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Graangewasse  
Potchefstroom

Agricultural Research Council  
Grain Crops  
Potchefstroom

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**VERSLAG VAN DIE NASIONALE  
SOJABOON KULTIVARPROEWE/  
2017/18  
REPORT OF THE NATIONAL  
SOYBEAN CULTIVAR TRIALS**

Verantwoordelike beampte:  
Responsible officer:  
AS de Beer

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## INHOUD/INDEX

<b>ONDERWERP SUBJECT</b>	<b>BLADSY PAGE</b>
<b>1 INLEIDING.....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
<b>1.1 DOEL.....</b>	<b>1</b>
<b>AIM .....</b>	<b>1</b>
<b>2 MATERIAAL EN METODE .....</b>	<b>1</b>
<b>MATERIALS AND METHODS .....</b>	<b>1</b>
<b>2.1 ALGEMEEN .....</b>	<b>1</b>
<b>GENERAL .....</b>	<b>1</b>
<b>2.2 WAARNEMINGS .....</b>	<b>2</b>
<b>OBSERVATIONS .....</b>	<b>2</b>
<b>2.2.1 Blomdatum .....</b>	<b>2</b>
<b>Date of flowering.....</b>	<b>2</b>
<b>2.2.2 Oesrypdatum.....</b>	<b>2</b>
<b>Date of harvest maturity.....</b>	<b>2</b>
<b>2.2.3 Groeiperiode .....</b>	<b>2</b>
<b>Length of growing season .....</b>	<b>2</b>
<b>2.2.4 Planthoogte .....</b>	<b>2</b>
<b>Plant height .....</b>	<b>2</b>
<b>2.2.5 Peulhoogte .....</b>	<b>2</b>
<b>Pod height .....</b>	<b>2</b>
<b>2.2.6 Groenstam.....</b>	<b>2</b>
<b>Green Stem.....</b>	<b>2</b>
<b>2.2.7 Omval.....</b>	<b>2</b>
<b>Lodging.....</b>	<b>2</b>
<b>2.2.8 Opspring.....</b>	<b>3</b>
<b>Shattering .....</b>	<b>3</b>
<b>2.2.9 Massa per 100 sade .....</b>	<b>3</b>
<b>100 Seed mass .....</b>	<b>3</b>
<b>2.2.10 Ongewenste sade .....</b>	<b>3</b>
<b>Undesirable seed .....</b>	<b>3</b>
<b>2.2.11 Saadopbrengs.....</b>	<b>3</b>
<b>Seed yield .....</b>	<b>3</b>
<b>2.3 DIE EVALUERING VAN PROEWE .....</b>	<b>3</b>
<b>THE EVALUATION OF TRIALS .....</b>	<b>3</b>
<b>3 BESPREKING VAN RESULTATE .....</b>	<b>4</b>
<b>DISCUSSION OF RESULTS.....</b>	<b>4</b>
<b>3.1 ALGEMEEN .....</b>	<b>4</b>

<b>GENERAL .....</b>	<b>4</b>
<b>3.2 BESPREKING VAN TABELLE .....</b>	<b>4</b>
<b>DISCUSSION OF TABLES .....</b>	<b>4</b>
<b>3.2.1 Dae tot blom en lengte van die groeiperiode .....</b>	<b>4</b>
Days to flowering and length of growing season .....	4
<b>3.2.2 Planthoogte .....</b>	<b>5</b>
Plant height .....	5
<b>3.2.3 Peulhoogte .....</b>	<b>5</b>
Pod height .....	5
<b>3.2.4 Omval.....</b>	<b>6</b>
Lodging.....	6
<b>3.2.5 Groenstam.....</b>	<b>6</b>
Green stem .....	6
<b>3.2.6 Oopspring.....</b>	<b>6</b>
Shattering.....	6
<b>3.2.7 Planttelling .....</b>	<b>6</b>
Number of plants .....	6
<b>3.2.8 Persentasie ongewenste sade.....</b>	<b>6</b>
Percentage undesirable seed .....	6
<b>3.2.9 Saadgrootte.....</b>	<b>7</b>
Seed size .....	6
<b>3.2.10 Opbrengs.....</b>	<b>7</b>
Yield .....	7
<b>4 INTERPRETASIE VAN OPBRENGSRESULTATE.....</b>	<b>7</b>
INTERPRETATION OF YIELD RESULTS .....	7
<b>4.1 INLEIDING.....</b>	<b>7</b>
INTRODUCTION .....	7
<b>4.2 OPBRENGSWAARSKYNLIKHEID EN OPBRENGS.....</b>	<b>8</b>
YIELD PROBABILITY AND YIELD.....	8

**TABEL**  
**TABLE**

**BLADSY**  
**PAGE**

Lys van medewerkers .....	9
List of co-operators .....	9
 <b>NASIONALE SOJABOONKULTIVARPROEWE</b> <b>NATIONAL SOYBEAN CULTIVAR TRIALS</b>	
1 Sojaboonsaad eienskappe en saadverskaffers .....	10
Soybean seed characteristics and agents.....	10
2 Grond en verbouingsinligting.....	11
Soil and general information .....	11
3 Reënvalgegewens.....	12
Rainfall detail .....	12
4 Dae tot blom .....	13
Days to flowering.....	13
5 Dae tot fisiologiesrypstadium.....	14
Days to physiological maturity.....	14
6 Lengte van groeiperiode .....	15
Length of growing season .....	15
7 Planthoogte (cm) .....	16
Plant height (cm).....	16
8 Peulhoogte (cm).....	17
Pod height (cm).....	17
9 Omval (1-5) .....	18
Lodging (1-5) .....	18
10 Groenstam (1-5) .....	19
Green stem (1-5) .....	19
11 Oopspring (1-5) .....	20
Shattering (1-5) .....	20
12 Planttelling .....	21
Number of plants .....	21

<b>13</b>	<b>Percentasie ongewenste sade .....</b>	<b>22</b>
	<b>Percentage undesirable seed .....</b>	<b>22</b>
<b>14</b>	<b>Massa/100 sade (g) .....</b>	<b>23</b>
	<b>Mass/100 seeds (g) .....</b>	<b>23</b>
<b>15</b>	<b>Opbrengste per lokaliteit .....</b>	<b>24</b>
	<b>Actual yield for various localities .....</b>	<b>24</b>
<b>16</b>	<b>Opbrengswaarskynlikheid vir koeler produksiegebiede (3 jaar) .....</b>	<b>25</b>
	<b>Yield probability for cooler production areas (3 year).....</b>	<b>25</b>
<b>17</b>	<b>Opbrengste vir koeler produksiegebiede (2 jaar) .....</b>	<b>26</b>
	<b>Actual yield for cooler production areas (2 year) .....</b>	<b>26</b>
<b>18</b>	<b>Opbrengswaarskynlikheid vir matige produksiegebiede (3 jaar) .....</b>	<b>27</b>
	<b>Yield probability for moderate production areas (3 year) .....</b>	<b>27</b>
<b>19</b>	<b>Opbrengste vir matige produksiegebiede (2 jaar) .....</b>	<b>28</b>
	<b>Actual yield for moderate production areas (2 year) .....</b>	<b>28</b>
<b>20</b>	<b>Opbrengswaarskynlikheid vir warmer produksiegebiede (3 jaar)....</b>	<b>29</b>
	<b>Yield probability for warmer production areas (3 year).....</b>	<b>29</b>
<b>21</b>	<b>Opbrengste vir warmer produksiegebiede (2 jaar) .....</b>	<b>30</b>
	<b>Actual yield for warmer production areas (2 year) .....</b>	<b>30</b>
<b>22</b>	<b>Saamgevatte inligting vir koeler produksiegebiede .....</b>	<b>31</b>
	<b>Summerised information for cooler production areas .....</b>	<b>31</b>
<b>23</b>	<b>Saamgevatte inligting vir matige produksiegebiede .....</b>	<b>32</b>
	<b>Summerised information for moderate production areas .....</b>	<b>32</b>
<b>24</b>	<b>Saamgevatte inligting vir warmer produksiegebiede .....</b>	<b>33</b>
	<b>Summerised information for warmer production areas .....</b>	<b>33</b>

## 1 INTRODUCTION

The National Soybean Cultivar Trials (project M101/62 (P05000002) were planted for the 40<sup>th</sup> successive year this past growing season. A total of 21 trials were planted at 21 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 35 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 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.

Three (3) of the 21 trials could not be included (14%) in the report compared to the four (4) out of 21 trials (19%) in the 2016/17 season.

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

- 1 Hopetown – High CV%. Deviate from set trial plan.
- 2 Kestell – First planting damage by pigeons. Second planting poor emergence. Trial terminated.
- 3 Verkeerdevlei – Poor emergence due severe drought just after planting. Poor yield results.

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 (45 days Marble Hall) and the longest in

the cooler areas (90 days at Clarens).

The number of days to physiological maturity is shown in Table 5. The longest average days to maturity was experienced at Stoffberg (168 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 6663 RSF (MG 6.3) had a mean plant height of 112 cm (highest) in the warm area compared to 56 cm (lowest) of the indeterminate cultivar LS 6851 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 58 cm at Dundee to 101 cm at Bergville.

### 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 cultivars DM 6.8i RR (MG 6.8; indeterminate ) and DM 6663 RSF (MG 6.3; indeterminate), showed a mean pod height of 17cm in the warm area, while NS 5909 R (MG 5.9; indeterminate) and LS 6860 R (MG 6.0; semi determinate) also had an above average pod height in all the areas.

SSS 5449 (tuc) (MG 4.9) (indeterminate) had the lowest reading of 4 in the warm region. 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 at Bapsfontein. The highest lodging figures was reported for LS 6248 R and Y 657 at Bapsfontein as well as LS 6248 R, LS 6860 R, DM 6663 RSF, DM 6402 RSF and DM 6.8i RR at Bergville, both in the moderate area.

### 3.2.5 Green stem (Table 10)

A high percentage of green stem, was recorded at Potchefstroom, while the cultivars P48T48 R and DM 6663 RSF 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 Greytown in the moderate production area as well as at Delmas in the cool area.

### 3.2.7 Number of plants (Table 12)

Enough certified seed was provided to establish 400 000 plants ha<sup>-1</sup> for the irrigation and high rainfall areas and 350 000 for dryland.

### 3.2.8 Percentage undesirable seed (Table 13)

The lowest mean of 0.09% undesirable seeds was recorded for the moderate region. The range varied from 1.57% at Bethlehem (due to hail damage) to 0.13% at Cedara.

### 3.2.9 Mass (g) 100<sup>-1</sup> seeds (Table 14)

The variation in seed mass among localities ranged between 14.25 g 100<sup>-1</sup> seeds at Bethlehem to 19.28 g 100<sup>-1</sup> seeds at Delmas. The highest seed mass was recorded

for PHB 96 T 06 R in the cool region, while LS 6248 R, had the smallest seed in the cool region.

### 3.2.10 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 1521 R and DM 5953 RSF showed an above average yield probability (Table 19) for all the yield potentials. For the moderate area PAN 1521 R and PAN 1623 R, as for the cool area, showed above average figures over the whole production potential range. PAN 1521 R, PAN 1623 R and DM 6.8i RR also performed above average for the warm areas.

**Lokaliteit, medewerkers en adresse van kultivarproewe soos beplan vir, 2017/18**  
**Localities, co-operators and addresses of the cultivar trials, 2017/18**

Nr No	Lokaliteit Locality	Adres van proeflokaliteit Address of trial locality	Tel. no. Tel. nr.	Verantwoordelike beämpte Responsible officer
1	Bapsfontein	Bapsfontein	013 665 2251/082 969 1981	A Mathebula
2	Bergville	J Jackson Shamrock H4 Bergville 3350	082 388 0311	R Wessels
3	Bethlehem	Keingraan Instituut Bethlehem 9700	082 375 8999	L Bronkhorst & E Maree
4	Brits K2	K2 Navorsingsstasie Brits 0250	072 606 5094	R Boshoff
5	Cedara	Cedara P/bag X9059 Pietermaritzburg 3200	033-355 9495/079 898 5522	J Arathoon
6	Clarens	D Terblanche Tailfert Clarens 9707	082 388 0311	R Wessels
7	Clocolan	G Hugo van Niekerk Kroon Clocolan 9735	082 375 8999	L Bronkhorst & E Maree
8	Delmas-Pannar	Pannar Saad Navorsingsplaas Postbus 439 Delmas 2210	013-665 8524/082 969 1981	A Mathebula
9	Dundee	Dundee Navorsingstasie Postbus 626 Dundee 3000	034 212 479/076 953 3587	M Buthelezi
10	Greytown	Pannar Proefplaas Postbus 19 Greytown 3250	033-413 9639	A Jarvie
11	Grobblersdal (Agricor)	Koos Louw trust suite 38 postnet Groblersdal Hopetown	083 625 4906/081 016 7848	R van Niekerk & C Schoeman
12	Hopetown	Kestell Vosstoffel Boerdery Postbus 80 Kinross 2270	084 475 0924/072 253 9433	D Scheepers & PJ Fourie
13	Kestell	Research Station P/Bag X501 Kokstad 4700	082 375 8999	L Bronkhorst
14	Kinross	Hoërskool Kroonstad Kroonstad 9500	039 727 2105/072 778 8785	MP Skhakane
15	Kokstad	Marble Hall	082 375 8999	L Bronkhorst, M van Heerden & E Maree
16	Kroonstad	G Anderson Postnet Suite 15 P/Bag 1866 Middelburg 1050	079 043 0597	R Boshoff
17	Marble Hall	IGG Proefplaas Privaatsak X1251 Potchefstroom 2520	082 375 8999	L Bronkhorst
18	Middelburg	CMJ Boerdery Postbus 6 Stoffberg 1056	018-299 6366/082 375 8999	L Bronkhorst
19	Potchefstroom	Stoffberg	083 625 4906/081 016 7848	R van Niekerk & C Schoeman
20	Stoffberg	Verkeerdevlei	082 375 8999	L Bronkhorst, J Richter & E Maree
21				

**Tabel 1 Sojaboonaad eienskappe en inligting oor verskaffers, 2017/18**  
**Table 1 Soybean seed characteristics and information about agents, 2017/18**

Kultivar Cultivar	Volwassenheids- groepings- Maturity Group	Groeiwys- 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
PAN 1454 R	4.3	-	BL	P	B	JAYES	Pannar	JAYES
PHB 94 Y 80 R	4.8	-	BL	P	W	JAYES	Pioneer	JAYES
LS 6248 R	4.8	SD	BL	W	W	JAYES	Link Seed	JAYES
P48T48 R	4.8	-	B	W	T	JAYES	Pioneer	JAYES
DM 5953 RSF	4.8	-	IB	P	W	JAYES	GDM Seeds	JAYES
SSS 5449 (tuc)	4.9	-	B	P	G	JAYES	Sensako	JAYES
NS 5009 R	5.0	SD	B	W	T	JAYES	NEE/NO	NEE/NO
LS 6851 R	5.1	-	BL	P	W	JAYES	K2	JAYES
NS 5288 R	5.2	-	BL	W	B	JAYES	Link Seed	NEE/NO
PAN 1552 R	5.3	-	LB	P	G	JAYES	K2	JAYES
DM 5351 RSF	5.3	-	IB	W	G	JAYES	Pannar	JAYES
Y 540	5.4	-	B	W	-	JAYES	GDM Seeds	JAYES
SSS 5052 (tuc)	5.5	-	BL	P	G	JAYES	Southern Hemisphere Seeds	NEE/NO
NS 5509	5.5	-	BL	P	B	JAYES	Sensako	JAYES
Y 550	5.5	-	BL	P	B	JAYES	K2	NEE/NO
DM 5609 RSF	5.6	D	LB	P	G	JAYES	Southern Hemisphere Seeds	NEE/NO
PAN 1521 R	5.7	-	IB	P	G	JAYES	GDM Seeds	JAYES
DM 5302 RSF	5.7	-	LB	P	G	JAYES	K2	NEE/NO
NS 5909 R	5.9	-	IB	P	G	JAYES	GDM Seeds	JAYES
LS 6860 R	6.0	SD	B	P	G	JAYES	Pannar	JAYES
PHB 96 T 06 R	6.0	-	KL	W	G	JAYES	GDM Seeds	JAYES
PAN 1623 R	6.1	-	KL	W	G	JAYES	K2	NEE/NO
LS 6161 R	6.1	D	IB	P	B	JAYES	Link Seed	JAYES
LS 6862 R	6.2	SD	B	W	G	JAYES	Link Seed	JAYES
SSS 6560 (tuc)	6.2	-	B	W	G	JAYES	Sensako	JAYES
NS 6267 R	6.2	D	IB	P	W	JAYES	K2	NEE/NO
Y 627	6.2	-	LB	W	G	JAYES	Southern Hemisphere Seeds	NEE/NO
P61T38 R	6.3	D	LB	P	G	JAYES	Pannar	JAYES
DM 6663 RSF	6.3	-	LB	P	G	JAYES	GDM Seeds	JAYES
NS 6448 R	6.4	SD	LB	P	G	JAYES	K2	NEE/NO
P64T39 R	6.4	-	KL	W	G	JAYES	Pannar seed	JAYES
DM 6402 RSF	6.4	-	LB	W	G	JAYES	GDM Seeds	JAYES
Y 657	6.5	-	B	P	-	JAYES	Southern Hemisphere Seeds	NEE/NO
LS 6868 R	6.8	SD	B	W	W	JAYES	Link Seed	JAYES
DM 6.8i RR	6.8	I	B	P	G	JAYES	GDM Seeds	JAYES

\*1 D - Bepaalda/determinate; I - Onbepaalda/indeterminate; SD - Semi-Bepaalda/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 verbouingspraktyke by die onderskeie proeflokaliteite van die kultivarproewe, 2017/18**  
**Table 2 General information in connection with soil and cultivation practices at the different trial localities, 2017/18**

Lokalteit Locality	Plantdatum Date of planting	Grondvorm Soil type	Grondvorm Soil type	Grond ontleding Soil analysis			Bemesting Fertilization			Spansering Spacing (cm)	Onkruid beheer Weed control	Koördinate van lokaliteit Co-ordinate of localities
				pH (H <sub>2</sub> O)	P	K	N	P	K			
Bapsfontein/B	09/11/2017	-	-	-	-	-	-	-	-	90	-	S26.0878 E28.5816
Bergville/B	21/11/2017	-	-	-	-	-	-	-	-	90	-	S28°43.234" E29°18.433"
Bethlehem/D	30/10/2017	Avalon	5.94	60	255	4.76	2.52	0	75	Strongarm, Alachlor, skoffel	S28°09'36.1" E028°18'14.9"	
Bril's K2/B	01/12/2017	Kalspruit	-	-	-	-	-	-	-	75	Geen, Slegs geskoffel	S25.591916 E27.719345
Cedara/D	21/11/2017	Hutton	4.29	7	218	0	6.3	0	45	Dual S Gold, Hammer, Round-up powermax	S29°32'10" E30°16'00"	
Clarens/D	14/11/2017	-	-	-	-	-	-	-	-	90	-	S28°23.387 E28°25.254
Ciocolan/D	21/11/2017	-	4.61	56	150	6.44	2.52	0	75	Strongarm en Alachlor	S28°900864" E027.60007"	
Delmas/D	08/12/2017	Sandy loam (Davidson)	-	-	-	-	-	-	-	90	Fluumsulfam, Metolachlor 960, Roundup	S26°8'36.08" E28°42'28.73"
Dundee/D	15/12/2017	Hutton	-	-	-	-	-	-	-	45	-	S28°08'19.74 E30°18'53.52
Greytown/D	13/11/2017	Hutton	5.29	20	198	17.78	26.67	35.56	75	Metagan Gold, Roundup	S29°05'08.85" E30°36'17.8"	
(Groblersdal/B) Marble Hall	29/11/2017	Avalon	-	-	-	-	-	-	-	75	Strongarm, Agill, Round-up	S 25.066033 E29.144778
Hopetown/B	13/12/2017	-	-	-	-	-	-	-	-	75	-	S29°35'35" E23°59'50"
Kestell/D	24/11/2017 05/12/2017	-	-	-	-	-	-	-	-	75	Strongarm, Alachlor en skoffel	S25°39'47.4" "E029°46'19.8"
Kinross/D	20/11/2017	-	4.58	71	173	3.08	2.31	0	75	Strongarm, Alachlor, Round-up, skoffel	S26°22'26.2" E29°08'47.7"	
Kokstad/D	27/11/2017	-	-	-	-	-	-	-	-	45	Dual Gold	S30°31'54" E29°24'44"
Kroonstad/D	08/12/2017	-	5.87	41	95	5.88	2.31	11.5	75	Strongarm, Alachlor, Round-up, skoffel	S27°36'29.9" E027°14'00.6"	
Middelburg/D	02/11/2017	-	Boer werk op globale monster			-	-	-	-	75	Strongarm, Agill, Round-up, skoffel	S25°39'46.4" E029°46'30.3"
Potchefstroom/B	09/11/2017	Hutton	6.14	61	268	0	2.31	0	75	Strongarm, Alachlor, Round-up, skoffel	S26°44'00.0" E027°04'01.2"	
Stoffberg/D	27/10/2017	Hutton	4.77	15	150	0	0	0	76	Round-up powermax	S25.437151 E29.853939	
(Thabazimbi/B) Groblersdal	15/11/2017	Hutton	6.41	21	333	0	0	0	76	Round-up powermax	S25.377004 E29.365510	
Verkeerdevlei/D	08/12/2017	Hutton	-	-	-	-	-	-	75	Strongarm, Alachlor, Round-up	S28°48'15.6" E026°46'39.9"	

- Inligting nie beskikbaar/information not available

Haal skade/Hail damage Clarens – 24/12/2018

Tabel 3 Reënval en besproeiing vir die verskillende lokaliteite (mm), 2017/18  
 Table 3 Rainfall and irrigation at the different localities (mm), 2017/18

Lokaliteit Locality	Maandelikse reënval (mm)/Monthly rainfall (mm)						Totaal Total * **	
	Okt	Nov	Des	Jan	Feb	Mrt		
Bethlehem	43.18	94.23	114.3	98.55	163.07	213.11	43.43	769.87
Cedara	145.29	135.64	98.3	20.83	227.6	155.7	64.77	0
Greytown	-	123.2	102.8	72.4	83.6	122.8	41.6	546.4
Groblersdal	79	83	132	37	38	91	60	520
Potchefstroom B	56.13	69.34	62.48	47.24	68.33	58.93	35.56	398.01
Stoffberg	77	65	140	46	44	89	49	510

\* 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 soyaboonkultivars by die verskillende proef lokalteite, 2017/18  
 Table 4 The number of days from planting to 50% flowering stage of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Matig/Moderate										Warm			
	Koel/Cool					Gem/Mean					Briët K2		Marbie Hall	
	Kinross	Clarendon	Delmas	Koststad	Bapsfontein	Cedara	Bergvliet	Dundee	Kroonstad	Potchefstroom	Stoffberg	Gem/Mean	Groblerstad	Gem/Mean
PAN 1454 R	56	62	55	49	60	71	63	59	56	59	39	43	61	56
PHB 94 Y 80 R	43	62	55	48	60	76	63	58	62	53	39	43	62	54
LS 6248 R	72	94	84	67	84	85	97	83	76	77	67	64	62	69
P46T48 R	64	69	55	49	60	69	77	63	56	59	60	54	39	53
DM 5953 RSF	67	69	64	49	60	71	63	56	59	60	52	39	43	53
SSS 5449 (tuc)	67	87	70	67	79	84	83	77	68	74	73	66	59	68
NS 5009 R	67	69	55	49	66	72	77	65	56	59	71	56	39	60
LS 6851 R	86	90	84	66	79	87	90	83	69	74	75	65	62	74
NS 5258 R	67	69	57	49	60	73	63	56	59	61	54	39	43	68
PAN 1532 R	77	97	95	67	79	84	92	84	75	70	73	66	64	57
DM 5351 RSF	64	69	57	49	60	75	70	63	55	59	60	52	39	61
Y 540	77	84	57	67	79	82	83	76	70	77	62	66	59	49
SSS 5052 (tuc)	79	97	96	69	85	85	90	86	77	74	78	68	63	79
NA 5509 R	77	94	96	67	87	88	90	85	77	74	79	68	54	71
Y 550	86	97	70	67	87	80	83	81	72	74	76	66	64	54
DM 5609 RSF	77	97	84	63	79	108	84	74	74	76	76	65	70	80
PAN 1521 R	86	97	96	68	87	87	83	86	78	74	75	67	70	71
DM 5302 RSF	77	92	84	66	77	87	77	80	70	77	73	66	64	57
NS 5909 R	86	96	91	71	92	83	97	88	81	80	73	59	69	81
LS 6860 R	91	101	91	75	92	91	108	93	81	77	80	71	70	81
PHB 96 T 06 R	91	96	74	89	91	104	92	82	77	81	73	64	71	87
PAN 1623 R	77	97	91	70	82	88	104	87	79	74	80	70	65	83
LS 6161 R	86	94	91	69	79	85	97	86	77	74	80	67	70	69
LS 6862 R	86	94	96	72	79	89	90	87	80	77	66	70	62	83
SSS 6560 (tuc)	77	97	70	67	87	87	90	82	76	74	77	66	64	85
NS 6267 R	86	90	84	67	79	83	90	83	75	74	76	67	54	71
Y 627	86	97	84	67	79	84	90	84	77	74	77	67	54	71
P61T38 R	77	94	84	68	79	85	90	82	74	86	76	66	59	67
DM 6663 RSF	91	103	91	74	87	92	90	82	77	81	73	70	71	90
NS 6448 R	91	94	84	61	82	90	97	86	81	77	79	63	71	89
P64T39 R	86	97	91	75	92	91	90	89	83	77	81	71	70	62
DM 6402 RSF	91	97	96	75	92	89	108	93	84	89	80	73	64	67
Y 657	86	100	91	68	92	90	104	90	82	77	80	71	64	71
LS 6868 R	86	106	96	77	92	85	108	93	82	89	82	72	64	71
DM 6.81 RR	91	100	91	76	87	89	90	89	82	77	81	69	70	67
Gem/Mean	79	90	81	65	80	84	89	81	73	73	75	65	61	78

Tabel 5 Die aantal dae vanaf plant tot fisiologiese stadium van die verskillende sojaboontkultivars by die verskillende proef lokaliteite, 2017/18  
 Table 5 The number of days from planting to physiological maturity of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Klarens Bethlehem	Colocalan Klinross	Koststad Kirkcaldy	Middleburg Gem/Mean	Bergville Cedara	Kroonstad Potchefstroom	Stoffberg Brits K2	Groblersdal Marble Hall	Warm	
									Matijs/Moderate	Matijs/Moderate
PAN 1454 R	130	146	146	137	133	140	139	126	131	123
PHB 94 Y 80 R	130	139	141	132	141	128	123	120	128	147
LS 6248 R	148	156	141	148	158	154	151	137	141	120
P48T48 R	130	143	141	137	135	141	138	137	131	116
DM 5953 RSF	130	143	141	132	163	138	141	116	131	123
SSS 5449 (tuc)	148	153	146	146	158	154	151	123	135	116
NS 5009 R	130	143	141	137	133	138	137	116	132	128
LS 6851 R	148	167	160	137	158	167	156	126	141	145
NS 5258 R	130	139	141	132	137	140	137	116	130	120
PAN 1532 R	148	153	160	148	156	154	153	126	137	132
DM 5351 RSF	130	139	141	132	135	140	136	123	130	123
Y 540	148	153	160	143	150	150	151	126	134	123
SSS 5052 (tuc)	148	162	163	148	141	154	153	134	138	132
NA 5509 R	163	167	163	148	154	161	159	129	140	132
Y 550	163	167	163	148	150	158	158	129	138	123
DM 5609 RSF	148	160	160	148	154	158	155	123	137	123
PAN 1521 R	155	160	160	137	156	154	154	129	135	132
DM 5302 RSF	148	156	163	146	150	154	153	123	136	123
NS 5909 R	163	170	163	155	156	167	162	137	144	132
LS 6860 R	163	170	163	163	141	167	161	149	143	110
PHB 96 T 06 R	163	167	163	155	158	167	162	137	142	145
PAN 1623 R	177	167	163	148	150	154	160	134	139	123
LS 6161 R	177	162	163	155	150	161	161	137	143	140
LS 6862 R	157	167	163	148	158	158	159	134	143	110
SSS 6560 (tuc)	163	156	160	148	156	154	156	134	139	132
NS 6267 R	148	167	163	155	135	167	156	144	143	123
Y 627	163	167	160	148	156	158	159	134	139	132
P6TT38 R	148	162	163	148	141	159	154	137	147	132
DM 6663 RSF	148	170	163	155	162	167	161	133	143	140
NS 6448 R	163	170	160	148	163	158	160	137	144	132
P64T39 R	144	170	163	163	156	165	160	137	148	140
DM 6402 RSF	163	170	163	151	158	167	162	149	143	132
Y 657	148	167	163	155	161	159	137	144	132	145
LS 6868 R	144	170	163	155	168	169	162	148	140	145
DM 6.8i RR	144	170	163	155	168	167	161	149	148	123
Gem/Mean	150	160	157	147	151	156	153	132	139	116

Tabel 6 Die aantal dae vanaf plant tot oesstadium van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2017/18  
 Table 6 The number of days from planting to maturity of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Koel/Cool		Matig/Moderate				Warm	
	Klarens	Kinross	Bergvliie	Cedara	Kroonstad	Ootchervloeg	Gem/Mean	
PAN 1454 R	153	171	168	148	157	154	159	142
PHB 94 Y 80 R	148	168	148	157	154	157	150	142
LS 6248 R	191	185	197	180	192	196	190	155
P48T48 R	153	171	168	155	157	167	162	155
DM 5953 RSF	148	171	168	148	157	154	158	142
SSS 5449 (tuc)	167	171	171	164	168	171	169	142
NS 5009 R	152	171	168	148	157	154	158	142
LS 6851 R	169	185	184	178	191	196	184	155
NS 5258 R	158	168	174	148	157	154	160	142
PAN 1332 R	169	171	181	178	191	174	177	155
DM 5351 RSF	148	168	168	148	157	154	157	142
Y 540	158	171	174	164	157	167	165	142
SSS 5052 (tuc)	184	185	197	180	193	196	189	155
NA 5509 R	191	185	197	178	191	189	188	142
Y 550	191	185	190	178	192	196	189	142
DM 5609 RSF	184	185	184	171	191	179	182	142
PAN 1321 R	176	185	190	155	193	169	178	155
DM 5302 RSF	169	185	177	155	191	174	175	142
NS 5909 R	191	185	197	169	191	196	188	155
LS 6860 R	191	185	197	182	193	196	191	155
PHB 96 T 06 R	191	185	197	180	192	196	190	155
PAN 1623 R	191	185	184	178	192	189	186	155
LS 6161 R	191	185	197	178	191	181	187	155
LS 6862 R	184	185	197	178	191	196	188	155
SSS 6560 (tuc)	191	185	190	178	192	196	189	155
NS 6267 R	184	185	190	178	193	196	188	155
Y 627	191	185	184	178	193	189	187	155
P61T38 R	176	185	190	178	191	196	186	155
DM 6663 RSF	191	185	190	178	191	196	189	155
NS 6448 R	191	185	197	180	191	189	189	155
P64T39 R	191	185	197	178	191	196	190	155
DM 6402 RSF	191	185	197	176	191	196	189	155
Y 657	191	185	197	180	192	174	187	155
LS 6868 R	191	185	197	178	192	196	190	155
DM 6.8i RR	191	185	197	178	193	196	190	155
Gem/Mean	178	181	186	170	183	182	180	151
								153
								166
								175
								159
								128
								133
								124

Tabel 7 Die planthoogte van die verskillende sojaboontkultivars by die verskillende proef lokaliteite, 2017/18  
 Table 7 The plant height of the different soybean cultivars at the different trial localities, 2017/18

	Koel/Cool	Matig/Moderate										Warm				
		Kirnross	Deimias	Clocoalan	Bethlehem	Cultivars	Gem/Mean	Bapsfontein	Dundee	Greytown	Kroonstad	Potchefstroom	Stoffberg	Gem/Mean	Marble Hall	Gem/Mean
PAN 1454 R	73	60	85	66	88	92	77	73	105	60	69	77	75	70	76	67
PHB 94 Y 80 R	65	50	65	58	78	80	66	64	100	65	59	50	80	66	67	64
LS 6248 R	108	80	88	80	110	112	96	93	115	103	69	91	95	105	75	93
P48T48 R	72	70	68	64	87	78	73	69	90	66	47	65	60	48	61	63
DM 5953 RSF	83	65	77	62	87	98	79	72	95	74	55	65	72	93	70	75
SSS 5449 (tuc)	80	90	87	72	95	102	88	79	90	82	52	71	72	77	67	74
NS 5009 R	52	45	70	63	65	78	62	66	60	62	43	63	73	73	65	63
LS 6851 R	57	60	70	61	90	80	70	68	90	79	52	75	55	58	54	66
NS 5258 R	75	65	57	76	72	83	71	81	85	70	47	63	50	75	63	67
PAN 1532 R	92	60	70	66	75	78	73	68	85	72	42	70	68	82	68	69
DM 5351 RSF	87	60	77	66	87	87	77	74	90	71	50	62	68	92	72	72
Y 540	92	65	62	62	87	92	76	69	70	77	51	66	67	85	70	69
SSS 5052 (tuc)	97	65	73	63	102	93	82	81	110	87	63	79	80	93	68	83
NA 5509 R	93	80	78	66	92	107	86	72	110	93	59	76	73	95	65	65
Y 550	105	80	97	66	88	100	89	67	105	93	57	79	75	90	62	78
DM 5609 RSF	75	65	57	68	90	92	74	74	90	77	55	74	58	60	60	69
PAN 1521 R	117	80	77	69	100	101	90	70	105	85	67	76	75	108	65	81
DM 5302 RSF	92	75	62	68	90	93	80	76	100	75	50	71	60	72	70	72
NS 5509 R	110	55	77	68	100	105	86	72	110	92	51	76	75	110	75	83
LS 6860 R	110	90	87	113	110	100	87	105	94	62	79	83	123	75	89	72
PHB 96 T 06 R	110	80	110	73	107	101	97	73	115	106	63	91	75	98	75	87
PAN 1623 R	98	65	82	83	97	104	88	83	105	95	61	79	83	110	75	86
LS 6161 R	97	75	78	76	97	96	87	81	110	93	62	82	85	110	70	87
LS 6862 R	85	75	87	70	92	95	84	80	100	84	57	73	72	100	70	79
SSS 5560 (tuc)	103	75	78	82	107	95	90	90	115	95	60	75	73	108	70	86
NS 6267 R	82	80	63	73	92	90	80	79	100	92	58	71	63	67	75	76
Y 627	97	80	82	66	98	107	88	70	110	93	59	80	72	98	70	82
P61T38 R	82	65	68	64	95	92	78	70	95	88	56	76	67	55	58	71
DM 6663 RSF	127	80	98	80	102	113	79	110	103	72	96	95	110	101	96	94
NS 6448 R	112	80	69	93	97	87	73	110	96	59	85	65	90	72	81	68
P64T39 R	115	65	88	73	110	108	93	78	115	96	69	83	75	117	78	89
DM 6402 RSF	112	80	95	74	95	105	94	79	105	94	62	91	85	100	95	89
Y 657	112	75	92	75	102	111	94	77	110	96	59	78	73	100	80	84
LS 6868 R	90	60	75	80	110	120	89	81	110	101	67	95	75	95	80	88
DM 6.8i RR	132	105	92	81	108	123	107	92	115	111	76	97	93	130	70	98
Gem/Mean	94	71	78	71	94	98	84	76	101	87	58	77	73	91	71	68

Tabel 8 Die peulhoogte van die verskillende sojaboontkultivars by die verskillende proef lokaliteite, 2017/18  
 Table 8 The pod height of the different soybean cultivars at the different trial localities, 2017/18

Kultivars	Koel/Cool	Matig/Moderate										Warm							
		Bethlehem	Clarendon	Delmas	Kinross	Middleburg	Gem/Mean	Bergville	Cedara	Dundee	Greytown	Kroonstad	Potchefstroom	Bespr	Groblerdal	Marble Hall	Gem/Mean		
PAN 1454 R	5	5	10	13	7	9	8	14	7	11	9	11	7	10	7	10	9		
PHB 94 Y 80 R	5	3	3	7	8	6	6	6	10	10	7	10	8	5	7	4	10	7	
LS 6248 R	13	7	2	19	11	10	11	18	20	12	17	10	10	15	8	10	9		
P48T48 R	6	7	3	9	10	7	7	9	9	12	8	12	4	5	5	8	3	10	7
DM 5953 RSF	7	5	6	8	7	10	7	7	16	13	9	11	8	11	10	11	7	10	9
SSS 5449 (tuc)	6	10	8	9	8	10	9	12	7	17	6	12	3	6	5	8	3	5	4
NS 5009 R	5	5	5	8	5	9	6	7	5	9	6	10	6	7	5	7	4	10	7
LS 6851 R	2	5	4	10	11	7	6	11	13	19	9	19	2	5	5	10	3	10	7
NS 5258 R	7	5	1	15	6	8	7	15	6	9	7	8	1	6	8	8	6	5	6
PAN 1532 R	8	6	4	8	9	7	7	8	13	14	6	16	4	7	8	10	7	10	9
DM 5351 RSF	9	4	8	8	9	8	8	8	12	13	6	10	4	10	9	9	7	8	8
Y 540	7	5	2	14	10	8	8	14	10	13	7	12	3	11	7	10	5	15	10
SSS 5052 (tuc)	9	5	7	10	10	8	8	17	18	10	21	7	9	7	12	6	10	8	
NA 5509 R	9	6	6	13	10	10	9	12	9	21	12	19	4	13	10	13	8	15	12
Y 550	14	10	6	12	10	10	10	16	16	18	9	19	5	9	5	12	4	10	7
DM 5609 RSF	5	5	3	11	9	10	7	11	10	15	9	18	1	5	5	9	3	10	7
PAN 1521 R	13	7	7	16	10	11	11	16	14	17	14	19	4	12	8	13	7	10	9
DM 5302 RSF	8	7	2	11	7	8	7	10	9	12	7	12	2	7	12	9	11	10	11
NS 5909 R	12	10	10	19	11	10	12	18	17	22	10	18	5	12	15	15	13	15	14
LS 6860 R	14	10	5	14	9	11	13	17	17	12	23	6	11	18	15	16	10	13	
PHB 96 T 06 R	12	5	10	9	12	8	9	9	14	18	12	20	5	13	20	14	17	10	14
PAN 1623 R	9	7	4	16	9	12	9	16	13	18	11	16	4	13	12	13	10	8	9
LS 6161 R	10	7	7	15	10	10	13	20	20	10	25	7	12	8	14	6	15	11	
LS 6862 R	7	7	6	11	9	11	9	10	13	16	11	20	4	11	15	12	12	10	11
SSS 6560 (tuc)	9	10	6	17	9	10	10	15	21	10	17	4	11	12	14	11	10	11	
NS 6267 R	8	10	4	14	12	11	10	12	12	23	14	20	3	7	15	13	13	10	12
Y 627	9	10	3	13	8	11	9	13	15	19	10	17	5	10	15	13	12	15	14
P6TT38 R	6	10	2	15	11	10	9	15	7	25	15	27	4	10	14	8	15	12	
DM 6663 RSF	10	10	11	15	10	11	11	12	13	23	13	20	9	9	21	15	18	15	17
NS 6448 R	15	10	6	15	9	11	11	16	17	22	12	20	3	11	12	14	11	15	13
P64T39 R	12	5	8	10	13	9	9	11	18	18	11	21	4	10	10	13	8	8	8
DM 6402 RSF	13	9	9	15	8	10	11	17	10	18	12	20	6	9	10	13	9	10	10
Y 657	13	9	9	16	11	9	11	13	19	19	10	18	4	12	8	13	7	8	8
LS 6868 R	8	5	7	13	11	11	9	14	17	22	12	26	6	8	13	15	12	10	11
DM 6.8i RR	22	11	5	16	10	10	12	18	19	21	13	20	9	10	20	16	19	15	17
Gem/Mean	9	7	6	13	9	10	9	12	13	17	10	17	5	9	11	12	9	11	10

Tabel 9 Onvalwaarnemings (1-5) van die verskillende sojaboontkultivars by die verschillende proef lokaliteite, 2017/18  
 Table 9 Lodging dat (1-5) of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Koel/Cool		Matig/Moderate						Warm		
	Bethlehem Clocolan	Kinross Delmas	Gem/Mean	Bergvliet Bapsfontein	Cedara Middleburg	Dundee Groenstad	Greytown Potchefstroom	Stoffberg Vryheid	Gem/Mean	Groblersdal Marble Hall	Gem/Mean
PAN 1454 R	1.00	1.00	2.33	1.67	1.00	1.40	3.00	1.00	1.00	1.00	1.00
PHB 94 Y 80 R	1.00	1.00	3.00	1.00	1.00	1.40	3.00	1.00	2.33	1.00	1.00
LS 6248 R	1.00	1.00	3.00	1.67	1.00	1.53	5.00	1.00	1.00	1.00	1.00
P48148 R	1.00	1.00	2.33	1.00	1.00	1.27	3.00	1.00	1.00	1.00	1.00
DM 5953 RSF	1.00	1.00	2.33	1.00	1.00	1.27	3.33	1.00	1.00	1.00	1.00
SSS 5449 (tuc)	1.00	1.00	2.67	1.00	1.00	1.33	3.00	1.00	1.00	1.00	1.00
NS 5009 R	1.00	1.00	1.33	1.00	1.00	1.07	3.00	1.00	1.00	1.00	1.00
LS 6851 R	1.00	1.00	1.00	1.00	1.00	1.00	2.33	1.00	1.00	1.00	1.00
NS 5258 R	1.00	1.00	2.33	1.00	1.00	1.27	3.00	1.00	1.00	1.00	1.00
PAN 1532 R	1.00	1.00	1.33	1.00	1.00	1.07	2.33	1.00	1.00	1.00	1.00
DM 5351 RSF	1.00	1.00	2.00	1.00	1.00	1.20	2.67	1.00	1.00	1.00	1.00
Y 540	1.00	1.00	1.67	1.00	1.00	1.13	3.33	1.00	1.00	1.00	1.00
SSS 5052 (tuc)	1.00	1.00	2.00	1.00	1.00	1.20	3.33	1.00	1.00	1.00	1.00
NA 5509 R	1.00	1.00	1.67	1.00	1.00	1.67	4.00	1.00	1.00	1.00	1.00
Y 550	1.00	1.00	2.33	1.00	1.33	1.33	4.33	3.00	1.00	1.67	1.00
DM 5609 RSF	1.00	1.00	2.00	1.00	1.00	1.20	3.00	1.00	1.00	1.00	1.00
PAN 1521 R	1.00	1.00	2.00	1.00	1.00	1.67	4.00	1.00	1.00	1.00	1.00
DM 5302 RSF	1.00	1.00	2.67	1.00	1.00	1.33	3.67	3.00	1.00	1.00	1.00
NS 5909 R	1.00	1.00	2.33	1.00	1.00	1.27	3.67	3.00	1.00	1.00	1.00
LS 6860 R	1.00	1.00	2.33	1.33	1.33	1.40	3.33	5.00	1.00	1.00	1.00
PHB 96 T 06 R	1.00	1.00	2.67	1.00	1.00	1.33	4.67	2.00	1.00	1.00	1.00
PAN 1623 R	1.00	1.00	3.00	1.00	1.00	1.67	1.53	4.50	1.00	1.00	1.00
LS 6161 R	1.00	1.00	2.33	1.00	1.00	1.27	3.50	2.00	1.00	1.00	1.00
LS 6862 R	1.00	1.00	2.00	1.00	1.00	1.20	3.50	2.00	1.00	1.00	1.00
SSS 6560 (tuc)	1.00	1.00	2.00	1.00	1.00	1.20	4.33	2.00	1.00	1.00	1.00
NS 6267 R	1.00	1.00	1.33	1.00	1.00	1.07	4.00	4.00	1.00	1.00	1.00
Y 627	1.00	1.00	2.67	1.00	1.00	1.33	4.33	2.00	1.00	1.67	1.00
P6T38 R	1.00	1.00	1.00	1.00	1.00	1.00	2.33	2.00	1.00	1.00	1.00
DM 6663 RSF	1.00	1.00	3.00	1.33	1.33	1.53	4.00	5.00	1.00	1.00	1.00
NS 6448 R	1.00	1.00	1.33	1.00	1.00	1.07	3.00	2.00	1.00	1.00	1.00
P64T39 R	1.00	1.00	2.67	1.33	1.00	1.40	3.33	2.00	1.00	1.00	1.00
DM 6402 RSF	1.00	1.00	2.67	1.00	1.33	1.40	3.33	5.00	1.00	1.00	1.00
Y 657	1.00	1.00	2.67	1.00	1.00	1.33	5.00	3.00	1.00	1.00	1.00
LS 6868 R	1.00	1.00	2.00	1.00	1.00	1.20	3.50	1.00	1.00	1.00	1.00
DM 6.8i RR	1.00	1.00	3.33	1.33	1.00	1.53	4.00	5.00	1.00	1.00	1.00
Gem/Mean	1.00	1.00	2.21	1.10	1.08	1.28	3.53	2.11	1.00	1.19	1.00

Tabel 10 Groenstam (1-5) van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2017/18  
 Table 10 Greenstem (1-5) of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Koel/Cool	Matig/Moderate										Warm		
		Kinross	Middleburg	Koksstad	Bapsfontein	Cedara	Dundee	Greytown	Kroonstad	Potchefstroom	Brits K2	Groblerstad	Marble Hall	Gem/Mean
PAN 1454 R	2.67	1.67	2.33	1.00	1.33	1.80	1.00	1.33	1.00	2.00	4.00	5.00	1.00	2.19
PHB 94 Y 80 R	2.00	1.33	1.00	1.00	2.00	1.47	1.00	2.67	1.00	2.00	4.33	4.33	1.00	2.33
LS 6248 R	1.33	3.67	1.00	1.00	1.00	1.60	2.67	1.00	1.00	2.33	5.00	4.33	1.00	2.48
P48T48 R	3.33	1.67	1.00	2.67	2.07	1.33	2.33	1.00	2.33	4.67	5.00	2.00	1.00	2.67
DM 5953 RSF	4.00	1.00	1.00	1.00	1.60	1.00	1.00	1.00	1.00	3.67	4.67	2.00	1.00	2.05
SSS 5449 (tuc)	2.00	1.33	1.00	1.00	1.27	1.00	1.00	1.00	1.00	1.67	4.67	1.00	1.00	1.62
NS 5009 R	3.00	2.00	1.00	1.67	1.73	1.00	2.33	1.00	1.00	3.00	5.00	2.00	2.19	3.00
LS 6851 R	2.67	2.00	1.00	1.00	1.53	1.33	1.00	1.00	1.00	3.33	4.00	1.00	1.00	1.81
NS 5258 R	2.33	1.33	1.00	1.00	1.40	1.00	1.00	1.00	1.00	2.00	3.33	1.00	1.00	1.52
PAN 1532 R	2.00	2.33	1.00	1.00	1.47	1.00	1.00	1.00	1.00	2.33	4.33	1.00	1.00	2.00
DM 5351 RSF	3.67	1.00	1.00	1.00	1.53	1.00	1.00	1.00	1.00	3.33	3.33	5.00	2.00	2.10
Y 540	2.00	3.33	1.00	1.00	2.33	1.93	1.00	1.00	1.00	3.33	5.00	1.00	1.00	1.90
SSS 5052 (tuc)	2.67	2.67	1.00	1.00	1.00	1.67	1.67	1.00	1.00	3.33	3.33	4.00	1.00	1.90
NA 5509 R	2.00	1.67	1.00	1.00	1.00	1.33	2.67	1.00	1.00	4.00	3.00	4.67	1.00	2.48
Y 550	2.33	2.67	1.00	1.00	1.33	1.67	4.00	1.00	1.00	3.00	3.67	5.00	1.00	2.67
DM 5609 RSF	2.00	2.67	1.00	1.00	1.67	1.67	2.33	1.00	1.00	1.33	4.33	5.00	2.00	2.43
PAN 1521 R	2.67	2.67	2.00	1.00	1.67	2.00	1.33	1.00	1.00	2.33	3.67	1.00	1.00	1.62
DM 5302 RSF	2.00	3.00	1.67	1.00	1.00	1.73	1.00	1.00	1.00	2.33	4.33	1.00	1.00	1.67
NS 5909 R	3.00	3.67	1.00	1.00	1.33	2.00	2.67	1.00	1.00	2.67	5.00	5.00	1.00	2.62
LS 6860 R	2.67	3.00	1.00	1.67	1.87	3.67	1.00	1.00	1.00	3.67	4.33	3.67	1.00	2.62
PHB 96 T 06 R	2.00	3.00	1.00	1.00	1.60	1.33	1.00	1.00	1.00	1.67	3.67	4.33	1.00	2.00
PAN 1623 R	2.33	2.67	1.00	1.00	1.60	1.33	1.00	1.00	1.00	1.67	3.33	4.33	1.00	1.95
LS 6161 R	1.33	2.33	1.00	1.00	1.33	1.40	2.00	1.00	1.33	2.67	4.33	5.00	1.00	2.48
LS 6862 R	1.67	1.67	1.00	1.00	1.27	2.00	1.00	1.00	1.00	2.33	4.00	4.00	1.00	2.19
SSS 6560 (tuc)	1.67	4.00	1.00	1.00	1.73	1.33	1.00	1.00	1.00	2.67	4.00	5.00	1.00	2.29
NS 6267 R	3.67	2.33	1.00	1.00	1.80	3.33	1.00	1.00	1.00	5.00	4.67	1.00	1.00	2.57
Y 627	2.00	3.00	1.00	1.00	1.67	1.73	2.67	1.00	1.00	2.00	4.67	4.67	1.00	1.00
P61T38 R	3.00	1.00	1.00	1.00	1.80	2.67	1.67	1.00	1.00	3.00	4.67	3.33	1.00	2.48
DM 6663 RSF	3.67	2.67	1.00	1.00	1.87	4.33	1.00	1.00	1.00	5.00	5.00	1.00	1.00	3.19
NS 6448 R	1.67	2.67	1.00	1.00	1.47	1.67	1.00	1.00	1.00	2.33	4.67	1.00	1.00	2.10
P64T39 R	3.33	1.33	1.00	1.00	1.53	3.00	1.00	1.00	1.00	3.00	4.67	5.00	1.00	2.67
DM 6402 RSF	3.33	3.67	1.00	1.00	2.00	4.00	1.00	1.00	1.00	4.33	5.00	4.67	1.00	3.00
Y 657	2.00	1.67	1.00	1.00	1.33	2.33	1.00	1.00	1.00	1.67	2.33	3.67	1.00	1.86
LS 6868 R	2.67	3.00	1.00	1.33	1.80	2.33	1.00	1.00	1.00	5.00	3.67	4.00	1.00	2.71
DM 6.8i RR	3.67	3.67	1.00	1.00	2.07	4.33	1.00	1.00	1.00	5.00	4.67	4.33	1.00	3.05
Gem/Mean	2.52	2.41	1.14	1.00	1.26	1.67	2.07	1.15	1.01	2.30	3.72	4.48	1.17	2.27

Tabel 11 Oopspring (1-5) van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2017/18  
 Table 11 Shattering (1-5) of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Koel/Cool	Matig/Moderate										Warm				
		Bethlehem	Cloocalan	Kinross	Middleburg	Bapsfontein	Cedara	Dundee	Greytown	Kroonstad	Potchefstroom	Stoffberg	Brits K2	Groblerdal	Marble Hall	Gem/Mean
PAN 1454 R	1.33	1.00	4.67	1.00	1.00	1.80	1.00	1.00	5.00	1.00	1.00	1.57	1.00	1.00	1.00	1.00
PHB 94 Y 80 R	3.33	1.00	5.00	1.00	1.00	2.27	1.33	1.00	5.00	1.00	1.00	1.62	1.00	1.00	1.00	1.00
LS 6248 R	1.00	1.00	3.33	1.00	1.00	1.47	1.00	1.00	4.00	1.00	1.00	1.43	1.00	1.00	1.00	1.00
P48T48 R	1.33	1.00	3.33	1.00	1.00	1.53	2.67	1.00	4.67	1.00	1.00	1.76	1.00	1.00	1.00	1.00
DM 5953 RSF	1.00	1.00	5.00	1.00	1.00	1.80	1.33	1.00	5.00	1.00	1.00	1.62	1.00	1.00	1.00	1.00
SSS 5449 (tuc)	1.00	1.00	3.33	1.00	1.00	1.47	1.67	1.00	3.67	1.00	1.00	1.48	1.00	1.00	1.00	1.00
NS 5009 R	1.00	1.00	4.67	1.00	1.00	1.73	2.67	1.00	3.00	1.00	1.00	1.52	1.00	1.00	1.00	1.00
LS 6851 R	1.00	1.00	2.33	1.00	1.00	1.27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NS 5258 R	1.00	1.00	3.67	1.00	1.00	1.53	1.00	1.00	4.67	1.00	1.00	1.52	1.00	1.00	1.00	1.00
PAN 1532 R	1.00	1.00	1.67	1.00	1.00	1.13	1.00	1.00	1.67	1.00	1.00	1.10	1.00	1.00	1.00	1.00
DM 5351 RSF	1.00	1.00	5.00	1.00	1.00	1.80	2.00	1.00	5.00	1.00	1.00	1.71	1.00	1.00	1.00	1.00
Y 540	1.00	1.00	3.00	1.00	1.00	1.40	2.00	1.00	4.33	1.00	1.00	1.62	1.00	1.00	1.00	1.00
SSS 5052 (tuc)	1.00	1.00	3.67	1.00	1.00	1.53	1.33	1.00	1.67	1.00	1.00	1.14	1.00	1.00	1.00	1.00
NA 5509 R	1.00	1.00	1.67	1.00	1.00	1.13	1.00	1.00	3.00	1.00	1.00	1.29	1.00	1.00	1.00	1.00
Y 550	1.00	1.00	2.33	1.00	1.00	1.27	1.00	1.00	1.67	1.00	1.00	1.10	1.00	1.00	1.00	1.00
DM 5609 RSF	1.00	1.00	2.33	1.00	1.00	1.27	1.00	1.00	2.00	1.00	1.00	1.14	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	1.67	1.00	1.00	1.10	1.00	1.00	1.00	1.00
DM 5302 RSF	1.00	1.00	3.33	1.00	1.00	1.47	1.33	1.00	2.00	1.00	1.00	1.19	1.00	1.00	1.00	1.00
NS 5909 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	3.00	1.00	1.00	1.29	1.00	1.00	1.00	1.00
LS 6860 R	1.00	1.00	3.33	1.00	1.00	1.47	1.00	1.00	2.67	1.00	1.00	1.24	1.00	1.00	1.00	1.00
PHB 96 T 06 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	1.33	1.00	1.00	1.05	1.00	1.00	1.00	1.00
PAN 1623 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
LS 6161 R	1.00	1.00	4.00	1.00	1.00	1.60	1.00	1.00	2.67	1.00	1.00	1.24	1.00	1.00	1.00	1.00
LS 6862 R	1.00	1.00	2.33	1.00	1.00	1.27	1.00	1.00	1.33	1.00	1.00	1.05	1.00	1.00	1.00	1.00
SSS 6560 (tuc)	1.00	1.00	4.00	1.00	1.00	1.60	1.33	1.00	1.33	1.00	1.00	1.10	1.00	1.00	1.00	1.00
NS 6267 R	1.00	1.00	4.33	1.00	1.00	1.67	1.33	1.00	1.00	1.33	1.00	1.00	1.10	1.00	1.00	1.00
Y 627	1.00	1.00	4.00	1.00	1.00	1.60	1.00	1.00	3.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00
P61T38 R	1.00	1.00	2.00	1.00	1.00	1.20	1.00	1.00	1.67	1.00	1.00	1.10	1.00	1.00	1.00	1.00
DM 6663 RSF	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	1.00	1.00
NS 6448 R	1.00	1.00	4.00	1.00	1.00	1.60	1.00	1.00	2.67	1.00	1.00	1.24	1.00	1.00	1.00	1.00
P64T39 R	1.00	1.00	3.00	1.00	1.00	1.40	1.00	1.00	1.33	1.00	1.00	1.05	1.00	1.00	1.00	1.00
DM 6402 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
Y 657	1.00	1.00	5.00	1.00	1.00	1.80	1.00	1.00	2.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
LS 6868 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
DM 6.8i RR	1.00	1.00	2.67	1.00	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.05	1.00	1.00	1.00	1.00
Gem/Mean	1.09	1.00	3.43	1.00	1.00	1.50	1.23	1.00	2.56	1.00	1.00	1.26	1.00	1.00	1.00	1.00

Tabel 12 Die plantelling drie weke na opkoms (x 1000) van die verskillende sojaboontkultivars by die verskillende proeflokaliteite, 2017/18  
 Table 12 The number of plant three weeks after germination (x 1000) of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Koel/Cool	Matig/Moderate										Warm						
		Clocoalan	Bethlehem	Kinross	Kokstad	Gem/Mean	Cedara	Bapsfontein	Dundee	Kroonstad	Beespr	Otcheström	Grotteberg	Gem/Mean	Grotteleberg	Grobledsdal	Marbelle Hall	Gem/Mean
PAN 1454 R	257	219	135	177	140	223	192	326	320	208	218	324	167	261	282	189	119	197
PHB 94 Y 80 R	239	166	102	222	129	149	168	377	301	219	193	295	178	261	325	208	137	223
LS 6248 R	277	206	159	154	155	214	194	373	327	209	187	302	174	262	309	189	125	208
P48T48 R	258	236	96	166	83	226	178	332	286	203	187	288	185	247	393	186	118	233
DM 5953 RSF	321	202	224	244	160	194	224	395	358	309	181	287	185	286	265	205	133	201
SSS 5449 (tuc)	240	189	109	203	155	229	188	425	374	223	150	287	186	274	307	205	112	208
NS 5009 R	195	160	131	103	98	196	147	186	240	132	163	277	179	196	333	168	105	202
LS 6851 R	64	207	87	70	80	191	116	164	107	122	124	283	133	155	279	157	81	172
NS 5258 R	241	127	195	188	126	217	182	384	345	255	216	289	185	279	318	199	121	213
PAN 1532 R	261	192	157	208	141	202	193	359	358	199	202	303	177	266	291	206	124	207
DM 5351 RSF	326	226	203	241	109	246	225	471	389	277	209	283	173	300	306	209	147	221
Y 540	228	81	85	166	106	238	151	144	232	143	126	267	179	182	349	185	106	213
SSS 5052 (tuc)	274	164	163	199	122	206	188	379	339	219	157	315	188	266	333	212	134	226
NA 5509 R	263	195	169	212	162	192	199	305	322	209	216	296	185	255	266	218	112	198
Y 550	271	196	154	211	134	216	197	397	353	255	202	300	192	283	344	190	138	224
DM 5609 RSF	214	90	181	234	152	201	179	367	323	257	169	307	186	268	278	198	117	197
PAN 1521 R	258	134	175	189	166	172	182	276	303	206	198	294	174	242	303	203	93	200
DM 5302 RSF	243	203	80	190	122	204	174	294	258	164	156	269	161	217	235	206	91	177
NS 5909 R	172	159	156	145	129	204	161	219	214	161	119	276	173	194	337	203	117	219
LS 6860 R	185	109	115	116	81	223	138	157	197	147	104	312	180	183	343	207	112	221
PHB 96 T 06 R	252	258	147	192	131	182	194	366	367	296	174	306	182	282	287	219	136	214
PAN 1623 R	264	209	160	166	132	152	181	312	270	217	194	303	193	248	282	198	82	187
LS 6161 R	256	106	217	198	181	176	189	369	349	301	199	285	192	283	275	206	124	202
LS 6862 R	64	113	79	69	134	184	107	181	152	185	175	292	153	190	315	197	111	208
SSS 6560 (tuc)	241	151	92	144	76	214	153	303	294	120	144	292	177	222	322	211	106	213
NS 6267 R	263	212	100	202	94	208	180	392	331	226	170	285	181	264	325	214	122	220
Y 627	217	150	173	215	129	231	186	346	327	264	193	290	190	268	266	218	147	210
P61T38 R	236	134	125	172	144	192	167	363	281	256	204	293	164	260	353	194	113	220
DM 6663 RSF	285	173	199	156	186	195	262	228	207	190	306	182	229	309	214	91	205	
NS 6448 R	283	179	205	235	217	230	211	417	356	261	228	277	192	289	297	224	112	211
P64T39 R	249	202	99	157	119	237	177	269	202	204	153	302	184	219	307	210	133	217
DM 6402 RSF	258	200	126	120	151	201	176	282	263	215	198	301	193	242	321	217	118	219
Y 657	276	190	139	230	180	237	209	384	306	239	164	287	161	257	301	208	124	211
LS 6868 R	231	177	138	160	142	211	176	268	251	210	202	304	184	236	272	217	141	210
DM 6.8i RR	286	147	100	136	172	185	171	243	278	204	159	312	181	229	316	219	101	212
Gem/Mean	241	173	141	178	133	205	179	317	292	215	178	294	178	246	307	203	117	209

Tabel 13 Percentasie ongewenste sade van die verskillende sojaboontkultivars by die verskillende proef lokaliteite, 2017/18  
 Table 13 Percentage undesirable seed of the different soybean cultivars at the different trial localities, 2017/18

	Cultivar Kultivar	Koel/Cool	Matig/Moderate			
			Kirkwood	Middleburg	Cedara	Gem/Mean
PAN 1454 R	0.10	0.00	0.40	0.10	0.12	0.00
PHB 94 Y 90 R	0.00	0.10	0.00	0.20	0.10	0.30
LS 6248 R	1.00	1.00	0.20	1.20	0.10	0.30
P48T48 R	0.10	0.10	0.00	0.70	0.50	0.28
DM 5953 RSF	0.10	0.30	0.60	0.30	0.10	0.28
SSS 5449 (tuc)	0.60	0.10	0.30	1.20	0.10	0.46
NS 5009 R	0.00	0.00	0.50	0.30	0.50	0.26
LS 6851 R	2.90	0.50	0.40	0.70	0.00	0.90
NS 5258 R	0.10	0.20	0.00	0.00	0.90	0.24
PAN 1532 R	0.60	0.10	0.20	1.40	0.70	0.60
DM 5351 RSF	0.20	0.00	0.10	0.40	0.40	0.22
Y 540	0.70	0.30	0.10	1.20	0.50	0.56
SSS 5052 (tuc)	5.40	0.60	0.30	2.20	0.40	1.78
NS 5509 R	1.50	0.30	0.20	0.50	0.60	0.62
Y 550	4.80	0.20	0.30	1.20	0.20	1.34
DM 5609 RSF	2.00	0.20	0.10	0.40	0.00	0.54
PAN 1521 R	1.10	0.10	0.70	0.40	0.30	0.52
DM 5302 RSF	1.00	0.20	0.50	0.80	0.70	0.64
NS 5909 R	1.10	0.40	0.10	0.70	0.30	0.52
LS 6860 R	1.00	0.70	0.20	1.00	0.80	0.74
PHB 96 T 06 R	2.20	1.60	0.40	1.10	0.30	1.12
PAN 1623 R	2.10	0.20	0.30	0.80	0.20	0.72
LS 6161 R	2.50	0.80	0.00	0.50	0.50	0.86
LS 6862 R	0.60	0.10	0.20	0.50	0.30	0.34
SSS 6560 (tuc)	2.20	1.10	0.20	0.90	0.00	0.88
NS 6267 R	2.10	0.50	0.10	0.90	0.10	0.74
Y 627	2.30	0.00	0.20	0.50	0.20	0.64
P61T38 R	1.50	0.30	0.10	1.00	0.00	0.58
DM 6663 RSF	1.10	0.60	0.30	0.80	0.30	0.62
NS 6448 R	2.50	0.50	0.10	0.80	0.10	0.80
P64T39 R	2.20	3.20	0.30	0.80	0.20	1.34
DM 6402 RSF	1.50	1.20	0.30	0.90	0.00	0.78
Y 657	3.20	1.20	0.20	3.00	2.20	1.96
LS 6868 R	3.00	1.50	0.30	0.50	0.70	1.20
DM 6.8i RR	1.50	1.00	0.00	0.70	0.30	0.70
Gem/Mean	1.57	0.55	0.22	0.83	0.37	0.71

Tabel 14 Massa van 100 sade (g) van die verskillende sojaboontkultivars by die verskillende proef lokalteite, 2017/18  
 Table 14 Mass 100 seeds (g) of the different soybean cultivars at the different trial localities, 2017/18

Kultivar Cultivar	Bethlehem Carnarvon	Koel/Cool										Warm									
		Colclough	Kinross	Kokstad	Middleburg	Gem/Mean	Bapsfontein	Bergville	Cedara	Dundee	Greytown	Kroonstad	Potchefstroom	Stoffberg	Brits K2	Grootbosdal	Marble Hall	Gem/Mean	Gem/Mean		
PAN 1454 R	16.30	15.70	16.77	18.97	17.27	17.53	18.83	17.34	18.90	19.20	19.77	18.67	18.57	17.90	18.73	18.30	18.75	16.95	17.30	20.47	18.24
PHB 94 Y 80 R	16.77	15.40	17.57	17.67	16.20	17.53	18.00	17.02	18.70	17.80	19.40	18.20	18.77	16.37	20.03	17.90	18.40	17.70	16.50	20.00	18.07
LS 6248 R	12.77	12.80	12.97	14.97	13.03	14.00	14.43	13.57	16.60	14.20	13.10	14.37	13.50	15.40	16.10	16.70	15.00	15.83	17.50	18.23	17.19
P48748 R	17.67	18.10	18.50	20.03	17.87	19.27	20.37	18.83	19.40	19.90	20.70	19.93	19.10	19.03	19.60	15.40	19.13	17.27	15.50	19.93	17.57
DM 5953 RSF	16.73	15.70	16.07	16.43	15.50	18.63	17.47	16.65	16.80	16.90	16.53	16.83	15.67	16.73	18.57	13.70	16.47	18.23	13.50	17.47	16.40
SSS 5449 (tuc)	12.33	13.50	13.50	16.40	13.03	13.93	14.67	13.91	14.10	13.10	13.53	13.97	12.63	15.87	15.30	16.20	14.34	14.80	15.60	17.60	16.00
NS 5009 R	16.77	16.60	17.07	18.10	17.53	18.10	19.30	17.64	17.50	17.60	19.70	19.40	17.57	18.13	19.60	18.10	18.45	15.73	20.00	19.47	18.40
LS 6851 R	11.73	12.90	14.53	17.23	15.40	14.83	18.27	14.99	15.20	14.20	13.07	14.77	12.87	16.10	16.00	17.40	14.95	14.50	16.90	16.83	16.08
NS 5258 R	14.43	13.40	15.07	16.43	13.83	15.87	15.17	14.89	15.30	15.30	15.20	15.90	15.10	15.23	16.80	15.30	15.52	14.67	15.90	17.87	16.14
PAN 1532 R	13.65	12.70	13.87	17.63	14.50	15.37	15.63	14.76	15.50	15.30	15.07	14.57	13.50	16.07	15.90	17.50	15.43	18.10	16.27	16.60	
DM 5551 RSF	16.37	14.10	15.53	17.13	15.07	17.53	17.23	16.14	17.20	16.50	16.53	17.63	14.70	15.97	19.33	13.80	16.46	16.67	14.30	17.60	16.19
Y 540	12.50	14.30	14.87	17.00	14.37	14.70	15.57	14.76	14.10	14.60	14.23	15.27	13.40	16.23	16.10	17.80	15.22	14.07	18.00	15.80	15.96
SSS 5052 (tuc)	12.27	12.40	14.73	16.73	13.23	13.90	15.57	14.12	15.50	13.80	13.33	15.00	13.53	16.27	17.00	18.20	15.33	14.10	17.80	17.97	16.62
NA 5509 R	14.33	14.90	14.80	18.60	14.70	15.80	18.47	15.94	17.00	16.40	15.50	16.10	14.67	17.97	18.73	17.90	16.78	15.47	16.80	18.70	16.99
Y 550	14.03	13.50	13.90	17.53	14.80	14.73	17.40	15.13	18.30	15.10	16.37	16.00	14.17	17.37	17.37	16.80	16.43	13.57	16.70	18.07	16.11
DM 5609 RSF	14.87	14.00	15.23	18.60	14.07	15.10	15.87	15.39	16.20	14.63	15.50	14.13	17.73	18.77	13.00	15.77	-	11.30	19.40	15.35	
PAN 1521 R	14.70	13.80	15.20	17.87	15.27	15.53	16.17	15.50	16.80	15.70	15.23	16.87	14.23	18.43	20.70	16.60	16.82	17.60	15.60	19.37	17.52
DM 5302 RSF	14.20	14.50	16.50	18.70	15.80	15.93	14.97	16.30	15.87	16.20	14.80	15.40	15.57	14.03	17.97	18.50	15.40	15.98	17.20	15.30	19.07
NS 5909 R	14.57	12.90	14.10	18.10	16.00	15.13	17.43	15.46	17.00	16.80	15.43	16.47	15.03	18.10	20.40	18.00	17.15	17.70	17.70	17.87	17.18
LS 6860 R	15.70	15.60	14.20	19.27	16.67	16.37	20.90	16.96	18.40	18.60	16.10	18.07	17.50	20.00	20.30	18.20	18.40	19.80	19.50	19.40	
PHB 96 T 06 R	12.80	14.60	13.63	75.37	14.90	15.10	15.50	23.13	16.20	17.40	15.10	16.20	14.53	17.90	17.23	16.80	16.42	16.87	16.60	17.67	17.04
PAN 1623 R	12.57	12.90	14.37	16.47	13.83	14.50	15.23	14.27	16.30	15.40	14.27	16.00	14.27	16.23	16.37	17.70	15.73	16.33	16.80	17.73	16.96
LS 6161 R	12.30	13.80	13.27	16.90	14.33	14.10	15.67	14.34	16.00	17.20	14.23	16.03	14.90	16.47	17.43	16.20	16.06	15.40	17.00	17.73	16.71
LS 6862 R	13.17	15.20	14.47	19.07	15.57	15.83	17.43	15.82	16.80	16.90	15.87	16.83	13.47	18.73	18.23	14.90	16.47	14.07	14.00	18.73	15.60
SSS 6560 (tuc)	12.47	12.50	13.50	16.47	14.27	14.07	16.03	14.19	17.60	16.80	14.93	15.40	13.83	16.10	17.63	16.00	16.04	14.60	15.50	17.77	15.96
NS 6267 R	14.03	12.70	15.80	19.00	15.33	15.73	18.07	15.81	16.30	17.30	15.40	16.67	15.80	18.20	18.87	18.30	17.10	17.20	18.40	19.97	18.52
Y 627	13.73	13.30	16.20	16.70	14.70	15.67	17.27	15.37	16.80	16.70	15.10	16.07	14.20	17.77	16.60	17.10	16.29	-	16.90	17.17	17.03
P61138 R	13.73	13.90	15.67	18.10	16.13	15.30	18.47	15.90	17.10	18.00	16.93	17.37	14.37	17.83	17.00	16.40	16.88	17.43	17.00	19.53	17.99
DM 6663 RSF	15.17	13.80	15.30	17.80	15.67	15.30	18.40	15.92	17.00	18.90	15.17	16.97	17.87	18.50	18.43	14.50	17.17	16.73	13.80	18.07	16.20
NS 6448 R	13.80	15.10	13.83	19.27	15.40	15.30	15.47	15.45	16.70	16.50	14.50	16.77	15.93	17.83	17.07	17.10	16.55	17.50	17.50	17.07	17.07
P64139 R	15.50	14.40	12.67	17.47	15.30	14.07	16.93	15.19	17.50	17.20	14.97	15.50	16.10	17.47	19.93	17.60	17.03	16.23	16.00	18.43	16.89
DM 6402 RSF	14.70	15.80	13.20	16.33	14.77	14.83	16.70	15.19	16.70	15.10	13.80	15.63	16.23	16.70	17.27	16.30	15.97	13.70	17.20	16.53	15.81
Y 657	12.07	12.10	12.33	16.63	13.40	14.73	13.60	13.55	16.00	15.30	13.40	13.97	14.07	16.20	16.50	15.70	15.14	16.43	14.90	15.80	15.71
LS 6868 R	13.33	13.20	12.37	16.37	14.73	13.93	16.20	14.30	14.30	14.50	13.13	15.60	15.67	15.93	15.57	15.50	14.97	15.70	17.00	15.89	
DM 6.81 RR	16.87	15.50	14.07	19.60	16.87	15.20	17.03	16.45	16.90	18.80	15.27	17.93	18.23	18.93	19.87	17.80	17.97	16.90	17.80	19.05	17.92
Gem/Mean	14.25	14.16	14.73	19.28	15.13	15.50	16.89	15.71	16.65	16.40	15.45	16.31	15.21	17.25	17.94	16.57	16.02	16.43	18.17	16.88	

Tabel 18 Die saadopbrengs van elke kultivar by die verskillende lokaliteite, 2017/18  
 Table 18 The seed yield of the cultivars at the different localities, 2017/18

Kultivar	Koel/Cool		Matig/Moderate								Warm										
	Bethlehem	Claaren	Koekstad	Kinross	Middleburg	Bergville	Gem/Mean	Bapsfontein	Dundee	Greytown	Stoffberg	Gem/Mean	Groblersdal	Marble Hall	Gem/Mean						
PAN 1454 R	1840	2854	2643	1969	3263	2218	4142	2704	5554	3468	4174	1219	1757	2560	996	2864	2964	2139	4497	3200	
PHB 94 Y 80 R	1763	3865	2711	1331	4205	4326	4433	3234	5375	4301	4536	1601	1771	1806	2911	2229	3066	2705	1951	4372	3024
LS 6248 R	1561	2654	2115	3102	3434	2017	2294	2454	4380	3911	3873	2357	1829	3685	3209	1866	3139	2629	3397	4812	3613
F48T48 R	2060	3023	3091	1857	4014	2797	4014	2979	5610	4357	4343	2499	2272	2679	2402	1346	3189	2606	1880	4502	2996
DM 5953 RSF	3544	3687	3369	2661	3681	3932	3846	3531	5853	4165	4727	2561	1752	2200	5139	1701	3512	2957	3015	3750	3240
SSS 5449 (tuc)	1961	2459	2660	2897	3870	2156	3543	2792	5085	3702	4006	1700	1932	3048	3271	1912	3082	2729	3133	4591	3484
NS 5009 R	1389	2553	2433	2131	2951	2793	3897	2593	4865	4111	4331	1324	2130	2791	2818	1375	2988	2507	3235	5073	3605
LS 6851 R	896	1818	2896	2694	2931	1943	2876	2294	5260	4351	5269	1981	2075	3653	3475	1173	3405	2939	2330	4504	3258
NS 5258 R	2972	3752	1722	3450	3153	2672	3851	3082	5462	4258	4196	1537	1888	2984	4232	1398	3244	2294	2356	5353	3334
PAN 1532 R	2286	2863	2447	3637	3341	2912	3973	3065	5222	4203	4096	1842	2137	4119	3932	2340	3486	2443	2737	4404	3195
DM 5351 RSF	2693	3222	3624	2343	3608	4165	4835	3499	5579	4103	4514	2264	1773	2488	5018	1328	3383	2776	3258	4840	3624
Y 540	2758	2173	2639	2486	4261	3305	4107	3104	4967	4607	4802	1882	2172	3925	4408	2270	3229	2481	2161	5169	3270
SSS 5052 (tuc)	1649	1837	1737	3071	3565	1976	2855	2383	5082	3245	3417	2217	2159	4323	3673	2000	3264	2609	3174	4796	3526
NA 5509 R	1343	2646	2930	3430	3391	2625	4532	2985	4466	3893	3893	2335	1987	2335	1915	3345	3080	4627	4261	3989	
Y 550	1490	2713	2474	3392	3558	2429	3475	2790	4516	3749	3962	1733	1918	3139	2778	2173	2996	2194	3245	4256	3232
DM 5609 RSF	2028	3031	2027	3427	3473	2779	3266	2861	5697	3985	4259	2555	2196	3862	3341	1793	3554	2078	3115	4849	3347
PAN 1521 R	2180	2821	2513	3305	3756	3432	3334	3049	4927	3545	4155	2734	2140	3967	4277	2806	3569	3458	3580	5109	4049
DM 5302 RSF	2399	3311	3016	2917	3658	2630	3270	3029	5125	4176	4213	2253	2031	3306	3865	2236	3401	2748	2780	5164	3564
NS 5909 R	1354	1837	1916	3078	3510	2233	3328	2465	4891	4183	4332	2294	2060	3295	4534	1835	3431	2977	3325	4608	3637
LS 6860 R	1304	1374	1079	3310	3247	1450	2800	2081	4368	3570	3863	2332	1785	3832	3532	2278	3195	3026	3608	4484	3706
SSS 6560 (tuc)	1416	2378	2725	3032	2948	3183	2459	2592	4777	3832	4238	2290	1934	3297	3794	2723	3380	2700	4060	5126	3962
NS 6267 R	1664	2596	2825	3143	4199	2939	3728	3013	5107	4599	4279	2015	2197	4078	3298	2660	3529	2582	3427	4832	3514
Y 627	1677	2628	3125	3379	4228	1954	3198	2884	5108	4224	4466	2314	2081	4313	4282	2291	3642	2333	3716	4130	3393
P61T38 R	1871	2659	3123	3437	3373	2197	2921	2797	5551	4269	5066	2448	2334	4051	3725	1526	3621	3971	4187	5001	4386
DM 6663 RSF	1483	1981	2330	3343	4094	1458	3616	4661	3326	4905	2391	2187	3815	1638	3401	4032	3517	4032	4239	3930	
NS 6448 R	1703	2699	2208	3698	3825	1876	3627	2805	5543	4402	4183	2010	2044	4346	3156	1675	3420	3580	3624	4624	3943
P64T39 R	1412	2745	2760	3333	4292	1941	3687	2881	5208	3165	4698	2356	2304	4136	5275	1326	3558	3767	3875	5439	4360
DM 6402 RSF	1402	1646	1199	2651	2990	1403	3084	2053	4774	4098	3663	2258	2209	4153	3522	1423	3263	2398	3782	4706	3629
Y 657	1754	2680	2726	3721	4125	1751	4383	3020	5182	4644	4295	2590	2153	4153	3714	2478	3651	2692	5035	5105	4277
LS 6868 R	1087	1833	1696	3040	2267	2271	2810	2143	3132	3588	3924	1654	2020	3652	3007	1457	2804	2888	2766	4711	3455
DM 6.8i RR	1359	2381	1924	3517	3042	1536	3301	2437	4936	4158	4452	2360	2242	4280	4575	1565	3571	3439	3766	4361	3855
Gem/Mean	1748	2591	2482	3062	3599	2462	3506	2779	4877	4014	4285	2138	2047	3563	3806	1914	3333	2833	3350	4683	3622
CV	21.7	18.5	21.2	19.0	18.7	24.8	21.5	9.6	12.8	10.6	15.2	7.6	16.7	14.1	6.9	17.8	7.0	10.1			

Tabel 19 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2015/16, 2016/17 en 2017/18 vir die koeler droëland produksiegebiede by verskillende opbrengspotensiaal

Table 19 Yield probability (%) of cultivars in the 2015/16, 2016/17 and 2017/18 for the cooler dryland production areas at different yield potentials

Kultivar	Opbrengspotensiaal/Yield potential (t/ha)					
	1.0	1.5	2.0	2.5	3.0	3.5
PAN 1454 R	53	48	42	35	29	24
PHB 94 Y 80 R	64	62	60	57	54	50
LS 6248 R	51	51	51	51	50	49
DM 5953 RSF	78	79	79	79	77	76
SSS 5449 (tuc)	8	13	23	37	55	72
SSS 5052 (tuc)	27	27	26	27	28	30
PAN 1521 R	71	73	76	77	79	79
NS 5909 R	8	13	20	33	49	66
PHB 96 T 06 R	52	49	45	42	38	35
PAN 1623 R	52	56	59	63	66	69
LS 6161 R	38	37	36	35	35	35
SSS 6560 (tuc)	38	35	32	29	27	26
NS 6448 R	62	63	64	65	65	64
DM 6.8i RR	46	42	37	32	28	25

Tabel 20 Saadopbrengs ( $\text{kg}/\text{ha}^{-1}$ ) van kultivars gedurende die 2016/17 en 2017/18 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die koeler produksiegebiede geleë is  
 Table 20 Seed yield ( $\text{kg}/\text{ha}^{-1}$ ) of cultivars during the 2016/17 and 2017/18 growing season for the various localities situated in the cooler production areas

Kultivar Cultivar	2016/17						2017/18					
	Beihem Cilliers	Claar Cocoalan	Dele Kirkos	Middleburg Kirkos	Beihem Gem/Mean	Claar Cocoalan	Dele Kirkos	Beihem Gem/Mean	Claar Cocoalan	Dele Kirkos	Koekstad Middleburg	Gem/Mean
PAN 1454 R	2830	2877	2161	2703	3363	2838	2795	1840	2854	1969	3263	2218
PHB 94 Y 80 R	3184	3787	2795	3283	2885	3218	3192	1763	3865	2711	1331	4205
LS 6248 R	3900	2713	2508	3152	3640	2360	3046	1561	2654	2115	3102	3434
P48T48 R	-	-	-	-	-	-	-	2060	3023	3091	1857	4014
DM 5953 RSF	4684	3602	3413	4522	5430	3090	4123	3544	3687	3369	2661	2797
SSS 5449 (tuc)	4081	2856	2500	3611	3598	2465	3185	1961	2459	2660	2897	3846
NS 5009 R	-	-	-	-	-	-	-	1389	2553	2433	2131	2953
LS 6851 R	-	-	-	-	-	-	-	896	1818	2896	2694	2897
NS 5258 R	-	-	-	-	-	-	-	2972	3752	1722	3450	3153
PAN 1532 R	3782	2589	2701	3897	3283	2699	3159	2286	2863	2447	3637	3341
DM 5351 RSF	-	-	-	-	-	-	-	2693	3222	3624	2343	3608
Y 540	-	-	-	-	-	-	-	2758	2713	2639	2486	4261
SSS 5052 (tuc)	3305	2372	2635	3342	3666	2376	2949	1649	1837	1737	3071	3555
NA 5509 R	-	-	-	-	-	-	-	1343	2646	2930	3430	3391
Y 550	-	-	-	-	-	-	-	1490	2713	2474	3392	3558
DM 5609 RSF	3984	2748	3028	3756	3773	2825	3352	2028	3031	3427	3473	2429
PAN 1521 R	4387	2506	3294	3765	4159	3083	3533	2180	2821	2513	3305	3756
DM 5302 RSF	4037	2555	3480	3766	4251	2570	3443	2399	3311	3016	2917	3658
NS 5909 R	3731	2465	2593	3517	4336	3480	3320	1354	1837	1916	3078	3510
LS 6860 R	-	-	-	-	-	-	-	1304	1374	1079	3310	3247
PHB 96 T 06 R	2688	2319	1907	3764	3221	2807	2784	1223	2481	2566	3939	3843
PAN 1623 R	3727	2480	3056	3617	3636	3112	3271	1404	3056	3590	3876	4230
LS 6161 R	2928	2072	2792	4147	3195	2889	3004	926	2253	1959	3131	3817
LS 6862 R	-	-	-	-	-	-	-	1310	2175	2080	3458	3847
SSS 6560 (tuc)	3073	2494	2251	3460	3538	2968	2964	1416	2378	2725	3032	2948
NS 6267 R	-	-	-	-	-	-	-	1664	2596	3143	4199	2939
Y 627	-	-	-	-	-	-	-	1677	2658	3125	3379	4228
P61T38 R	3341	2402	2876	4171	3917	2616	3220	1871	2659	3123	3437	3373
DM 6663 RSF	3875	1633	2254	2834	3646	2561	2800	1483	1981	2330	3343	4094
NS 6448 R	3460	2988	3028	3894	3084	2910	3227	1703	2659	2208	3698	3825
P64T39 R	3581	2447	2867	3858	5095	3283	3522	1412	2760	3333	4292	3134
DM 6402 RSF	-	-	-	-	-	-	-	1402	1646	1199	2651	2990
Y 657	-	-	-	-	-	-	-	1754	2680	2726	3721	4125
LS 6868 R	-	-	-	-	-	-	-	1087	1833	1696	3040	2267
DM 6.8i RR	3391	2994	2327	3357	3774	2744	3098	1359	2381	1924	3517	3042
LS 6240 R	2617	2371	2792	3978	3435	2928	3020	-	-	-	-	-
SSS 4945 (tuc)	3261	3100	2966	3343	4694	3347	-	-	-	-	-	-
LS 6146 R	2675	3115	3343	3506	2143	2834	2936	-	-	-	-	-
PHB 95 Y 20 R	2855	2347	2110	3368	3445	2929	2842	-	-	-	-	-
LS 6261 R	3466	2121	3344	3481	3449	2944	3134	-	-	-	-	-
LS 6164 R	3416	2662	1806	2793	3976	2933	-	-	-	-	-	-
PAN 1614 R	3282	2302	3207	3207	3674	2621	3048	-	-	-	-	-
NS 7211 R	2982	2776	2855	3707	4136	2716	3196	-	-	-	-	-
SSS 5755 (tuc)	3173	2564	2242	3546	3435	2655	2936	-	-	-	-	-
LDC 5.9	4079	2035	2633	3792	3781	2988	3218	-	-	-	-	-
LDC 6.0	3107	584	1930	3752	3850	2414	2561	-	-	-	-	-
6968 RSF	3186	1537	2818	2836	2921	3205	2751	-	-	-	-	-
Gen/Mean	3440	2513	2703	3553	3086	2856	3125	1748	2591	2482	3062	3506
											2462	2779

Tabel 21 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2015/16, 2016/17 en 2017/18 vir die matige produksiegebiede by verskillende opbrengspotensiaal

Table 21 Yield probability (%) of cultivars in the 2015/16, 2016/17 and 2017/18 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
PAN 1454 R	8	9	11	13	16
PHB 94 Y 80 R	32	32	33	35	36
LS 6248 R	72	66	57	49	38
DM 5953 RSF	37	43	49	56	62
SSS 5449 (tuc)	27	27	28	28	29
SSS 5052 (tuc)	68	65	60	55	49
PAN 1521 R	87	87	86	84	82
NS 5909 R	63	64	64	64	65
PHB 96 T 06 R	34	37	40	43	47
PAN 1623 R	88	85	82	78	73
LS 616 1R	60	58	56	54	51
SSS 6560 (tuc)	72	66	59	51	42
NS 6448 R	36	41	46	53	58
DM 6.8i RR	51	53	56	59	61
					65
					67

Tabel 22 Saadopbrengs ( $\text{kg}/\text{ha}^{-1}$ ) van kultivars gedurende die 2016/17 en 2017/18 groeiieseisoen ten opsigte van die verskillende lokaliteite wat in die matige produksiegebiede geleë is  
 Table 22 Seed yield ( $\text{kg}/\text{ha}^{-1}$ ) of cultivars during the 2016/17 and 2017/18 growing season for the various localities situated in the moderate production areas

	Cultivar	2016/17										2017/18									
		Cedara	Dundee	Greytown	Krantskops	Kroonstad	Otchefroom	Otcherville	Pretoria	Verkerefval	Bergvlié										
PAN 1454 R	4255	2886	2956	3148	3021	2954	2618	1912	2566	2924	5564	3468	4174	1219	1757	2590	3158	996	2864	Gem/Mean	
PHB 94 Y 80 R	4274	3091	3521	2980	3384	3037	1738	2575	3065	5375	4301	4536	1601	1771	1806	2911	2229	3066			
LS 6248 R	4268	2944	3031	3365	3074	3791	2881	3212	2414	3220	4380	3911	3873	2357	1829	3685	3209	1866	3139		
P4874 R	-	-	-	-	-	-	-	-	-	-	5610	4357	4343	2499	2272	2679	2402	1346	3189		
DM 5953 RSF	4672	3432	3519	4102	4182	3636	3172	2195	2852	3629	5853	4165	4727	1752	2200	5139	1701	3512			
SSS 5449 (tuc)	4083	2627	3676	3214	3756	3623	2949	2239	2287	3162	5085	3702	4006	1700	1932	3048	3271	1912	3082		
NS 5009 R	-	-	-	-	-	-	-	-	-	-	4865	4111	4331	1324	2130	2791	2818	1375	2968		
LS 6851 R	-	-	-	-	-	-	-	-	-	-	5260	4351	5269	1981	2075	3653	3475	1173	3405		
NS 5258 R	-	-	-	-	-	-	-	-	-	-	5462	4253	4196	1537	1888	2984	4232	1398	3244		
PAN 1532 R	3990	3331	3144	3180	3687	4221	3289	2935	2068	3316	5222	4203	4096	1842	2137	4119	3932	2340	3486		
DM 5351 RSF	-	-	-	-	-	-	-	-	-	-	5579	4103	4514	2264	1773	2488	5018	1328	3383		
Y 540	-	-	-	-	-	-	-	-	-	-	4967	4607	4802	1882	2172	3925	4408	2270	3629		
SSS 5052 (tuc)	3859	3029	2853	2647	4198	3274	3294	3262	2307	3191	5082	3245	3417	2159	2159	4323	3673	2000	3264		
NA 5509 R	-	-	-	-	-	-	-	-	-	-	4466	3893	3893	2335	1987	4346	3931	1915	3345		
Y 550	-	-	-	-	-	-	-	-	-	-	4516	3749	3962	1732	1918	3139	2778	2173	2996		
DM 5609 RSF	4594	2942	2745	3764	4056	4043	2666	3871	1406	3343	5697	3985	4259	2555	2196	3802	3341	1793	3454		
PAN 1521 R	4323	3274	3291	3739	4530	4537	3927	3663	2860	3783	4927	3545	4155	2734	2140	3967	4277	2806	3569		
DM 5302 RSF	4509	2700	3421	3518	3857	3743	3018	2963	2520	3361	5125	4176	4213	2253	2253	3306	3295	4534	1836		
NS 5909 R	3866	2834	3222	4015	3966	3714	3311	3702	1759	3381	4891	4183	4352	2294	2060	3295	4534	3931	1915		
LS 6860 R	-	-	-	-	-	-	-	-	-	-	4368	3570	3863	2332	1785	3832	3532	2278	3195		
PHB 96 T 06 R	4298	2833	3535	3628	3471	3510	3854	3256	1753	3349	4843	4047	3860	1691	1882	3640	3866	2146	3247		
PAN 1623 R	3975	3122	3565	2838	3726	3242	3530	3970	2252	3358	3515	3534	3888	2743	2304	3858	3835	2140	3227		
LS 6161 R	4230	3180	3161	3043	3672	3541	3783	3020	2367	3333	2938	3960	3741	2304	2116	3252	4705	2049	3133		
LS 6862 R	-	-	-	-	-	-	-	-	-	-	3147	4760	5331	2185	1888	3868	4724	2910	3602		
SSS 6560 (tuc)	3803	3028	2799	4051	3678	3096	2864	3343	1684	3150	4777	3832	4238	2290	1934	3297	3794	2723	3360		
NS 6267 R	-	-	-	-	-	-	-	-	-	-	5107	4599	4279	2015	2197	4078	3298	2660	3529		
Y 627	-	-	-	-	-	-	-	-	-	-	5108	4224	4466	2314	2081	4373	4282	2291	3642		
P61138 R	4130	3172	2888	4269	3809	3151	3248	3915	1916	3339	5561	4269	5066	2448	2334	4051	4724	3133	3621		
DM 6663 RSF	3997	2909	2726	3970	2313	2294	4069	1449	2962	4661	3326	4905	2391	2187	4290	3815	1638	3401			
NS 6448 R	3846	2976	3341	3644	4281	3430	3860	2767	1543	3299	5543	4402	4183	2010	2044	4346	3156	1675	3420		
P64139 R	3883	2949	3234	4049	4230	4238	3955	3830	2195	3618	5208	3165	4698	2356	2304	4136	5275	1326	3558		
DM 6402 RSF	-	-	-	-	-	-	-	-	-	-	4774	4098	3663	2258	2209	4153	3522	1423	3263		
Y 657	-	-	-	-	-	-	-	-	-	-	5182	4644	4295	2159	4153	4794	2478	3651			
LS 6868 R	-	-	-	-	-	-	-	-	-	-	3132	3588	4936	4158	4452	2360	2242	4280	4575	1565	
DM 6.81 RR	4443	2973	3190	4146	3317	3305	2956	4735	1339	3338	3264	-	-	-	-	-	-	-	-		
LS 6240 R	4536	3368	3044	3573	3577	3601	2776	1403	2624	3167	-	-	-	-	-	-	-	-	-		
SSS 4945 (tuc)	4441	3474	2677	3140	3965	3706	3297	2752	1507	1695	2981	-	-	-	-	-	-	-	-		
LS 6146 R	3999	2949	3367	3424	3645	3645	2752	2976	1219	3468	3468	3030	-	-	-	-	-	-	-		
PHB 95 Y 20 R	4050	3206	2652	3409	3356	3392	2633	3003	2160	3096	-	-	-	-	-	-	-	-	-		
LS 6261 R	3793	3020	4676	3322	4024	3308	2814	3081	2737	3419	-	-	-	-	-	-	-	-	-		
LS 6164 R	4003	2302	3110	3654	3394	3050	3589	2964	2253	3147	-	-	-	-	-	-	-	-	-		
PAN 1614 R	3734	2688	2845	3648	3806	3243	3353	2989	1651	3106	-	-	-	-	-	-	-	-	-		
NS 7211 R	4161	2504	2708	3838	3860	2939	3618	3777	1651	3228	-	-	-	-	-	-	-	-	-		
SSS 5755 (tuc)	3928	2847	2958	3017	4093	2844	3188	2845	1844	3063	-	-	-	-	-	-	-	-	-		
LDC 5.9	4473	2947	3138	4216	3983	3503	3628	3447	2747	3565	-	-	-	-	-	-	-	-	-		
LDC 6.0	4197	2640	2204	3380	4233	3586	3057	1989	2199	3054	-	-	-	-	-	-	-	-	-		
6968 RSF	3956	2926	2546	3702	3111	2845	3111	2595	3919	1604	-	-	-	-	-	-	-	-	-		
Gem/Mean	4143	2972	3117	3523	3784	3431	3188	3038	2164	3262	4877	4014	4285	2138	2047	3583	3806	1914	3333		

Tabel 23 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2015/16, 2016/17 en 2017/18 vir die warm produksiegebiede by verskillende opbrengspotensiaal  
 Table 23 Yield probability (%) of cultivars in the 2015/16, 2016/17 and 2017/18 for the warm production areas at different yield potentials

Kultivar Cultivar	Opbrengspotensiaal/Yield potential (t/ha)					
	1.5	2.0	2.5	3.0	3.5	4.0
PAN 1454 R	45	38	32	25	21	18
PHB 94 Y 80 R	29	26	24	23	23	24
LS 6248 R	22	30	42	55	68	77
DM 5953 RSF	80	74	67	57	47	37
SSS 5449 (tuc)	20	19	19	19	20	22
SSS 5052 (tuc)	27	29	31	34	38	43
PAN 1521 R	72	77	82	85	88	89
NS 5909 R	52	55	59	62	65	67
PHB 96 T 06 R	53	46	38	31	24	20
PAN 1623 R	62	63	65	66	66	65
LS 6161 R	34	40	47	54	62	68
SSS 6560 (tuc)	51	53	57	60	62	64
NS 6448 R	51	54	57	60	63	65
DM 6.8 iRR	72	71	68	65	61	57
						53

Tabel 24 Saadopbrengs ( $\text{kg}/\text{ha}^{-1}$ ) van kultivars gedurende die 2016/17 en 2017/18 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die warm produksiegebiede geleë is

Table 24 Seed yield ( $\text{kg}/\text{ha}^{-1}$ ) of cultivars during the 2016/17 and 2017/18 growing season for the various localities situated in the warm production areas

Kultivar Cultivar	2016/17			2017/18		
	Brits	Brits K2	Gem/Mean	Brits	Groblersdal Agricul	Marble Hall
PAN 1454 R	1673	2578	2125	2964	2139	4497
PHB 94 Y 80 R	1766	2717	2241	2750	1951	4372
LS 6248 R	1524	2861	2193	2629	3397	4812
P48T48 R	-	-	-	2606	1880	4502
DM 5953 RSF	2921	3668	3294	2957	3015	3750
SSS 5449 (tuc)	1938	2220	2079	2729	3133	4591
NS 5009 R	-	-	-	2507	3235	5073
LS 6851 R	-	-	-	2939	2330	4504
NS 5258 R	-	-	-	2294	2356	5353
PAN 1532 R	1910	1895	1902	2443	2737	4404
DM 5351 RSF	-	-	-	2776	3258	4840
Y 540	-	-	-	2481	2161	5169
SSS 5052 (tuc)	1871	2601	2236	2609	3174	4796
NA 5509 R	-	-	-	3080	4627	4261
Y 550	-	-	-	2194	3245	4256
DM 5609 RSF	2174	2846	2510	2078	3115	4849
PAN 1521 R	3654	4176	3915	3458	3580	5109
DM 5302 RSF	2649	3095	2872	2748	2780	5164
NS 5909 R	2052	2419	2236	2977	3325	4608
LS 6860 R	-	-	-	3026	3608	4484
PHB 96 T 06 R	2352	2159	2256	2987	3627	4039
PAN 1623 R	2364	2896	2630	3091	4463	4715
LS 6161 R	2203	2448	2326	2572	3215	5082
LS 6862 R	-	-	-	2386	4618	4718
SSS 6560 (tuc)	2328	2188	2258	2700	4060	5126
NS 6267 R	-	-	-	2582	3427	4532
Y 627	-	-	-	2333	3716	4130
P61T38 R	2419	2732	2576	3971	4187	5001
DM 6663 RSF	1842	1947	1895	3517	4032	4239
NS 6448 R	1926	2019	1973	3580	3624	4624
P64T39 R	4226	2825	3526	3767	3875	5439
DM 6402 RSF	-	-	-	2398	3782	4706
Y 657	-	-	-	2692	5035	5105
LS 6868 R	-	-	-	2888	2766	4711
DM 6.8i RR	2565	2688	2626	3439	3766	4361
LS 6240 R	1551	2416	1984	-	-	-
SSS 4945 (tuc)	2064	2687	2375	-	-	-
LS 6146 R	1722	2483	2103	-	-	-
PHB 95 Y 20 R	2431	2551	2491	-	-	-
LS 6261 R	1738	2637	2187	-	-	-
LS 6164 R	1885	2400	2142	-	-	-
PAN 1614 R	1891	2260	2075	-	-	-
NS 7211 R	2297	2591	2444	-	-	-
SSS 5755 (tuc)	1652	2008	1830	-	-	-
LDC 5,9	2936	3413	3174	-	-	-
LDC 6,0	1431	1906	1669	-	-	-
6968 RSF	2645	2080	2362	-	-	-
Gem/Mean	2206	2575	2391	2833	3350	4683
						3622

Tabel 26 Saamgevatte inligting van al die lokaliteite in die koel produksiegebiede, 2017/18  
 Table 26 Summarised information for all the localities in the cool production areas, 2017/18

Kultivar/Cultivar	Dae tot blom/ Days to flowering	Fisiologies/ Physolo- gical mature	Oes datum/ Harvest date	Planthoog- te/ Plant height	Peulhoog- te/ Pod height	Omval/ Lodging	Groenstam/ Green stem	Oopspring/ Shattering	Plantel- ling/ Number of plants	Persentasie onge- wensste sade/Per- centage undesir- able seed	Massa 100 seeds	Olie persen- tasie/Oil percen- tage	Ru- proteien- tasie/ Crude protein percen- tage	Opbrengs/ Yield
PAN 1454 R	59	139	159	77	8	1.40	1.80	1.80	192	0.12	17.34	12.35	33.85	2704
PHB 94 Y 80 R	58	137	157	66	6	1.40	1.47	2.27	168	0.10	17.02	14.28	33.45	3234
LS 6248 R	83	151	190	96	11	1.53	1.60	1.47	194	0.70	13.57	12.27	32.54	2454
P48T48 R	63	138	162	73	7	1.27	2.07	1.53	178	0.28	18.83	13.64	32.71	2979
DM 5953 RSF	63	141	158	79	7	1.27	1.60	1.80	224	0.28	16.65	12.22	33.80	3531
SSS 5449 (tuc)	77	151	169	88	9	1.33	1.27	1.47	188	0.46	13.91	14.07	33.54	2792
NS 5009 R	65	137	158	62	6	1.07	1.73	1.73	147	0.26	17.64	14.09	32.97	2593
LS 6851 R	83	156	184	70	6	1.00	1.53	1.27	116	0.90	14.99	13.22	32.79	2294
NS 5258 R	63	137	160	71	7	1.27	1.40	1.53	182	0.24	14.89	12.48	34.34	3082
PAN 1532 R	84	153	177	73	7	1.07	1.47	1.13	193	0.60	14.76	12.68	33.73	3065
DM 5351 RSF	63	136	157	77	8	1.20	1.53	1.80	225	0.22	16.14	12.25	33.93	3499
Y 540	76	151	165	76	8	1.13	1.93	1.40	151	0.56	14.76	11.44	33.53	3104
SSS 5052 (tuc)	86	153	189	82	8	1.20	1.67	1.53	188	1.78	14.12	12.78	33.42	2383
NA 5509 R	85	159	188	86	9	1.27	1.33	1.13	199	0.62	15.94	13.21	32.50	2985
Y 550	81	158	189	89	10	1.33	1.67	1.27	197	1.34	15.13	14.05	32.30	2790
DM 5609 RSF	84	155	182	74	7	1.20	1.67	1.27	179	0.54	15.39	12.98	32.74	2861
PAN 1521 R	86	154	178	90	11	1.33	2.00	1.40	182	0.52	15.50	12.86	32.89	3049
DM 5302 RSF	80	153	175	80	7	1.33	1.73	1.47	174	0.64	15.87	15.66	32.31	3029
NS 5909 R	88	162	188	86	12	1.27	2.00	1.40	161	0.52	15.46	12.75	33.49	2465
LS 6860 R	93	161	191	100	11	1.40	1.87	1.47	138	0.74	16.96	13.47	31.48	2081
PHB 96 T 06 R	92	162	190	97	9	1.33	1.60	1.40	194	1.12	23.13	12.98	32.87	2750
PAN 1623 R	87	160	186	88	9	1.53	1.60	1.33	181	0.72	14.27	14.65	33.12	3134
LS 6161 R	86	161	187	87	10	1.27	1.40	1.60	189	0.86	14.34	12.67	32.95	2592
LS 6862 R	87	159	188	84	9	1.20	1.27	1.27	107	0.34	15.82	11.40	33.10	2564
SSS 6560 (tuc)	82	156	189	90	10	1.20	1.73	1.60	153	0.88	14.19	13.49	32.79	2592
NS 6267 R	83	156	188	80	10	1.07	1.80	1.67	180	0.74	15.81	11.59	31.21	3013
Y 627	84	159	187	88	9	1.33	1.73	1.60	186	0.64	15.37	13.07	31.88	2884
P6:T38 R	82	154	186	78	9	1.00	1.80	1.20	167	0.58	15.90	13.84	32.86	2797
DM 663 RSF	90	161	189	100	11	1.53	1.87	1.80	195	0.62	15.92	14.59	31.87	2615
NS 6448 R	86	160	189	87	11	1.07	1.47	1.60	217	0.80	15.45	13.36	33.31	2805
P6:T39 R	89	160	190	93	9	1.40	1.53	1.40	177	1.34	15.19	14.02	32.12	2881
DM 6402 RSF	93	162	189	94	11	1.40	2.00	1.33	176	0.78	15.19	15.41	31.89	2053
Y 657	90	159	187	94	11	1.33	1.80	209	1.96	13.55	14.53	32.60	3020	
LS 6888 R	93	162	190	89	9	1.20	1.53	1.76	1430	1.20	14.30	13.43	33.05	2143
DM 681 RR	89	161	190	107	12	1.53	2.07	1.33	171	0.70	16.45	12.26	31.79	2437
Gem/Mean	81	153	180	84	9	1.28	1.67	1.50	179	0.71	15.71	13.26	32.85	2779

Tabel 27 Saamgevatte inligting van al die lokaliteite in die matige produksiegebiede, 2017/18  
 Table 27 Summarized information for all the localities in the moderate production areas, 2017/18

Kultivar/Cultivar	Dae tot blom/ Days to flowering	Fisiologies/ np/ Physio- logical mature	Oes datum/ Harvest date	Planthoog te/ Plant height	Peulhoog te/ Pod height	Omval/ Lod- ging	Groenstam/ Green stem	Opspring/ Shattering	Plantel- ling/ Number of plants	Persentasie- ongewen- sade/Per- centage undesir- able seed	Massa 100 sade/ Mass 100 seeds	Olie persen- tasië/Oil percentage	Ru- protein- persen- tasië/Crude protein percen- tage	Opbrengs/ Yield
PAN 1454 R	56	131	144	76	10	1.26	2.19	1.57	261	0.08	18.75	13.80	35.18	2864
PHB 94 Y 80 R	54	129	144	67	7	1.37	2.33	1.62	261	0.12	18.40	14.50	35.20	3066
LS 6248 R	69	141	163	93	15	1.89	2.48	1.43	262	0.12	15.00	13.65	34.45	3139
P48T48 R	53	134	148	63	8	1.22	2.67	1.76	247	0.04	19.13	13.52	34.50	3189
DM 5953 RSF	53	131	146	75	11	1.26	2.05	1.62	286	0.08	16.47	12.51	35.22	3572
SSS 5449 (tuc)	68	133	151	74	8	1.22	1.62	1.48	274	0.04	14.34	13.72	35.58	3082
NS 5009 R	55	129	148	63	7	1.22	2.19	1.52	196	0.00	18.45	13.67	34.75	2968
LS 6851 R	68	141	160	66	10	1.15	1.81	1.00	155	0.06	14.95	12.90	35.34	3405
NS 5258 R	54	131	150	67	8	1.26	1.52	1.52	279	0.10	15.52	14.02	35.46	3244
PAN 1532 R	69	141	159	69	10	1.15	1.71	1.10	266	0.06	15.43	13.68	35.24	3486
DM 5351 RSF	54	133	146	72	9	1.19	2.10	1.71	300	0.08	16.46	13.05	35.23	3383
Y 540	65	137	153	69	10	1.26	1.90	1.62	182	0.06	15.22	12.06	35.43	3629
SSS 5052 (tuc)	72	143	162	83	12	1.26	1.90	1.14	266	0.46	15.33	13.87	35.03	3264
NA 5509 R	72	144	161	80	13	1.37	2.48	1.29	255	0.08	16.78	13.72	35.04	3345
Y 550	70	139	158	78	12	1.67	2.67	1.10	283	0.08	16.43	14.64	34.09	2996
DM 5609 RSF	73	138	155	69	9	1.22	2.43	1.14	268	0.06	15.77	12.75	35.31	3454
PAN 1521 R	73	138	160	81	13	1.33	1.62	1.10	242	0.04	16.82	13.82	34.51	3569
DM 5302 RSF	69	134	153	72	9	1.56	1.67	1.19	217	0.12	15.98	15.42	34.09	3401
NS 5909 R	75	145	163	83	15	1.52	2.62	1.29	194	0.08	17.15	13.87	35.27	3431
LS 6860 R	76	143	165	89	15	1.70	2.62	1.24	183	0.04	18.40	13.30	34.43	3195
PHB 96 T 06 R	76	146	163	87	14	1.52	2.00	1.05	282	0.14	16.42	13.63	35.19	3247
PAN 1623 R	73	145	164	86	13	1.43	1.95	1.00	248	0.08	15.73	15.12	34.98	3227
LS 6161 R	74	147	161	87	14	1.39	2.48	1.24	283	0.08	16.06	13.93	34.85	3133
LS 6862 R	74	144	164	79	12	1.39	2.19	1.05	190	0.06	16.47	10.98	35.62	3602
SSS 6560 (tuc)	73	145	165	86	14	1.59	2.29	1.10	222	0.08	16.04	13.94	34.54	3360
NS 6267 R	72	147	163	76	13	1.74	2.57	1.10	264	0.18	17.10	12.47	34.74	3529
Y 627	72	146	167	82	13	1.56	2.43	1.33	268	0.04	16.29	13.71	34.35	3642
P6T38 R	74	149	167	71	14	1.26	2.48	1.10	260	0.12	16.88	14.65	34.63	3621
DM 6663 RSF	78	145	167	96	15	1.78	3.19	1.10	229	0.02	17.17	13.79	34.21	3401
NS 6448 R	76	148	163	81	14	1.33	2.10	1.24	289	0.08	16.55	13.52	35.34	3420
P6T39 R	76	151	169	89	13	1.48	2.67	1.05	219	0.06	17.03	14.68	34.07	3558
DM 6402 RSF	78	147	167	89	13	1.74	3.00	1.00	242	0.02	15.97	14.79	34.59	3263
Y 657	77	148	163	84	13	1.67	1.86	1.14	257	0.12	15.14	14.71	34.37	3651
LS 6868 R	79	153	167	88	15	1.28	2.71	1.00	236	0.32	15.03	13.10	35.71	2804
DM 681 RR	77	150	169	98	16	1.78	3.05	1.05	229	0.06	17.97	13.04	34.25	3571
Gem/Mean	69	141	159	79	12	1.43	2.27	1.26	246	0.09	16.47	13.67	34.88	3333

Tabel 28 Saamgevatte inligting van al die lokaliteite in die warmer produksiegebiede, 2017/18  
Table 28 Summarised information for all the localities in the warmer production areas, 2017/18

Kultivar/Cultivar	Dae tot blom/ Days to flower ring	Fisiologies/ Physiological mature	Oes datum/ Harvest date	Planthoog te/ Plant height	Peulhoog te/ Pod height	Omval/ Lod- ging	Groen stam/ Green stem	Opspring/ Shattering	Planttel- ling/ Number of plants	Persen- tasië/ Percentage undesir- able seed	Massa 100 sade/ Mass 100 seeds	Olie persen- tasië/Oil percen- tage	Ru- proteïn- persen- tasië/ Crude protein percen- tage	Opprens/ Yield
PAN 1454 R	42	109	124	79	9	1.00	1.33	1.00	197	-	18.24	13.99	36.61	3200
PHB 94 Y 80 R	40	109	120	72	7	1.00	1.00	1.00	223	-	18.07	14.07	36.57	3024
LS 6248 R	48	118	131	92	9	1.00	1.00	1.00	208	-	17.19	13.99	35.92	3613
P48T48 R	42	111	124	68	7	1.00	1.67	1.00	233	-	17.57	11.79	36.26	2996
DM 5953 RSF	43	113	123	79	9	1.00	1.33	1.00	201	-	16.40	12.02	36.84	3240
SSS 5449 (tuc)	48	112	123	78	4	1.00	1.00	1.00	208	-	16.00	12.89	37.12	3484
NS 5009 R	44	119	126	77	7	1.00	1.67	1.00	202	-	18.40	13.17	36.27	3605
LS 6851 R	49	119	132	56	7	1.00	1.00	1.00	172	-	16.08	12.61	37.07	3258
NS 5258 R	44	108	118	76	6	1.00	1.00	1.00	213	-	16.14	15.11	35.78	3334
PAN 1532 R	49	119	127	73	9	1.00	1.33	1.00	207	-	16.60	13.94	36.46	3195
DM 5351 RSF	43	111	129	79	8	1.00	1.33	1.00	221	-	16.19	11.91	37.01	3624
Y 540	48	114	126	79	10	1.00	1.00	1.00	213	-	15.96	12.57	36.95	3270
SSS 5052 (tuc)	49	116	130	83	8	1.00	1.00	1.00	226	-	16.62	12.97	36.59	3526
NA 5509 R	51	119	130	87	12	1.00	1.00	1.00	198	-	16.99	14.05	36.41	3989
Y 550	49	117	126	84	7	1.00	1.33	1.00	224	-	16.11	14.18	35.53	3232
DM 5609 RSF	49	119	131	64	7	1.00	1.67	1.00	197	-	15.35	11.55	36.35	3347
PAN 1521 R	51	117	129	87	9	1.00	1.00	1.00	200	-	17.52	13.17	36.18	4049
DM 5302 RSF	49	112	123	78	11	1.00	1.00	1.00	177	-	17.19	13.59	36.28	3564
NS 5909 R	53	121	131	81	14	1.00	1.00	1.00	219	-	17.18	13.43	37.04	3637
LS 6860 R	53	120	129	91	13	1.00	1.00	1.00	221	-	19.57	13.15	36.29	3706
PHB 96 T 06 R	52	124	133	96	14	1.00	1.00	1.00	214	-	17.04	13.37	36.62	3551
PAN 1623 R	52	119	134	92	9	1.00	1.00	1.00	187	-	16.96	13.41	37.17	4090
LS 6161 R	52	123	133	94	11	1.00	1.00	1.00	202	-	16.71	14.52	35.59	3623
LS 6862 R	50	118	131	78	11	1.00	1.00	1.00	208	-	15.60	10.55	37.35	3907
SSS 6560 (tuc)	51	116	129	89	11	1.00	1.00	1.00	213	-	15.96	13.88	36.05	3962
NS 6267 R	50	121	133	76	12	1.00	1.33	1.00	220	-	18.52	12.60	36.53	3514
Y 627	52	118	132	83	14	1.00	1.33	1.00	210	-	17.03	13.91	35.73	3393
P61T38 R	52	126	136	62	12	1.00	1.00	1.00	220	-	17.99	15.12	35.89	4386
DM 6663 RSF	52	124	132	112	17	1.00	1.67	1.00	205	-	16.20	11.37	36.44	3930
NS 6448 R	50	127	134	79	13	1.00	1.00	1.00	211	-	17.07	13.42	36.52	3943
P64T39 R	51	124	133	88	8	1.00	1.00	1.00	217	-	16.89	13.61	36.32	4360
DM 6402 RSF	52	127	135	106	10	1.00	1.33	1.00	219	-	15.81	14.00	36.35	3629
Y 657	53	123	135	88	8	1.00	1.00	1.00	211	-	15.71	14.23	36.06	4277
LS 6888 R	53	122	135	104	11	1.00	1.33	1.00	210	-	15.89	11.96	37.58	3455
DM 681 RR	54	126	137	98	17	1.00	1.00	1.00	212	-	17.92	13.46	36.11	3855
Gem/Mean	49	118	130	83	10	1.00	1.16	1.00	209	-	16.88	13.24	36.45	3622