21.35	22.00	21.01	21.30	21.33	21.13	21.32	21.39	21.70	21.39	21.80	21.09	24.20	22.36
PHB 96 T 06 R	19.62	18.40	21.40	20.80	20.44	20.42	20.18	21.43	22.40	20.72	21.40	21.10	20.88	22.87	21.99	22.06	21.65	21.00	22.40	23.80	22.40
LS 6466 R	19.81	17.70	20.00	19.70	20.90	19.28	19.57	20.55	18.50	20.21	20.30	20.06	20.81	20.52	21.40	21.97	20.48	19.80	20.09	23.80	21.23
PAN 1666 R	19.67	18.50	21.70	20.40	19.44	19.45	19.86	21.31	19.20	20.03	20.20	20.56	21.03	22.45	19.46	21.14	20.60	20.60	20.82	23.30	21.57
PAN 1623 R	19.30	18.10	20.40	21.70	19.39	19.95	19.81	20.58	22.80	20.06	20.60	20.69	21.50	21.24	21.47	20.42	21.04	21.20	21.92	24.30	22.47
LS 6261 R	19.11	18.40	21.20	19.30	19.60	19.47	19.51	20.46	21.50	20.71	20.20	19.95	21.09	20.90	19.50	20.92	20.58	20.30	20.04	24.30	21.55
DM 6.2i RR	19.37	17.00	19.50	18.90	18.66	18.61	18.67	19.73	20.20	19.04	20.60	20.07	20.37	19.77	19.44	19.98	19.91	20.60	20.02	24.10	21.57
LS 6164 R	19.89	16.40	19.90	19.70	19.19	20.54	19.27	20.84	20.80	20.67	20.30	21.20	21.56	21.70	21.66	20.80	21.06	20.80	21.98	23.80	22.19
LS 6161 R	19.02	18.30	20.80	20.80	19.26	19.95	19.69	20.24	22.10	19.80	20.70	20.97	22.02	21.61	21.86	21.48	21.20	20.70	21.67	25.70	22.69
PAN 1614 R	19.66	17.80	20.90	20.00	19.30	20.82	19.75	20.55	20.20	20.11	20.20	21.17	20.96	21.33	20.89	21.22	20.74	21.30	21.63	25.20	22.71
NS 6448 R	19.47	18.80	20.90	21.20	20.18	20.60	20.19	21.11	19.30	20.21	20.70	22.05	21.63	21.84	19.63	21.19	20.85	-	21.93	24.60	23.27
DM 6.8i RR	18.74	16.30	21.30	19.20	18.77	19.39	18.95	20.57	19.90	18.98	20.90	19.62	19.97	20.73	20.15	19.52	20.04	21.10	21.62	22.80	21.84
NS 7211 R	18.38	15.20	19.20	20.00	18.73	19.57	18.51	19.74	20.10	18.55	21.20	19.26	19.31	20.78	21.60	19.99	20.06	20.80	21.23	24.30	22.11
PAN 1729 R	19.41	18.30	19.80	19.90	20.57	19.52	19.58	20.70	22.80	19.40	21.00	20.62	21.56	21.15	20.27	20.27	20.86	21.30	20.70	22.50	21.50
Standaard	19.76	17.40	20.90	19.60	20.44	20.72	19.80	20.34	22.20	20.19	20.40	20.83	20.42	21.24	20.22	20.63	20.72	20.60	19.89	22.00	20.83
Gem/Mean	19.67	18.12	20.96	19.90	19.98	20.17	19.80	20.62	21.19	20.09	20.53	20.49	21.17	21.49	20.91	20.93	20.82	21.26	20.96	23.79	22.02

Tabel 16 Ru-proteïenpersentasie op vogvrye basis van die verskillende sojaboonkultivars by die verskillende proef lokaliteite, 2014/15

Table 16 Percentage crude protein on moisture free basis of the different soybean cultivars at the different trial localities, 2014/15

	Koel/Cool							Matig/Moderate									Warm			
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	40.57	38.10	40.10	37.30	38.66	38.30	38.84	39.06	36.60	40.70	37.00	41.22	38.89	37.89	39.20	37.87	38.71	42.10	41.29	39.30	40.90
LS 6444 R	37.11	39.90	38.40	36.00	34.04	35.74	36.87	39.02	35.20	37.36	35.05	38.30	37.41	33.78	37.65	37.92	36.85	40.50	39.21	35.40	38.37
PAN 1454 R	39.16	37.10	39.90	36.10	35.44	37.50	37.53	40.36	33.70	39.54	35.60	38.48	37.85	35.67	36.18	38.84	37.36	41.60	39.96	39.20	40.25
LS 6146 R	38.00	36.00	36.40	35.10	33.59	37.41	36.08	38.49	33.00	37.50	36.30	39.13	36.93	35.84	37.48	35.55	36.69	40.20	38.03	36.30	38.18
PHB 94 Y 80 R	40.28	40.40	41.60	37.10	36.51	38.82	39.12	41.92	33.20	40.38	36.20	38.62	40.29	37.82	35.64	38.87	38.10	43.20	40.28	41.10	41.53
LS 6248 R	38.18	39.40	40.10	36.50	34.99	37.08	37.71	38.81	36.30	40.15	36.10	38.90	40.05	36.91	36.90	34.55	37.63	42.10	41.52	39.40	41.01
NS 5009 R	40.16	38.30	37.50	37.00	33.13	35.94	37.01	39.92	36.10	40.20	36.60	39.82	37.29	39.28	36.97	37.74	38.21	42.40	42.16	40.75	41.77
DM 5.1i RR	39.00	38.30	39.00	37.00	31.34	36.43	36.85	37.51	31.80	37.50	35.60	39.38	37.16	35.09	33.35	34.73	35.79	42.80	39.66	36.30	39.59
PHB 95 Y 20 R	41.15	41.40	42.00	37.80	38.23	40.18	40.13	42.61	32.50	40.56	36.70	39.49	39.12	37.35	40.59	35.66	38.29	40.60	42.06	43.50	42.05
PAN 1583 R	38.70	38.10	38.60	35.80	34.65	37.07	37.15	39.20	36.80	38.41	34.30	38.91	37.82	36.73	38.71	35.16	37.34	41.60	39.83	37.40	39.61
PAN 1664 R	37.99	37.50	39.10	32.60	35.60	37.46	36.71	39.52	35.30	37.11	34.90	38.92	38.02	36.95	37.84	34.88	37.05	37.70	40.36	41.80	39.95
DM 5953 RSF	37.18	37.70	40.50	34.70	33.57	36.29	36.66	38.35	39.20	38.67	34.00	37.26	38.78	33.43	35.38	36.58	36.85	37.80	40.94	42.30	40.35
LS 6453 R	40.13	38.50	40.90	37.70	35.46	38.77	38.58	41.45	31.60	41.75	37.40	38.30	38.33	37.77	36.88	40.00	38.16	39.40	41.27	40.40	40.36
PAN 1521 R	38.91	39.00	39.30	36.60	35.94	39.75	38.25	39.77	33.30	40.45	35.50	40.25	37.80	36.75	39.22	38.54	37.95	37.90	40.66	39.20	39.25
PAN 1500 R	41.54	39.80	42.00	37.10	38.18	41.19	39.97	42.33	35.30	41.76	37.90	40.94	39.90	37.74	35.54	39.08	38.94	39.20	42.50	40.80	40.83
NS 5909 R	39.47	38.70	39.50	35.50	35.64	39.47	38.05	38.36	32.00	38.34	34.80	38.15	40.29	36.51	37.00	36.83	36.92	36.70	42.18	40.10	39.66
PHB 96 T 06 R	38.55	38.00	39.70	33.10	34.01	38.84	37.03	38.57	33.60	38.98	34.40	38.24	37.69	33.63	35.13	35.17	36.16	38.00	40.60	39.70	39.43
LS 6466 R	39.41	39.40	41.00	36.00	34.18	41.60	38.60	39.99	41.30	39.12	36.30	39.81	39.44	38.74	35.51	35.34	38.39	39.20	42.33	39.70	40.41
PAN 1666 R	39.08	38.40	39.80	35.90	37.32	40.26	38.46	38.63	38.30	39.67	36.10	38.81	39.06	35.66	39.05	37.62	38.10	37.40	41.33	40.70	39.81
PAN 1623 R	41.01	40.10	42.30	33.20	40.93	40.96	39.75	41.54	33.30	39.92	37.00	41.04	39.72	38.45	38.23	40.08	38.81	38.00	41.19	39.50	39.56
LS 6261 R	40.46	38.60	39.40	37.40	38.36	40.91	39.19	40.47	34.80	38.42	36.00	40.25	38.44	38.19	40.51	38.08	38.35	38.00	42.07	39.50	39.86
DM 6.2i RR	39.02	38.40	40.80	38.00	37.95	38.74	38.82	40.00	37.40	40.14	35.00	40.00	37.56	39.48	38.31	36.38	38.25	37.60	42.21	37.70	39.17
LS 6164 R	38.90	40.10	41.00	36.80	38.25	39.09	39.02	39.48	35.70	38.46	36.00	38.58	39.36	36.17	34.99	36.87	37.29	37.50	40.83	40.10	39.48
LS 6161 R	40.08	37.40	40.50	34.10	39.12	39.55	38.46	40.57	35.40	41.28	35.50	39.40	37.37	36.98	35.67	38.28	37.83	37.70	39.96	34.60	37.42
PAN 1614 R	38.71	39.50	40.10	34.90	37.91	38.23	38.23	39.94	36.80	38.31	36.10	37.68	37.95	37.30	38.69	37.86	37.85	36.00	39.88	35.60	37.16
NS 6448 R	40.17	36.80	40.10	34.70	36.63	39.34	37.96	38.57	38.90	37.65	35.90	37.98	39.22	36.52	39.77	38.13	38.07	-	41.57	39.40	40.49
DM 6.8i RR	38.68	37.50	39.80	35.00	35.18	38.84	37.50	38.31	35.40	38.07	34.40	39.31	36.55	35.54	38.01	37.75	37.04	36.40	39.61	39.00	38.34
NS 7211 R	40.57	38.60	39.70	34.20	35.71	39.90	38.11	40.72	36.70	39.46	34.10	40.94	40.36	37.34	34.34	38.06	38.00	37.60	41.68	38.50	39.26
PAN 1729 R	38.05	37.00	40.60	36.20	31.77	39.89	37.25	38.90	31.30	38.97	34.40	38.04	37.20	35.61	38.14	39.48	36.89	37.30	42.02	42.30	40.54
Standaard	38.82	38.80	40.10	36.50	33.30	38.12	37.61	40.08	31.60	40.09	35.70	38.77	39.93	37.14	38.69	36.71	37.63	37.80	41.01	41.90	40.24
Gem/Mean	39.30	38.56	39.99	35.86	35.85	38.72	38.05	39.75	35.08	39.30	35.70	39.16	38.53	36.74	37.32	37.29	37.65	39.11	40.94	39.38	39.83

Tabel 17 Gemiddelde van die olie-en proteïen persentasie saamgevoeg (Protolie), 2014/15

Table 17 Average of the oil and protein percentage joined (Profat), 2014/15

	Koel/Cool							Matig/Moderate										Warm			
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD1 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	60.74	58.10	62.10	57.10	58.64	58.83	59.25	60.34	57.50	61.11	57.20	60.43	59.99	59.74	59.94	58.96	59.47	62.80	61.92	63.60	62.77
LS 6444 R	58.31	59.00	60.80	56.40	55.67	57.31	57.92	60.41	56.50	58.61	55.85	59.33	59.14	56.90	59.67	59.36	58.42	63.80	60.11	60.70	61.54
PAN 1454 R	59.19	57.30	61.50	56.20	56.28	58.89	58.23	60.87	55.70	59.80	56.40	59.23	59.42	58.23	58.44	59.91	58.67	64.40	61.08	63.10	62.86
LS 6146 R	59.49	56.40	60.40	56.30	55.10	58.57	57.71	60.32	55.60	59.19	57.10	59.47	58.80	58.42	58.50	57.80	58.36	63.60	59.95	61.60	61.72
PHB 94 Y 80 R	60.21	59.00	62.60	56.80	56.80	59.20	59.10	62.38	56.10	60.53	56.60	59.35	61.00	59.50	57.74	59.24	59.16	65.40	61.27	63.90	63.52
LS 6248 R	57.70	56.90	60.30	56.00	55.63	57.83	57.39	59.66	56.90	59.75	56.10	59.07	61.17	58.72	58.14	56.14	58.41	64.00	61.89	62.60	62.83
NS 5009 R	59.85	57.20	59.60	56.60	53.80	56.56	57.27	59.88	56.80	59.72	56.20	59.63	58.51	60.14	58.32	57.87	58.56	64.10	61.74	63.45	63.10
DM 5.1i RR	59.96	57.90	61.50	57.10	53.21	57.23	57.82	59.22	54.60	58.81	56.30	59.65	59.01	57.56	56.32	57.15	57.62	64.50	60.96	61.40	62.29
PHB 95 Y 20 R	59.85	56.90	61.40	56.00	56.29	59.08	58.25	61.96	54.70	59.17	56.70	59.57	59.54	58.37	60.12	56.09	58.47	63.70	62.96	65.80	64.15
PAN 1583 R	57.91	55.20	59.60	54.80	54.22	57.07	56.47	60.13	56.60	58.90	55.20	59.26	59.72	57.10	58.38	55.93	57.91	64.00	61.42	61.70	62.37
PAN 1664 R	57.36	55.10	59.50	52.70	55.10	57.42	56.20	59.87	55.90	57.61	55.50	59.62	59.45	57.13	57.71	55.22	57.56	58.00	61.23	64.60	61.28
DM 5953 RSF	57.93	57.20	62.00	55.60	54.30	57.45	57.41	59.63	58.30	59.06	55.60	58.41	60.16	56.60	57.31	57.72	58.09	58.60	61.18	65.10	61.63
LS 6453 R	59.44	56.90	61.50	57.00	55.34	59.34	58.25	60.99	54.60	61.55	56.90	59.14	60.13	59.00	58.07	60.55	58.99	59.40	61.85	64.10	61.78
PAN 1521 R	58.43	56.70	60.40	56.00	55.59	59.10	57.70	60.10	55.20	60.09	55.90	60.00	59.21	58.08	58.82	58.97	58.49	58.30	60.89	62.70	60.63
PAN 1500 R	60.77	57.90	61.90	56.40	57.47	60.43	59.15	61.55	56.60	61.13	57.60	60.89	61.31	58.71	56.30	59.52	59.29	59.00	62.90	63.90	61.93
NS 5909 R	59.41	57.40	60.60	54.60	56.16	59.75	57.99	59.71	54.00	59.35	56.10	59.48	61.42	57.83	58.39	58.53	58.31	58.50	63.27	64.30	62.02
PHB 96 T 06 R	58.17	56.40	61.10	53.90	54.45	59.26	57.21	60.00	56.00	59.70	55.80	59.34	58.57	56.50	57.12	57.23	57.81	59.00	63.00	63.50	61.83
LS 6466 R	59.22	57.10	61.00	55.70	55.08	60.88	58.16	60.54	59.80	59.33	56.60	59.87	60.25	59.26	56.91	57.31	58.87	59.00	62.42	63.50	61.64
PAN 1666 R	58.75	56.90	61.50	56.30	56.76	59.71	58.32	59.94	57.50	59.70	56.30	59.37	60.09	58.11	58.51	58.76	58.70	58.00	62.15	64.00	61.38
PAN 1623 R	60.31	58.20	62.70	54.90	60.32	60.91	59.56	62.12	56.10	59.98	57.60	61.73	61.22	59.69	59.70	60.50	59.85	59.20	63.11	63.80	62.04
LS 6261 R	59.57	57.00	60.60	56.70	57.96	60.38	58.70	60.93	56.30	59.13	56.20	60.20	59.53	59.09	60.01	59.00	58.93	58.30	62.11	63.80	61.40
DM 6.2i RR	58.39	55.40	60.30	56.90	56.61	57.35	57.49	59.73	57.60	59.18	55.60	60.07	57.93	59.25	57.75	56.36	58.16	58.20	62.23	61.80	60.74
LS 6164 R	58.79	56.50	60.90	56.50	57.44	59.63	58.29	60.32	56.50	59.13	56.30	59.78	60.92	57.87	56.65	57.67	58.35	58.30	62.81	63.90	61.67
LS 6161 R	59.10	55.70	61.30	54.90	58.38	59.50	58.15	60.81	57.50	61.08	56.20	60.37	59.39	58.59	57.53	59.76	59.03	58.40	61.63	60.30	60.11
PAN 1614 R	58.37	57.30	61.00	54.90	57.21	59.05	57.97	60.49	57.00	58.42	56.30	58.85	58.91	58.63	59.58	59.08	58.58	57.30	61.51	60.80	59.87
NS 6448 R	59.64	55.60	61.00	55.90	56.81	59.94	58.15	59.68	58.20	57.86	56.60	60.03	60.85	58.36	59.40	59.32	58.92	-	63.50	64.00	63.75
DM 6.8i RR	57.42	53.80	61.10	54.20	53.95	58.23	56.45	58.88	55.30	57.05	55.30	58.93	56.52	56.27	58.16	57.27	57.08	57.50	61.23	61.80	60.18
NS 7211 R	58.95	53.80	58.90	54.20	54.44	59.47	56.63	60.46	56.80	58.01	55.30	60.20	59.67	58.12	55.94	58.05	58.06	58.40	62.91	62.80	61.37
PAN 1729 R	57.46	55.30	60.40	56.10	52.34	59.41	56.84	59.60	54.10	58.37	55.40	58.66	58.76	56.76	58.41	59.75	57.76	58.60	62.72	64.80	62.04
Standaard	58.58	56.20	61.00	56.10	53.74	58.84	57.41	60.42	53.80	60.28	56.10	59.60	60.35	58.38	58.91	57.34	58.35	58.40	60.90	63.90	61.07
Gem/Mean	59.05	56.85	61.04	55.79	56.10	58.85	57.95	60.39	56.42	59.44	56.30	59.67	59.71	58.28	58.28	58.19	58.52	60.59	61.86	63.10	61.89

Tabel 18 Die saadopbrengs van elke kultivar by die verskillende lokaliteite, 2014/15

Table 18 The seed yield of the cultivars at the different localities, 2014/15

	Koel/Cool							Matig/Moderate										Warm			
Kultivar Cultivar	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
LS 6240 R	2221	1230	4793	2050	2963	3063	2720	2896	1755	3792	2121	1760	1010	1625	1037	1382	1931	4331	3200	1983	3171
LS 6444 R	2427	884	3917	1570	2613	3346	2459	2615	1318	3140	2116	1644	1394	1776	860	912	1753	4165	2651	2074	2963
PAN 1454 R	2610	1171	4494	1806	2906	3629	2769	3546	1647	3545	1328	1981	1302	2250	972	1364	1993	4399	3732	2202	3445
LS 6146 R	1943	1090	3808	2056	2819	3166	2480	3405	1661	3239	2228	1740	1125	1819	792	1901	1990	4928	2650	2157	3245
PHB 94 Y 80 R	2471	1465	5642	1727	2876	3575	2959	3740	1320	3296	1211	1725	1358	2141	961	1079	1870	4401	3940	2245	3528
LS 6248 R	2631	1286	3687	1499	2387	3067	2426	3922	1896	3421	2770	2254	1267	2637	1262	2029	2384	4640	2228	2218	3029
NS 5009 R	2482	1311	4361	1597	2984	3234	2662	3666	2046	4012	1322	2027	1313	1979	991	1640	2111	4622	2738	1794	3052
DM 5.1i RR	2554	1306	3907	878	2755	3225	2437	2332	1352	3237	1148	1852	1311	2336	924	1291	1754	4802	3199	2940	3647
PHB 95 Y 20 R	2622	1080	3909	1188	2378	2625	2300	2875	1380	2590	2104	1703	1551	1802	1387	2090	1942	4237	2600	1852	2897
PAN 1583 R	2556	1372	4778	1370	2391	2732	2533	3033	1605	3622	2435	2190	1169	2633	1437	2607	2303	4299	2979	1854	3044
PAN 1664 R	2814	1158	4052	1475	1892	2855	2374	3086	1590	3624	2549	2118	1138	3735	1223	2401	2385	3988	3048	1866	2967
DM 5953 RSF	3892	1199	5090	1977	3483	3618	3210	3961	1677	4944	1613	2099	1703	2895	1197	1628	2413	4361	3151	2607	3373
LS 6453 R	2604	1524	2554	1578	1994	2871	2188	3685	1434	2845	2239	2303	1421	2030	1019	1567	2060	4318	2788	1913	3006
PAN 1521 R	3033	1112	4039	1768	2115	2806	2479	4421	1726	3528	2621	2222	1380	2202	1418	2370	2432	4632	4303	2437	3791
PAN 1500 R	2694	1008	4214	1442	2457	2654	2411	3502	1432	3319	2096	1906	1457	2771	1454	2340	2253	4195	2699	1881	2925
NS 5909 R	3230	1263	4019	748	2367	2497	2354	3007	1359	3492	1840	1948	1344	3622	1876	2575	2340	4738	2698	2274	3236
PHB 96 T 06 R	2583	1284	3695	887	2603	2922	2329	2815	1293	2903	2160	1964	1347	2321	1671	2686	2129	4220	2300	1660	2727
LS 6466 R	2397	1188	3731	645	2503	2586	2175	4145	1229	3197	2440	2486	1411	2081	1422	2280	2299	3871	3112	2211	3064
PAN 1666 R	2432	1226	4335	1275	2382	2249	2316	3192	1101	3001	2112	2123	1059	2347	1121	1883	1993	4426	2899	1627	2984
PAN 1623 R	2556	1394	3636	1583	2918	2726	2469	3698	1730	3591	2732	2487	1840	2727	1553	2430	2532	4701	3215	2309	3409
LS 6261 R	2301	1240	3704	715	1853	2633	2074	3588	1747	3287	2661	2926	1440	2399	1184	1716	2328	4635	2806	1694	3045
DM 6.2i RR	2628	1751	3857	1275	2685	2728	2487	3629	1922	3386	2280	2475	1638	2513	1304	2089	2360	4548	3012	2501	3354
LS 6164 R	2612	1206	3482	1042	1777	2566	2114	3831	1659	2497	2385	1901	1246	2787	1572	2448	2259	4091	2618	2230	2980
LS 6161 R	2296	1327	3433	988	1652	2897	2099	4195	1370	3273	2632	2391	1567	2464	1902	2383	2464	3960	3397	2208	3188
PAN 1614 R	2787	1124	4160	1069	2639	2184	2327	3299	1512	2789	2110	2368	1276	2118	1606	2188	2141	4170	2798	1716	2895
NS 6448 R	3029	1596	4399	819	2657	2505	2501	2994	1473	2871	2379	2023	1532	2842	1383	2910	2268	-	3110	2662	2886
DM 6.8i RR	3105	1525	4013	970	2873	2170	2443	4141	984	3411	2501	2838	1457	3146	2129	1912	2502	4302	3315	2317	3311
NS 7211 R	2860	1559	3911	946	2590	2703	2428	3433	1247	3274	2216	2426	1184	2718	1943	2115	2284	4226	3534	2517	3425
PAN 1729 R	2406	1147	3543	959	1843	2650	2091	3708	1609	2506	2120	1724	1606	3142	1976	2230	2291	3509	3129	2039	2892
Standaard	2911	1333	3806	1535	2277	2882	2457	3466	1474	3881	2220	2587	1382	2962	2170	2404	2505	4716	3706	2502	3641
Gem/Mean	2656	1279	4032	1315	2488	2845	2436	3461	1518	3317	2156	2140	1374	2494	1392	2028	2209	4360	3052	2150	3171
KV/CV	11.9	22.2	13.3	13.4	13.1	10.1		14.5	21.3	17.5	13.9	18.3	23.4	24.3	22.8	14.4		6.6	13.6	18.9	

Tabel 19 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2012/13, 2013/14 en 2014/15 vir die koeler droëland produksiegebiede by verskillende opbrengspotensiaal
Table 19 Yield probability (%) of cultivars evaluated in 2012/13, 2013/14 and 2014/15 for the cooler dryland production areas at different yield potentials

Kultivar Cultivar	Opbrengspotensiaal/Yield potential (t/ha)							
	1	1.5	2	2.5	3	3.5	4	4.5
LS 6444 R	77	69	59	47	35	25	18	13
PAN 1454 R	89	84	76	65	51	37	26	18
LS 6146 R	76	70	62	53	43	33	26	20
LS 6248 R	30	40	52	66	77	85	90	94
PAN 1583 R	23	34	49	65	78	88	93	96
PHB 95 Y 20 R	38	38	38	38	39	40	41	42
PAN 1666 R	43	44	45	47	48	50	52	53
PAN 1664 R	20	29	40	53	67	78	85	90
LS 6164 R	15	22	32	45	59	72	81	87
LS 6161 R	37	41	45	51	56	62	66	70
LS 6453 R	90	83	70	53	35	20	10	6
PAN 1500 R	11	20	31	48	65	80	88	94
LS 6261 R	37	39	40	43	44	47	49	51
PAN 1614 R	20	24	30	37	45	53	60	67

Tabel 20 Saadopbrengs (kg/ha^{-1}) van kultivars gedurende die 2013/14 en 2014/15 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die koeler produksiegebiede geleë is

Table 20 Seed yield (kg/ha^{-1}) of cultivars during the 2013/14 and 2014/15 growing season for the various localities situated in the cooler production areas

	2013/14						2014/15						
Kultivar Cultivar	Bethlehem	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean	Bethlehem	Clocolan	Delmas	Kinross	Kokstad	Middelburg	Gem/Mean
Sonop	3657	3325	4012	2948	2664	3321	-	-	-	-	-	-	-
LS 6444 R	3688	3117	1923	3146	1408	2656	2427	884	3917	1570	2613	3346	2459
PAN 1454 R	2547	3458	2592	2904	2025	2705	2610	1171	4494	1806	2906	3629	2769
LS 6146 R	2923	4798	2286	2539	2177	2944	1943	1090	3808	2056	2819	3166	2480
LS 6248 R	3561	3720	3910	3516	1905	3323	2631	1286	3687	1499	2387	3067	2426
PAN 1583 R	3960	3424	4002	3081	3079	3509	2556	1372	4778	1370	2391	2732	2533
Highveld Top	2963	3906	3478	3476	2892	3343	-	-	-	-	-	-	-
Knap	3069	4535	2503	2771	2413	3058	-	-	-	-	-	-	-
PHB 95 Y 20 R	1948	3939	3051	2552	2469	2792	2622	1080	3909	1188	2378	2625	2300
PHB 95 Y 40 R	2784	4033	3791	3151	3817	3515	-	-	-	-	-	-	-
PAN 1666 R	3438	2650	3305	3485	3021	3180	2432	1226	4335	1275	2382	2249	2316
PAN 1664 R	3441	3799	3409	2944	2861	3291	2814	1158	4052	1475	1892	2855	2374
LS 6164 R	3795	4186	3747	3173	2908	3562	2612	1206	3482	1042	1777	2566	2114
Dundee	2096	4108	2769	2809	2557	2868	-	-	-	-	-	-	-
Marula	2721	4109	2431	2899	2926	3017	-	-	-	-	-	-	-
LS 6161 R	3444	4161	3828	3284	2620	3467	2296	1327	3433	988	1652	2897	2099
Egret	2214	4307	2725	1933	2839	2803	-	-	-	-	-	-	-
Heron	2679	4391	2377	2571	2689	2941	-	-	-	-	-	-	-
Ibis 2000	1966	3768	2440	2468	2572	2643	-	-	-	-	-	-	-
LS 6453 R	3271	2508	3803	3133	2596	3062	2604	1524	2554	1578	1994	2871	2188
PAN 1500 R	3830	3610	3472	3126	3219	3452	2694	1008	4214	1442	2457	2654	2411
LS 6261 R	3559	3394	3919	2980	2855	3342	2301	1240	3704	715	1853	2633	2074
PAN 1614 R	3778	4871	3524	1846	3261	3456	2787	1124	4160	1069	2639	2184	2327
LS 6240 R	3185	5133	1594	2809	2691	3082	2221	1230	4793	2050	2963	3063	2720
PHB 94 Y 80 R	3310	4712	2568	3207	2143	3188	2471	1465	5642	1727	2876	3575	2959
PAN 1521 R	3729	5024	4323	3054	2829	3792	3033	1112	4039	1768	2115	2806	2479
PHB 96 T 06 R	3466	5474	3802	3169	3203	3823	2583	1284	3695	887	2603	2922	2329
S 722/6/1E	1797	2606	-	2469	1698	2143	-	-	-	-	-	-	-
PAN 1623 R	3574	4664	3875	3479	3053	3729	2556	1394	3636	1583	2918	2726	2469
DM 6.2i RR	3037	4772	3528	2969	2784	3418	2628	1751	3857	1275	2685	2728	2487
PAN 1729 R	2095	3955	3326	2626	2282	2857	2406	1147	3543	959	1843	2650	2091
NS 5009 R	-	-	-	-	-	-	2482	1311	4361	809	2984	3234	2530
DM 5.1i RR	-	-	-	-	-	-	2554	1306	3907	878	2755	3225	2437
DM 5953 RSF	-	-	-	-	-	-	3892	1199	5090	1977	3483	3618	3210
NS 5909 R	-	-	-	-	-	-	3230	1263	4019	748	2367	2497	2354
LS 6466 R	-	-	-	-	-	-	2397	1188	3731	645	2503	2586	2175
NS 6448 R	-	-	-	-	-	-	3029	1596	4399	819	2657	2505	2501
DM 6.8i RR	-	-	-	-	-	-	3105	1525	4013	970	2873	2170	2443
NS 7211 R	-	-	-	-	-	-	2860	1559	3911	946	2590	2703	2428
Gem/Mean	3081	4015	3211	2920	2660	3170	2647	1277	4040	1280	2495	2844	2431

Tabel 21 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2012/13, 2013/14 en 2014/15 vir die matige droëland produksiegebiede by verskillende opbrengspotensiaal
Table 21 Yield probability (%) of cultivars evaluated in 2012/13, 2013/14 and 2014/15 for the moderate dryland production areas at different yield potentials

Kultivar Cultivar	Opbrengs potensiaal/Yield potential (t/ha)							
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
LS 6444 R	14	16	17	20	23	27	31	35
PAN 1454 R	24	29	35	41	48	54	60	65
LS 6146 R	40	35	31	27	24	21	19	18
LS 6248 R	64	61	58	55	51	48	45	42
PAN 1583 R	73	73	71	70	68	66	63	61
PHB 95 Y 20 R	68	57	46	34	24	17	12	8
PAN 1666 R	32	37	44	51	58	64	70	74
PAN 1664 R	50	57	64	71	77	81	84	87
LS 6164 R	80	74	66	57	46	38	30	24
LS 6161 R	71	74	77	79	80	81	81	82
LS 6453 R	45	40	34	29	25	22	19	18
PAN 1500 R	59	55	51	47	43	39	36	33
LS 6261 R	52	60	68	75	81	85	88	90
PAN 1614 R	61	62	63	64	64	65	64	64

Tabel 22 Saadopbrengs (kg/ha^{-1}) van kultivars gedurende die 2013/14 en 2014/15 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die matige produksiegebiede geleë is

Table 22 Seed yield (kg/ha^{-1}) of cultivars during the 2013/14 and 2014/15 growing season for the various localities situated in the moderate production areas

	2013/14										2014/15									
Kultivar Cultivar	Cedara	Glen	Greytown	Greytown Kranskop	Hoopstad	Migdol	Potchefstroom Bespr	Potchefstroom Drg	Stoffberg	Gm/Mean	Cedara	Dundee	Glen	Greytown Kranskop	Kroonstad	Migdol	Potchefstroom Bespr	Potchefstroom PD1 Drg	Potchefstroom PD2 Drg	Gem/Mean
Sonop	4138	4288	3009	2067	3423	3420	3544	1774	2533	3133	-	-	-	-	-	-	-	-	-	-
LS 6444 R	3979	4686	2041	1983	2396	2090	2320	1183	1412	2454	2615	1318	3140	2116	1644	1394	1776	860	912	1753
PAN 1454 R	4321	3828	2679	1886	2640	2571	2267	1568	2331	2677	3546	1647	3545	1328	1981	1302	2250	972	1364	1993
LS 6146 R	3583	4750	2062	2323	2959	2169	1975	1600	1576	2555	3405	1661	3239	2228	1740	1125	1819	792	1901	1990
LS 6248 R	4339	4207	2516	2489	2549	3415	3695	1997	2001	3023	3922	1896	3421	2770	2254	1267	2637	1262	2029	2384
PAN 1583 R	4268	4272	2671	2391	2430	2949	3143	2150	3054	3036	3033	1605	3622	2435	2190	1169	2633	1437	2607	2303
Highveld Top	4663	4537	2590	1983	2681	3722	3461	2232	2248	3124	-	-	-	-	-	-	-	-	-	-
Knap	4464	4556	2724	1857	3142	3477	2941	1494	2566	3025	-	-	-	-	-	-	-	-	-	-
PHB 95 Y 20 R	3934	4097	3068	2061	2547	2058	3286	2163	2563	2864	2875	1380	2590	2104	1703	1551	1802	1387	2090	1942
PHB 95 Y 40 R	4293	3648	2658	1913	2580	3065	3284	1802	3019	2918	-	-	-	-	-	-	-	-	-	-
PAN 1666 R	3841	3326	3269	1753	2297	3028	3719	1933	2672	2871	3192	1101	3001	2112	2123	1059	2347	1121	1883	1993
PAN 1664 R	4590	3866	2632	2198	2401	2277	4692	1759	2633	3005	3086	1590	3624	2549	2118	1138	3735	1223	2401	2385
LS 6164 R	4023	3163	3073	2545	2216	2793	4262	1762	2573	2934	3831	1659	2497	2385	1901	1246	2787	1572	2448	2259
Dundee	4220	4294	2917	1739	3133	3757	3935	2080	2597	3186	-	-	-	-	-	-	-	-	-	-
Marula	4288	4354	3253	2365	3317	3566	3341	2083	2581	3239	-	-	-	-	-	-	-	-	-	-
LS 6161 R	4360	3163	3167	2528	2334	3168	4090	2632	2550	3110	4195	1370	3273	2632	2391	1567	2464	1902	2383	2464
Egret	3640	3316	2917	2120	1898	2236	4012	1574	3167	2765	-	-	-	-	-	-	-	-	-	-
Heron	4579	3888	3403	2314	1868	2476	3455	1901	2451	2926	-	-	-	-	-	-	-	-	-	-
Ibis 2000	3657	3073	2895	1120	2404	3099	3872	2206	2727	2784	-	-	-	-	-	-	-	-	-	-
LS 6453 R	3832	4330	2683	2365	2716	3232	2906	1441	1995	2833	3685	1434	2845	2239	2303	1421	2030	1019	1567	2060
PAN 1500 R	3799	4054	2507	1162	2786	3310	3085	1961	2786	2828	3502	1432	3319	2096	1906	1457	2771	1454	2340	2253
LS 6261 R	4500	5195	2542	2386	3105	3373	3783	1601	2409	3211	3588	1747	3287	2661	2926	1440	2399	1184	1716	2328
PAN 1614 R	4110	3961	3141	2346	3675	3182	3000	1766	2502	3076	3299	1512	2789	2110	2368	1276	2118	1606	2188	2141
LS 6240 R	4403	4126	2061	2129	4118	2269	2419	1756	1268	2728	2896	1755	3792	2121	1760	1010	1625	1037	1382	1931
PHB 94 Y 80 R	3868	4838	1974	1717	3584	2322	3912	1345	1743	2811	3740	1320	3296	1211	1725	1358	2141	961	1079	1870
PAN 1521 R	4094	3727	2657	2333	2595	3521	4490	2017	3061	3166	4421	1726	3528	2621	2222	1380	2202	1418	2370	2432
PHB 96 T 06 R	4058	2906	3154	2516	2725	3079	4041	2171	2581	3026	2815	1293	2903	2160	1964	1347	2321	1671	2686	2129
S 722/6/1E	4369	3215	2808	1629	2350	3809	2371	1423	2412	2709	-	-	-	-	-	-	-	-	-	-
PAN 1623 R	4324	4426	3078	2426	3248	3557	3650	1756	2839	3256	3698	1730	3591	2732	2487	1840	2727	1553	2430	2532
DM 6.2i RR	4679	3012	2848	1916	2814	3202	3659	1674	2632	2937	3629	1922	3386	2280	2475	1638	2513	1304	2089	2360
PAN 1729 R	4247	3686	3123	2541	1809	2823	3150	1759	2459	2844	3708	1609	2506	2120	1724	1606	3142	1976	2230	2291
NS 5009 R					-	-	-	-	-	-	3666	2046	4012	1322	2027	1313	1979	991	1640	2111
DM 5.1i RR					-	-	-	-	-	-	2332	1352	3237	1148	1852	1311	2336	924	1291	1754
DM 5953 RSF					-	-	-	-	-	-	3961	1677	4944	1613	2099	1703	2895	1197	1628	2413
NS 5909 R					-	-	-	-	-	-	3007	1359	3492	1840	1948	1344	3622	1876	2575	2340
LS 6466 R					-	-	-	-	-	-	4145	1229	3197	2440	2486	1411	2081	1422	2280	2299
NS 6448 R					-	-	-	-	-	-	2994	1473	2871	2379	2023	1532	2842	1383	2910	2268
DM 6.8i RR					-	-	-	-	-	-	4141	984	3411	2501	2838	1457	3146	2129	1912	2502
NS 7211 R					-	-	-	-	-	-	3433	1247	3274	2216	2426	1184	2718	1943	2115	2284
Gem/Mean	4176	3961	2778	2100	2734	3001	3412	1825	2450	2937	3461	1520	3298	2154	2124	1374	2478	1365	2015	2199

Tabel 23 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2012/13, 2013/14 en 2014/15 vir die warm besproeiing produksiegebiede by verskillende opbrengspotensiaal

Table 23 Yield probability (%) of cultivars evaluated in 2012/13, 2013/14 and 2014/15 for the warm irrigation production areas at different yield potentials

Kultivar Cultivar	Opbrengs potensiaal/Yield potential (t/ha)							
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
LS 6444 R	21	21	21	22	23	25	27	30
PAN 1454 R	37	38	39	41	42	44	46	48
LS 6146 R	38	37	35	35	34	34	34	34
LS 6248 R	62	59	55	51	47	42	39	35
PAN 1583 R	53	54	54	55	55	56	56	57
PHB 95 Y 20 R	29	34	40	48	56	64	70	76
PAN 1666 R	61	58	54	51	47	43	39	37
PAN 1664 R	59	59	59	59	58	58	57	57
LS 6164 R	65	64	62	60	58	56	53	51
LS 6161 R	80	80	79	78	77	75	72	70
LS 6453 R	51	50	48	47	46	45	43	43
PAN 1500 R	68	60	48	37	25	18	11	8
LS 6261 R	38	44	51	59	66	73	78	82
PAN 1614 R	62	60	58	56	54	51	48	46

Tabel 24 Saadopbrengs (kg/ha^{-1}) van kultivars gedurende die 2013/14 en 2014/15 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die warm produksiegebiede geleë is

Table 24 Seed yield (kg/ha^{-1}) of cultivars during the 2013/14 en 2014/15 growing season for the various localities situated in the warm production areas

	2013/14			2014/15			
Kultivar Cultivar	Brits	Groblersdal	Gem/Mean	Atlanta	Brits	Groblersdal	Gem/Mean
Sonop	2779	2532	2656	-	-	-	-
LS 6444 R	2676	2501	2588	4165	2651	2074	2963
PAN 1454 R	2602	1766	2184	4399	3732	2202	3445
LS 6146 R	2753	2758	2755	4928	2650	2157	3245
LS 6248 R	3396	2326	2861	4640	2228	2218	3029
PAN 1583 R	2494	2370	2432	4299	2979	1854	3044
Highveld Top	2675	2198	2436	-	-	-	-
Knap	3357	2641	2999	-	-	-	-
PHB 95 Y 20 R	2962	1785	2373	4237	2600	1852	2897
PHB 95 Y 40 R	3329	2677	3003				-
PAN 1666 R	2823	2163	2493	4426	2899	1627	2984
PAN 1664 R	2766	2642	2704	3988	3048	1866	2967
LS 6164 R	2998	3314	3156	4091	2618	2230	2980
Dundee	2864	2694	2779	-	-	-	-
Marula	2661	2489	2575	-	-	-	-
LS 6161 R	3169	2637	2903	3960	3397	2208	3188
Egret	3081	3415	3248	-	-	-	-
Heron	1871	2770	2320	-	-	-	-
Ibis 2000	2552	2754	2653	-	-	-	-
LS 6453 R	3635	2544	3090	4318	2788	1913	3006
PAN 1500 R	2737	2257	2497	4195	2699	1881	2925
LS 6261 R	3555	2445	3000	4635	2806	1694	3045
PAN 1614 R	3412	3262	3337	4170	2798	1716	2895
LS 6240 R	2827	2322	2575	4331	3200	1983	3171
PHB 94 Y 80 R	2358	2259	2308	4401	3940	2245	3528
PAN 1521 R	3876	2707	3291	4632	4303	2437	3791
PHB 96 T 06 R	3424	2092	2758	4220	2300	1660	2727
S 722/6/1E	2418	1752	2085	-	-	-	-
PAN 1623 R	3619	3503	3561	4701	3215	2309	3409
DM 6.2i RR	3607	2325	2966	4548	3012	2501	3354
PAN 1729 R	2922	2095	2509	3509	3129	2039	2892
NS 5009 R				4622	2738	1794	3051
DM 5.1i RR				4802	3199	2940	3647
DM 5953 RSF				4361	3151	2607	3373
NS 5909 R				4738	2698	2274	3236
LS 6466 R				3871	3112	2211	3064
NS 6448 R				-	3110	2662	2886
DM 6.8i RR				4302	3315	2317	3311
NS 7211 R				4226	3534	2517	3425
Gem/Mean	2974	2516	2745	4347	3029	2138	3154

Tabel 25 Saamgevatte inligting van al die lokaliteite in die koel produksiegebiede, 2014/15

Table 25 Summerised information for all the localities in the cool production areas, 2014/15

Kultivar/ Cultivar	Dae tot blom/ Days to flowe-ring	Fisiologies ryp/ Physologi cal mature	Oes datum/ Harvest date	Planthoog te/ Plant height (cm)	Peulhoog te/ Pod height (cm)	Omval/ Lodging (1-5)	Groen stam/ Green stem (1-5)	Oopspring/ Shattering (1-5)	Planttelling/ Number of plants	Ongewenste sade/ undesirable seed %	Massa 100 sade/ Mass 100 seeds (g)	Olie/Oil %	Ru-proteïen/ Crude protein %	Opbrengs/ Yield (kg/ha)
LS 6240 R	58	123	141	69	9	1.13	1.67	2.00	233	0.50	18.00	20.41	38.84	2720
LS 6444 R	56	123	141	65	6	1.00	1.67	3.50	242	0.73	14.24	21.05	36.87	2459
PAN 1454 R	58	128	144	87	10	1.00	2.00	2.25	241	0.48	16.25	20.69	37.53	2769
LS 6146 R	56	123	141	82	9	1.00	1.47	1.50	246	0.65	14.19	21.63	36.08	2480
PHB 94 Y 80 R	60	124	139	66	8	1.20	2.40	2.50	248	0.38	15.92	19.98	39.12	2959
LS 6248 R	78	143	164	87	11	1.73	1.73	2.25	241	0.42	14.16	19.69	37.71	2426
NS 5009 R	60	125	141	68	8	1.07	2.47	2.00	238	0.27	16.35	20.26	37.01	2662
DM 5.1i RR	55	125	141	64	8	1.33	2.00	3.25	203	0.48	15.31	20.97	36.85	2437
PHB 95 Y 20 R	82	149	171	84	10	1.47	1.47	1.00	241	0.50	14.78	18.13	40.13	2300
PAN 1583 R	78	150	168	82	10	1.13	1.67	1.00	231	0.47	14.39	19.31	37.15	2533
PAN 1664 R	76	151	166	75	9	1.23	1.47	1.00	225	0.70	14.49	19.49	36.71	2374
DM 5953 RSF	61	125	145	69	8	1.33	1.80	1.50	244	0.68	15.11	20.76	36.66	3210
LS 6453 R	76	139	154	85	9	1.53	2.07	2.50	244	0.87	13.94	19.68	38.58	2188
PAN 1521 R	80	143	164	82	10	1.40	1.40	1.50	245	1.08	15.43	19.45	38.25	2479
PAN 1500 R	80	151	168	81	10	1.40	1.87	1.00	253	0.32	15.33	19.18	39.97	2411
NS 5909 R	80	152	172	86	11	1.47	2.13	1.00	251	0.53	15.58	19.94	38.05	2354
PHB 96 T 06 R	81	153	170	93	9	1.33	1.67	1.00	218	0.72	14.30	20.18	37.03	2329
LS 6466 R	78	151	172	98	9	1.40	1.87	2.00	238	0.57	16.75	19.57	38.60	2175
PAN 1666 R	78	142	171	93	10	1.43	1.93	2.00	233	0.42	14.84	19.86	38.46	2316
PAN 1623 R	79	142	168	86	9	1.87	1.73	1.00	236	0.58	14.61	19.81	39.75	2469
LS 6261 R	78	144	163	69	7	1.20	1.80	3.00	204	0.67	15.06	19.51	39.19	2074
DM 6.2i RR	79	146	170	85	9	1.80	1.53	1.00	254	0.53	16.59	18.67	38.82	2487
LS 6164 R	78	150	171	91	13	2.00	1.87	1.00	257	0.53	14.27	19.27	39.02	2114
LS 6161 R	80	152	167	85	9	1.57	1.33	1.50	218	0.87	13.82	19.69	38.46	2099
PAN 1614 R	83	151	169	92	12	1.33	1.73	1.00	258	0.42	14.78	19.75	38.23	2327
NS 6448 R	82	151	171	82	11	1.37	1.53	1.00	248	0.73	15.14	20.19	37.96	2501
DM 6.8i RR	82	151	174	106	12	2.00	1.93	1.00	259	0.47	16.28	18.95	37.50	2443
NS 7211 R	81	149	174	80	9	1.37	1.60	2.25	251	0.75	15.23	18.51	38.11	2428
PAN 1729 R	87	147	174	95	12	1.50	1.87	1.00	256	0.57	14.59	19.58	37.25	2091
Standaard	78	146	168	85	11	1.60	1.07	1.50	228	0.60	15.40	19.80	37.61	2457
Gem/Mean	74	142	161	82	9	1.41	1.76	1.67	239	0.58	15.17	19.80	38.05	2436

Tabel 26 Saamgevatte inligting van al die lokaliteite in die matige produksiegebiede, 2014/15

Table 26 Summerised information for all the localities in the moderate production areas, 2014/15

Kultivar/ Cultivar	Dae tot blom/ Days to flowe-ring	Fisiologies ryp/ Physologi cal mature	Oes datum/ Harvest date	Planthoog te/ Plant height (cm)	Peulhoog te/ Pod height (cm)	Omval/ Lodging (1-5)	Groen stam/ Green stem (1-5)	Oopspring/ Shattering (1-5)	Planttelling/ Number of plants	Ongewenste sade/ undesirable seed %	Massa 100 sade/ Mass 100 seeds (g)	Olie /Oil %	Ru-proteïen/ Crude protein %	Opbrengs/ Yield (kg/ha)
LS 6240 R	47	111	131	58	8	1.00	1.92	3.87	203	1.01	18.53	20.75	38.71	1931
LS 6444 R	46	111	132	57	6	1.00	1.79	4.33	216	0.83	14.54	21.56	36.85	1753
PAN 1454 R	48	115	132	72	9	1.00	2.04	4.40	230	1.12	16.59	21.31	37.36	1993
LS 6146 R	46	115	132	67	8	1.00	1.67	3.80	224	1.19	14.93	21.66	36.69	1990
PHB 94 Y 80 R	48	111	132	59	7	1.00	2.38	4.33	224	1.18	16.39	21.06	38.10	1870
LS 6248 R	62	125	145	70	11	1.00	2.67	4.33	236	0.83	14.93	20.78	37.63	2384
NS 5009 R	47	112	133	61	7	1.00	2.79	4.00	212	0.97	17.46	20.35	38.21	2111
DM 5.1i RR	48	114	133	59	10	1.00	2.50	4.60	208	0.99	15.70	21.83	35.79	1754
PHB 95 Y 20 R	63	131	152	70	13	1.00	2.67	2.60	217	0.72	15.67	20.18	38.29	1942
PAN 1583 R	59	127	150	63	9	1.00	2.58	2.60	222	0.77	15.66	20.58	37.34	2303
PAN 1664 R	59	127	148	60	9	1.00	2.63	3.40	219	0.80	15.86	20.51	37.05	2385
DM 5953 RSF	49	114	132	63	8	1.00	2.17	3.80	240	1.15	15.30	21.24	36.85	2413
LS 6453 R	59	125	145	67	10	1.00	2.46	3.80	222	0.54	14.56	20.83	38.16	2060
PAN 1521 R	64	127	148	73	12	1.13	2.67	1.40	232	0.89	16.84	20.53	37.95	2432
PAN 1500 R	65	128	152	66	11	1.00	3.13	2.00	229	0.46	16.27	20.35	38.94	2253
NS 5909 R	63	131	153	71	12	1.00	2.88	3.20	223	0.56	16.31	21.39	36.92	2340
PHB 96 T 06 R	64	131	153	73	11	1.04	2.63	2.20	196	0.66	16.06	21.65	36.16	2129
LS 6466 R	64	126	148	79	13	1.04	2.83	4.27	243	1.23	16.52	20.48	38.39	2299
PAN 1666 R	65	127	148	71	11	1.00	2.96	2.80	222	1.60	15.55	20.60	38.10	1993
PAN 1623 R	64	128	148	72	11	1.00	2.83	1.60	231	0.69	15.52	21.04	38.81	2532
LS 6261 R	60	126	147	59	10	1.00	2.83	4.07	232	0.77	16.77	20.58	38.35	2328
DM 6.2i RR	62	127	153	72	12	1.08	3.17	1.60	217	0.50	17.84	19.91	38.25	2360
LS 6164 R	62	129	150	73	11	1.00	2.58	3.80	230	0.79	15.37	21.06	37.29	2259
LS 6161 R	63	131	151	70	11	1.00	2.92	3.80	226	0.41	14.95	21.20	37.83	2464
PAN 1614 R	65	131	151	76	13	1.00	2.83	2.07	235	0.45	15.69	20.74	37.85	2141
NS 6448 R	63	129	152	68	12	1.00	2.42	3.73	238	0.91	16.53	20.85	38.07	2268
DM 6.8i RR	64	133	157	83	12	1.00	2.67	2.40	219	0.87	17.55	20.04	37.04	2502
NS 7211 R	64	132	155	70	11	1.00	2.75	3.80	232	0.94	16.73	20.06	38.00	2284
PAN 1729 R	69	135	157	81	12	1.00	2.50	1.80	223	0.77	16.42	20.86	36.89	2291
Standaard	64	128	147	73	11	1.04	2.25	2.00	228	0.73	16.62	20.72	37.63	2505
Gem	59	125	146	68	10	1.01	2.57	3.21	224	0.84	16.12	20.82	37.65	2209

Tabel 27 Saamgevatte inligting van al die lokaliteite in die warmer produksiegebiede, 2014/15

Table 27 Summerised information for all the localities in the warmer production areas, 2014/15

Kultivar/ Cultivar	Dae tot blom/ Days to flowe-ring	Fisiologies ryp/ Physologi cal mature	Oes datum/ Harvest date	Planthoog te/ Plant height (cm)	Peulhoog te/ Pod height (cm)	Omval/ Lodging (1-5)	Groen stam/ Green stem (1-5)	Oopspring/ Shattering (1-5)	Planttelling/ Number of plants	Ongewenste sade/ undesirable seed %	Massa 100 sade/ Mass 100 seeds (g)	Olie /Oil %	Ru-proteïen / Crude protein %	Opbrengs/ Yield (kg/ha)
LS 6240 R	35	101	125	59	5	1.00	1.17	1.00	170	0.80	20.87	21.88	40.90	3171
LS 6444 R	35	93	118	60	6	1.00	2.67	2.00	199	0.70	15.99	23.17	38.37	2963
PAN 1454 R	35	135	126	74	7	1.00	4.00	1.00	189	0.57	18.89	22.61	40.25	3445
LS 6146 R	35	98	127	65	5	1.00	2.00	1.00	170	0.73	15.76	23.54	38.18	3245
PHB 94 Y 80 R	37	98	128	68	6	1.00	4.17	1.00	184	0.93	18.29	22.00	41.53	3528
LS 6248 R	42	107	148	72	7	1.00	4.17	1.00	194	1.93	17.40	21.82	41.01	3029
NS 5009 R	36	98	133	64	6	1.00	3.17	1.00	182	0.70	18.71	21.33	41.77	3052
DM 5.1i RR	36	98	123	71	6	1.00	3.17	1.00	186	0.97	17.06	22.70	39.59	3647
PHB 95 Y 20 R	44	118	150	68	6	1.00	4.17	1.00	166	1.37	18.46	22.10	42.05	2897
PAN 1583 R	42	107	140	61	6	1.00	3.67	2.00	173	0.83	17.18	22.76	39.61	3044
PAN 1664 R	42	107	145	60	6	1.00	2.33	1.00	170	1.07	18.23	21.32	39.95	2967
DM 5953 RSF	36	98	128	74	5	1.00	3.17	1.00	188	1.13	17.03	21.28	40.35	3373
LS 6453 R	44	107	131	70	7	1.00	2.50	2.00	175	0.57	16.46	21.43	40.36	3006
PAN 1521 R	45	101	138	78	8	1.00	3.67	1.00	203	1.03	17.93	21.38	39.25	3791
PAN 1500 R	46	107	151	63	7	1.00	4.00	1.00	164	1.27	18.04	21.10	40.83	2925
NS 5909 R	48	135	157	77	6	1.00	4.83	1.00	210	1.37	18.24	22.36	39.66	3236
PHB 96 T 06 R	44	107	143	74	6	1.00	3.67	1.00	166	1.27	18.24	22.40	39.43	2727
LS 6466 R	46	135	150	88	8	1.00	4.33	1.00	218	2.13	18.99	21.23	40.41	3064
PAN 1666 R	47	108	146	75	7	1.00	4.67	1.00	164	0.53	16.96	21.57	39.81	2984
PAN 1623 R	47	118	146	74	6	1.00	3.83	1.00	188	0.97	16.49	22.47	39.56	3409
LS 6261 R	43	98	140	57	8	1.00	3.67	2.00	205	1.37	17.39	21.55	39.86	3045
DM 6.2i RR	48	118	154	77	6	1.00	4.50	1.00	211	0.90	19.21	21.57	39.17	3354
LS 6164 R	45	107	145	79	7	1.00	3.67	1.00	185	1.13	16.44	22.19	39.48	2980
LS 6161 R	45	135	140	73	7	1.00	3.67	1.00	175	0.63	16.30	22.69	37.42	3188
PAN 1614 R	48	118	143	73	9	1.00	2.67	1.00	198	0.87	17.38	22.71	37.16	2895
NS 6448 R	49	135	151	68	6	1.00	3.67	1.00	227	1.75	20.43	23.27	40.49	2886
DM 6.8i RR	47	135	154	92	6	1.00	4.17	1.00	173	1.07	18.81	21.84	38.34	3311
NS 7211 R	48	135	154	68	6	1.00	3.83	1.00	201	1.50	20.29	22.11	39.26	3425
PAN 1729 R	50	135	154	75	7	1.00	4.33	1.00	180	1.23	19.87	21.50	40.54	2892
Standaard	49	101	140	85	10	1.00	3.00	1.00	198	1.37	18.33	20.83	40.24	3641
Gem	43	113	141	71	7	1.00	3.55	1.13	187	1.09	17.99	22.02	39.83	3171