SOJABOON KULTIVARAANBEVELINGS VIR 2007/2008

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Hoewel sojabone 'n gewas is wat bykans wêreldwyd verbou word, het individuele kultivars 'n beperkte gebiedsaanpassing. Gevolglik sal die sojaboonkultivar wat die beste aangepas is vir 'n gegewe plaas of boerdery, dié een wees wat oor 'n aantal jare die hoogste opbrengs en saadkwaliteit lewer vir dié spesifieke plaas. Normaalweg is die aangewese lengte van die groeiseisoen vir 'n kultivar wat goed aangepas is, in die omgewing van 120 dae van plant tot oesryp. In die keuse van 'n kultivar is dit dus van groot belang om te kyk na kultivarproefresultate vir vergelykbare toestande en aan die hand van sulke proewe alle kultivars uit te soek met die ideale groeiseisoen. Die Nasionale Sojaboonkultivarproewe van die LNR-Instituut vir Graangewasse lewer in die opsig waardevolle inligting.

BELANGRIKE INLIGTING VIR KULTIVARKEUSE

Die belangrikste inligting waarna gekyk moet word vir kultivarkeuse by sojabone, is **lengte van groeiseisoen**. Anders as by die meeste algemeen verboude gewasse, is sojabone gevoelig vir daglengte (fotoperiode) en sal 'n gegewe kultivar al hoe later ryp word hoe verder suid dit in Suider Afrika geplant word. Vir dieselfde rede sal plantdatum ook die lengte van die groeiseisoen beïnvloed en sal 'n gegewe kultivar heelwat

SOYBEAN CULTIVAR RECOMMENDATIONS FOR 2007/2008

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In contrast to the fact that soybeans as a crop is grown world wide, individual cultivars or genotypes demonstrate a very limited adaptation due to it's sensitivity to photoperiod as affected by latitude and planting date. The best-adapted cultivar is therefore the one that will give, over the long term, the best yield and quality for a specific site. The National Soybean Cultivar Trials conducted by the ARC-Grain Crops Institute render a valuable service in identifying such cultivars for different growing areas in South Africa.

IMPORTANT CHARACTERISTICS FOR CULTIVAR CHOICE

The **length of the growing season** is the most important characteristic for soybeans to take into consideration for cultivar choice for soybeans. Unlike the other most commonly cultivated crops, soybeans are sensitive to day length (photo period) and a given cultivar will ripen later and demonstrate a lengthening growing season the further south it is planted in Southern Africa. Planting dates will therefore also affect the length of the growing season and a given cultivar will flower much earlier should it be planted at a later planting date. Prevailing temperature also has an affect and soybeans grow much slower on the Highveld compared to the warmer Lowveld. Table 1 illustrates the

gouer blom by ‘n later plantdatum. Heersende temperatuur (veral nag-temperatuur) het ook ‘n invloed en sojabone groei heelwat stadiger op die hoëveld, vergeleke met die warmer laeveld. Tabel 1 illustreer die lengte van groeiseisoen tussen kultivars en ook vir ‘n spesifieke kultivar oor verbouingsgebiede. Dit is belangrik om te onthou dat vroeë en later plantdatums binne dieselfde gebied ook die groeiseisoenlengte van ‘n kultivar affekteer.

Vir sojaboonprodusente met ondervinding kan die gevoeligheid vir daglengte en die genetiese variasie vir relatiewe lengte van groeiseisoen, met vrug gebruik word vir byvoorbeeld hooiproduksie (gebruik van lang groeiseisoen kultivars), stroopskedulering (plant kultivars met verskillende rypwordatums) en vir droogte-ontwyking of noodaanplantings (kultivars met ‘n relatief kort groeiseisoen). Vir produsente wat nie ondervinding het van sojaboonproduksie nie kan dié eienskap ook by wyse van verkeerde kultivarkeuse tot gevolg hê dat die sojabone a) nie wil ryp word nie waar ‘n kultivar met ‘n te lang groeiseisoen vir ‘n gebied aangeplant is, b) reeds oesgereed is terwyl reën en hoë temperature stroop bemoeilik en kwaliteit benadeel waar ‘n kultivar met ‘n te kort groeiseisoen vir ‘n gebied gekies is en c) onstroopbaar is as gevolg van ‘n te lae peulhoogte.

Prosedure vir kultivarkeuse op grond van groeiseisoenlengte is dan as volg: Die lokaliteite waar die sojaboonkultivarproewe uitgevoer is, is groepeer om warm-, matig- en koel gebiede aan te dui (Tabel 2). Dit is belangrik dat u moet bepaal of die gebied waar u sojabone produseer ‘n klimaat soortgelyk aan

dramatic variances for length of growing season between cultivars as well as different production areas.

Producers well experienced in soybean cultivation can utilize the photo-period sensitivity of soybeans, along with the genetic variances for relative length of the growing season with great success, for example, for hay production (a cultivar with a long growing season can be used), for scheduling of harvest (planting cultivars with differing ripening dates of) and for drought avoidance or emergency planting (using cultivars with relatively short growing seasons). For producers with little or no experience in soybean cultivation, this characteristic could prove to be hazardous when the wrong cultivar choice is made and the yield is not realised because it a) does not ripen (a too long grower has been planted for the area), b) is ready for harvesting while rain and high temperatures hamper harvesting and impairs quality (a too short grower has been planted for the area), and c) is unable to be harvested because of a too low pod height (possibly a good cultivar planted too far to the north).

Cultivar choice using length of growing season – Localities where soybean trials were conducted during the past season were divided into warm-, moderate- and cool production areas (Table 2). It is important for a soybean producer to determine whether the area that will be used for soybean production is similar to the grouping of localities indicated by the warm-, moderate- and cool production areas. It is generally accepted that cultivars with a longer growing

die warm, matig of koel groepering van lokaliteite het. As algemene reël word aanvaar dat kultivars met ‘n langer groeiseisoen die beste sal doen in gebiede met ‘n warmer klimaat, medium groeiseisoen kultivars die beste sal vaar in gebiede met ‘n gematigde klimaat en korter groeiseisoen kultivars die beste sal vaar in gebiede met ‘n koeler klimaat. Dit is egter belangrik om te onthou dat daar ook uitsonderings op die reël is en daarom word aanbeveel dat die opbrengs en aanpassingsvermoë van kultivars soos aangedui in Tabelle 4 tot 12 saam met groeiseisoenlengte gebruik sal word om ‘n kultivarkeuse te maak.

Plantdatum beïnvloed sojabone se aanpassing en gevolglik kultivarkeuse. Die optimale plantdatum is normaalweg November. In warmer gebiede kan egter tot die eerste week in Januarie nog geplant word, maar dan sal nouer rywydte, hoër plantpopulasie en ‘n vinniger kultivar aanbeveel word. Waar grond- en lugtemperature aanvaarbare vlakke vroeg in die seisoen bereik, is ‘n Oktober-plantdatum, veral op die hoërliggende gebiede aan te beveel. Dit is belangrik om te onthou dat ‘n vroeër of ‘n later plantdatum in ‘n gebied kultivarkeuse kan beïnvloed.

Peul- en planthoogte beïnvloed die stroopbaarheid en die staanvermoë van ‘n sojaboonaanplanting en is faktore wat in ag geneem moet word by kultivarkeuse. Oor die algemeen is daar ‘n verband tussen peul- en planthoogte en relatiewe lengte van die groeiseisoen. Relatief kort groeiseisoenkultivars het gewoonlik ‘n laer peul- en planthoogte as langgroeiseisoenkultivars onder vergelykbare

season will perform better in the warmer growing areas, cultivars with a medium growing season will perform better in the moderate growing areas and cultivars with a shorter growing season perform better in the cooler production areas. There are however exceptions to the rule and it is therefore recommended to also use yield performance and adaptation presented in Tables 4 to 12 with length of growing season in cultivar selection for a specific area.

Planting date influences soybean’s adaptation and therefore cultivar choice. The optimum planting date is usually in November. In warmer areas though, soybeans can be planted until the first week of January. With later planting dates narrow rows, higher plant populations and cultivars with shorter growing seasons are recommended. A planting date in October, especially on the higher lying areas, will be recommended where soil and air temperatures reach acceptable levels early in the growing season. Planting at an earlier or later planting date will affect cultivar choice.

Pod- and plant height have an impact on the ability to harvest the crop, and are characteristics that should be taken into account with cultivar choice. A relationship exists between pod- and plant height and relative length of the growing season. Cultivars with a shorter growing season tend to have lower plant- and pod heights compared to longer growing season cultivars under similar growing conditions.

Both characteristics are also affected by production practices. More narrow inter- and intra row spacing

toestande. Beide eienskappe word egter ook deur produksiepraktyke beïnvloed. ‘n Nouer tussenry- en binneryspasiëring sal peulhoogte betekenisvol verhoog. In die Nasionale Kultivarproewe word onder gestandardiseerde toestande geëvalueer vir peulhoogte en kan kultivars met aanvaarbare peulhoogtes gekies word. Peulhoogte word aangedui in Tabel 3.

Staanvermoë kan beïnvloed word deur ‘n aantal bewolkte dae. Dit kan tot gevolg hê dat kultivars wat normaalweg goed staan hoër groei en dus die risiko van omval verhoog.

Groeiwyse onderskei tussen bepaald en onbepaald. Kultivars met ‘n bepaalde groeiwyse word verkieslik onder besproeiing geplant, terwyl kultivars met ‘n onbepaalde groeiwyse (wat nie lengtegroei staak tydens blom nie) verkies word onder droëland- en koelweergroeitoestande. Die groeiwyse van geregistreerde kultivars word aangedui in Tabel 3.

Genetiese **weerstand teen siektes en insekte** kan goed gebruik word waar die siektes en insekte die oes kan verlaag. Die kultivar met weerstand teen sojaboon mosaïekvirus is Ibis, en teen paranocheta, SCS 1. Inligting oor vatbaarheid van kultivars vir aalwurms word aangedui in Tabel 3.

Rywydte kan ook kultivarkeuse beïnvloed aangesien daar ‘n betekenisvolle interaksie bestaan. Kultivars wat geneig is tot sytakvorming en ‘n digte blaredak, is beter aangepas in wye rye, terwyl kultivars met ‘n oop blaredak en min sytakke, beter aangepas is by relatief nouer rywydtes.

will increase pod height significantly. Pod clearance is reported in Table 3.

Standability is affected by the number of overcast days. Plant height tends to increase under overcast weather and could result in a higher lodging percentage lodging.

Growth habit distinguishes between determinate and indeterminate genotypes. Cultivars with a determinate growth habit are preferably planted under irrigation conditions, while indeterminate cultivars (that do not cease vertical growth during flowering) are preferred under dry land and cool weather growing conditions. Growth habit for registered cultivars is indicated in Table 3.

Genetic resistance against diseases and pests are characteristics that are relevant where the probability of such risks increases. The cultivar with known resistance against soybean mosaic virus is Ibis, and against paranocheta SCS 1. Root knot nematode sensitivity is reported in Table 3.

Row width will also affects cultivar selection as a significant relation exists between cultivars and row width. Cultivars producing more side branches and leaves are better adapted to wider rows and cultivars with less side branches and leaves are better adapted to more narrow rows.

Resistance against seed shattering can play an important role during unfavourable harvesting conditions. Information from the National Soybean Cultivar Trials indicates that cultivars with a

Weerstand teen oopspring kan ‘n belangrike rol speel tydens ongunstige oestoestande. Volgens inligting uit die Nasionale Kultivarproewe is dit duidelik dat relatief kort groeiseisoenkultivars die grootste risiko van oopspring het en relatief lang groeiseisoenkultivars die minste. Dit was egter nog nie moontlik om ‘n aanduiding van genetiese weerstand tussen kultivars van dieselfde groeiseisoenlengte te kry nie. Kultivars word evalueer op ‘n skaal van 1 (goed) tot 5 (swak) en die resultate word aangebied in Tabel 3.

Gevoeligheid vir onkruiddoder kan in sommige gevalle kultivarkeuse beinvloed. Geen sojaboonkultivar is bestand teen die atrazine-tipe onkruiddoders nie en die volle wagperiode moet nagekom word voordat die plant van sojabone oorweeg word. Sommige kultivars soos Dumela, Ibis, Komatie en Edgar is besonder gevoelig vir metribusin. In alle gevalle moet seker gemaak word dat aanwysings op die etiket voorsiening maak vir die kultivar wat aangeplant gaan word.

Saadgrootte, hilumkleur, proteïengehalte en GMO-status is eienskappe wat ‘n premieprys kan beding. Saadgrootte is geneties, maar word sterk beïnvloed deur omgewing.

Gunstige toestande tydens saadvulperiode sal saadgrootte positief beïnvloed. Proteïeninhoud van die saad is ook geneties maar kan nadelig beïnvloed word deur omgewing (reënval, temperatuur en stremming) en bestuur (swak of geen nodulering, suur grond en lae grondvrugbaarheid).

relative short growing season tend to shatter more than cultivars with a longer growing season. Rating of cultivars on a scale from 1 (good) to 5 (poor) is presented in Table 3.

Sensitivity to herbicides can, in some cases, influence the choice of a cultivar. No soybean is resistant to the atrazine type herbicides and the full waiting period will have to be maintained before soybeans can be considered. Some cultivars, such as Dumela, Ibis, Komatie and Edgar, are extremely sensitive to metribusin and this should under no circumstances be used with the aforementioned cultivars.

Seed size, hilum colour, protein qualities and GMO status are characteristics that can negotiate a premium price. Seed size is genetically regulated, but is greatly influenced by the environment. Favourable conditions during the seed filling period will positively influence seed size. The protein content of the seed is also genetically regulated and can adversely be affected by the environment (rainfall, temperature, stress) and crops management (poor or no nodulating, acidic soil and low soil fertility). Protein contents below 36 % are unsatisfactory and above 40%, on a moisture free basis, excellent.

Seed yield indicates the genetic adaptation and the suitability of a cultivar to be planted in a specific area. In the 2006/2007 season 30 cultivars were included in the National Soybean Cultivar Trials and data of 27 localities were acceptable for statistical analyses.

Proteïeninhoud (vogvrye basis) onder 36% is onbevredigend en bokant 40% is uitstekend.

Saadopbrengs gee ‘n aanduiding van ‘n kultivar se genetiese aanpassing en geskiktheid vir ‘n bepaalde omgewing. Vir die 2006/2007 seisoen is 30 kultivars aangeplant en was die data van 27 proewe aanvaarbaar vir statistiese analises. Die oeskerheidswaardes van die 30 kultivars vir die drie verbouingsgebiede (warm, matig en koud) word aangebied in Tabelle 4-6, 7-9 en 10-12. Tabelle 4, 7 en10; 5, 8 en 11 en 6, 9 en 12 bevat inligting oor kultivars wat vir onderskeidelik drie, twee en een jaar in die proewe ingesluit was. Dit is belangrik dat u die verdeling van lokaliteite in Tabel 2 gebruik om te bepaal in watter gebied u plaas sal val. Vergelyk dan die kultivars in die oessekerheidstabel wat u gekies het met mekaar by die realistiese opbrengsmikpunt vir u plaas.

VERDERE INLIGTING

Volledige inligting oor die Nasionale Sojaboon Kultivarproewe en twee nuttige bronne van inligting oor sojaboonproduksie nl Jou Gids tot Suksesvolle Sojaboonproduksie en Sojaboonsiektes en –plae is beskikbaar by:

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*** Kultivars wat in die verslag opgeneem is, is die enigste kultivars wat deur die LNR getoets en aanbeveel word.**

The yield reliability values of the 30 cultivars for the three production areas (warm, moderate and cool) are presented in Tables 4-6, 7-9 and 10-12. It is also important to use the information in Table 2 to determine whether the area to be planted corresponds with the warm, moderate or cool localities. Use selected the yield reliability table (warm, moderate or cool) to select cultivars for the yield potential of the specific field/farm.

FURTHER INFORMATION

Information on the National Soybean Cultivar Trials and two useful guides: Your Guide to Successful Soybean Production and Soybean Diseases and Pests, are available at:

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*** The cultivars in this report are the only cultivars tested and recommended by the ARC.**

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ERKENNING

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Tabel 1 Gemiddelde aantal dae tot 50% blom en oesryp vir warm, matig en koue gebiede 2006/07
Table 1 Average number of days to 50 % flower and harvest for warm, moderate and cool areas 2006/07

Kultivar/ Cultivar	Dae tot 50% blom/Days to 50% flower			Dae tot oesryp/Days to harvest		
	Warm/Warm[1]	Matig/Moderate[2]	Koud/Cool[3]	Warm/Warm[4]	Matig/Moderate[5]	Koel/Cool[6]
Wenner	39	58	71	117	135	-
LS 555	49	60	69	116	135	-
Sonop	49	61	72	119	139	-
SNK 440	46	64	76	116	137	-
PAN 660	50	61	70	120	139	-
Highveld Top	50	60	72	118	137	-
A 5409 RG	52	63	77	116	138	-
LS 666	50	62	77	124	145	-
Marula	52	65	73	122	145	-
Bloekom	47	63	73	123	147	-
Knap	46	63	76	120	143	-
Tamboti	48	64	74	124	148	-
LS 6050 R	50	64	77	121	146	-
LS 6150 R	48	64	77	121	145	-
PAN 535 R	44	64	77	118	137	-
PAN 737 R	50	65	79	122	156	-
LS 6161 R	47	64	77	124	145	-
LS 677	50	67	78	125	148	-
LS 678	50	70	78	127	152	-
LS 6164 R	50	63	77	121	146	-
PAN 1652	53	66	77	122	140	-
PAN 626	56	65	78	119	146	-
SNK 500	53	66	81	120	143	-
PAN 809	48	63	76	127	159	-
Egret	57	66	78	131	159	-
PAN 538 R	55	68	77	126	150	-
PHB 96 B 01	53	62	78	126	150	-
PHB 95 B 53	53	62	77	121	146	-
Stork	55	69	80	129	153	-
Mukwa	54	71	81	129	160	-

[1] - Gemiddeld van 3 lokaliteite, average of 3 localities
[2] - Gemiddeld van 4 lokaliteite, average of 4 localities
[3] - Gemideld van 2 lokaliteit, average of 2 locality
[4] - Gemiddeld van 3 lokaliteite, average of 3 localities
[5] - Gemiddeld van 2 lokaliteite, average of 2 localities
[6] - Gemiddeld van 0 lokaliteit, average of 0 locality

Tabel 2 Groepering van lokaliteite volgens warm, matig en koue gebiede 2006/07
Table 2 Grouping of localities according to warm, moderate and cool areas 2006/07

Warm/Warm	Matig/Moderate	Koud/Cool
Atlanta (B/I)	Aliwal Noord (D)	Bethlehem (D)
Brits (B/I)	Bothaville (D)	Delmas Pannar (D)
Groblersdal Bespr (B/I)	Cedara (D)	Ficksburg (D)
Groblersdal Afgri (B/I)	Glen Besproeiing (B/I)	Frankfort (D)
Koedoeskop (B/I)	Greytown (D)	Kokstad (B/I)
Rustenburg (D)	Mquanduli (B/I)	Reitz (D)
Warmbad (B/I)	Newcastle (D)	Tweeling (D)
	Potchefstroom B90 (B/I)	Wonderfontein (D)
	Potchefstroom D90 (D)	
	Tsolo (d)	
	Vryheid (D)	

B - Besproeing/I - Irrigation D - Droëland/Dry land

Tabel 3 Algemene inligting van sojaboonkultivars 2006/07
Table 3 General information on soybean cultivars 2006/07

Kultivar/ Cultivar	Groei-wyse/ Growth habit[1]	Hilum-kleur/ Hilum colour[2]	Oliepersentasie/ Oil percentage	Proteïenpersentasie/ Protein percentage	Aalwurm gasheerstatus/ Nematode host status[3]		Peul-hoogte /Pod height[4]	Oopspring/ Shatter[5]	Verskaffer/ Supplier
					M Incognita	*M Javanica*			
Wenner	D	B	15.78	44.69	S	S	8	2.41	GJ Bohrman
LS 555	D	LB	17.01	43.80	S	-	7	2.41	Link Seed
Sonop	I	B	17.25	43.42	S	S	11	2.67	GW BÜhrmann
SNK 440	I	B	16.35	44.43	S	-	11	2.44	Afgri
PAN 660	D	BL	16.70	42.93	R	S	8	2.44	Pannar
Highveld Top	I	BL	16.27	43.66	S	S	10	2.48	GW BÜhrmann
A 5409 RG	I	LB	15.89	43.50	S	S	8	1.89	Pannar
LS 666	D	IB	16.03	44.05	S	S	11	2.85	Link Seed
Marula	I	BL	15.90	43.80	S	S	10	2.11	GW BÜhrmann
Bloekom	I/D	S	15.83	44.15	S	-	11	1.78	GW BÜhrmann
Knap	I	B	16.33	43.78	S	S	10	1.93	GW BÜhrmann
Tamboti	D/I	S	15.86	43.73	S	-	11	1.44	Newcrop
LS 6050 R	I	LB	16.46	43.21	S	-	9	2.19	Link Seed
LS 6150 R	I	LB	16.40	42.42	S	-	10	2.70	Link Seed
PAN 535 R	D	B	15.83	44.27	-	S	8	1.56	Pannar
PAN 737 R	D	LB	16.51	43.04	S	-	10	1.48	Pannar
LS 6161 R	I	IB	16.38	44.12	S	-	10	2.48	Link Seed
LS 677	D	LB	15.41	44.17	S	S	10	1.89	Link Seed
LS 678	D	LB	16.28	43.05	S	S	8	1.26	Link Seed
LS 6164 R	D	LB	16.23	43.33	S	-	9	2.04	Link Seed
PAN 1652	I	B	16.46	43.63	S	-	10	1.15	Pannar
PAN 626	I	KL	15.83	43.12	S	S	10	1.37	Pannar
SNK 500	D	LB	15.58	44.27	S	R	11	1.78	Sensako
PAN 809	D	LB	16.00	43.24	S	S	10	1.52	Pannar
Egret	D	KL	14.49	45.13	R	R	11	2.30	Agriocare
PAN 538 R	I	KL	17.04	41.65	-	S	13	1.37	Pannar
PHB 96 B 01	D	LB	16.06	43.59	S	-	10	1.37	Pioneer
PHB 95 B 53	D	BL	15.94	44.45	S	-	10	1.41	Pioneer
Stork	D	KL	13.79	46.33	S	-	10	1.93	Agriocare
Mukwa	D	IB	15.10	44.73	S	-	13	1.48	Newcrop

[1] D - Bepaald/determinate I - Onbepaald/Indeterminate
[2] BL - Swart/Black IB - Onvolledig swart/Imperfect black
B - Bruin/Brown LB - Ligbruin/buff
G - Grys/Grey KL - Kleurloos/buff
[3] R - Nie vatbaar vir die spesifieke knopwortel aalwurm spesie en/of ras
Resistant to the specific root-knot namatode species and/or race
S - Vatbaar vir die spesifieke knopwortel aalwurm spesie en/of ras
Susceptible to the specific root-knot nematode species and/or race
[4] Peulhoogte in cm/Pod height in cm
[5] Geneigdheid tot oopspring evalueer op 'n skaal van 1-5 waar 1 = goed en 5 = swak
Tendency to shatter evaluated on a scale from 1-5 where 1 = good and 5 = poor

Tabel 4 Oessekerheid by die verskillende opbrengsmikpunte vir die koeler produksiegebiede, 2004/05, 2005/06, 2006/07
Table 4 Yield reliability at different yield targets for the cooler production areas, 2004/05, 2005/06, 2006/07

KULTIVAR CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.52*	0.95*	1.38	1.81	2.23	2.66	3.09	2.37	0.2407
LS 555	0.38	0.87	1.35	1.84	2.32	2.81	3.30	2.39	0.2439
Sonop	0.29	0.83	1.37	1.91	2.45	2.99*	3.53*	2.27	0.1354
PAN 660	0.53*	1.00*	1.48*	1.95*	2.43	2.90	3.38	2.35	0.1466
A 5409 RG	0.60*	1.05*	1.50*	1.95*	2.40	2.85	3.30	2.37	0.1538
LS 666	0.50*	1.00*	1.49*	1.98*	2.47*	2.96	3.45	2.45	0.1915
Marula	0.48*	0.87	1.27	1.66	2.06	2.45	2.85	2.27	0.2662
Knap	0.52*	0.99*	1.47*	1.94	2.41	2.88	3.35	2.38	0.1692
PAN 535 R	0.33	0.83	1.33	1.82	2.32	2.82	3.32	2.39	0.2581
PAN 737 R	0.49*	0.99*	1.49*	1.99*	2.50*	3.00*	3.50*	2.39	0.1454
LS 677***	0.38	0.93	1.48*	2.03*	2.58*	3.13*	3.68*	2.44	0.1609
LS 678	0.25	0.82	1.38	1.95*	2.51*	3.07*	3.64*	2.34	0.1568
PAN 626	0.35	0.86	1.37	1.89	2.40	2.91	3.42	2.38	0.2067
SNK 500	0.28	0.84	1.39	1.95*	2.51*	3.07*	3.62*	2.38	0.1760
PAN 809****	0.30	0.82	1.35	1.87	2.39	2.92	3.44	2.37	0.2152
PAN 538 R	0.00	0.52	1.08	1.63	2.19	2.74	3.30	2.24	0.2960

* Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher
Verwysingscultivars/Reference cultivars
** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season
**** Lang groeiseisoen/Long growing season
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar

D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 5 Oessekerheid by die verskillende opbrengsmikpunte van die koeler produksiegebiede, 2005/06, 2006/07
Table 5 Yield reliability at different yield targets of the cooler production areas, 2005/06, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.22	0.76	1.30	1.83	2.37	2.90	3.44	1.83	0.2057
LS 555	0.39	0.89	1.40	1.90	2.40	2.91	3.41	1.98	0.2325
Sonop	0.29	0.78	1.28	1.77	2.27	2.76	3.26	1.91	0.2658
SNK 440	0.35	0.93	1.50*	2.08*	2.65*	3.23*	3.80*	1.89	0.1280
PAN 660	0.55*	1.08*	1.61*	2.14*	2.67*	3.20*	3.73*	2.00	0.1232
A 5409 RG	0.48*	1.00*	1.52*	2.05*	2.57*	3.10*	3.62*	1.94	0.1359
LS 666	0.40	0.77	1.13	1.49	1.86	2.22	2.59	1.78	0.2575
Marula	0.54*	1.06*	1.58*	2.10*	2.63*	3.15*	3.67*	1.98	0.1289
Knap	0.12	0.69	1.26	1.83	2.39	2.96	3.53	1.84	0.2456
Tamboti	0.59*	1.16*	1.73*	2.30*	2.87*	3.43*	4.00*	2.09	0.1141
PAN 535 R	0.48*	1.06*	1.63*	2.20*	2.78*	3.35*	3.92*	2.12	0.1838
PAN 737 R	0.85*	1.42*	1.99*	2.56*	3.12*	3.69*	4.26*	2.27	0.0789
LS 677***	0.46	0.92	1.38	1.84	2.30	2.75	3.21	1.89	0.1839
LS 678	0.10	0.56	1.02	1.48	1.94	2.40	2.85	1.69	0.2875
PAN 626	0.29	0.80	1.30	1.80	2.30	2.81	3.31	1.71	0.1292
SNK 500	0.54*	0.99*	1.44	1.89	2.34	2.79	3.25	1.92	0.1621
PAN 809****	0.44	0.88	1.32	1.76	2.19	2.63	3.07	1.93	0.2423
PAN 538 R	0.28	0.71	1.14	1.57	2.00	2.43	2.86	1.74	0.2305
PHB 96 B 01	0.33	0.74	1.15	1.57	1.98	2.39	2.81	1.75	0.2275
PHB 95 B 53	0.07	0.63	1.18	1.74	2.29	2.85	3.40	1.79	0.2556
Mukwa	0.22	0.68	1.14	1.60	2.07	2.53	2.99	1.61	0.1591

* Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars
** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season
**** Lang groeiseisoen/Long growing season
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 6 Oessekerheid by die verskillende opbrengsmikpunte vir die koeler produksiegebiede, 2006/07
Table 6 Yield reliability at different yield targets for the cooler production areas, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.73*	1.16	1.59	2.03	2.46	2.89	3.32	1.18	0.0864
LS 555	0.87*	1.32*	1.76*	2.21	2.65	3.09	3.54	1.10	0.0245
Sonop	0.61	1.13	1.65	2.17	2.69	3.22	3.74	0.97	0.0557
SNK 440	0.81*	1.27*	1.72	2.17	2.63	3.08	3.53	1.04	0.0237
PAN 660	0.69	1.09	1.50	1.90	2.30	2.70	3.10	1.19	0.1036
Highveld Top	0.60	1.05	1.50	1.94	2.39	2.84	3.28	0.88	0.0340
A 5409 RG	0.74*	1.21	1.69	2.17	2.65	3.12	3.60	0.97	0.0251
LS 666	0.44	1.08	1.73	2.37*	3.02*	3.66*	4.31*	1.07	0.1690
Marula	0.66	1.23*	1.80*	2.37*	2.94*	3.51*	4.08*	0.94	0.0355
Bloekom	0.74*	1.16	1.58	2.01	2.43	2.86	3.28	0.89	0.0109
Knap	0.61	1.18	1.76*	2.33*	2.91*	3.48*	4.06*	1.05	0.0863
Tamboti	0.69	1.12	1.55	1.97	2.40	2.83	3.25	1.02	0.0455
LS 6050 R	0.74*	1.23*	1.71	2.20	2.68	3.16	3.65	0.98	0.0262
LS 6150 R	0.73*	1.35*	1.97*	2.60*	3.22*	3.84*	4.47*	1.06	0.0500
PAN 535 R	0.66	1.18	1.69	2.21	2.72	3.23	3.75	1.00	0.0491
PAN 737 R	0.83*	1.42*	2.00*	2.59*	3.18*	3.76*	4.35*	1.03	0.0196
LS 6161 R	0.75*	1.25*	1.75*	2.25	2.76	3.26	3.76	1.05	0.0407
LS 677***	0.55	1.02	1.48	1.94	2.40	2.86	3.32	0.82	0.0310
LS 678	0.66	1.25*	1.85*	2.45*	3.04*	3.64*	4.24*	0.96	0.0411
LS 6164 R	0.86*	1.37*	1.87*	2.38*	2.89*	3.40*	3.91*	1.03	0.0135
PAN 1652	0.71	1.12	1.54	1.96	2.37	2.79	3.20	0.95	0.0263
PAN 626	0.73*	1.21	1.70	2.18	2.67	3.15	3.63	0.98	0.0295
SNK 500	0.55	0.99	1.43	1.86	2.30	2.73	3.17	0.91	0.0533
PAN 809****	0.59	1.11	1.63	2.15	2.67	3.19	3.71	0.91	0.0445
Egret	0.68	1.23*	1.77*	2.32*	2.87*	3.41*	3.96*	0.95	0.0327
PAN 538 R	0.59	1.17	1.76*	2.35*	2.93*	3.52*	4.11*	0.93	0.0525
PHB 96 B 01	0.50	0.94	1.39	1.83	2.27	2.71	3.15	0.93	0.0783
PHB 95 B 53	0.68	1.11	1.53	1.96	2.39	2.81	3.24	0.95	0.0309
Stork	0.47	0.99	1.51	2.03	2.55	3.07	3.59	0.86	0.0654
Mukwa	0.37	0.90	1.43	1.96	2.49	3.01	3.54	0.79	0.0743

* Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars
** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season
**** Lang groeiseisoen/Long growing season

D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 7 Oessekerheid by die verskillende opbrengsmikpunte vir die matige produksiegebiede, 2004/05, 2005/06, 2006/07
Table 7 Yield reliability at different yield targets for the moderate production areas, 2004/05, 2005/06, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.08	0.62	1.17	1.71	2.26	2.80	3.35	2.61	0.2488
LS 555	0.40	0.87	1.34	1.80	2.27	2.74	3.21	2.60	0.1997
Sonop	0.10	0.62	1.15	1.68	2.21	2.74	3.27	2.58	0.2520
PAN 660	0.28	0.82	1.35	1.89	2.43	2.97	3.50	2.65	0.1595
A 5409 RG	0.33	0.82	1.31	1.81	2.30	2.79	3.28	2.58	0.1785
LS 666	0.38	0.86	1.34	1.82	2.30	2.78	3.26	2.52	0.1379
Marula	0.18	0.67	1.16	1.66	2.15	2.64	3.13	2.52	0.2355
Knap	0.72*	1.15*	1.58*	2.01	2.44	2.87	3.30	2.72	0.1580
PAN 535 R	0.65*	1.14*	1.63*	2.12*	2.61*	3.10*	3.59*	2.82	0.1359
PAN 737 R	0.56*	1.09*	1.61*	2.14*	2.66*	3.19*	3.71*	2.90	0.1623
LS 677***	0.59*	1.09*	1.60*	2.10*	2.61*	3.11*	3.62*	2.77	0.1143
LS 678	0.54*	1.04*	1.53*	2.02*	2.51*	3.01	3.50	2.88	0.2356
PAN 626	0.56*	1.06*	1.56*	2.07*	2.57*	3.08*	3.58*	2.86	0.1832
SNK 500	0.68*	1.16*	1.64*	2.13*	2.61*	3.09*	3.57*	2.85	0.1521
PAN 809****	0.39	0.93	1.47	2.01*	2.55*	3.09*	3.63*	2.79	0.1657
PAN 538 R	0.45	0.94	1.43	1.92	2.41	2.90	3.39	2.71	0.1890

* Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars
** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season
**** Lang groeiseisoen/Long growing season
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 8 Oessekerheid by die verskillende opbrengsmikpunte vir die matige produksiegebiede, 2005/06, 2006/07
Table 8 Yield reliability at different yield targets for the moderate production areas, 2005/06, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.00	0.38	0.84	1.31	1.77	2.24	2.70	2.24	0.5526
LS 555	0.42	0.90	1.38	1.86	2.34	2.81	3.29	2.42	0.2293
Sonop	0.49	1.03*	1.58*	2.12*	2.67*	3.21*	3.75*	2.48	0.1129
SNK 440	0.24	0.84	1.44	2.05*	2.65*	3.25*	3.85*	2.46	0.1471
PAN 660	0.22	0.77	1.33	1.88	2.43	2.99	3.54	2.37	0.1880
A 5409 RG	0.32	0.86	1.40	1.94	2.48	3.01	3.55	2.31	0.1215
LS 666	0.21	0.69	1.17	1.65	2.13	2.61	3.09	2.11	0.1643
Marula	0.45	0.93	1.41	1.90	2.38	2.86	3.34	2.43	0.2050
Knap	0.48	1.04*	1.60*	2.15*	2.71*	3.27*	3.83*	2.49	0.1050
Tamboti	0.44	1.06*	1.68*	2.30*	2.92*	3.54*	4.16*	2.62	0.0993
PAN 535 R	0.39	0.98	1.58*	2.17*	2.77*	3.36*	3.96*	2.50	0.1051
PAN 737 R	1.03*	1.51*	1.98*	2.45*	2.93*	3.40*	3.88*	2.73	0.0704
LS 677***	0.17	0.72	1.27	1.81	2.36	2.91	3.45	2.29	0.1764
LS 678	0.54*	1.04*	1.53*	2.03	2.53	3.02	3.52	2.42	0.1267
PAN 626	0.55*	1.03*	1.51	1.99	2.47	2.95	3.43	2.31	0.0918
SNK 500	0.37	0.91	1.45	1.99	2.53	3.07	3.61	2.42	0.1541
PAN 809****	0.41	0.84	1.28	1.71	2.14	2.58	3.01	2.24	0.2002
PAN 538 R	0.35	0.77	1.20	1.62	2.05	2.47	2.90	2.28	0.2842
PHB 96 B 01	0.71*	1.04*	1.37	1.70	2.03	2.36	2.69	2.41	0.3090
PHB 95 B 53	0.57*	1.01	1.45	1.88	2.32	2.76	3.20	2.51	0.2686
Mukwa	0.11	0.53	0.95	1.36	1.78	2.20	2.62	2.32	0.5585

* Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars
** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season
**** Lang groeiseisoen/Long growing season
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 9 Oessekerheid by die verskillende opbrengsmikpunte vir matige produksiegebiede, 2006/07
Table 9 Yield reliability at different yield targets for moderate production areas, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.35	0.81	1.28	1.74	2.21	2.67	3.13	1.68	0.1741
LS 555	0.50	0.99	1.49	1.99	2.49	2.99	3.49	1.68	0.0798
Sonop	0.38	0.90	1.43	1.95	2.47	3.00	3.52	1.52	0.0527
SNK 440	0.51	1.03	1.55	2.08	2.60	3.12	3.64	1.69	0.0669
PAN 660	0.56	1.09	1.63	2.16*	2.69*	3.23*	3.76*	1.98	0.1636
Highveld Top	0.27	0.79	1.30	1.82	2.34	2.85	3.37	1.68	0.1686
A 5409 RG	0.49	1.08	1.67*	2.25*	2.84*	3.43*	4.02*	1.81	0.0808
LS 666	0.80*	1.22*	1.64*	2.06	2.49	2.91	3.33	1.91	0.0979
Marula	0.46	1.00	1.53	2.06	2.59	3.12	3.65	1.68	0.0718
Bloekom	0.58	1.12	1.66*	2.20*	2.74*	3.28*	3.82*	1.77	0.0600
Knap	0.37	0.88	1.39	1.90	2.41	2.92	3.43	1.53	0.0655
Tamboti	0.63	1.17*	1.70*	2.23*	2.76*	3.29*	3.83*	1.74	0.0385
LS 6050 R	0.65*	1.17*	1.69*	2.21*	2.73*	3.25*	3.78*	1.77	0.0469
LS 6150 R	0.76*	1.17*	1.59	2.01	2.42	2.84	3.25	1.73	0.0500
PAN 535 R	0.59	1.05	1.51	1.97	2.43	2.89	3.35	1.80	0.1127
PAN 737 R	0.82*	1.34*	1.85*	2.36*	2.87*	3.38*	3.90*	1.83	0.0234
LS 6161 R	0.57	1.06	1.55	2.04	2.53	3.02	3.51	1.71	0.0709
LS 677***	0.79*	1.25*	1.71*	2.17*	2.63	3.09	3.56	1.84	0.0548
LS 678	0.57	1.16*	1.76*	2.35*	2.94*	3.54*	4.13*	1.87	0.0688
LS 6164 R	0.63	1.15*	1.67*	2.19*	2.71*	3.23*	3.75*	1.87	0.0891
PAN 1652	0.56	1.08	1.61	2.13	2.65	3.18	3.70	1.82	0.0952
PAN 626	0.60	1.05	1.50	1.96	2.41	2.86	3.31	1.80	0.1159
SNK 500	0.54	0.97	1.39	1.82	2.25	2.67	3.10	1.73	0.1273
PAN 809****	0.57	1.03	1.50	1.96	2.42	2.88	3.34	1.86	0.1515
Egret	0.55	1.06	1.57	2.09	2.60	3.11	3.62	1.70	0.0601
PAN 538 R	0.46	0.95	1.43	1.92	2.40	2.89	3.38	1.65	0.0874
PHB 96 B 01	0.65*	1.16*	1.66*	2.17*	2.68*	3.18*	3.69	1.74	0.0439
PHB 95 B 53	0.77*	1.26*	1.75*	2.24*	2.74*	3.23*	3.72*	1.72	0.0178
Stork	0.58	1.11	1.63	2.15	2.67*	3.19*	3.71*	1.88	0.1097
Mukwa	0.57	1.03	1.49	1.95	2.41	2.87	3.34	1.78	0.1148

*** Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars**
**** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season**
****** Lang groeiseisoen/Long growing season**
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 10 Oessekerheid by die verskillende opbrengsmikpunte vir die warmer produksiegebiede, 2004/05, 2004/06, 2006/07
Table 10 Yield reliability at different yield targets for the warmer production areas, 2004/05, 2005/06, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.06	0.43	0.80	1.17	1.54	1.90	2.27	2.18	0.4760
LS 555	0.40*	0.80	1.19	1.58	1.98	2.37	2.76	2.24	0.1820
Sonop	0.05	0.54	1.03	1.52	2.01	2.50	2.99	2.24	0.2153
PAN 660	0.25	0.73	1.21	1.68	2.16	2.63	3.11	2.50	0.2885
A 5409 RG	0.34	0.86	1.37	1.89	2.40	2.92	3.43	2.46	0.1245
LS 666	0.00	0.53	1.13	1.72	2.32	2.92	3.51	2.51	0.2482
Marula	0.42*	0.83	1.23	1.64	2.05	2.46	2.86	2.51	0.3361
Knap	0.48*	1.06*	1.64*	2.22*	2.80*	3.38*	3.95*	2.82	0.1377
PAN 535 R	0.19	0.72	1.25	1.79	2.32	2.85	3.39	2.68	0.3377
PAN 737 R	0.29	0.88	1.47*	2.06*	2.65*	3.24*	3.84*	2.84	0.2439
LS 677***	0.17	0.74	1.31	1.89	2.46	3.03*	3.60*	2.59	0.1964
LS 678	0.29	0.85	1.42*	1.98*	2.54*	3.10*	3.66*	2.83	0.3031
PAN 626	0.20	0.80	1.41*	2.02*	2.63*	3.24*	3.85*	2.69	0.1722
SNK 500	0.66*	1.19*	1.72*	2.25*	2.78*	3.32*	3.85*	2.95	0.1967
PAN 809****	0.25	0.71	1.16	1.61	2.07	2.52	2.98	2.67	0.5010
PAN 538 R	0.60*	0.93*	1.25	1.57	1.89	2.21	2.53	2.49	0.3967

*** Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars**
**** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season**
****** Lang groeiseisoen/Long growing season**
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 11 Oessekerheid by die verskillende opbrengsmikpunte vir die warmer produksieareas, 2005/06, 2006/07
Table 11 Yield reliability at different yield targets for the warmer production areas, 2005/06, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.16	0.37	0.57	0.78	0.99	1.20	1.41	2.18	0.8506
LS 555	0.53*	0.88*	1.24	1.60	1.95	2.31	2.66	2.24	0.1380
Sonop	0.00	0.24	0.80	1.35	1.91	2.47	3.02	2.47	0.4368
SNK 440	0.38	0.71	1.05	1.38	1.71	2.04	2.37	2.48	0.4809
PAN 660	0.00	0.22	0.82	1.41	2.01	2.61	3.20	2.59	0.4769
A 5409 RG	0.00	0.46	0.98	1.50	2.02	2.54	3.06	2.48	0.3268
LS 666	0.36	0.78	1.20	1.61	2.03	2.45	2.86	2.41	0.2174
Marula	0.54*	1.12*	1.70*	2.28*	2.86*	3.45*	4.03*	2.97	0.1268
Knap	1.02*	1.42*	1.83*	2.23*	2.63*	3.04*	3.44	2.96	0.1779
Tamboti	0.86*	1.44*	2.02*	2.60*	3.18*	3.76*	4.34*	3.14	0.0652
PAN 535 R	0.00	0.57	1.15	1.72	2.30	2.88	3.46*	2.59	0.2357
PAN 737 R	0.40	0.91*	1.41*	1.91*	2.41*	2.92*	3.42	2.76	0.2314
LS 677***	0.57*	1.04*	1.51*	1.98*	2.45*	2.92*	3.39	2.80	0.2199
LS 678	0.00	0.50	1.03	1.56	2.09	2.63	3.16	2.74	0.4996
PAN 626	0.00	0.18	0.66	1.14	1.62	2.10	2.58	2.50	0.7091
SNK 500	0.53*	0.95*	1.38*	1.80	2.23	2.65	3.08	2.71	0.2946
PAN 809****	0.00	0.37	0.91	1.45	2.00	2.54	3.08	2.65	0.5151
PAN 538 R	0.36	0.81	1.25	1.70	2.14	2.59	3.03	2.74	0.3979
PHB 96 B 01	0.00	0.49	1.10	1.71	2.32	2.94*	3.55*	2.72	0.3249
PHB 95 B 53	0.00	0.00	0.74	1.47	2.21	2.95*	3.69*	2.62	0.4165
Mukwa	0.00	0.19	0.82	1.44	2.07	2.69	3.32	2.76	0.6136

*** Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars**
**** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season**
****** Lang groeiseisoen/Long growing season**
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar

Tabel 12 Oessekerheid by die verskillende opbrengsmikpunte vir die warmer produksiegebiede, 2006/07
Table 12 Yield reliability at different yield targets for the warmer production areas, 2006/07

KULTIVAR / CULTIVAR	OPBRENGSMIKPUNTE/YIELD TARGETS ton/ha^{-1}							GEM / MEAN	D^2
	1.0	1.5	2.0	2.5	3.0	3.5	4.0		
Wenner**	0.59	0.79	0.98	1.17	1.37	1.56	1.75	1.83	0.1588
LS 555	0.32	0.73	1.14	1.55	1.95	2.36	2.77	2.38	0.2588
Sonop	0.43	0.88	1.33	1.78	2.23	2.68	3.13	2.22	0.0724
SNK 440	0.82*	1.18*	1.55	1.91	2.27	2.64	3.00	2.65	0.2048
PAN 660	0.71*	1.17*	1.63*	2.09	2.55	3.01	3.47	2.43	0.0445
Highveld Top	0.44	0.87	1.30	1.72	2.15	2.58	3.00	2.25	0.1043
A 5409 RG	0.48	1.00	1.52	2.03	2.55	3.07	3.59	2.48	0.0746
LS 666	0.00	0.42	1.12	1.82	2.51	3.21	3.90*	2.79	0.3547
Marula	0.09	0.67	1.25	1.83	2.41	2.99	3.57	2.34	0.0963
Bloekom	0.86*	1.18*	1.49	1.81	2.12	2.44	2.75	2.56	0.2089
Knap	0.56	0.98	1.40	1.82	2.25	2.67	3.09	2.18	0.0497
Tamboti	0.52	1.02	1.52	2.02	2.52	3.02	3.53	2.51	0.0919
LS 6050 R	0.11	0.72	1.34	1.95	2.56	3.18	3.79*	2.52	0.1219
LS 6150 R	0.99*	1.39*	1.79*	2.19*	2.59	2.99	3.39	2.49	0.0344
PAN 535 R	1.10*	1.36*	1.62*	1.88	2.15	2.41	2.67	2.48	0.1304
PAN 737 R	0.29	0.97	1.65*	2.33*	3.01*	3.69*	4.37*	2.63	0.0344
LS 6161 R	0.47	1.07	1.66*	2.25*	2.85*	3.44*	4.04*	2.52	0.0272
LS 677***	0.30	0.99	1.68*	2.37*	3.06*	3.75*	4.44*	2.73	0.0494
LS 678	1.01*	1.39*	1.78*	2.16*	2.55	2.93	3.32	2.67	0.0990
LS 6164 R	0.32	0.92	1.53	2.13*	2.74*	3.34*	3.95*	2.42	0.0331
PAN 1652	0.60	1.06	1.53	2.00	2.46	2.93	3.40	2.57	0.1229
PAN 626	0.41	0.95	1.50	2.05	2.60	3.15	3.70	2.51	0.0808
SNK 500	0.70*	1.23*	1.75*	2.27*	2.80*	3.32*	3.84*	2.68	0.0617
PAN 809****	0.36	0.90	1.44	1.97	2.51	3.05	3.59	2.54	0.1217
Egret	0.25	0.81	1.37	1.92	2.48	3.04	3.60	2.48	0.1163
PAN 538 R	0.37	0.96	1.55	2.13*	2.72*	3.31*	3.90*	2.41	0.0307
PHB 96 B 01	0.70*	1.20*	1.70*	2.20*	2.70*	3.21	3.71	2.66	0.0811
PHB 95 B 53	0.25	0.99	1.73*	2.47*	3.20*	3.94*	4.68*	2.88	0.0672
Stork	0.33	0.87	1.41	1.96	2.50	3.04	3.59	2.61	0.1611
Mukwa	0.42	0.86	1.29	1.72	2.16	2.59	3.02	2.37	0.1567

*** Waardes in dieselfde kolom is betekenisvol beter/Values in the same column are significantly higher Verwysingscultivars/Reference cultivars**
**** Kort groeiseisoen/Short growing season *** Medium groeiseisoen/Medium growing season**
****** Lang groeiseisoen/Long growing season**
D^2 dui stabiliteit van 'n kultivar aan. Hoe kleiner D^2 is hoe meer stabiel is die kultivar
D^2 indicates the stability of a cultivar. A smaller D^2 indicates a more stable cultivar