

Landbounavorsingsraad

Graangewasse

Potchefstroom

Agricultural Research Council

Grain Crops

Potchefstroom

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VERSLAG VAN DIE NASIONALE

SOJABOON KULTIVARPROEWE/

2016/17

REPORT OF THE NATIONAL

SOYBEAN CULTIVAR TRIALS

Verantwoordelike beampte:

Responsible officer:

AS de Beer

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1 INTRODUCTION

The National Soybean Cultivar Trials (project M101/62) were planted for the 39th successive year this past growing season. A total of 21 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 as well as a Latinized row-column design using three replications with 32 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 (RCBD) as well as a Latinized row-column design.

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

The trial means (x-axis) versus the cultivar means (y-axis) 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.

A yield probability of more than 50% indicated above average yield and a yield probability of less than 50% indicated a below average yield.

3 DISCUSSION OF RESULTS

3.1 GENERAL

The rainfall and irrigation data are shown in Table 3.

Four (4) of the 21 trials could not be included (19%) in the report compared to the five (5) out of 19 trials (26%) in the 2015/16 season.

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

- 1 Bergville – Hail damage. Trial terminated.
- 2 Groblersdal – High CV%. Damage by pigeons and water logging.
- 3 Hoopstad – High CV%. Replanted due to wind damage. Late second planting and severe drought just after planting.
- 4 Kokstad – Poor emergence. Trial terminated

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 (46 days Brits) and the longest in the cooler areas (78 days at Clocolan).

The number of days to physiological maturity is shown in Table 5. The longest average days to maturity was experienced at Clarens (150 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) had a mean plant height of 112 cm (highest) in the moderate area compared to 44 cm (lowest) of the indeterminate cultivar PAN 1532 R (MG 5.3) in the warm region. 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 54 cm at Brits to 107 cm at Potchefstroom (Irrigation).

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 indeterminate cultivars NS 5909 R (MG 5.9) and LS 6164 R (MG 6.0; determinate), as last season showed a mean pod height of 18cm in the moderate area, while DM 6.8i RR (MG 6.8; indeterminate) also had an above average pod height in all the areas.

PHB 94 Y 80 R (MG 4.8) (indeterminate) had the lowest reading of 4, 8 and 5 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. A pod height of at least 7.5 cm (combine harvesting height) is preferable.

3.2.4 Lodging (Table 9)

The highest lodging occurred in the trial as the previous year at Delmas. The highest lodging figures was reported for PAN 1521 R and LDC 5.9 at Delmas and Kinross (cool area) and PHB 95 Y 20 R at Clarens.

3.2.5 Green stem (Table 10)

A high percentage of green stem, like the previous season, was recorded at Brits, while the cultivar PHB 95 Y 20 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 at Brits and Brits (K2) in the warm production area as well as at Delmas and Kinross in the cool area.

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 Delmas were due to pigeon damage after planting. The lower number of plant ha⁻¹ in the case of Stoffberg is due to a seeding rate of 234 000 seed ha⁻¹.

3.2.8 Percentage undesirable seed (Table 13)

The lowest mean of 0.65% undesirable seeds was recorded for the cool and moderate region. The range varied from 1.41% at Verkeerdevlei to 0.21% at Delmas.

3.2.9 Mass (g) 100⁻¹ seeds (Table 14)

The variation in seed mass among localities ranged between 14.77 g 100⁻¹ seeds at Clarens to 18.62 g 100⁻¹ seeds at Greytown Kranskop and 18.63 g 100⁻¹ at Potchefstroom (Irrigation). The highest seed mass was recorded for LS 6240 R across all climatic regions, while SSS 5052 (tuc), had the smallest seed across all areas.

3.2.10 Oil percentage (Table 15)

The cultivar 5302 RSF had, the highest average oil percentage for all the regions (15.72% cool, 14.25% moderate, 15.16% warm).

3.2.11 Crude Protein percentage (Table 16)

The cultivar SSS 4945 (tuc), as the previous season had the highest values for all the climate regions.

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. The cultivar 5302 RSF had the highest average profat value for all the 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. Thus a 60% probability indicated a 10% chance of an above average yield, while a 40% probability indicated a 10% chance of getting a below average yield.

PAN 1623 R showed an above average yield probability (Table 19) for the low to medium yield potential, (cool area), while PAN 1521 R, DM 5953 RSF and PHB 94 Y 80 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 1521 R, PHB 94 Y 80 R and DM 5953 RSF, as for the cool area, showed above average figures over the whole production potential range. DM 5953 RSF, PAN 1623 R, NS 7211 R and PAN 1521 R also performed above average for the warm areas.

Lokaliteite, medewerkers en adresse van kultivarproewe soos beplan vir, 2016/17
Localities, co-operators and addresses of the cultivar trials, 2016/17

Nr No	Lokaliteit Locality	Adres van proeflokaliteit Address of trial locality	Tel. no. Tel. nr.	Verantwoordelike beämpte Responsible officer
1	Bethlehem	Kleingraan Instituut Bethlehem 9700	082 375 8909	L Bronkhorst & E Maree
2	Bergville	J Jackson Shamrock H4 Bergville 3350	082 388 0311	R Wessels
3	Brits	Hartbeespoort Nav. Stasie Posbus 1261 Brits 0250	082 375 8909	L Bronkhorst & T Kruger
4	Brits K2	K2 Navorsingstasie Brits 0250	072 606 5094	R Boshoff
5	Cedara	Cedara P/bag X9059 Pietermaritzburg 3200	033-355 9455/079 898 5522	J Arathoon
6	Clarendon	D Terblanche Tailfert Clarens 9707	082 388 0311	R Wessels
7	Ciocolan	G Hugo van Niekerk Kroon Ciocolan 9735	082 375 8909	L Bronkhorst & E Maree
8	Delmas-Pannar	Pannar Saad Navorsingsplaas Posbus 439 Delmas 2210	013-665 8524/082 969 1981	A Mathebula
9	Dundee	Dundee Navorsingstasie Posbus 626 Dundee 3000	034 212 479/076 953 3587	M Buthelezi
10	Greytown	Pannar Proefplaas Posbus 19 Greytown 3250	033-413 9639	A Jarvie
11	Greytown Kranskop	Umvoyuna Farm Posbus 755 Greytown 3250	033-417 1404/6)/082 558 1766	P Herbst
12	Groblerdal-Loskop	Loskopproefplaas Posbus 1367 Groblersdal 0470	013-262 3042/083 274 1951	C Fourie
13	Hoopstad	R Taijaard Posbus 120 Hoopstad 9479	082 375 8909	L Bronkhorst
14	Kinross	Vosstoffel Boerdery Posbus 80 Kinross 2270	082 375 8909	L Bronkhorst
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 8909	L Bronkhorst, M van Heerden & E Maree
17	Middelburg	G Anderson Postnet Suite 15 P/Bag 1866 Middelburg 1050	082 375 8909	L Bronkhorst
18-19	Potchefstroom	IGG Proefplaas Privaatsak X1251 Potchefstroom 2520	018-299 6366/082 375 8909	L Bronkhorst
20	Verkeerdevlei	Bloemfontein	082 375 8909	L Bronkhorst, J Richter & E Maree

Tabel 1 Sojaboonaad eienskappe en inligting oor verskaffers, 2016/17
 Table 1 Soybean seed characteristics and information about agents, 2016/17

Kultivar Cultivar	Volwassenheids- groeperings Maturity Group	Groeiyse Growth habit *1	Hilum kleur Hilum colour *2	Blomkleur Flower colour *3	Haarkleur Pubescence *4	Op varieiteits lys On variety list	Verskaffer Agent	Telersregte Breeding rights
LS 6240 R	4.0	SD	BL	W	W	JA/YES	Linkseed	JA/YES
PAN 1454 R	4.4	-	BL	P	T	JAYES	Pannar	JA/YES
SSS 4945 (tuc)	4.5	-	-	W	-	JAYES	Sensako	JA/YES
LS 6146 R	4.4	-	BL	P	G	JAYES	Link Seed	JA/YES
PHB 94 Y 80 R	4.8	SD	BL	P	T	JAYES	Pioneer	JA/YES
LS 6248 R	4.8	-	BL	W	W	JAYES	Link Seed	JA/YES
SSS 5449 (tuc)	4.9	-	-	P	-	JAYES	Sensako	JA/YES
PHB 95 Y 20	5.2	D	BL	P	T	JAYES	Pioneer	JA/YES
DM 5983 RSF	5.3	-	IB	P	W	JAYES	GDM Seeds	JA/YES
PAN 1532 R	5.3	-	LB	P	G	JAYES	Pannar	JA/YES
SSS 5052 (tuc)	5.5	-	-	W	-	JAYES	Sensako	JA/YES
5609 RSF	5.6	-	-	P	G	JAYES	GDM Seeds	JA/YES
PAN 1521 R	5.7	-	IB	P	G	JAYES	Pannar	JA/YES
5302 RSF	5.7	-	-	P	G	JAYES	GDM Seeds	JA/YES
LS 6261 R	6.0	SD	BL	W	B	JAYES	Link Seed	JA/YES
SSS 5755 (tuc)	5.8	-	-	P	-	JAYES	Sensako	JA/YES
NS 5909 R	5.9	-	IB	P	G	JAYES	K2	NEE/NO
LDC 5.9	5.9	-	-	W	-	JAYES	Louise Dreyfus	NEE/NO
PHB 96 T 06 R	6.1	-	KL	-	G	JAYES	Pioneer	NEE/NO
LDC 6.0	6.0	-	-	W	-	JAYES	Louise Dreyfus	NEE/NO
PAN 1623 R	6.1	-	L	P	G	JAYES	Pannar	JA/YES
LS 6161 R	6.3	D	IB	W	B	JAYES	Link Seed	JA/YES
P61T38 R	6.3	D	LB	W	G	JAYES	Pioneer	JA/YES
SSS 6560 (tuc)	6.2	-	-	W	-	JAYES	Sensako	JA/YES
6663 RSF	6.3	-	-	P	G	JAYES	GDM Seeds	JA/YES
LS 6164 R	6.0	D	LB	W	G	JAYES	Link Seed	JA/YES
PAN 1614 R	6.4	-	SD	LB	G	JAYES	Pannar	NEE/NO
NS 6448 R	6.4	-	-	P	G	JAYES	K2	NEE/NO
P64T39 R	6.4	-	KL	W	G	JAYES	Pioneer	JA/YES
DM 6.8i RR	6.8	-	B	P	G	JAYES	GDM Seeds	JA/YES
6968 RSF	6.9	-	-	P	G	JAYES	GDM Seeds	JA/YES
NS 7211 R	7.2	D	LB	W	G	JAYES	K2	NEE/NO

*1 D - Bepaald/determinate; I - Onbepaald/indeterminate; SD - Semi-Bepaald/semi determinate

*2 BL - Swart/black; IB - Onvolloogd swart/imperfect black; B - Bruin/brown; LB - Ligbruin/buff; G - Grys/grey; KL - Kleurloos/buff

*3 P - Pers/purple; W - Wit/white

*4 B - Bruin/brown; G - Grys/grey; W - Wit/white; T - Taankleuring/Tawny

Tabel 2 Algemene inligting aangaande grond en verbouingpraktyke by die onderskeie proeflokaliteite van die kultivarproewe, 2016/17
Table 2 General information in connection with soil and cultivation practices at the different trial localities, 2016/17

Lokaliteit Locality	Plantadatum Date of planting	Grondvorm Soil type	Grond ontleding Soil analysis			Bemesting Fertilization			Spasiering Spacing (cm)	Onkruid beheer Weed control	Koördinate van lokaliteit Co-ordinate of localities
			pH (H ₂ O)	P	K	N	P	K			
Bergville/B	13/11/2016	-	3.7	43.1	146.6	-	-	-	90	-	S28°43'234"
Bethlehem/D	27/10/2016	Avalon	7.88	72	295	4.2	2.52	0	90	Strongarm, Agill, Round-up, skoffel	S28°09'36,1"
Brits/B	30/11/2016	Arcadia	8.01	16	40	1.12	14.81	0	75	Strongarm, Agill, Round-up, skoffel	S26°21'31,7"
Brits K2/B	01/12/2016	Katspruit	8.23	4	350	0	21.84	0	75	Geen, Siegs geskoffel	S25,591916
Cedara/D	06/12/2016	Hutton	4.51	-	0	0	30.45	0	45	Dual S Gold, Hammer, Basagran	S29°32'10"
Clarends/D	22/11/2016	-	4.0	19.8	207.0	-	-	-	90	-	S28°23.387
Clocolan/D	31/10/2016	-	5.03	56	73	6.44	2.52	10.5	75	-	S28,90864°
Delmas/D	24/11/2016	Sandy loam (Davidson)	0	0	0	0	0	0	90	Flumetsulam, Metolachlor 960, Roundup	S26°8'36,08"
Dundee/D	09/12/2016	Hutton	-	-	-	-	-	-	45	-	S28°42'28,73"
Greytown/D	24/11/2016	Hutton	5.29	20	198	-	-	-	75	Metagan Gold, Roundup	S29°05'08,85"
Greytown Kranskop/D	22/11/2016	Hutton	4.75	36	330	-	-	-	90	Felgan Gold, Classic	S29°03'48,37"
Groblersdal/B	03/11/2016	Avalon	5.35	31	148	2.24	2.31	0	75	Strongarm, Agill, Round-up	S25°10'43,4"
Hoopstad	15/11/2016	-	6.25	61	143	7.28	2.52	0	75	-	S27°53'38,8"
Kinross/D	02/11/2016	-	6.67	107	300	1.96	2.31	0	75	Strongarm, Agill, Round-up, skoffel	S26°22'26,2"
Kokstad/D	29/11/2016	-	-	-	-	-	-	-	45	Dual Gold	S30°31'54"
Kroonstad/D	16/11/2016	-	6.31	35	178	5.04	2.31	0	90	Strongarm, Agill, Round-up, skoffel	S27°36'29,9"
Middelburg/D	22/11/2016	-	Boer werk op globale monster			-	-	-	75	Strongarm, Alachlor, Round-up, skoffel	S25°39'51,7"
Potchefstroom/B	09/11/2016	Hutton	7.56	75	298	0	2.31	0	75	Strongarm, Alachlor, Round-up, skoffel	S26°44'00,0"
Potchefstroom/D	12/11/2016	Hutton	7.40	59	293	0	2.52	0	90	Strongarm, Alachlor, Round-up, skoffel	S26°44'11,2"
Stoffberg	17/11/2016	-	5.48	16	158	0	0	0	75	-	S-25,4371430
Verkeerdevlei	28/11/2016	Hutton	-	-	4.2	13.02	0	75	Strongarm, Agill, Round-up	S28°09'36,1"	
										-	E028°18'14,9"

- Inligting nie beskikbaar/information not available

Tabel 3 Reënval en besproeiing vir die verskillende lokaliteite (mm), 2016/17
 Table 3 Rainfall and irrigation at the different localities (mm), 2016/17

Lokaliteit Locality	Maandelikse reënval (mm)/ Monthly rainfall (mm)						Totaal Total **
	Okt	Nov	Des	Jan	Feb	Mrt	
Bethlehem	-	36.07	96.27	141.22	244.09	26.92	24.89
Cedara	75.2	87.38	34.04	83.7	217.5	64	76.45
Delmas	106.45	257.75	156.95	187.36	120.67	42.53	64.65
Greytown	66	112.6	59	110.6	118.6	49	12.8
Greytown Kranskop	68	103	31	138	140	63	15
Grobblersdal	36.5	143.5	110.5	177.5	79.5	19.5	15.5
Potchefstroom B	55.12	94.74	93.98	29.21	225.55	33.78	46.23
Potchefstroom Drg	55.12	94.74	93.98	29.21	225.55	33.78	46.23
Stoffberg	41	185	269	116	167	86	109
							973

* Vir reënval/For rainfall

* Vir besproeiing/For irrigation

Tabel 4 Die aantal dae vanaf plant tot 50% blomstadium van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2016/17
 Table 4 The number of days from planting to 50% flowering stage of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Koel/Cool		Matig/Moderate						Warm	
	Bethlehem Clarendon	Delemas Cedara	Gem/Mean	Kinross Gretelburg	Dundee Krantskop	Gem/Mean	Kroonstad Potchefstroom	Potchefstroom Besproei	Stofberg Vrekkevlei	Brits Gem/Mean
LS 6240 R	65	55	60	52	62	49	57	43	45	47
PAN 1454 R	46	52	51	47	52	49	50	42	47	44
SSS 4945 (tuc)	46	54	61	50	56	49	53	49	47	46
LS 6146 R	46	52	51	45	56	49	50	44	47	45
PHB 94 Y 80 R	46	54	51	54	52	57	52	47	48	47
LS 6248 R	75	54	70	55	77	64	66	59	61	59
SSS 5449 (tuc)	65	76	78	64	73	56	69	60	58	61
PHB 95 Y 20 R	83	79	86	68	86	64	78	61	64	66
DM 5953 RSF	65	52	61	47	52	49	54	46	48	47
PAN 1532 R	75	70	81	94	77	64	77	60	59	66
SSS 5052 (tuc)	75	79	81	69	77	72	76	66	62	61
5609 RSF	71	76	85	64	69	64	71	63	59	58
PAN 1521 R	75	77	84	67	77	72	75	61	58	58
5302 RSF	75	76	81	58	69	64	71	59	57	56
LS 6261 R	65	70	84	63	77	64	71	61	57	55
SSS 5755 (tuc)	83	74	79	64	77	72	75	63	60	58
NS 5909 R	81	79	86	61	77	72	76	67	63	60
LDC 5,9	83	81	85	59	82	72	77	65	60	55
PHB 96 T 06 R	83	86	91	102	83	72	86	68	62	61
LDC 6,0	83	79	86	71	77	72	78	65	63	61
PAN 1623 R	83	79	81	64	77	72	76	67	61	58
LS 6161 R	83	79	71	64	77	72	74	66	60	55
P61T38 R	75	76	84	59	77	64	73	65	62	58
SSS 6560 (tuc)	83	79	85	59	82	64	75	75	65	58
6663 RSF	75	86	92	72	77	72	79	67	65	60
LS 6164 R	82	76	85	55	77	72	74	64	66	63
PAN 1614 R	83	80	85	65	82	72	78	67	63	61
NS 6448 R	75	81	86	67	77	64	75	66	63	61
P64T39 R	82	79	85	68	77	72	77	67	62	58
DM 6,8i RR	83	86	86	66	77	72	78	67	65	63
6968 RSF	88	79	91	73	77	72	80	66	65	58
NS 7211 R	78	81	86	60	82	72	77	66	61	56
Gen/Mean	74	73	78	63	73	65	71	61	59	56
										59
										46
										47

Tabel 5 Die aantal dae vanaf plant tot fisiologiesrypstadium van die verskillende soyaboonkultivars by die verskillende proef lokalteite, 2016/17
 Table 5 The number of days from planting to physiological maturity of the different soybean cultivars at the different trial localities, 2016/17

Cultivar	Kultivar	Koel/Cool		Matiig/Moderate						Warm	
		Bethlehem	Clarendon	Kinross	Cedara	Dundee	Gretswyn	Kranskop	Potchefstroom	Sloofberg	Gem/Mean
LS 6240 R	LS 6240 R	128	124	100	134	120	121	117	112	114	111
PAN 1454 R	PAN 1454 R	128	135	100	134	127	125	117	115	114	111
SSS 4945 (tuc)	SSS 4945 (tuc)	125	129	100	134	117	121	116	112	114	111
LS 6146 R	LS 6146 R	125	133	100	130	117	121	115	112	114	111
PHB 94 Y 80 R	PHB 94 Y 80 R	125	137	100	134	117	123	114	112	114	111
LS 6248 R	LS 6248 R	146	144	136	143	133	140	127	120	119	126
SSS 5449 (tuc)	SSS 5449 (tuc)	128	144	143	141	127	137	121	117	134	121
PHB 95 Y 20 R	PHB 95 Y 20 R	154	151	155	147	141	150	125	117	132	134
DM 5953 RSF	DM 5953 RSF	128	135	100	134	127	125	124	114	112	121
PAN 1532 R	PAN 1532 R	146	144	143	147	130	142	128	121	119	138
SSS 5052 (tuc)	SSS 5052 (tuc)	146	151	143	147	133	144	130	125	127	134
5609 RSF	5609 RSF	139	151	143	147	133	143	128	117	119	134
PAN 1521 R	PAN 1521 R	146	144	155	141	133	144	126	116	126	127
5302 RSF	5302 RSF	139	144	150	147	141	144	123	120	114	138
LS 6261 R	LS 6261 R	146	144	155	154	141	148	127	116	124	134
SSS 5755 (tuc)	SSS 5755 (tuc)	154	151	155	154	133	149	127	120	129	130
NS 5909 R	NS 5909 R	154	161	155	147	141	152	132	119	138	121
LDC 5,9	LDC 5,9	146	151	155	147	133	146	129	124	127	138
PHB 96 T 06 R	PHB 96 T 06 R	154	161	155	154	141	153	134	125	127	134
LDC 6,0	LDC 6,0	146	161	155	147	141	150	129	127	126	120
PAN 1623 R	PAN 1623 R	154	161	143	147	133	148	128	123	121	134
LS 6161 R	LS 6161 R	146	144	155	154	133	146	131	125	121	130
P61T38 R	P61T38 R	154	151	143	147	141	147	136	123	140	138
SSS 6560 (tuc)	SSS 6560 (tuc)	154	151	137	147	133	144	130	129	140	126
663 RSF	663 RSF	154	161	155	150	156	155	131	127	129	134
LS 6164 R	LS 6164 R	154	161	143	147	141	149	128	118	142	138
PAN 1614 R	PAN 1614 R	154	161	143	147	141	149	130	121	119	130
NS 6448 R	NS 6448 R	154	161	143	154	141	151	133	126	127	141
P64T39 R	P64T39 R	158	161	155	154	156	157	134	124	127	138
DM 6,8IRR	DM 6,8IRR	154	161	155	154	149	155	135	130	148	127
6968 RSF	6968 RSF	158	161	155	154	151	156	135	131	126	121
NS 7211 R	NS 7211 R	154	161	155	154	156	156	130	123	148	127
Gen/Mean	Gen/Mean	145	150	140	146	136	143	127	121	125	123

Tabel 6 Die aantal dae vanaf plant tot oesstadium van die verskillende sojaboontkultivars by die verschillende proef lokalteite, 2016/17
 Table 6 The number of days from planting to maturity of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Beethem Claren	Koel/Cool				Matig/Moderate				Warm			
		Kinross D'Emas	Middleburg Clarendon	Gem/Mean	Cedara	Dundee	Krantskop Greytown	Potchefstroom Besproei	Droog Potchefstroom	Vryheidsele Stoffberg	Burg Gem/Mean	Brits Gem/Mean	KZ Burg
LS 6240 R	146	144	147	135	141	133	141	121	123	134	138	151	135
PAN 1454 R	146	161	155	133	141	143	147	122	152	134	138	144	135
SSS 4945 (tuc)	146	154	155	133	145	133	144	121	124	134	138	148	135
LS 6146 R	146	154	155	134	141	133	144	119	125	134	138	138	136
PHB 94 Y 80 R	146	161	151	133	141	133	144	121	132	134	138	135	134
LS 6248 R	163	161	175	141	163	146	158	132	128	134	148	142	150
SSS 5449 (tuc)	158	161	170	147	155	148	157	125	138	161	138	137	135
PHB 95 Y 20 R	165	168	184	147	170	167	167	130	123	134	148	161	150
DM 5953 RSF	146	154	155	133	141	133	144	124	125	134	138	138	135
PAN 1532 R	160	161	179	149	167	146	161	133	135	134	148	152	141
SSS 5052 (tuc)	165	168	198	151	168	163	169	135	144	134	167	158	150
5609 RSF	160	168	169	145	163	167	162	133	128	134	153	150	146
PAN 1521 R	168	161	179	149	158	146	160	131	126	134	157	151	139
5302 RSF	160	161	170	140	160	151	157	127	138	134	148	148	135
LS 6261 R	163	161	184	141	182	154	164	134	123	134	153	148	141
SSS 5755 (tuc)	173	168	193	150	177	169	172	133	143	134	167	146	143
NS 5909 R	175	168	193	151	182	169	173	137	153	168	162	164	146
LDC 5,9	182	168	193	156	173	165	173	134	148	148	148	148	134
PHB 96 T 06 R	173	168	189	146	177	163	169	138	145	147	167	161	143
LDC 6,0	175	168	198	150	173	167	172	134	144	148	162	156	146
PAN 1623 R	168	168	184	150	177	169	169	133	134	134	158	151	139
LS 6161 R	168	161	179	149	177	149	164	135	139	134	153	152	143
P61T38 R	165	168	189	139	175	160	166	141	136	155	158	155	146
SSS 6560 (tuc)	182	168	193	151	177	154	171	135	143	155	162	164	146
6663 RSF	178	168	198	156	182	169	175	136	159	168	167	167	159
LS 6164 R	172	168	170	139	182	167	166	134	132	155	167	158	146
PAN 1614 R	182	168	189	151	173	163	171	136	147	147	167	152	146
NS 6448 R	170	168	189	149	165	163	167	137	143	147	153	152	146
P64T39 R	187	168	189	151	182	165	174	136	142	148	162	158	150
DM 6,8i RR	187	168	198	153	182	163	175	139	157	161	167	159	167
6968 RSF	187	168	198	157	182	169	177	139	153	168	167	167	167
NS 7211 R	170	168	198	148	168	169	170	135	150	161	162	157	151
Gem/Mean	167	164	180	145	167	156	163	132	139	144	155	144	147

Tabel 7 Die planthoogte van die verskillende sojaboenkultivars by die verskillende proeflokaaliteite, 2016/17
 Table 7 The plant height of the different soybean cultivars at the different trial localities, 2016/17

Kultivar/Cod	Koel/Cold	Matri/Moderate												Warm	
		Bethlehem	Clarendon	Delmas	Kinross	Middleburg	Cedara	Dundee	Greytown	Kranskop	Potchefstroom	Sotkberg	Brits K2	Gem/Mean	
LS 6240 R	62	75	75	101	57	48	70	79	68	76	78	57	98	85	54
PAN 1454 R	93	90	88	116	64	58	85	102	98	106	93	78	102	97	70
SSS 4945 (tuc)	62	90	68	83	57	52	69	75	70	72	78	77	90	78	57
LS 6146 R	82	90	77	111	59	54	79	90	83	99	100	73	102	91	71
PHB 94 Y 80 R	55	70	60	79	63	45	62	74	67	78	74	55	103	80	56
LS 6248 R	93	105	85	104	77	91	103	86	97	103	95	103	85	74	73
SSS 5449 (tuc)	87	100	80	99	83	73	87	90	72	92	97	85	117	95	71
PHB 95 Y 20 R	77	90	73	106	68	60	79	95	79	78	93	73	98	71	81
DM 5953 RSF	90	80	67	93	78	50	76	79	78	81	87	68	107	88	65
PAN 1532 R	82	80	67	111	73	62	79	74	65	76	80	72	102	70	68
SSS 5052 (tuc)	90	90	82	108	92	78	90	100	80	100	97	102	110	80	68
5609 RSF	65	85	62	92	57	57	70	84	65	70	72	65	74	72	48
PAN 1521 R	102	85	92	110	100	82	95	93	88	91	98	103	108	92	77
5302 RSF	83	90	78	102	75	65	82	84	72	88	82	78	105	82	69
LS 6261 R	78	85	65	105	70	63	78	72	67	76	82	78	100	70	67
SSS 5755 (tuc)	87	100	65	109	85	71	86	89	79	96	102	90	90	95	73
NS 5909 R	98	100	72	105	90	79	91	105	83	99	110	99	125	85	87
LDC 5,9	93	80	87	118	112	81	95	100	80	102	107	103	128	92	85
PHB 96 T 06 R	95	105	85	118	93	85	97	104	88	105	117	107	133	97	102
LDC 6,0	75	60	60	100	72	60	71	77	60	75	85	95	82	73	67
PAN 1623 R	92	95	88	108	90	84	93	97	89	99	102	93	120	90	67
LS 6161 R	93	90	93	105	87	83	92	92	90	89	98	103	92	93	92
P61T38 R	62	85	63	97	60	54	70	92	73	74	95	72	70	66	73
SSS 6560 (tuc)	92	105	75	94	95	64	88	87	75	86	105	90	103	87	74
6663 RSF	103	110	72	95	100	88	95	120	93	98	115	107	137	110	93
LS 6164 R	105	105	82	95	95	92	96	110	92	118	110	113	103	103	88
PAN 1614 R	103	95	82	118	105	85	98	111	100	109	118	103	124	100	82
NS 6448 R	75	100	67	107	75	63	81	102	100	97	107	87	97	78	79
P64T39 R	110	100	98	106	103	86	101	102	89	107	110	103	115	93	78
DM 6,8iRR	111	100	90	133	110	97	107	115	102	116	118	120	143	103	97
6968 RSF	113	110	92	115	107	86	104	106	96	100	105	113	148	87	93
NS 7211 R	68	95	67	107	77	67	80	101	73	74	103	73	105	72	83
Gem/Mean	87	92	77	105	82	70	85	94	81	91	98	89	107	86	75

Tabel 8 Die peulhoogte van die verskillende sojaboontkultivars by die verskillende proeflokaliteite, 2016/17
 Table 8 The pod height of the different soybean cultivars at the different trial localities, 2016/17

	Koel(Cool)	Matig/Moderate										Warm			
		Bethlehem	Clares	Deimelaar	Kinross	Dundee	Greytown	Kranskop	Greytown	Potchefstroom	Droog	Stoffberg	Verkeerdevlei	Brits K2	Gem/Mean
LS 6240 R	3	8	7	12	6	2	6	10	9	6	14	8	7	9	3
PAN1454 R	8	7	8	10	6	4	7	14	9	7	13	12	10	11	4
SSS 4945 (tuc)	4	7	6	8	7	2	6	11	9	10	4	13	8	3	7
LS 6146 R	9	7	7	12	7	2	7	12	14	16	11	3	10	10	6
PHB 94 Y 80 R	2	6	4	6	6	1	4	12	12	9	3	4	15	9	5
LS 6248 R	9	15	8	9	10	5	10	22	17	18	22	10	11	8	18
SSS 5449 (tuc)	6	7	9	14	7	5	8	20	14	12	18	8	12	10	12
PHB 95 Y 20 R	10	10	8	12	9	6	9	20	17	20	22	11	12	8	22
DM 5963 RSF	10	5	4	8	8	1	6	11	13	12	9	5	17	11	5
PAN 1532 R	6	18	5	15	8	4	9	13	12	14	13	6	13	8	8
SSS 5052 (tuc)	9	16	9	14	10	7	11	20	15	16	17	9	14	8	14
5609 RSF	5	10	7	9	6	4	7	15	15	17	12	7	12	8	4
PAN 1521 R	10	10	13	17	11	5	11	19	17	17	18	10	15	9	9
5302 RSF	7	3	9	14	6	2	7	14	13	12	8	5	15	9	13
LS 6261 R	7	10	4	22	8	7	10	18	16	19	17	7	11	8	14
SSS 5755 (tuc)	11	10	4	14	9	8	9	18	14	17	18	8	10	11	8
NS 5909 R	7	16	9	12	11	8	11	28	21	20	20	10	19	9	24
LDC 5,9	3	10	8	15	12	7	9	17	13	18	24	7	14	10	13
PHB 96 T 06 R	8	15	9	12	7	7	10	18	12	14	25	8	12	9	24
LDC 6,0	5	3	2	16	6	4	6	13	10	13	19	6	9	8	11
PAN 1623 R	7	9	12	12	8	4	9	17	17	17	9	14	9	15	8
LS 6161 R	11	8	10	13	10	9	10	18	20	18	18	12	11	10	20
P61T38 R	9	15	5	10	8	9	25	21	22	20	9	8	7	25	7
SSS 6560 (tuc)	8	15	8	10	11	7	10	18	14	17	20	7	10	16	8
6663 RSF	9	13	7	9	8	7	9	21	15	16	20	8	14	15	22
LS 6164 R	9	10	7	11	9	8	9	22	18	24	25	11	12	27	11
PAN 1614 R	12	11	10	14	11	9	11	25	18	18	27	8	16	11	26
NS 6448 R	9	17	4	13	7	6	10	20	16	15	23	9	14	10	19
P64T39 R	8	16	12	11	8	6	10	19	16	16	24	7	11	9	12
DM 6,81 RR	8	15	8	10	11	8	10	23	21	22	19	11	14	13	27
6968 RSF	11	20	11	17	13	8	13	24	18	20	11	14	10	23	10
NS 7211 R	8	18	4	13	8	5	9	21	17	16	23	7	13	8	15
Gem/Mean	8	11	7	12	9	6	9	18	15	16	17	8	13	10	15

Tabel 9 Omvalwaarnemings (1-5) van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2016/17
 Table 9 Lodging data (1-5) of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Koel(Cool)	Matig/Moderate				Warm			
		Bethlehem	Claarlaan	Kinross	Gem/Mean	Gem/Mean	Dundee	Grytown	Gem/Mean
LS 6240 R	1.00	1.00	2.33	1.00	1.22	1.00	1.00	1.00	1.67
PAN 1454 R	1.00	1.00	3.33	1.00	1.39	1.00	1.00	1.00	1.08
SSS 4945 (tuc)	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.04
LS 6146 R	1.00	1.00	3.00	1.00	1.33	1.00	1.00	1.00	1.25
PHB 94 Y 80 R	1.00	1.00	3.67	1.00	1.44	1.00	1.00	1.00	1.00
LS 6248 R	1.00	1.00	2.67	1.00	1.28	1.00	1.00	1.00	1.00
SSS 5449 (tuc)	1.00	1.00	2.67	1.00	1.28	1.00	1.00	1.00	1.04
PHB 95 Y 20 R	1.00	4.00	3.67	1.00	1.94	1.00	1.00	1.00	1.00
DM 5953 RSF	1.00	1.00	2.67	1.00	1.28	1.00	1.00	1.00	1.00
PAN 1532 R	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.33
SSS 5052 (tuc)	1.00	1.00	4.67	1.33	1.00	1.67	1.00	1.00	1.00
5609 RSF	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.00
PAN 1521 R	2.67	1.00	4.33	4.33	1.00	2.39	1.00	1.00	1.00
5302 RSF	1.00	1.00	3.33	1.00	1.39	1.00	1.00	1.00	1.00
LS 6261 R	1.00	1.00	2.33	1.00	1.22	1.00	1.00	1.00	1.04
SSS 5755 (tuc)	1.00	1.00	2.33	1.00	1.22	1.00	1.00	1.00	1.00
NS 5909 R	1.33	1.00	5.00	1.00	1.72	1.00	1.00	1.00	1.08
LDC 5.9	1.00	1.00	5.00	4.67	1.00	2.28	1.00	1.00	1.29
PHB 96 T 06 R	1.00	1.00	4.67	1.33	1.00	1.67	1.00	1.00	1.08
LDC 6.0	1.00	1.00	3.67	2.00	1.61	1.00	1.00	1.00	1.00
PAN 1623 R	1.00	1.00	5.00	1.33	1.00	1.72	1.00	1.00	1.67
LS 6161 R	1.33	1.00	3.00	1.00	1.39	1.00	1.00	1.00	1.00
P61T38 R	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.13
SSS 6560 (tuc)	1.00	1.00	4.33	1.00	1.56	1.00	1.00	1.00	1.00
6663 RSF	1.00	3.00	1.00	5.00	1.33	1.00	1.00	1.33	1.00
LS 6164 R	1.00	1.00	4.00	2.00	1.67	1.00	1.00	1.00	1.00
PAN 1614 R	1.33	1.00	5.00	1.00	1.72	1.00	1.00	1.00	1.00
NS 6448 R	1.00	1.00	5.00	1.00	1.67	1.00	2.33	1.00	1.17
P64T39 R	1.33	1.00	4.00	3.00	1.89	1.00	1.00	3.33	1.00
DM 6.8i RR	3.00	1.00	5.00	1.33	2.06	1.00	1.00	2.33	1.00
6968 RSF	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.04
NS 7211 R	1.00	1.00	2.00	1.00	1.17	1.00	1.00	1.00	1.00
Gem/Mean	1.09	1.22	1.00	3.49	1.40	1.00	1.53	1.00	1.06

Tabel 10 Groenstam (1-5) van die verskillende sojaboontkultivars by die verschillende proef lokalteite, 2016/17
 Table 10 Greenstem (1-5) of the different soybean cultivars at the different trial localities, 2016/17

Cultivar	Koel/Cool	Matig/Moderate												Warm	
		Bethlehem	Clarendon	Klinross	Middleburg	Gem/Mean	Cedara	Dundee	Greytown	Kroonstad	Potchefstroom	Stoffberg	Brits	Brits K2	Gem/Mean
LS 6240 R	1.00	1.00	2.00	2.67	1.33	1.60	1.33	1.00	2.67	4.00	2.67	1.00	1.67	1.92	3.33
PAN 1454 R	1.67	1.00	2.00	3.33	4.00	2.40	2.67	3.00	1.00	2.33	4.00	2.00	3.00	2.54	4.67
SSS 4945 (tuc)	1.33	1.00	2.00	2.33	1.73	1.67	1.00	3.00	4.67	2.67	1.00	3.33	2.29	5.00	2.00
LS 6146 R	1.00	1.00	2.00	2.33	1.33	1.53	1.00	1.00	3.00	2.67	2.33	5.00	1.00	2.13	5.00
PHB 94 Y 80 R	2.33	1.00	2.67	3.00	3.33	2.47	4.67	1.00	3.00	4.33	3.00	1.00	4.00	2.75	4.67
LS 6248 R	2.33	1.00	2.67	4.33	4.00	2.87	1.00	1.00	4.00	4.00	3.00	2.00	1.33	2.17	3.67
SSS 5449 (tuc)	1.67	1.00	2.67	3.33	4.67	2.67	1.00	1.00	4.00	2.67	3.67	1.00	1.33	1.96	3.33
PHB 95 Y 20 R	4.33	1.00	3.67	5.00	4.67	3.73	1.67	1.33	1.00	4.00	4.67	3.00	5.00	4.00	3.08
DM 5953 RSF	1.33	1.00	1.67	2.00	1.67	1.53	1.33	1.00	1.00	3.67	3.00	1.00	1.00	1.79	4.00
PAN 1532 R	2.33	1.00	2.33	3.67	2.33	2.33	1.00	1.00	2.00	4.67	2.67	1.00	1.33	1.83	3.00
SSS 5052 (tuc)	2.33	1.00	1.33	3.00	2.67	2.07	1.00	1.00	3.67	4.67	3.33	3.00	2.00	2.46	4.00
5609 RSF	2.00	1.00	2.67	4.67	4.67	3.00	1.00	1.00	4.67	4.33	3.00	3.00	2.33	2.54	4.67
PAN 1521 R	3.67	1.00	3.00	3.67	2.33	2.73	1.00	1.00	2.67	4.33	2.33	2.00	1.00	1.92	4.67
5302 RSF	1.67	1.00	2.67	4.00	3.33	2.53	1.00	1.00	2.33	4.00	2.00	1.00	1.67	1.75	3.67
LS 6261 R	3.67	1.00	3.33	5.00	3.60	2.33	1.00	1.33	4.67	4.00	4.00	2.00	1.33	2.58	5.00
SSS 5755 (tuc)	2.67	1.00	2.33	4.00	1.67	2.33	1.33	1.00	3.67	4.00	4.67	4.00	1.33	2.63	3.67
NS 5909 R	4.67	1.00	1.67	4.00	2.67	2.80	2.33	1.00	1.00	4.67	4.67	3.33	3.00	2.00	2.75
LDC 5.9	4.00	1.00	2.33	4.00	1.67	2.60	1.00	1.33	1.00	4.67	3.33	1.00	2.00	2.17	4.00
PHB 96 T 06 R	2.33	1.00	1.33	1.00	1.40	1.33	1.00	1.00	2.00	5.00	3.67	1.00	2.00	2.13	4.67
LDC 6.0	5.00	1.00	2.33	3.67	3.67	3.13	1.00	1.00	4.00	4.67	3.33	1.00	2.00	2.25	5.00
PAN 1623 R	1.67	1.00	2.33	2.67	1.67	1.87	1.00	1.00	3.33	4.00	5.00	1.00	1.67	2.25	3.00
LS 6161 R	4.33	1.00	1.67	4.00	1.33	2.47	1.00	1.00	4.33	4.33	4.00	1.00	2.67	2.42	4.67
P61T38 R	3.00	1.00	2.67	4.67	4.33	3.13	1.67	1.00	4.33	4.00	3.67	5.00	1.33	2.75	5.00
SSS 6560 (tuc)	3.00	1.00	2.00	3.00	3.33	2.27	1.33	1.00	4.67	4.67	3.33	1.00	1.00	2.25	4.33
6663 RSF	4.00	1.00	2.00	3.67	4.67	3.07	1.67	1.00	4.33	5.00	3.33	5.00	2.00	3.00	5.00
LS 6164 R	4.00	1.00	2.00	4.33	4.00	3.07	1.33	1.00	4.33	4.33	4.00	5.00	2.00	2.75	3.67
PAN 1614 R	3.33	1.00	2.00	3.33	2.33	2.40	1.33	1.00	4.67	4.67	4.00	2.00	2.00	2.58	3.67
NS 6448 R	1.00	1.00	2.00	2.67	1.33	1.60	1.00	1.00	1.67	4.33	3.33	3.00	2.33	2.21	3.67
P64T39 R	4.33	1.00	1.67	3.33	1.67	2.40	1.00	1.00	2.00	5.00	3.00	1.00	1.67	1.96	4.67
DM 6.8i RR	2.67	1.00	2.67	2.67	1.67	2.13	1.00	1.00	3.67	5.00	4.00	1.00	2.00	2.33	5.00
6968 RSF	5.00	1.00	2.00	3.67	2.87	1.33	1.00	1.00	3.67	5.00	3.33	2.00	2.46	5.00	2.00
NS 7211 R	4.00	1.00	2.00	4.33	5.00	3.27	1.33	1.00	4.67	4.67	3.67	5.00	2.33	2.96	4.00
Gem/Mean	2.86	1.00	2.24	3.45	2.89	2.49	1.43	1.08	3.49	4.31	3.29	2.28	1.97	2.36	4.27
															3.23

Tabel 11 Oopspring (1-5) van die verskillende sojaboontkultivars by die verschillende proef lokalteite, 2016/17
 Table 11 Shattering (1-5) of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Bethlehem Clarendon	Delmas Klerksdorp	Klipspruit Kirkwood	Dundee Grootfontein	Greytown Kroonstad	Potchefstroom Pofadder	Droog Stoffeestroom	Vrekerevellei Verkeerseveld	Briëls Gem/Mean	Warm	
										Briëls K2 Gem/Mean	
LS 6240 R	2.00	1.00	3.00	2.33	5.00	1.00	2.39	1.00	1.00	2.00	1.29
PAN 1454 R	1.00	1.00	4.00	4.00	2.00	2.17	1.00	1.00	1.00	2.00	1.14
SSS 4945 (tuc)	3.00	2.00	5.00	5.00	4.00	3.67	1.00	1.67	1.00	3.00	1.38
LS 6146 R	2.00	2.00	2.67	5.00	1.00	2.61	1.00	2.00	2.00	1.00	1.57
PHB 94 Y 80 R	2.00	2.00	5.00	4.00	3.00	3.17	1.00	2.00	2.00	1.00	1.57
LS 6248 R	2.00	1.00	3.67	5.00	1.00	2.28	1.00	2.00	2.00	1.00	1.71
SSS 5449 (tuc)	2.00	1.00	3.67	5.00	1.00	2.28	1.00	1.00	2.00	1.00	1.57
PHB 95 Y 20 R	1.00	1.00	2.00	5.00	1.00	2.00	1.00	1.00	2.00	1.00	1.43
DM 5953 RSF	2.00	1.00	2.00	3.00	4.00	2.00	2.33	1.00	1.00	1.00	1.29
PAN 1532 R	1.00	1.00	2.00	1.00	1.00	1.17	1.00	1.00	2.00	1.00	1.29
SSS 5052 (tuc)	2.00	1.00	1.33	3.00	1.00	1.56	1.00	1.00	2.00	1.00	1.57
5609 RSF	1.00	1.00	2.00	3.67	4.00	1.00	2.11	1.00	2.00	1.00	1.43
PAN 1521 R	1.00	1.00	2.00	2.33	3.00	1.00	1.72	1.00	2.00	1.00	1.43
5302 RSF	2.00	1.00	2.00	4.67	4.00	1.00	2.44	1.00	2.00	1.00	1.43
LS 6261 R	1.00	1.00	3.00	3.33	3.00	1.00	2.06	1.00	1.00	1.00	1.00
SSS 5755 (tuc)	3.00	1.00	3.00	1.00	1.00	1.67	1.00	1.00	2.00	1.00	1.43
NS 5909 R	3.00	1.00	2.33	4.00	2.33	2.28	1.00	1.00	2.00	1.00	1.43
LDC 5.9	1.00	1.00	3.00	2.00	1.00	1.50	1.00	1.00	1.00	1.00	1.14
PHB 96 T 06 R	2.00	1.00	1.33	1.00	1.00	1.22	1.00	1.00	2.00	1.00	1.29
LDC 6.0	1.00	1.00	2.67	4.00	1.00	1.78	1.00	2.00	2.00	1.00	1.43
PAN 1623 R	1.00	1.00	1.33	4.00	1.00	1.56	1.00	1.00	1.00	1.00	1.00
LS 6161 R	2.00	1.00	3.67	5.00	1.00	2.28	1.00	1.33	2.00	4.00	1.00
P61T38 R	1.00	1.00	2.67	1.00	1.00	1.28	1.00	1.00	2.00	1.00	1.14
SSS 6560 (tuc)	2.00	1.00	2.33	2.50	1.00	1.64	1.00	1.00	2.00	1.00	1.57
6663 RSF	2.00	1.00	1.67	1.00	1.00	1.28	1.00	1.00	1.00	1.00	1.29
LS 6164 R	1.00	3.00	2.67	5.00	1.00	2.28	1.00	1.67	1.00	1.00	1.38
PAN 1614 R	3.00	1.00	1.00	1.00	1.00	1.33	1.00	1.00	2.00	1.00	1.29
NS 6448 R	2.00	3.00	4.00	3.00	2.50	1.00	1.64	1.00	2.00	1.00	1.29
P64T39 R	2.00	1.00	2.33	1.00	1.00	1.39	1.00	2.00	1.00	1.00	1.00
DM 6.8i RR	2.00	1.00	2.67	1.00	1.00	1.44	1.00	1.00	2.00	1.00	1.29
6968 RSF	1.00	2.00	3.00	1.00	1.00	1.50	1.00	1.00	1.00	1.00	1.50
NS 7211 R	2.00	2.00	4.00	5.00	1.00	2.50	1.00	1.00	1.00	1.00	1.00
Gem/Mean	1.75	1.09	1.72	2.76	3.30	1.32	1.99	1.00	1.05	1.34	1.66

Tabel 13 Persentasie ongewenste sade van die verskillende sojaboontkultivars by die verschillende proef lokaliteite, 2016/17
 Table 13 Percentage undesirable seed of the different soybean cultivars at the different trial localities, 2016/17

Cultivar Koel/Cool	Koel/Cool			Gem/Mean			Matig/Moderate			Warm			
	Bethlehem	Claress	Delmars	Middleburg	Cedara	Dundee	Greytown	Krantskop	Kroonstad	Potchefstroom	Sotlafberg	Vryheidervlei	Gem/Mean
LS 6240 R	0.00	0.20	0.43	0.40	1.14	0.30	0.41	0.00	2.50	0.60	0.80	0.37	0.60
PAN 1454 R	0.39	0.90	1.00	0.30	0.99	0.80	0.73	0.00	2.00	0.80	0.90	0.50	0.50
SSS 4945 (tuc)	0.14	0.20	0.87	0.40	0.80	0.10	0.42	0.30	1.10	0.30	0.40	0.50	0.35
LS 6146 R	0.27	0.40	0.35	0.50	1.78	0.40	0.62	0.40	0.50	0.30	0.50	1.05	0.60
PHB 94 Y 80 R	0.22	0.00	0.64	0.60	2.00	1.50	0.83	0.70	0.90	0.40	0.90	0.65	0.71
LS 6248 R	0.68	2.20	1.57	0.00	0.44	1.00	0.98	0.40	0.60	0.20	0.31	0.79	1.36
SSS 5449 (tuc)	0.24	0.90	1.07	0.00	0.11	0.10	0.40	0.00	0.80	0.10	0.20	0.60	0.00
PHB 95 Y 20 R	1.52	0.00	0.39	0.10	0.52	1.00	0.59	0.30	0.80	0.20	0.40	0.80	0.69
DM 5953 RSF	0.32	0.00	0.81	0.00	0.34	0.70	0.36	0.10	1.60	0.80	0.40	0.00	0.86
PAN 1532 R	1.22	0.10	0.27	0.00	1.19	0.50	0.55	0.00	0.20	0.00	0.50	0.00	0.22
SSS 5052 (tuc)	0.45	1.00	1.06	0.40	0.34	0.20	0.58	0.20	0.40	0.00	0.40	0.25	2.43
5609 RSF	0.84	0.40	0.07	0.00	0.40	1.00	0.45	0.30	0.50	0.40	0.10	0.31	0.11
PAN 1521 R	0.96	3.40	0.58	0.00	1.37	0.00	1.05	0.30	0.50	0.80	0.00	0.40	0.90
5302 RSF	0.74	1.60	0.60	0.00	0.62	0.70	0.71	0.20	0.00	0.30	0.40	0.10	0.27
LS 6261 R	0.58	0.60	1.20	0.00	0.80	0.70	0.65	0.50	0.00	0.40	0.30	0.40	0.35
SSS 5755 (tuc)	0.44	1.10	0.86	0.10	0.83	0.30	0.61	0.10	0.30	0.50	0.20	1.10	0.97
NS 5909 R	0.62	0.40	0.66	0.10	0.27	0.80	0.48	0.80	0.70	0.30	0.40	0.20	0.50
LDC 5.9	0.30	2.00	0.21	0.60	0.61	0.80	0.75	0.20	0.30	0.10	0.00	0.00	0.60
PHB 96 T 06 R	0.60	0.90	0.76	0.40	0.78	0.30	0.62	0.00	0.90	0.10	0.30	0.70	0.50
LDC 6.0	0.20	0.50	0.24	0.40	0.51	1.40	0.54	0.10	0.60	0.40	0.20	0.50	0.67
PAN 1623 R	0.79	1.90	0.50	0.30	0.30	1.10	0.82	0.60	0.40	0.30	0.20	0.10	0.31
LS 6161 R	0.29	1.30	0.52	0.00	0.12	0.20	0.41	0.60	0.30	0.40	0.10	0.10	0.09
P61T38 R	0.96	1.50	0.14	0.00	0.40	0.70	0.62	0.00	0.10	0.50	0.00	0.56	0.63
SSS 6560 (tuc)	0.32	1.30	0.81	0.20	0.20	0.50	0.56	0.00	0.10	0.50	0.00	0.46	0.66
6663 RSF	0.78	0.80	1.32	0.10	0.14	1.90	0.84	0.50	2.30	0.80	0.10	0.60	0.77
LS 6164 R	0.41	1.00	1.13	0.30	0.70	0.90	0.74	0.30	0.10	1.00	0.20	0.30	0.42
PAN 1614 R	0.30	1.50	0.60	0.50	0.37	0.20	0.58	0.40	0.40	0.20	0.20	0.45	0.20
NS 6448 R	0.18	1.20	0.41	0.20	0.56	0.70	0.54	0.60	0.80	0.10	0.20	0.26	0.37
P64T39 R	0.93	0.50	0.58	0.20	0.47	1.30	0.66	0.40	0.90	1.60	0.00	1.00	0.29
DM 6.8i RR	0.66	3.80	0.72	0.10	1.47	0.30	1.18	0.80	1.10	0.50	0.60	0.22	1.43
6968 RSF	0.99	0.50	0.99	0.20	1.80	1.00	0.91	0.50	1.30	0.60	0.00	1.60	1.93
NS 7211 R	0.58	1.10	0.62	0.40	0.60	0.70	0.67	0.50	0.80	0.50	0.90	0.47	0.86
Gem/Mean	0.56	1.04	0.69	0.21	0.72	0.69	0.65	0.32	0.73	0.49	0.28	0.48	1.41

Tabel 14 Massa van 100 sade (g) van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2016/17
Table 14 Mass 100 seeds (g) of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Bethlehem Bethlehem	Koel/Cool		Matig/Moderate								Warm	
		Clarens	Kinross	Gem/Mean	Delmas	Cedara	Greytown	Kranstad	Potchefstroom	Droog	Brits K2	Gem/Mean	
LS 6240 R	21.38	19.37	17.56	23.33	19.67	21.33	20.44	21.00	20.63	18.20	24.00	23.63	21.34
PAN1454 R	19.29	17.07	14.19	16.53	17.93	20.40	17.57	20.20	19.00	17.35	19.00	19.17	17.98
SSS 4945 (tuc)	18.64	17.17	15.91	20.17	18.10	18.90	18.15	20.03	18.70	17.20	19.90	19.85	19.22
LS 6146 R	16.77	16.20	14.98	16.57	17.17	16.19	17.67	16.40	16.05	19.80	16.27	15.96	16.19
PHB 94 Y 80 R	18.46	16.73	15.01	18.17	17.23	18.33	17.32	18.70	17.70	19.80	18.70	19.19	17.23
LS 6248 R	15.44	13.67	14.67	14.03	16.01	16.56	15.06	15.13	13.37	13.45	16.43	18.23	17.82
SSS 5449 (tuc)	14.75	14.10	13.39	15.77	14.83	16.00	14.81	14.00	13.80	16.90	16.03	15.18	16.08
PHB 95 Y 20 R	15.51	14.80	14.59	16.17	16.90	17.73	15.95	16.10	15.73	13.35	17.80	16.97	17.97
DM 5983 RSF	18.89	16.37	16.62	19.50	16.94	18.27	17.76	16.97	14.93	15.75	20.00	17.83	17.01
PAN1532 R	15.38	13.67	14.57	16.17	16.05	16.20	15.34	16.13	14.63	14.15	17.90	16.80	18.20
SSS 5052 (tuc)	14.99	13.93	13.10	15.03	14.40	15.23	14.45	14.47	13.70	13.55	15.60	14.80	16.58
5609 RSF	15.52	14.63	15.14	18.33	17.80	18.63	16.68	15.00	14.37	14.35	17.50	17.33	18.97
PAN1521 R	18.52	14.07	16.57	16.77	17.92	17.83	16.95	16.47	14.23	14.20	16.20	19.23	21.96
5302 RSF	17.79	14.93	17.08	16.77	18.89	19.33	17.47	15.73	15.40	14.20	19.00	19.33	19.79
LS 6261 R	16.49	13.90	15.62	17.00	18.23	18.63	16.65	17.40	14.20	17.90	18.60	17.07	17.46
SSS 5755 (tuc)	14.90	13.80	14.51	14.60	17.01	17.50	15.39	15.17	14.43	14.50	18.40	17.97	17.75
NS 5909 R	16.48	14.03	14.88	15.70	17.02	16.87	15.83	15.73	15.03	15.25	17.70	16.73	18.54
LDC 5.9	19.56	15.33	16.84	17.60	19.13	19.20	17.94	16.37	16.73	16.30	21.80	20.30	23.23
PHB 96 T 06 R	14.95	13.63	14.17	16.27	15.31	17.27	15.27	16.77	15.33	15.10	17.90	15.97	18.90
LDC 6.0	16.12	14.40	14.58	15.53	16.93	17.83	15.90	14.13	14.95	14.70	16.60	16.07	18.26
PAN1623 R	15.10	13.50	14.78	15.27	15.23	15.60	14.91	15.03	13.50	14.25	16.60	17.07	17.99
LS 6161 R	14.24	14.27	13.89	15.47	15.73	14.97	14.76	16.33	14.20	13.00	17.80	15.40	15.89
P61T38 R	15.42	14.37	15.74	16.60	16.97	17.13	16.04	16.03	15.13	14.70	18.10	17.03	18.64
SSS 6560 (tuc)	15.38	14.20	13.80	15.13	15.30	16.63	15.08	15.47	14.13	13.20	16.10	16.87	17.99
6663 RSF	16.56	14.40	15.51	17.17	17.22	18.36	16.54	17.60	15.53	15.65	18.60	18.30	17.48
LS 6164 R	16.44	15.17	14.60	16.03	17.57	18.00	16.30	17.00	14.87	15.15	20.90	17.33	18.75
PAN1614 R	15.52	14.17	15.55	15.70	16.85	15.60	15.56	14.80	13.90	14.85	17.30	16.67	18.62
NS 6448 R	15.35	13.57	15.21	15.33	16.30	17.90	15.61	15.50	13.57	13.95	18.30	18.70	18.28
P64T39 R	17.32	14.73	14.89	15.57	17.38	16.83	16.12	16.03	14.43	14.25	18.90	16.67	20.83
DM 6.81 RR	16.36	14.30	16.75	15.53	17.55	17.97	16.41	16.16	15.60	13.70	20.00	17.27	20.66
6968 RSF	17.39	14.67	16.34	17.10	17.23	18.83	16.93	17.97	16.60	15.90	20.10	18.77	20.05
NS 7211 R	16.79	13.53	16.24	16.07	16.33	20.20	16.53	15.77	14.97	15.35	20.10	17.60	18.68
Gem/Mean	16.62	14.77	15.23	16.59	16.92	17.73	16.31	16.46	15.30	15.00	18.62	17.68	18.15

Tabel 15 Oliepersentasie op vogvrye basis van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2016/17
 Table 15 Oil percentage on moisture free basis of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Koel/Cool	Matig/Moderate								Warm			
		Klarens Delmas	Kinross Bethlehem	Cedara Gem/Mean	Greytown Dundee	Greytown Kroonstad	Kroonstad Drongo Pothoefstroom	Softeberg Verkereberg	Brits Gem/Mean	Brits K2 Gem/Mean	Brits Gem/Mean	Brits Gem/Mean	Brits Gem/Mean
LS 6240 R	14.22	12.28	12.46	14.49	13.91	13.47	12.89	12.90	15.32	13.91	13.74	12.43	13.73
PAN 1454 R	13.03	12.20	12.26	14.40	14.96	13.37	11.12	15.07	15.12	11.90	11.19	11.38	13.59
SSS 4945 (tuc)	14.21	11.15	9.81	12.89	13.65	12.34	14.22	12.86	13.51	13.86	13.32	9.91	11.62
LS 6146 R	10.98	12.32	8.62	13.94	11.52	11.48	11.11	13.18	12.48	12.03	8.70	10.56	11.78
PHB 94 Y 80 R	15.82	12.76	13.29	14.43	15.57	14.37	13.67	14.46	15.84	14.38	9.39	11.87	13.89
LS 6248 R	13.54	13.28	10.14	11.51	12.52	14.69	13.69	14.08	14.81	12.70	12.06	13.94	12.82
SSS 5449 (tuc)	14.14	14.62	10.16	13.26	14.55	13.35	11.34	13.45	14.25	12.52	12.31	11.46	11.44
PHB 95 Y 20 R	15.42	14.94	15.36	13.93	16.48	15.23	15.94	15.62	15.66	14.12	13.65	13.00	14.39
DM 5953 RSF	12.53	11.70	12.51	11.62	12.61	12.19	9.95	11.27	13.30	12.84	12.67	10.71	9.67
PAN 1532 R	12.87	13.59	8.77	14.51	13.18	12.58	12.78	12.35	12.96	12.87	10.82	11.40	10.71
SSS 5052 (tuc)	13.15	14.69	14.91	12.71	13.92	13.88	13.95	13.65	13.64	10.76	7.99	11.97	11.49
5609 RSF	11.11	14.35	11.31	12.11	15.01	12.78	13.74	12.74	14.08	9.78	12.94	7.42	11.50
PAN 1521 R	13.34	13.85	12.78	12.90	13.96	13.37	14.21	12.59	15.00	12.94	13.58	10.43	11.87
5302 RSF	14.95	16.05	15.53	14.45	17.64	15.72	15.60	14.78	16.00	14.54	15.18	10.89	13.37
LS 6261 R	12.64	14.33	12.86	14.33	13.18	13.47	15.07	13.18	12.92	13.11	13.07	15.52	13.37
SSS 5755 (tuc)	12.52	13.39	7.10	13.84	14.36	12.24	12.83	13.08	13.95	11.54	12.17	8.53	11.76
NS 5909 R	13.57	13.26	12.52	13.56	15.52	13.69	13.70	11.33	14.76	13.64	7.09	11.39	14.79
LDC 5.9	14.18	13.57	12.70	15.27	14.95	14.13	14.19	14.12	13.57	13.30	12.17	10.40	12.51
PHB 96 T 06 R	13.45	11.60	12.05	12.37	12.63	14.44	9.49	13.58	13.16	7.23	8.69	11.63	14.62
LDC 6.0	15.62	15.18	14.08	14.15	17.96	15.40	15.32	15.16	13.39	12.72	12.79	10.36	12.33
PAN 1623 R	14.64	14.11	14.30	14.21	15.25	14.50	15.94	13.46	16.04	13.69	11.98	12.41	14.50
LS 6161 R	14.40	12.89	12.54	12.34	12.60	12.95	12.79	11.99	14.36	12.20	10.01	11.29	12.72
P61T38 R	14.06	14.01	13.64	13.33	15.45	14.10	16.24	13.07	16.12	14.18	11.31	11.67	13.57
SSS 6560 (tuc)	14.05	13.57	9.41	13.37	14.72	13.02	15.43	11.64	15.76	13.11	11.14	9.88	11.30
6663 RSF	13.42	14.57	13.42	13.59	16.99	14.40	14.41	12.80	12.84	11.35	11.57	13.53	15.12
LS 6164 R	13.58	13.93	14.57	12.94	15.14	14.03	13.58	13.25	15.07	13.62	9.52	11.97	13.71
PAN 1614 R	15.55	14.90	15.59	13.65	15.54	15.05	14.63	15.50	13.78	12.78	9.15	12.68	13.23
NS 6448 R	12.78	14.05	13.62	14.01	14.65	13.82	12.85	13.54	16.80	12.79	12.75	9.49	11.75
P64T39 R	14.88	14.34	10.23	14.13	15.28	13.77	13.74	14.97	16.40	11.93	13.58	9.73	11.91
DM 6.8i RR	13.18	13.45	8.34	13.42	11.82	12.04	10.03	13.11	14.86	12.55	10.43	11.07	12.28
6968 RSF	16.17	13.21	9.24	15.44	16.49	14.11	12.49	14.88	16.36	13.32	13.51	13.75	14.62
NS 7211 R	13.66	14.35	14.43	13.00	16.85	14.46	15.20	15.73	15.75	12.84	11.54	10.41	14.03
Gen/Mean	13.80	13.64	12.14	13.57	14.70	13.72	13.45	14.61	12.96	11.53	11.13	12.70	13.52
													13.92

Tabel 16 Ru-proteïenpersentasie op vogvrye basis van die verskillende sojaboonkultivars by die verschillende proef lokalteite, 2016/17
Table 16 Percentage crude protein on moisture free basis of the different soybean cultivars at the different trial localities, 2016/17

Kultivar Cultivar	Koel/Cool	Matig/Moderate								Warm			
		Klarens	Delmas	Middleburg	Cedara	Greytown	Kroonstad	Potchefstroom	Droog	Brits KZ	Gem/Mean	Brits KZ	Gem/Mean
LS 6240 R	34.31	33.28	33.64	34.20	34.17	33.92	34.66	34.42	34.05	34.83	35.32	34.91	34.75
PAN 1454 R	34.43	32.64	33.21	33.35	34.81	33.38	32.65	34.21	35.03	35.63	35.81	35.75	34.25
SSS 4945 (tuc)	35.42	33.95	36.05	34.82	35.10	35.07	34.78	35.58	34.69	35.19	36.30	35.90	35.15
LS 6146 R	36.58	32.85	35.91	34.03	34.36	34.75	35.51	34.93	35.05	35.59	36.64	35.98	35.20
PHB 94 Y 80 R	34.19	32.70	33.01	33.63	33.40	33.39	34.27	33.50	33.65	34.37	35.90	35.56	34.95
LS 6248 R	34.12	30.72	33.52	33.29	32.76	32.88	33.79	34.18	34.37	33.81	34.24	34.99	33.58
SSS 55449 (tuc)	35.06	31.67	34.43	34.10	33.91	33.83	35.31	34.75	34.71	35.60	34.97	35.62	36.15
PHB 95 Y 20 R	32.93	30.63	32.02	32.86	32.71	32.23	33.30	33.45	33.09	33.97	34.19	34.82	33.55
DM 5953 RSF	34.67	32.87	33.75	34.72	33.76	33.95	36.52	34.54	34.34	34.75	35.20	34.99	37.10
PAN 1532 R	34.49	32.17	35.51	32.47	34.65	33.86	34.70	35.50	35.15	35.13	36.09	36.76	36.47
SSS 5052 (tuc)	34.46	31.85	32.68	34.41	34.17	33.51	33.92	34.87	34.58	35.96	36.16	35.86	35.54
5609 RSF	34.83	30.97	32.75	33.30	32.84	32.94	33.92	34.65	34.87	36.64	34.22	36.39	34.49
PAN 1521 R	32.92	30.75	32.69	32.98	32.45	32.89	33.82	33.99	33.55	34.43	33.76	35.41	33.90
5302 RSF	33.42	31.42	32.41	33.00	32.39	32.53	33.33	33.65	33.12	33.85	35.59	35.58	35.26
LS 6241 R	34.10	31.68	33.21	32.20	34.10	33.06	34.85	34.77	34.97	35.07	35.05	34.09	34.20
SSS 5755 (tuc)	33.11	31.60	34.73	31.98	32.74	32.83	34.81	33.34	34.17	34.53	33.93	35.42	34.20
NS 5909 R	34.05	31.92	34.27	33.58	33.25	33.41	35.57	35.98	34.84	34.87	36.56	36.52	34.89
LDC 5.9	33.28	31.54	33.11	31.88	33.40	32.64	33.95	33.81	34.52	35.42	34.85	35.26	33.38
PHB 96 T 06 R	34.76	32.27	34.03	34.76	34.72	34.11	34.96	36.61	35.06	34.92	36.83	36.49	35.05
LDC 6.0	32.52	30.00	32.65	32.41	31.13	31.74	33.89	33.10	34.23	34.18	33.69	35.39	34.83
PAN 1623 R	34.28	32.04	32.98	33.41	33.56	33.25	34.91	34.77	34.33	35.28	35.33	35.42	33.86
LS 6161 R	33.23	32.25	33.29	33.81	34.40	33.40	35.22	34.49	34.02	35.42	35.67	35.21	34.54
P61T38 R	34.18	31.70	33.88	33.53	33.11	33.28	34.43	34.80	34.05	34.20	35.73	35.23	34.50
SSS 6560 (tuc)	33.32	31.63	35.32	33.26	32.91	33.29	33.79	34.62	33.50	34.38	34.65	35.35	34.92
6663 RSF	33.56	31.57	32.21	32.65	31.76	32.35	32.48	32.48	34.77	33.89	34.43	34.26	34.53
LS 6164 R	34.50	31.56	31.67	33.01	32.89	32.73	35.24	34.81	33.86	34.21	36.09	35.90	34.08
PAN 1614 R	33.26	31.59	33.06	33.32	33.06	32.86	34.52	33.41	34.08	34.68	35.71	35.47	34.60
NS 6448 R	34.68	32.13	33.86	33.73	34.34	33.75	35.32	34.59	33.35	35.43	35.02	36.73	35.35
P64T39 R	32.99	31.23	34.89	32.75	32.26	32.82	34.55	33.03	33.33	35.09	34.12	35.80	35.15
DM 6.8i RR	32.94	31.52	34.19	31.38	33.17	32.64	34.90	32.90	33.12	33.78	33.99	33.57	30.76
6968 RSF	32.33	31.91	34.65	32.08	31.78	32.55	34.79	33.67	33.03	34.13	33.87	33.11	31.90
NS 7211 R	33.12	30.49	31.69	32.43	31.19	31.78	33.61	33.25	33.05	33.76	34.04	35.21	33.87
Gem/Mean	33.94	31.78	33.60	33.23	33.26	33.16	34.51	34.22	34.12	34.74	35.07	35.44	33.15

Tabel 17 Gemiddelde van die olie-en protein persentasie saamgevoeg (Protolie), 2016/17
 Table 17 Average of the oil and protein percentage joined (Profat), 2016/17

Kultivar Cultivar	Bethehem Clarense	Koel/Cool		Matig/Moderate				Warm			
		Kiross Delmas	Gem/Mean	Cedara Middleburg	Dundee Gretown	Kroonstad Greytown	Droog Potchefstroom	Softeefstrukturen Verkeerdevlei	Brits Gem/Mean	K2 Brits	
LS 6240 R	48.53	45.56	46.10	48.69	48.08	47.39	47.55	49.37	48.41	48.57	47.75
PAN 1454 R	47.46	44.84	45.47	47.67	48.31	46.75	45.93	47.72	49.33	46.93	49.34
SSS 4945 (tuc)	49.63	45.10	45.86	47.71	48.75	47.41	49.00	48.44	48.20	48.76	48.51
LS 6146 R	47.56	45.17	44.53	47.97	45.88	46.22	46.62	48.11	47.53	47.62	46.21
PHB 94 Y 80 R	50.01	45.46	46.30	48.06	48.97	47.76	47.94	47.96	49.49	48.75	45.34
LS 6248 R	47.66	44.00	43.66	44.80	46.89	45.40	48.48	47.87	48.45	48.62	46.94
SSS 5449 (tuc)	49.20	46.29	44.59	47.36	48.46	47.18	46.65	48.20	48.96	48.12	47.28
PHB 95 Y 20 R	48.35	45.57	47.38	46.79	49.19	47.46	49.24	49.07	48.75	48.09	47.84
DM 5953 RSF	47.20	44.57	46.26	46.34	46.37	46.15	46.47	45.81	47.64	47.59	47.87
PAN 1532 R	47.36	45.76	44.28	46.98	47.83	46.44	47.48	47.85	48.11	48.00	48.16
SSS 5052 (tuc)	47.61	46.54	47.59	47.12	48.09	47.39	47.87	48.52	48.22	46.72	44.15
5609 RSF	45.94	45.32	44.06	45.41	47.85	45.72	47.66	47.39	48.95	46.42	47.16
PAN 1521 R	46.26	44.60	45.47	45.88	46.85	45.81	48.03	46.58	48.55	47.37	47.34
5302 RSF	48.37	47.47	47.94	47.45	50.03	48.25	48.93	48.43	49.12	48.39	50.77
LS 6261 R	46.74	46.01	46.07	46.53	47.28	46.53	49.92	47.95	47.89	48.18	48.12
SSS 5755 (tuc)	45.63	44.99	41.83	45.82	47.10	45.07	47.64	46.42	48.12	46.07	46.10
NS 5909 R	47.62	45.18	46.79	47.14	48.77	47.10	49.27	47.31	49.60	48.51	43.65
LDC 5.9	47.46	45.11	45.81	47.15	48.35	46.78	49.14	47.93	48.09	48.72	47.02
PHB 96 T 06 R	48.21	43.87	46.08	47.13	47.35	46.53	49.40	46.10	48.64	48.08	44.06
LDC 6.0	48.14	45.18	46.73	46.56	49.09	47.14	49.21	48.26	47.62	46.90	46.48
PAN 1623 R	48.92	46.15	47.28	47.62	48.81	47.76	50.85	48.23	50.37	48.97	47.31
LS 6161 R	47.63	45.14	45.83	46.15	47.00	46.35	48.01	46.48	48.38	47.62	45.68
P61T38 R	48.24	45.71	47.52	46.86	48.56	47.38	50.67	47.87	50.17	48.38	47.04
SSS 6560 (tuc)	47.37	45.20	44.73	46.63	47.63	46.31	49.22	46.26	47.49	45.79	45.23
6663 RSF	46.98	46.14	45.63	46.24	48.75	46.75	46.89	46.88	47.57	46.73	45.78
LS 6164 R	48.08	45.49	46.24	45.95	48.03	46.76	48.82	48.06	48.93	47.83	45.61
PAN 1614 R	48.81	46.49	48.65	46.97	48.60	47.90	49.15	48.91	47.86	47.46	48.86
NS 6448 R	47.46	46.18	47.48	47.74	48.99	47.57	48.17	48.13	50.15	48.22	47.77
P64T39 R	47.87	45.57	45.12	46.88	47.54	46.60	48.29	48.00	49.73	47.02	45.53
DM 6.8i RR	46.12	44.97	42.53	44.80	44.99	44.68	44.93	46.01	47.98	44.33	44.42
6968 RSF	48.50	45.12	43.89	47.52	48.27	46.66	48.55	49.39	47.45	47.38	46.86
NS 7211 R	46.78	44.84	46.12	45.43	48.04	46.24	48.81	48.98	48.80	46.60	45.58
Gem/Mean	47.74	45.42	45.74	46.79	47.96	46.73	48.24	47.68	48.73	47.70	46.60

Tabel 18 Die saadopbrengs van elke kultivar by die verskillende lokaliteite, 2016/17
 Table 18 The seed yield of the cultivars at the different localities, 2016/17

Kultivar Cultivar	Bethlehem Clarendon	De Koker Kirros	Cederberg Cultivars	Dundee	Greytown Gem/Mean	Kroonstad Gretynow	Port Elizabeth Grantskop	Potchefstroom Greytown	Stofberg Kroonstad	Matig/Moderate		Warm	
										Breitkreis Gem/Mean	Brts/K2 Gem/Mean	Brts Gem/Mean	Gem/Mean
LS 6240 R	2617	2371	2792	3978	3435	2928	3020	4536	3368	3044	3573	3577	3601
PAN 1454 R	2830	2877	2161	2703	3363	2838	2795	4255	2886	2956	3148	3021	2954
SSS 4945 (tuc)	3261	3100	2966	3323	4694	3337	3447	4441	3474	3965	3140	3297	1695
LS 6146 R	2675	3115	3343	3506	2143	2834	2836	3999	2949	3367	3424	3645	2752
PHB 94 Y 80 R	3184	3787	2795	3283	2885	3218	3192	4274	3091	3521	2980	2984	3384
LS 6248 R	3900	2713	2508	3152	3640	2360	3046	4268	2944	3031	3365	3074	3791
SSS 5449 (tuc)	4081	2856	2500	3611	3598	2465	3185	4083	2627	3676	3214	3756	3623
PHB 95 Y 20 R	2855	2347	2110	3368	3445	2929	2842	4050	3206	2652	3409	3356	3392
DM 5953 RSF	4684	3602	3413	4522	5430	3090	4123	4672	3432	3519	4102	4182	3636
PAN 1532 R	3782	2589	2701	3897	3283	2699	3159	3990	3331	3144	3180	3687	4221
SSS 5052 (tuc)	3305	2372	2635	3342	3666	2376	2949	3859	3029	2853	2853	3274	3274
5609 RSF	3984	2748	3028	3756	3773	2825	3352	4594	2942	2745	3764	4056	4043
PAN 1521 R	4387	2506	3294	3765	4159	3083	3833	4323	3274	3291	3739	4530	4537
5302 RSF	4037	2555	3480	3766	4251	2570	3443	4509	2700	3421	3518	3857	3743
LS 6261 R	3466	2121	3344	3481	3449	2944	3134	3793	3020	4676	3322	4024	3308
SSS 5755 (tuc)	3173	2564	2242	3546	3435	2655	2936	3928	2847	2958	3017	4093	2844
NS 5909 R	3731	2465	2593	3517	4136	3480	3320	3866	3222	4015	3966	3714	3311
LDC 5,9	4079	2035	2633	3792	3781	2988	3218	4473	2947	3138	4216	3983	3503
PHB 96 T 06 R	2688	2319	1907	3764	3221	2807	2784	4298	2833	3535	3628	3471	3510
LDC 6,0	3107	584	1930	3762	3580	2414	2861	4197	2640	2204	3380	4233	3586
PAN 1623 R	3727	2480	3056	3617	3636	3112	3271	3975	3122	3565	2838	3726	3242
LS 6161 R	2928	2072	2792	4147	3195	2889	3004	4230	3180	3043	3672	3541	3783
P6TT38 R	3341	2402	2876	4171	3917	2616	3220	4130	3172	2888	4269	3809	3151
SSS 6560 (tuc)	3073	2494	2251	3460	3538	2968	2864	3803	3028	2799	4051	3678	3096
6663 RSF	3875	1633	2254	2834	3646	2561	2800	3997	2909	2726	2928	3970	2313
LS 6164 R	3416	2662	1806	2793	3976	2933	2831	4003	2302	3110	3654	3394	3050
PAN 1614 R	3282	2302	3205	3674	32621	3048	3734	2680	2845	3648	3806	3243	3353
NS 6448 R	3460	2988	3028	3894	3084	2910	3227	3846	2976	3341	3644	4281	3430
P64T39 R	3581	2447	2867	3858	5095	3283	3522	3883	2949	3234	4049	4230	4238
DM 681 RR	3391	2994	2327	3357	3774	2744	3098	4443	2973	3190	4146	3317	3305
6968 RSF	3186	1537	2818	2836	2921	3205	2751	3956	2926	2546	3855	3702	3111
NS 7211 R	2982	2776	2855	3710	4136	2716	3196	4161	2504	2708	3838	2939	3618
Gem/Mean	3440	2513	2703	3553	3686	2856	3125	4143	2972	3117	3523	3784	3431
CV	9.7	10.3	17.1	15.6	13.7	14.8	9.3	14.4	9.5	12.1	12.5	17.6	4.6
													21.0
													16.2
													16.5

Tabel 19 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2014/15, 2015/16 en 2016/17 vir die koeler droëland produksiegebiede by verskillende opbrengspotensiaal

Table 19 Yield probability (%) of cultivars evaluated in 2014/15, 2015/16 and 2016/17 for the cooler dryland production areas at different yield potentials

Kultivar Cultivar	Opbrengspotensiaal/Yield potential (t/ha)				
	1.0	1.5	2.0	2.5	3.0
PAN1454R	56	53	49	46	42
LS6146R	71	65	57	48	38
LS6248R	47	49	52	55	57
PHB95Y20R	13	11	10	10	10
LS6164R	48	43	38	34	29
LS6161R	50	46	41	36	31
LS6261R	48	47	45	44	42
PAN1614R	26	27	29	32	34
LS6240R	54	54	53	52	52
PHB94Y80R	58	60	61	63	64
PAN1521R	54	58	63	68	72
PHB96T06R	55	49	43	37	31
PAN1623R	79	76	71	65	57
DM5953RSF	51	64	76	86	92
NS5909R	18	26	35	47	59
NS6448R	43	46	50	54	59
DM6.8iRR	53	49	45	41	37
NS7211R	40	40	40	41	41

Tabel 20 Saadoppbrengs (kg/ha^{-1}) van kultivars gedurende die 2015/16 en 2016/17 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 2015/16 and 2016/17 growing season for the various localities situated in the cooler production areas

Kultivar Cultivar	2015/16						2016/17					
	Bethlehem Bethlehem	Clares Clarendon	Kinross Kinross	Kokstad Kokstad	Gem/Mean Gem/Mean	Citrusdal Citrusdal	Clares Clarendon	Drimas Drimas	Kinross Kinross	Middleburg Middleburg	Gem/Mean Gem/Mean	
LS 6240 R	2257	1677	3937	2020	2270	2432	2617	2371	2792	3978	3435	2928
PAN 1454 R	2394	1503	3979	2064	2146	2417	2830	2877	2161	2703	3363	2838
SSS 4945 (tuc)	2506	1653	3836	2208	1805	2402	3261	3100	2966	3323	4694	3337
LS 6146 R	2214	1787	3613	1895	1564	2215	2675	3115	3343	3506	2143	2834
PHB 94 Y 80 R	2822	2408	4598	2396	1658	2776	3184	3787	2795	3283	2885	3218
LS 6248 R	3639	1963	4790	1724	2430	2909	3900	2713	2508	3152	3640	2360
SSS 5449 (tuc)	3470	1409	4165	1983	2375	2682	4081	2856	2500	3611	3598	2465
NS 5009 R	3211	2184	4298	1721	1739	2631	-	-	-	-	-	-
DM 5.1i RR	2251	1821	3805	1361	1759	2199	-	-	-	-	-	-
PHB 95 Y 20 R	2137	1411	3830	1668	2222	2254	2855	2347	2110	3368	3445	2929
DM 5953 RSF	2877	1827	4590	1888	2210	2678	4684	3602	3413	4522	5430	3090
SSS 5052 (tuc)	2802	1230	3810	2120	2230	2438	3305	2372	2635	3342	3686	2376
PAN 1521 R	3927	1488	4250	2080	3090	2967	4387	2506	3294	3765	4159	3083
PAN 1500 R	3301	1629	3955	1990	2876	2750	-	-	-	-	-	-
NS 5909 R	3013	1569	4771	2281	2460	2819	3731	2465	2593	3517	4136	3480
LS 6261 R	3433	1760	4198	2170	2471	2806	3466	2121	3344	3481	3449	2944
PHB 96 T 06 R	3105	2065	3869	2475	2679	2839	2688	2319	1907	3764	3221	2807
PAN 1623 R	3605	1446	3645	2037	2722	2691	3727	2480	3056	3617	3636	3112
LS 6161 R	2956	1729	3701	2110	2982	2696	2928	2072	2792	4147	3195	2889
DM 6.2i RR	2543	1469	4369	1926	1956	2453	-	-	-	-	-	-
SSS 6560 (tuc)	3597	1536	3956	2119	2068	2655	3073	2494	2251	3460	3538	2968
LS 6164 R	2672	2023	3883	2101	2700	2676	3416	2662	1806	2793	3976	2933
PAN 1614 R	2931	1722	3217	1883	2107	2372	3282	2302	3205	3207	3674	2621
NS 6448 R	3021	1790	4579	2555	2503	2890	3460	2988	3028	3894	3084	2910
DM 6.8i RR	2529	1407	3420	2230	2446	2407	3391	2994	2327	3357	3774	2744
NS 7211 R	2785	1503	3826	2246	2080	2488	2982	2776	2855	3710	4136	2716
PAN 1532 R	-	-	-	-	-	-	3782	2589	2701	3897	3283	2699
5609 RSF	-	-	-	-	-	-	3984	2748	3028	3756	3773	2825
5302 RSF	-	-	-	-	-	-	4037	2555	3480	3766	4251	2570
SSS 5755 (tuc)	-	-	-	-	-	-	3173	2564	2242	3546	3435	2655
LDC 5.9	-	-	-	-	-	-	4079	2035	2633	3792	3781	2988
LDC 6.0	-	-	-	-	-	-	3107	584	1930	3752	3580	2414
P61T38 R	-	-	-	-	-	-	3341	2402	2876	4171	3917	2616
6663 RSF	-	-	-	-	-	-	3875	1633	2254	2834	3646	2561
P64T39 R	-	-	-	-	-	-	3581	2447	2867	3858	5095	3283
6968 RSF	-	-	-	-	-	-	3186	1537	2818	2836	2921	3205
Gen/Mean	2923	1693	4034	2048	2290	2598	3440	2513	2703	3553	3686	3125

Tabel 21 Opbrengswaarskynlikheid (%) van kultivars geëvalueer 2014/15, 2015/16 en 2016/17 vir die matige produksiegebiede by verskillende opbrengspotensiaal
 Table 21 Yield probability (%) of cultivars evaluated in 2014/15, 2015/16 and 2016/17 for the moderate production areas at different yield potentials

Kultivar Cultivar	Opbrengspotensiaal/Yield potential (t/ha)					
	1.0	1.5	2.0	2.5	3.0	3.5
PAN1454R	25	23	22	21	20	19
LS6146R	36	34	30	28	25	23
LS6248R	61	60	57	56	53	51
PHB95Y20R	51	41	31	22	15	10
LS6164R	61	57	53	49	45	40
LS6161R	65	63	61	58	55	52
LS6261R	61	60	58	57	54	52
PAN1614R	51	49	44	41	37	34
LS6240R	30	33	36	40	43	48
PHB94Y80R	21	24	27	31	35	39
PAN1521R	53	64	74	82	88	93
PHB96T06R	48	48	48	48	48	48
PAN1623R	87	85	82	79	75	69
DM5953RSF	39	46	53	62	69	75
NS5909R	66	65	63	62	60	57
NS6448R	57	57	58	58	58	57
DM6.8iRR	60	60	61	61	61	60
NS7211R	51	52	52	53	53	54

Tabel 22 Saaddopbrengs (kg/ha^{-1}) van kultivars gedurende die 2015/16 en 2016/17 groeiseisoen ten opsigte van die verskillende lokaliteitte wat in die matige produksiegebiede geleë is
 Table 22 Seed yield (kg/ha^{-1}) of cultivars during the 2015/16 and 2016/17 growing season for the various localities situated in the moderate production areas

Kultivar Cultivar	2015/16			2016/17			Verkeerdvlei Stoffberg	Gem/Mean Gem/Mean
	Bergvilee Bergvilee	Cedara Cedara	Gien Gien	Kroonstad Grytown	Dundee Grytown	Krantskop Grytown		
LS 6240 R	3595	2437	2297	2037	2962	1344	2445	4536
PAN 1454 R	2956	2541	1808	2224	2700	1031	2210	4255
SSS 4945 (tuc)	2340	2168	2604	1916	2579	953	2093	4441
LS 6146 R	3330	2111	2014	1889	3135	1314	2299	3999
PHB 94 Y 80 R	3799	2663	1930	1915	2801	1107	2367	4274
LS 6248 R	3293	2598	2515	2315	3565	1183	2578	4268
SSS 5449 (tuc)	2681	2255	2523	2320	3087	1067	2322	4083
NS 5009 R	3779	2550	2487	2004	2835	1465	2520	-
DM 5.1i RR	3190	2184	2368	2104	2950	1012	2301	-
PHB 95 Y 20 R	2778	2596	2265	2411	2799	1030	2313	4050
DM 5953 RSF	3520	2758	4016	2143	3341	890	2778	4672
SSS 5052 (tuc)	3677	3022	2048	2586	3115	1334	2630	3859
PAN 1521 R	3970	2854	2758	2548	3386	1148	2777	4323
PAN 1500 R	3222	2721	1748	2486	2629	1041	2308	-
NS 5909 R	2875	3103	2808	3123	2953	1119	2663	3866
LS 6261 R	2561	2678	2443	2257	3859	1228	2504	3793
PHB 96 T 06 R	2909	2832	1844	2918	3560	1075	2523	4298
PAN 1623 R	3590	3359	2885	3118	3829	1221	3000	3975
LS 6161 R	2350	3050	3955	3246	3087	1389	2846	4230
DM 6.2i RR	2293	2939	1712	3113	3583	1130	2462	-
SSS 6660 (tuc)	2702	2725	2619	2705	3560	1298	2602	3803
LS 6164 R	3091	3029	2307	2651	4108	1273	2743	4003
PAN 1614 R	3425	2773	1987	2710	3470	1092	2576	3734
NS 6448 R	3643	2887	2616	2971	4039	1167	2887	3846
DM 6.8i RR	2771	2977	2694	3186	3545	1053	2704	4443
NS 7211 R	3736	2911	2186	2993	3062	1159	2674	4161
PAN 1632 R	-	-	-	-	-	-	-	3900
5609 RSF	-	-	-	-	-	-	-	4594
5302 RSF	-	-	-	-	-	-	-	4509
SSS 5755 (tuc)	-	-	-	-	-	-	-	3928
LDC 5.9	-	-	-	-	-	-	-	4473
LDC 6.0	-	-	-	-	-	-	-	4197
P61T38 R	-	-	-	-	-	-	-	4130
6663 RSF	-	-	-	-	-	-	-	3997
P64T39 R	-	-	-	-	-	-	-	3883
6968 RSF	-	-	-	-	-	-	-	3956
Gem/Mean	3157	2720	2440	2534	3251	1159	2543	4143

Tabel 23 Opbrengswaarskynlikheid (%) van kultivars geëvalueer 2014/15, 2015/16 en 2016/17 vir die warm produksiegebiede by verskillende opbrengspotensiaal
 Table 23 Yield probability (%) of cultivars evaluated in 2014/15, 2015/16 and 2016/17 for the warm production areas at different yield potentials

Kultivar Cultivar	Opbrengspotensiaal/Yield potential (t/ha)				
	1.5	2	2.5	3	3.5
PAN1454R	50	46	41	37	33
LS6146R	18	26	38	51	65
LS6248R	25	30	36	44	52
PHB95Y20R	22	22	24	26	29
LS6164R	48	29	15	6	3
LS6161R	70	64	58	50	43
LS6261R	11	17	27	40	54
PAN1614R	36	34	34	32	33
LS6240R	30	26	23	21	19
PHB94Y80R	29	37	46	56	65
PAN1521R	88	89	90	89	88
PHB96T06R	48	38	29	21	16
PAN1623R	74	71	69	64	61
DM5933RSF	87	85	82	76	71
NS5909R	44	51	58	65	70
NS6448R	49	51	53	55	56
DM6.8IRR	90	84	76	64	50
NST211R	71	72	71	70	69

Tabel 24 Saadopbrengs (kg/ha^{-1}) van kultivars gedurende die 2015/16 en 2016/17 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 2015/16 and 2016/17 growing season for the various localities situated in the warm production areas

Kultivar Cultivar	Atlanta Brits	2015/16		2016/17	
		Groblersdal Brits	Gem/Mean Gem/Mean	Brits K2 Brits	Gem/Mean Gem/Mean
LS 6240 R	1634	1419	2405	1819	1551
PAN 1454 R	1652	1935	2484	2023	1673
SSS 4945 (tuc)	1170	1450	3858	2159	2064
LS 6146 R	1763	1829	4110	2567	1722
PHB 94 Y 80 R	1598	1460	3461	2173	1766
LS 6248 R	1515	1727	4360	2534	1524
SSS 5449 (tuc)	1305	1715	2653	1891	1938
NS 5009 R	2072	1802	3284	2386	-
DM 5.1i RR	1357	1820	3684	2287	-
PHB 95 Y 20 R	1576	1319	3852	2249	2431
DM 5953 RSF	1705	2555	4285	2848	2921
SSS 5052 (tuc)	2008	1733	3524	2422	1871
PAN 1521 R	2163	1941	4890	2998	3654
PAN 1500 R	2064	1693	3836	2531	-
NS 5909 R	2237	1866	4764	2956	2052
LS 6261 R	1234	1818	4146	2399	1738
PHB 96 T 06 R	1921	1475	2934	2110	2352
PAN 1623 R	2265	1658	3413	2445	2364
LS 6161 R	2321	1705	4071	2699	2203
DM 6.2i RR	2183	1886	4581	2883	-
SSS 6560 (tuc)	2225	2102	3463	2597	2328
LS 6164 R	2060	1628	3422	2370	1885
PAN 1614 R	2194	1727	4042	2655	1891
NS 6448 R	2336	1607	4126	2689	1926
DM 6.8i RR	2114	1752	3696	2521	2565
NS 7211 R	2557	1595	3540	2564	2297
PAN 1532 R	-	-	-	-	1910
5609 RSF	-	-	-	-	2174
5302 RSF	-	-	-	-	2649
SSS 5755 (tuc)	-	-	-	-	1652
LDC 5.9	-	-	-	-	2936
LDC 6.0	-	-	-	-	1431
P61T38 R	-	-	-	-	2419
6663 RSF	-	-	-	-	1842
P64T39 R	-	-	-	-	4226
6968 RSF	-	-	-	-	2645
Gem/Mean	1893	1739	3726	2453	2206

Tabel 25 Saamgevattie inligting van al die lokaliteite in die koel produksiegebiede, 2016/17
 Table 25 Summarised information for all the localities in the cool production areas, 2016/17

Kultivar/Cultivar	Dae tot blom/ Days to flower-	Fisiolo- giese tyf/ Physio- logical mature	Oes- datum/ Harvest date	Plant hoogte/ Plant height	Peulhoog- te/ Pod height	Omval/ Lod- ging	Groen stam/ Green stem	Oopspring/ Shattering	Planttel- ing/ Number of plants	Persentasie ongewenste sade/Percen- tage undesirable seed	Massa 100 sade/ Mass 100 seeds	Olie persen- tase/Oil/ percentage	Ru-proteïen- persentasie/ Crude protein percentage	Opbrengs/ Yield
LS 6240 R	57	121	141	70	6	1.22	1.60	2.39	216	0.41	20.44	13.47	33.92	3020
PAN 1454 R	50	125	147	85	7	1.39	2.40	2.17	251	0.73	17.57	13.37	33.38	2795
SSS 4945 (tuc)	53	121	144	69	6	1.17	1.73	3.67	243	0.42	18.15	12.34	35.07	3447
LS 6146 R	50	121	144	79	7	1.33	1.53	2.61	252	0.62	16.19	11.48	34.75	2936
PHB 94 Y 80 R	52	123	144	62	4	1.44	2.47	3.17	230	0.83	17.32	14.37	33.39	3192
LS 6248 R	66	140	158	91	10	1.28	2.87	2.28	260	0.98	15.06	12.52	32.88	3046
SSS 5449 (tuc)	69	137	157	87	8	1.28	2.67	2.28	256	0.40	14.81	13.35	33.83	3185
PHB 95 Y 20 R	78	150	167	79	9	1.94	3.73	2.00	260	0.59	15.95	15.23	32.23	2842
DM 5953 RSF	54	125	144	76	6	1.28	1.53	2.33	251	0.36	17.76	12.19	33.95	4123
PAN 1532 R	77	142	161	79	9	1.17	2.33	1.17	259	0.55	15.34	12.58	33.86	3159
SSS 5052 (tuc)	76	144	169	90	11	1.67	2.07	1.56	248	0.58	14.45	13.88	33.51	2949
5609 RSF	71	143	162	70	7	1.17	3.00	2.11	246	0.45	16.68	12.78	32.94	3352
PAN 1521 R	75	144	160	95	11	2.39	2.73	1.72	273	1.05	16.95	13.37	32.45	3533
5302 RSF	71	144	157	82	7	1.39	2.53	2.44	258	0.71	17.47	15.72	32.53	3443
LS 6261 R	71	148	164	78	10	1.22	3.60	2.06	254	0.65	16.65	13.47	33.06	3134
SSS 5755 (tuc)	75	149	172	86	9	1.22	2.33	1.67	253	0.61	15.39	12.24	32.83	2936
NS 5909 R	76	152	173	91	11	1.72	2.80	2.28	268	0.48	15.83	13.69	33.41	3320
LDC 5,9	77	146	173	95	9	2.28	2.60	1.50	240	0.75	17.94	14.13	32.64	3218
PHB 96 T 06 R	86	153	169	97	10	1.67	1.40	1.22	255	0.62	15.27	12.42	34.11	2784
LDC 6,0	78	150	172	71	6	1.61	3.13	1.78	190	0.54	15.90	15.40	31.74	2561
PAN 1623 R	76	148	169	93	9	1.72	1.87	1.56	264	0.82	14.91	14.50	33.25	3271
LS 6161 R	74	146	164	92	10	1.39	2.47	2.28	270	0.41	14.76	12.95	33.40	3004
P61138 R	73	147	166	70	9	1.17	3.13	1.28	255	0.62	16.04	14.10	33.28	3220
SSS 6560 (tuc)	75	144	171	88	10	1.56	2.27	1.64	245	0.56	15.08	13.02	33.29	2964
6663 RSF	79	155	175	95	9	2.06	3.07	1.28	241	0.84	16.54	14.40	32.35	2800
LS 6164 R	74	149	166	96	9	1.67	3.07	2.28	255	0.74	16.30	14.03	32.73	2931
PAN 1614 R	78	149	171	98	11	1.72	2.40	1.33	255	0.58	15.56	15.05	32.86	3048
NS 6448 R	75	151	167	81	10	1.67	1.60	2.83	246	0.54	15.61	13.82	33.75	3227
P64T39 R	77	157	174	101	10	1.89	2.40	1.39	260	0.66	16.12	13.77	32.82	3522
DM 6,8i RR	78	155	175	107	10	2.06	2.13	1.44	255	1.18	16.41	12.04	32.64	3098
6968 RSF	80	156	177	104	13	1.17	2.87	1.50	251	0.91	16.93	14.11	32.55	2751
NS 7211 R	77	156	170	80	9	1.17	3.27	2.50	244	0.67	16.53	14.46	31.78	3196
Gem/Mean	71	143	163	85	9	1.53	2.49	1.99	250	0.65	16.31	13.57	33.16	3125

Tabel 26 Saamgevattie inligting van al die lokaliteite in die matige produksiegebiede, 2016/17
 Table 26 Summarised information for all the localities in the moderate production areas, 2016/17

Kultivar/Cultivar	Dae tot blom/ Days to flow- ering	Fisiolo- gies typ/ Physolo- gical mature	Oes datum/ Harvest date	Planthoog- te/Plant height	Peul hoogte/ Pod height	Omval/ Lod- ging	Groen stam/ Green stem	Opspring/ Shattering	Planttel- ing/ Number of plants	Percentasie ongewenste sade/Percen- tage undesirable seed	Massa 100 sade/ Mass 100 seeds	Olie persen- tasiel/Oil percentage	Ru-proteïen- persentasie/ Crude protein percentage	Opbrengs/ Yield
LS 6240 R	45	114	135	74	9	1.08	1.92	1.29	225	0.75	21.55	13.35	34.75	3167
PAN 1454 R	44	116	136	92	11	1.04	2.54	1.14	260	0.72	18.51	12.76	34.77	2924
SSS 4945 (tuc)	45	114	133	74	8	1.25	2.29	1.38	250	0.55	19.02	12.91	35.31	3264
LS 6146 R	45	115	132	87	10	1.00	2.13	1.57	256	0.93	16.50	11.03	35.75	3030
PHB 94 Y 80 R	47	114	133	72	8	1.00	2.75	1.57	231	0.70	18.42	13.38	34.45	3065
LS 6248 R	57	122	141	91	15	1.04	2.17	1.71	251	0.68	16.10	13.60	34.01	3220
SSS 5449 (tuc)	58	122	139	89	13	1.00	1.96	1.57	268	0.46	15.18	12.36	35.22	3162
PHB 95 Y 20 R	56	123	147	83	15	1.08	3.08	1.43	256	0.92	16.59	14.67	33.57	3096
DM 5953 RSF	48	118	132	82	10	1.00	1.79	1.29	266	0.62	16.58	11.62	35.20	3529
PAN 1532 R	58	125	142	75	10	1.00	1.83	1.29	262	0.33	16.25	12.59	35.20	3316
SSS 5052 (tuc)	61	124	151	91	14	1.00	2.46	1.57	256	0.72	15.63	11.96	35.06	3191
5609 RSF	60	123	147	68	10	1.00	2.54	1.43	251	0.33	16.48	11.70	34.86	3343
PAN 1521 R	61	124	143	94	14	1.00	1.92	1.43	263	0.57	17.15	12.89	33.94	3793
5302 RSF	58	121	138	82	11	1.00	1.75	1.43	250	0.31	17.37	14.25	34.22	3361
LS 6261 R	58	123	143	76	13	1.04	2.58	1.00	250	0.57	17.17	13.34	34.64	3419
SSS 5755 (tuc)	62	126	149	88	13	1.00	2.63	1.43	255	0.61	16.43	11.99	34.24	3063
NS 5909 R	65	128	157	97	18	1.08	2.75	1.43	253	0.67	16.93	12.69	35.24	3381
LDC 5,9	60	126	151	99	14	1.29	2.17	1.14	235	0.46	19.12	13.20	34.44	3565
PHB 96 T 06 R	61	129	152	104	14	1.08	2.13	1.29	264	0.71	16.54	11.61	35.36	3349
LDC 6,0	63	126	151	75	11	1.08	2.25	1.43	188	0.45	16.07	13.10	34.17	3054
PAN 1623 R	61	127	145	93	14	1.00	2.25	1.00	271	0.69	16.03	14.37	34.51	3358
LS 6161 R	61	124	146	94	15	1.00	2.42	2.33	266	0.47	15.96	12.28	34.75	3333
P6/T38 R	63	131	154	76	16	1.13	2.75	1.14	261	0.33	16.68	13.79	34.44	3389
SSS 6560 (tuc)	64	130	155	87	13	1.00	2.25	1.57	240	0.47	15.76	12.85	34.21	3150
6663 RSF	67	130	162	106	15	1.08	3.00	1.29	225	1.00	17.42	13.25	33.61	2962
LS 6164 R	64	132	151	103	18	1.00	2.75	1.38	251	0.49	17.54	12.98	34.76	3147
PAN 1614 R	65	127	154	104	17	1.00	2.58	1.29	256	0.66	16.07	13.54	34.02	3106
NS 6448 R	66	130	150	92	15	1.17	2.21	1.29	238	0.63	16.81	12.95	34.85	3299
P64/T39 R	62	129	152	99	14	1.29	1.96	1.14	263	0.82	16.80	13.33	34.28	3618
DM 6,81 RR	67	132	161	112	18	1.17	2.33	1.29	253	1.47	17.36	12.35	33.35	3378
6968 RSF	64	128	161	104	17	1.04	2.46	1.00	250	0.93	18.55	14.22	33.55	3135
NS 7211 R	64	131	156	85	14	1.00	2.96	1.00	257	0.71	17.44	13.59	33.60	3228
Gem	59	125	147	89	13	1.06	2.36	1.36	251	0.65	17.06	12.95	34.51	3262

Tabel 27 Saamgevatte inligting van al die lokaliteite in die warmer produksiegebiede, 2016/17
 Table 27 Summarised information for all the localities in the warmer production areas, 2016/17

Kultivar/Cultivar	Dae tot blom/ Days to flow- ering	Fisiolo- gis rys/ Physolo- gical mature	Oes datum/ Harvest date	Plant hoogte/ Plant height	Peulhoog- te / Pod height	Omval/ Lod- ging	Groen stam/ Green stem	Oopspring/ Shattering	Plantel- ling/ Number of plants	Persentasie ongewenste sade/Percen- tage undesirable seed	Massa 100 sade/ Mass 100 seeds	Olie- persen- tasië/Oil percentage	Ru-proteïen- persentasie/ Crude protein percentage	Opbrengs/ Yield
LS 6240 R	39	100	119	49	6	1.33	2.50	3.00	259	0.45	19.97	12.90	35.67	1984
PAN 1454 R	41	110	123	54	7	1.00	4.17	4.00	291	0.55	18.00	13.45	35.46	2125
SSS 4945 (tuc)	36	110	118	55	5	1.00	3.50	4.00	291	0.70	16.42	12.35	36.31	2375
LS 6146 R	36	106	119	57	6	1.00	3.33	3.50	263	0.90	15.67	10.90	36.74	2103
PHB 94 Y 80 R	43	100	125	46	5	1.00	3.67	4.00	291	0.90	17.47	11.78	36.37	2241
LS 6248 R	47	110	125	62	8	1.17	3.33	4.00	267	0.55	15.98	13.77	35.57	2193
SSS 5449 (tuc)	48	105	119	53	5	1.00	3.33	4.50	278	0.55	15.28	12.95	36.39	2079
PHB 95 Y 20 R	47	114	129	55	9	1.00	3.33	3.50	291	0.95	15.73	13.45	35.38	2491
DM 5653 RSF	41	109	121	74	8	1.00	3.33	3.00	293	1.20	16.45	11.66	35.78	3294
PAN 1532 R	43	111	123	44	5	1.00	2.33	2.00	280	0.40	14.90	14.40	34.74	1902
SSS 5052 (tuc)	48	113	131	58	8	1.00	3.00	1.50	301	1.10	15.27	13.15	35.57	2236
5609 RSF	46	117	126	46	5	1.00	3.83	3.50	291	0.50	17.08	12.53	36.11	2510
PAN 1521 R	46	114	128	84	9	1.00	2.83	1.50	323	0.65	19.38	13.33	35.01	3915
5302 RSF	47	109	122	56	5	1.00	3.17	3.50	288	0.70	17.98	15.16	35.15	2872
LS 6261 R	48	110	124	51	8	1.00	4.00	4.50	285	1.35	16.35	13.38	35.37	2187
SSS 5755 (tuc)	50	118	130	54	6	1.00	2.83	2.00	293	0.85	16.08	14.00	34.55	1830
NS 5909 R	50	114	132	61	7	1.00	3.67	2.00	303	0.85	15.87	13.90	35.94	2236
LDC 5.9	50	117	139	76	8	1.00	3.17	1.00	296	0.55	19.18	12.83	35.26	3174
PHB 96 T 06 R	50	117	132	68	6	1.00	3.00	2.00	294	0.75	15.98	15.64	34.16	2256
LDC 6.0	49	114	131	48	6	1.00	3.67	2.00	223	0.45	16.27	15.01	34.79	1669
PAN 1623 R	48	114	126	64	6	1.00	2.33	1.50	293	0.70	15.10	14.11	35.45	2630
LS 6161 R	48	113	130	68	9	1.00	3.33	4.00	314	0.80	14.80	15.53	34.13	2326
P61T38 R	46	117	132	54	9	1.00	3.17	1.50	300	0.75	15.42	15.08	34.75	2576
SSS 6560 (tuc)	50	114	140	64	7	1.00	3.17	2.00	258	1.25	17.05	14.93	34.49	2258
6663 RSF	53	128	133	66	7	1.00	3.00	2.50	297	2.60	16.32	16.00	32.41	1895
LS 6164 R	49	114	131	73	9	1.00	3.17	3.50	305	0.95	16.65	15.21	34.20	2142
PAN 1614 R	50	114	125	59	9	1.00	2.83	2.00	294	1.15	16.08	14.21	33.32	2075
NS 6448 R	54	125	129	55	9	1.00	2.33	4.50	280	2.75	14.98	16.25	33.80	1973
P64T39 R	50	114	136	85	9	1.00	3.67	1.00	314	0.75	16.87	14.19	34.45	3526
DM 6.8i RR	51	128	142	79	10	1.00	4.00	1.50	303	2.15	17.87	13.04	34.32	2626
6988 RSF	52	117	138	73	9	1.00	3.50	1.50	290	1.45	18.55	14.76	34.73	2362
NS 7211 R	49	121	132	56	6	1.00	2.83	4.00	291	1.80	16.70	15.72	33.58	2444
Gem	47	114	128	61	7	1.02	3.23	2.77	289	1.00	16.62	13.92	35.00	2391