

SOJABOON KULTIVARAANBEVELINGS SOYBEAN CULTIVAR RECOMMENDATIONS 2022 / 2023



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Hoewel sojabone 'n gewas is wat bykans wêreldwyd verbou word, het individuele kultivars 'n beperkte gebiedsaanpassing. Gevolglik sal die kultivar wat die beste aangepas is vir 'n gegewe lokaliteit, dié een wees wat oor 'n aantal jare die hoogste opbrengs en saadkwaliteit lewer. Onder vergelykbare omgewingstoestande en produksiepraktyke kan 'n seleksie uit kultivars gemaak word wat 'n hoë opbrengs en 'n bogemiddelde opbrengswaarskynlikheid het. Die Nasionale Sojaboonkultivarproewe van die LNR-Graangewasse en verskeie medewerkers lewer in die opsig waardevolle inligting ten opsigte van verskillende produksie areas in Suid-Afrika.

BELANGRIKE INLIGTING VIR KULTIVARKEUSE

Die belangrikste inligting wat ten opsigte van kultivarkeuse by sojabone in ag geneem moet word, is **lengte van groeiseisoen**. Anders as die meeste algemeen verboude gewasse, is sojabone gevoelig vir dagliglengte en sal 'n gegewe kultivar al hoe later

Although soybeans as a crop are grown worldwide, individual cultivars demonstrate a limited adaptation to specific geographical areas. The best adapted cultivar is therefore the one that will, in the long term, give the best yield and quality for a specific locality within a specific geographical area. A selection can be made of cultivars with high yield and above average yield probability under comparable environmental conditions as well as production practises. The National Soybean Cultivar Trials conducted by the ARC-Grain Crops and several collaborators render a valuable service in identifying such cultivars for different production areas in South Africa.

IMPORTANT INFORMATION FOR CULTIVAR CHOICE

The **length of the growing season** is the most important characteristic to take into consideration in terms of cultivar choice for soybean. Unlike the other most commonly cultivated crops, soybeans are

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 gouer by 'n later plantdatum blom. Die heersende temperatuur (veral nagtemperatuur) het ook 'n invloed en sojabone groei heelwat stadiger op die Hoëveld in vergelyking met die warmer Laeveld. Tabel 1 illustreer die invloed wat die lengte van groeiseisoene op die verskillende kultivars het asook vir 'n spesifieke kultivar in verskillende produksiegebiede. Dit is belangrik om te onthou dat vroeë en later plantdatums binne dieselfde gebied ook die groeiseisoenlengte van 'n kultivar beïnvloed.

Vir produsente met ondervinding van sojaboonproduksie kan die gevoeligheid vir dagliglengte en die genetiese variasie vir relatiewe groeiseisoenlengte, met vrug gebruik word vir byvoorbeeld stroopskedulering (plant kultivars met verskillende rypworddatums) en vir droogte-ontwyking of noodaanplantings (kultivars met 'n relatief kort groeiseisoen). Vir produsente wat nie ondervinding het van sojaboonproduksie nie, kan dié eienskap egter by wyse van verkeerde kultivarkeuse tot gevolg hê dat die sojabone: a) nie wil ryp word nie in die geval van waar 'n kultivar met 'n te lang groeiseisoen in die 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: Die lokaliteite waar sojaboonkultivarproewe uitgevoer is, is gegroepeer om warm, matig en koel gebiede aan te dui (Tabel 2). Wanneer daar 'n kultivarkeuse gemaak word, is dit belangrik om die gebied wat dieselfde klimaatstoestand het te identifiseer en dan die tabelle te gebruik wat dieselfde klimaatstreek verteenwoordig. Risiko kan geminimaliseer word wanneer Tabel 1 en Tabel 3 gebruik word. As 'n algemene reël word aanvaar dat kultivars met 'n langer groeiseisoen die beste sal vaar in gebiede met 'n warmer klimaat,

sensitive to day length and a given cultivar will ripen later and result in a longer growing season the further south it is planted in Southern Africa. Planting dates will therefore also influence 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 effect, with soybean growing much slower on the Highveld compared to the warmer Lowveld. Table 1 illustrates the substantial variation for length of growing season among cultivars as well as for the different production areas.

Producers well experienced in soybean cultivation can utilize the photoperiod sensitivity of soybean, along with the genetic variation for relative length of the growing season with great success, for example, for scheduling of harvesting (plant cultivars with different ripening dates) and for drought avoidance or emergency planting (use relatively short growing season cultivars). 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 optimal yield is not realised because a) the cultivar does not ripen where a too long grower has been planted for the area, b) is ready for harvesting while rain and high temperatures hamper harvesting and adversely affect quality where a too short grower has been planted for the area, and c) the cultivar is unable to be harvested because of a too low pod height.

Procedure for 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). When cultivar selections are conducted it is important to establish which locality has similar climatic conditions and to use these Tables representing the same region.

Risk can be minimised if Tables 1 and 3 are utilised. It is generally accepted that cultivars with a longer growing season will perform better in the warmer growing areas, cultivars with a medium growing

mediumgroeiseisoenkultivars in gebiede met 'n gematigde klimaat en kultivars met 'n korter groeiseisoen 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 sowel opbrengs en aanpassingsvermoë van kultivars, soos aangedui in Tabela 4, 5, 6, 7, 8 en 9 saam met groeiseisoenlengte gebruik word om 'n meer akkurate kultivarkeuse vir 'n spesifieke gebied te maak.

Plantdatum beïnvloed sojabone se aanpassing en gevolglik die kultivarkeuse. Die optimale plantdatum is vanaf middel Oktober en November. In warmer gebiede kan produsente egter tot Desember nog plant, maar dan word 'n kultivar wat vinniger groei, aanbeveel. Waar grond- en lugtemperatuur vroeg in die seisoen aanvaarbare vlakke bereik, word 'n Oktober plantdatum - veral op die hoëliggende gebiede - aanbeveel. Vroeër plantdatums en die spasiëring daarvan kan die risiko vir Sclerotinia infeksie minimaliseer as gevolg van verskillende weersomstadighede.

Peul- en planthoogte beïnvloed die stroopbaarheid en die staanvermoë van sojabone 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. Kultivars met 'n relatief kort groeiseisoen het gewoonlik 'n laer peul- en planthoogte as langgroeiseisoenkultivars onder vergelykbare toestande. Beide eienskappe word egter ook deur produksiepraktyke beïnvloed. 'n Nouer tussenry- en binnery spasiëring sal peulhoogte betekenisvol verhoog. In die Nasionale Kultivarproewe word gestandaardiseerde toestande vir peulhoogte geëvalueer en kan kultivars met aanvaarbare peulhoogtes gekies word. Peulhoogte word aangedui in Tabel 3.

Staanvermoë kan beïnvloed word deur die aantal bewolkte dae wat tydens die seisoen voorkom. Dit kan tot gevolg hê dat kultivars wat normaalweg goed staan, hoër groei - wat die risiko van omval

season in the moderate growing areas and cultivars with a shorter growing season in the cooler production areas. There are however exceptions to the rule, and it is therefore recommended to also use yield performance and cultivar adaptation presented in Tables 4, 5, 6, 7, 8 and 9 in combination with length of growing season during cultivar selection for a specific area.

Planting date influences the adaptation of soybean cultivars and therefore also cultivar choice. The optimum planting date is from middle October and November. In warmer areas though, soybean can be planted until December. With later planting dates and shorter growing season cultivars are recommended. A planting date during October, especially in areas with a higher altitude, will be recommended where soil and air temperatures reach acceptable levels early in the growing season. Planting earlier and staggering planting dates can lower the risk for Sclerotinia infection as different planting dates may help to avoid the infection window.

Pod- and plant height have an impact on the ability to harvest the crop and are characteristics that should be considered during cultivar selection. 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 influenced by production practices. More narrow inter- and intra-row spacing will increase pod height significantly. Pod clearance for the cultivars evaluated is reported in Table 3.

Standability is influenced by the number of overcast days experienced during the growing season. Plant height tends to increase when overcast weather occurs and could result in a higher lodging percentage of plants.

Growth habit distinguishes between determinate

verhoog.

Groeiwyse onderskei tussen bepaalde en onbepaalde groeiers. Kultivars met 'n bepaalde groeiwyse word verkieslik onder besproeiing geplant, terwyl kultivars met 'n onbepaalde groeiwyse (wat nie lengtegroei tydens blom staak nie) onder droëland-toestande geplant word. Die groeiwyse van die kultivars kan in Tabel 3 gesien word.

Rywydte kan ook kultivarkeuse beïnvloed, aangesien 'n betekenisvolle interaksie tussen die twee bestaan. Kultivars wat geneig is tot sytakvorming en wat 'n digte blaredak het, is beter aangepas in wye rye, terwyl kultivars met 'n oop blaredak en min sytakke weer beter aangepas is by relatief nouer rywydtes. Wye rye sal 'n digter blaredak verminder en dus ook die mikroklimaat wat Sclerotinia bevoordeel.

Weerstand teen oopspring van peule kan 'n belangrike rol tydens ongunstige toestande gedurende die oes van sojabone speel.

Volgens inligting uit die Nasionale Kultivarproewe is dit duidelik dat kultivars met 'n relatief kort groeiseisoen die grootste risiko vir oopspring het, terwyl kultivars met 'n relatief lang groeiseisoen die minste daardeur geraak word. 'n Aanduiding ten opsigte van genetiese weerstand teen oopspring tussen kultivars van dieselfde groeiseisoenlengte, word waargeneem. Klimaatstoestande het egter 'n beduidende invloed op oopspring. Kultivars word geëvalueer op 'n skaal van 1 (goed) tot 5 (swak) wat oopspring betref en die resultate word in Tabel 3 aangebied.

Gevoeligheid vir onkruidodder kan kultivarkeuse in sommige gevalle beïnvloed. Geen sojaboonkultivar is bestand teen atrasien-tipe onkruidodders nie en die volle wagperiode moet nagekom word voordat die plant van sojabone oorweeg word. Sojabone is ook sensitief vir onkruidodders in die Triketone-groep en wagperiodes moet streng nagevolg word. In alle gevalle moet seker gemaak

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

Row width will also influence cultivar selection, since a significant relation exists between cultivars and row width. Cultivars with more side branches and leaves are better adapted to wider rows, while cultivars with less side branches and leaves are better adapted to more narrow rows. Wider rows will minimise dense canopies and therefore avoid the conducive environment for Sclerotinia infection.

Resistance against seed shattering can play an important role during unfavourable harvesting conditions. Information obtained during the National Soybean Cultivar Trials indicates that cultivars with a relative short growing period tend to shatter more than cultivars with a longer growing period.

Rating of cultivars in terms of their susceptibility to shattering are done on a scale from 1 (good) to 5 (poor) and are presented in Table 3.

Sensitivity to herbicides can, in some cases, influence the choice of a cultivar. No soybean is resistant to atrazine type herbicides and the full waiting period must be maintained before the planting of soybean can be considered. Soybean is also sensitive to herbicides in the Triketone group and waiting periods should be strictly adhered to. Ensure, in any case, that the herbicide can be used with the selected cultivar as indicated on the herbicide label.

Seed size, hilum colour and GMO status are characteristics that can possibly earn a premium price. Seed size is genetically regulated but is greatly influenced by the environmental conditions. Favourable conditions during the seed filling period will positively influence seed size.

word dat aanwysings op die onkruidroetiket voorsiening maak vir die kultivar wat aangeplant gaan word.

Saadgrootte, hilumkleur en GMO-status is eienskappe waarop 'n premie in prys moontlik betaal kan word. Saadgrootte is geneties, maar word sterk beïnvloed deur omgewingstoestande. Gunstige toestande tydens die saadvulperiode sal saadgrootte positief beïnvloed.

Graanopbrengs gee 'n aanduiding van 'n kultivar se genetiese aanpassing en geskiktheid vir 'n bepaalde gebied. Vir die 2021/2022 seisoen is 32 kultivars in die proewe ingesluit. Data van 21 proewe was aanvaarbaar vir statistiese analises. Tabelle 5, 7 en 9 bevat inligting aangaande die opbrengs van die kultivars vir die 2020/2021 en 2021/2022 produksieseisoen by die onderskeie lokaliteite. Gebruik die opbrengsdata saam met die opbrengswaarskynlikheidstabelle om 'n kultivarkeuse te maak.

'n Waardevolle hulpmiddel by **kultivarbeplanning** is die opbrengswaarskynlikheid waardes. Die prosedure wat gevolg word vir die maak van kultivaraanbevelings is kortliks as volg:

>>Eerstens moet vasgestel word vir watter opbrengspotensiaal aanbevelings gemaak word. Die produsent moet homself vergewis van die potensiaal wat ter sprake is. >>Die tweede stap is om die opbrengswaarskynlikheidstabel by die vasgestelde potensiaal te raadpleeg. Selekteer by die gekose potensiaal kultivars met bogemiddelde opbrengswaarskynlikheid en stabiliteit. Die kultivars met die bogemiddelde waardes behoort die beste kans op 'n stabiele, suksesvolle opbrengs verseker.

Kultivar stabiliteit

Die stabiliteit van 'n kultivar word aangedui deur twee waardes. Hoe nader die R^2 waarde aan 1 is hoe kleiner die Fprob waarde is (verkieslik <0.1) hoe meer stabiel is die kultivar.

Opbrengswaarskynlikheid

'n Kultivar se opbrengswaarskynlikheid is die kans

Grain yield indicates the genetic adaptation and suitability of a cultivar to be planted in a specific area. During the 2021/2022 season 32 cultivars were included in the National Soybean Cultivar Trials. Data of 21 localities were acceptable for statistical analyses. Yield of the cultivars at the different localities for the 2020/2021 and 2021/2022 growing season is presented in Tables 5, 7 and 9.

It is recommended to use the yield results with the yield probability values for a more accurate cultivar choice.

Cultivar planning - A valuable aid in cultivar planning is to also consider the yield probability values. The procedure to be followed in the making of cultivar recommendations is briefly as follows: Determine for which yield potential recommendations must be made. This must be done by the producer (farmer). The next step is to consult the yield probability table at the determined yield potential. From the yield probability table, cultivars with above average probability values as well as yield stability should be selected. This will provide the producer with the best change for a stable, successful yield.

Cultivar stability

The stability of a cultivar is determined by the closer the R^2 value is to 1 and the smaller the Fprob value (preferably <0.1) the more stable the cultivar will be.

Yield probability

The yield probability of a cultivar is the potential to achieve 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.

Yield probability values of the 16 cultivars for the

om 'n bogemiddelde opbrengs by 'n bepaalde opbrengspotensiaal te behaal. Indien die opbrengskaarskynlikheid van 'n kultivar by 'n bepaalde opbrengspotensiaal byvoorbeeld 60% is, dui dit op 'n 60% kans om 'n bogemiddelde opbrengs te behaal en 'n 40% kans om ondergemiddeld te presteer.

Die opbrengskaarskynlikheid van die 16 kultivars vir die koel verbouingsgebied asook 15 kultivars vir die matige en 16 kultivars vir die warm gebiede word in Tabele 4, 6 en 8 aangebied. Die tabelle bevat inligting oor kultivars wat vir drie jaar in dié proewe ingesluit is. Dit is belangrik om die verdeling van lokaliteite in Tabel 2 gebruik om te bepaal in watter gebied die plaas geleë is. Vergelyk dan die kultivars wat in die opbrengskaarskynlikheidstabel gekies is met mekaar by die realistiese opbrengsmikpunt vir die plaas.

Weens die jaarlikse toevoeging en onttrekking van kultivars, is 'n meerjarige opbrengskaarskynlikheid slegs op 'n beperkte aantal kultivars moontlik.

Tabelle 4, 6 en 8 kan gebruik word om 'n kernseleksie van kultivars te maak. Hierdie kern kan aangevul word met kultivars uit Tabele 5, 7 en 9. Dit is altyd raadsaam om meer as een kultivar te plant en om nuwe kultivars slegs op 'n beperkte skaal in te sluit.

cool production area as well as 15 cultivars for the moderate and 16 cultivars for the warm areas are presented in Tables 4, 6 and 8. These tables contain information regarding cultivars included in the trials for three years. It is also important to use the information provided in Table 2 to determine whether the area to be planted corresponds with the warm, moderate, or cool localities. Use the selected yield probability table (warm, moderate, or cool) to select cultivars for the yield potential of the specific farm.

Since new cultivars are introduced and some removed annually, a multiseason yield probability is only possible for a limited number of cultivars.

Tables 4, 6 and 8 can be used to make a core selection of cultivars. This selection can be expanded with cultivars from Tables 5, 7 and 9. It is advisable to grow more than one cultivar and to include new cultivars on a limited scale only.

Variëteitslys verslag Junie 2022/Variety list report June 2022

Konvensioneel/Conventional:

Amstel No. 1 (305)	Knap (150)	* PAN 1867 (1412)
ARC-Soy 01	* LS 555 (484)	* S 722/6/1E (1137)
ARC-Soy 02	* LS 677 (484)	SC H01
* Dundee (254-3)	* LS 678 (484)	* SC Sorcerer (1526)
* Egret (254-3)	Mukwa (489)	SC Stanza (1526)
* Heron (254-3)	* NED 11-91 (65)	* Stork (254-3)
* Ibis 2000 (254-3)	* Ngutu (254-3)	Wenner (369)
* Jimmy (254-3)	NSO-15 (1637)	
Kiaat (489)	* PAN 1800 (1412)	

Vegetable soybean:

VegSoyBIBI105 (1574)	VegSoyYeCo069 (1574)	VegSoyYGP077 (1574)
VegSoyBrBr082 (1574)	VegSoyYeCo070 (1574)	VegSoyYGP083 (1574)

GMO:

* 5302RSF (1708)	CU2512R	* JDR 2807 (411)	* P61T38 R (1412)	* RA568 (1670)
---DM 5302RSF	CVF1309	JEM4022	P62T16 R	RA626 (1670)
5351RSF (1708)	CVG820	* JHB 2507 (411)	* P64T39 R (1412)	* RA660 (1670)
---DM 5351RSF	CVG822	JRR4144	* P 71T74 R (1412)	RA655R
* 5609RSF (1708)	CX126R	* JSS 2459 (411)	* PAN 1454 R (1412)	# RAX2309R (1670)
---DM 5609RSF	DM59R03	* JSS 2517 (411)	PAN 1479 R (411)	# RAX3077 (1670)
* 5901RSF (1708)	DM60R05	JSS3988	* PAN 1500 R (1412)	* RJS 45002 (411)
---DM 5901RSF	DM60R06	LDC 5.3 (1778)	* PAN 1521 R (1412)	* RJS 46003 (411)
* 5953 RSF (1708)	DM68R09	LDC 5.9 (1778)	* PAN 1532 R (1412)	* RJS 49006 (411)
* 6.15 F (1573)	* Don Mario 5.1i (1708)	LDC 6.0 (1778)	* PAN 1555 R (1412)	* RJS 49012 (411)
--- Y 615F	* Don Mario 6.8i (1708)	* LS 6146 R (484)	* PAN 1575 R (1412)	* RJS 50001 (411)
* 6205 B (1573)	DON MARIO 55R20	* LS 6150 R (484)	PAN 1588 R	* RJS 53001 (411)
---Y627F	* FN 5.25 (1573)	* LS 6161 R (484)	* PAN 1614 R (1412)	* RJS 57002 (411)
6402RSF (1708)	--- Y 525F	* LS 6164 R (484)	* PAN 1623 R (1412)	* RJS 59001 (411)
---DM 6402RSF	* FN 5.75 (1573)	* LS 6240 R (484)	# PAN 1644 R (1412)	* RM 5500 (1573)
* 6505 B (1573)	--- Y575F	* LS 6248 R (484)	* PAN 1653 R (1412)	--- Y 550
---Y657F	FUNDACEP 65 RR (572)	* LS 6261 R (484)	* PAN 1663 R (411)	SRM 5200 (1573)
* 6663RSF (1708)	* JAR 2488 (411)	* LS 6851 R (484)	* PAN 1664 R (1412)	--- Y 540
---DM 6663RSF	JAR3108	* LS 6860 R (484)	* PAN 1666 R (1412)	* SSS 4945 (tuc) (24)
* 6968RSF (1708)	# JAR 3110 (411)	* LS 6868 (484)	PAN 1692 R	SSS 500
---DM 6968RSF	# JAR 3175 (411)	NA 5509 R (1421)	* PAN 1729 R (1412)	* SSS 5052 (tuc) (24)
* 95Y61 (411)	# JAR 3238 (411)	NS 5009 RG (1421)	* PHB 94Y80 R (411)	* SSS 5449 (tuc) (24)
* 95Y80 (411)	JAR4181	NS 5258 R (1421)	* PHB 95B53 R (411)	* SSS 6560 (tuc) (24)
* AGC 4134A4R (1076)	# JBC 3341 (411)	NS 5909 RG (1421)	* PHB 95Y01 R (411)	SSS 7446
* AGC 5028A4R (1076)	* JC 3240 R (1076)	NS 6267 R (1421)	* PHB 95Y20 R (411)	# SSS 7460 (24)
* AGC 5028B4R (1076)	* JC 3340 R (1076)	NS 6448 R (1421)	* PHB 95Y40 R (411)	# SSS 7665 (tuc) (24)
* AGC 5028C4R (1076)	* JC 4138 R (1076)	NS 7211 R (1421)	* PHB 96T06 R (411)	SSS 9446
* AGC 58007 R (1076)	* JC 4236 R (1076)	* P48T48 R (411)	* RA437 (1670)	SSS 9458
* AGC 64107 R (1076)	* JC 43A34 R (1076)	P53T10 R	* RA4918 R (1670)	SSS 9655
Bioceres 6.41 (1573)	* JC 43B34 R (1076)	* P56T88 R (411)	* RA560 (1670)	Y 605 (1573)
CS 1959R	* JDR 2453 (411)	P57T19 R (411)	* RA563 (1670)	
CT233R	* JDR 2466 (411)	* P 59T33 R (1412)	* RA565 (1670)	

Planttelersregte aangevra/Plant Breeders Rights applied for * Planttelersregte toegeken/Plant Breeders Rights granted

--- Sinoniem/Synonym

Adreslys / Address list:

24 Sensako
65 Adams & Adams
80 Monsanto
150 Buhrman, G
254-3 ARC GC
305 Vreken, H
369 Borman, G.J.J.
411 Corteva Agriscience RSA

484 Link Seed
489 New Crop
572 Capstone Seeds
1076 Agriocare
1137 Seed-Co (Pty) Ltd.
1412 Pannar Seed
1421 Klein Karoo Seed Marketing Ltd
1526 Seed Co SA (Pty) Ltd

1573 Southern Hemisphere Seeds
1574 Newlands Mashu
1637 One Direction Solutions
1670 Van Staden Derick
1708 GDM Seeds SA (Pty) Ltd
1778 Louis Dreyfus Commodities SA

Tabel 1. Gemiddelde aantal dae tot 50% blom en oesrypheid van kultivars gedurende die 2021/22 groeiseisoen vir warm, matig en koue produksiegebiede.

Table 1. Average number of days to 50 % flowering and harvesting of cultivars during the 2021/22 growing season for warm, moderate and cool production areas.

Kultivar / Cultivar	Dae tot 50% blom/Days to 50% flowering			Dae tot oes/Days to harvest		
	Warm/Warm ¹	Matig/Moderate ²	Koel/Cool ³	Warm/Warm ⁴	Matig/Moderate ⁵	Koel/Cool ⁶
PAN 1479 R	40	45	60	140	139	154
DM 5953 RSF	39	46	59	140	139	149
NS 5258 R	40	48	59	141	145	149
RA 4918 R	40	48	61	144	139	150
DM 5351 RSF	41	47	58	144	139	152
SSS 5449 (tuc)	50	58	70	143	139	156
Y540	49	60	70	146	143	155
RA 565 R	53	61	74	150	145	159
LS 6851 R	48	60	70	149	149	162
SSS 5052 (tuc)	64	61	76	150	148	161
P57T19 R	60	63	72	150	151	163
PAN 1555 R	59	62	76	149	151	160
PAN 1521 R	59	64	78	150	148	161
DM 5302 RSF	49	60	75	142	142	156
RA5921 R	56	62	76	150	152	167
PAN 1588R	61	64	77	152	151	165
NS 5909 R	61	63	76	150	147	167
RA 660 R	56	63	76	150	147	163
DM 59R03	55	62	79	152	153	168
LS 6164 R	56	63	78	156	153	171
LS 6860 R	66	65	76	153	152	174
P62T16R	57	64	80	153	158	174
Y627	61	64	79	155	154	168
PAN 1692 R	63	67	86	151	153	168
P64T39 R	58	68	82	157	156	175
NS 6448 R	56	65	79	153	153	174
RA6520RS	61	65	84	158	158	178
Y657	63	65	79	152	150	164
DM 68R09	64	66	81	159	155	175
PAN 1644 R	54	65	77	153	153	168
DM 6,8i RR	59	65	78	158	156	174
P71T74 R	64	66	82	159	158	177

* Kultivars nie op die variteitslys nie, kontak direk met saadmaatskappy/Cultivars not on the variety list, contact the relevant seed companies.

¹ - Gemiddeld van 4 lokaliteite / average of 4 localities

³ - Gemiddeld van 7 lokaliteite / average of 7 localities

⁵ - Gemiddeld van 5 lokaliteite / average of 5 localities

² - Gemiddeld van 6 lokaliteite / average of 6 localities

⁴ - Gemiddeld van 5 lokaliteite / average of 5 localities

⁶ - Gemiddeld van 7 lokaliteite / average of 7 localities

Dae tot blom - Gemiddeld 50% van die plante het een blom/Days to flowering – Average of 50% of plants with one flower

Dae tot oes – Gemiddeld van alle peule is volwasse, bros en droog/Days to harvest – Average of pods is mature, brittle and dry

Tabel 2. Groepering van lokaliteite volgens warm, matige en koue produksiegebiede gedurende die 2021/22 groeiseisoen.

Table 2. Grouping of localities according to warm, moderate and cool production areas during the 2021/22 growing season.

Warm/Warm	Matig/Moderate	Koel/Cool
Groblersdal Agri Seed (B/I) L	Barberspan (D) NW	Bapsfontein (B/I) MP
Groblersdal ARC (B/I) L	Bergville (B/I) KZN	Belfast (D) MP
Hoopstad (D) FS	Cedara (D) KZN	Bethlehem PD1 (B/I) FS
Pyramid (B/I) G	Greytown (D) KZN	Bethlehem PD2 (B/I) FS
Schweizer-Reneke PD1 (D) NW	Kroonstad (D) FS	Clarens (D) FS
Schweizer-Reneke PD2 (D) NW	Leeudoringstad (D) NW	Delmas (D) MP
	Potchefstroom Limagrain (B/I) NW	Standerton (D) MP
		Winterton (D) KZN

B – Besproeiing / I - Irrigation

D – Droëland / Dry land

Sleutel/Key:

NW – Noordwes/North West

L – Limpopo

KZN – Kwa Zulu Natal

FS – Vrystaat/Free State

MP – Mpumalanga

G – Gauteng

Tabel 3. Algemene inligting ten opsigte van geregistreerde sojaboonkultivars wat tydens die 2021/22 groeiseisoen geëvalueer is.
Table 3. General information on registered soybean cultivars that were evaluated during the 2021/22 growing season.

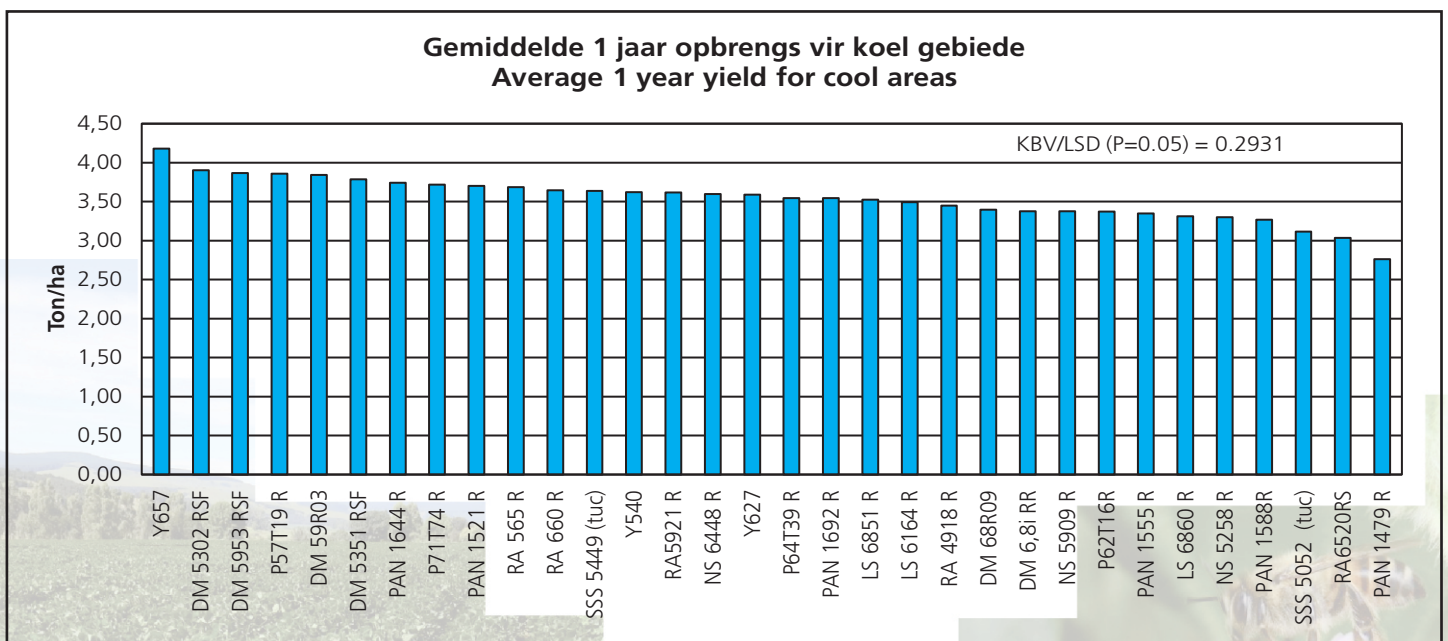
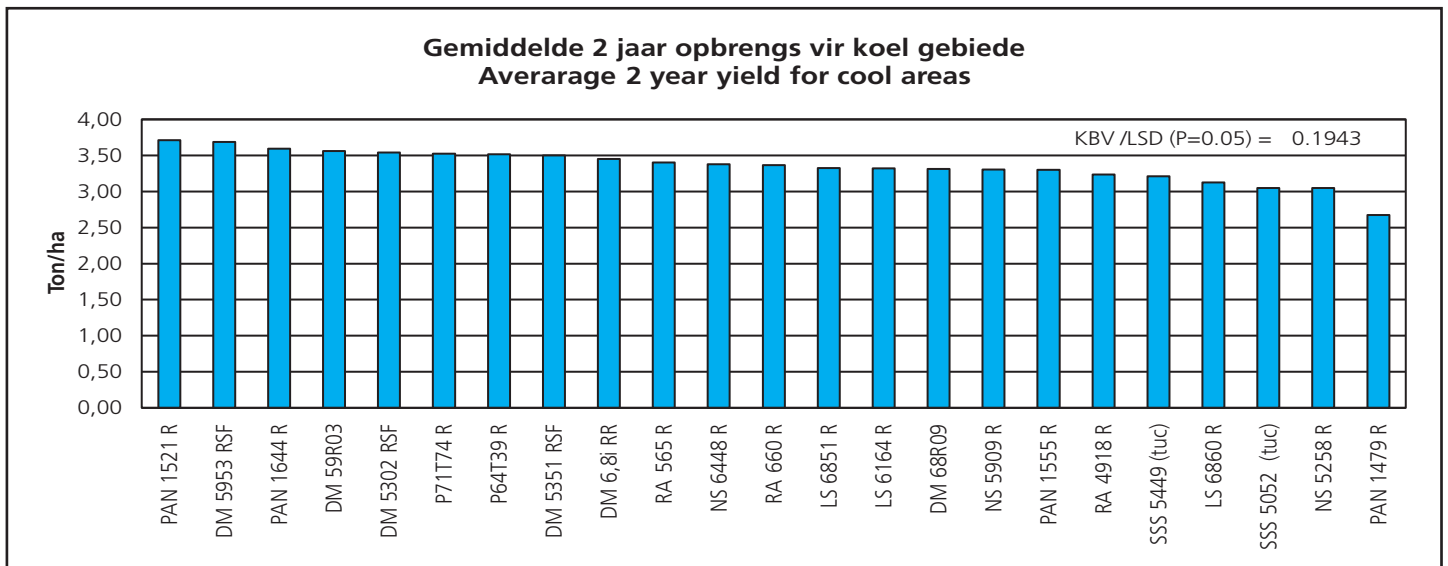
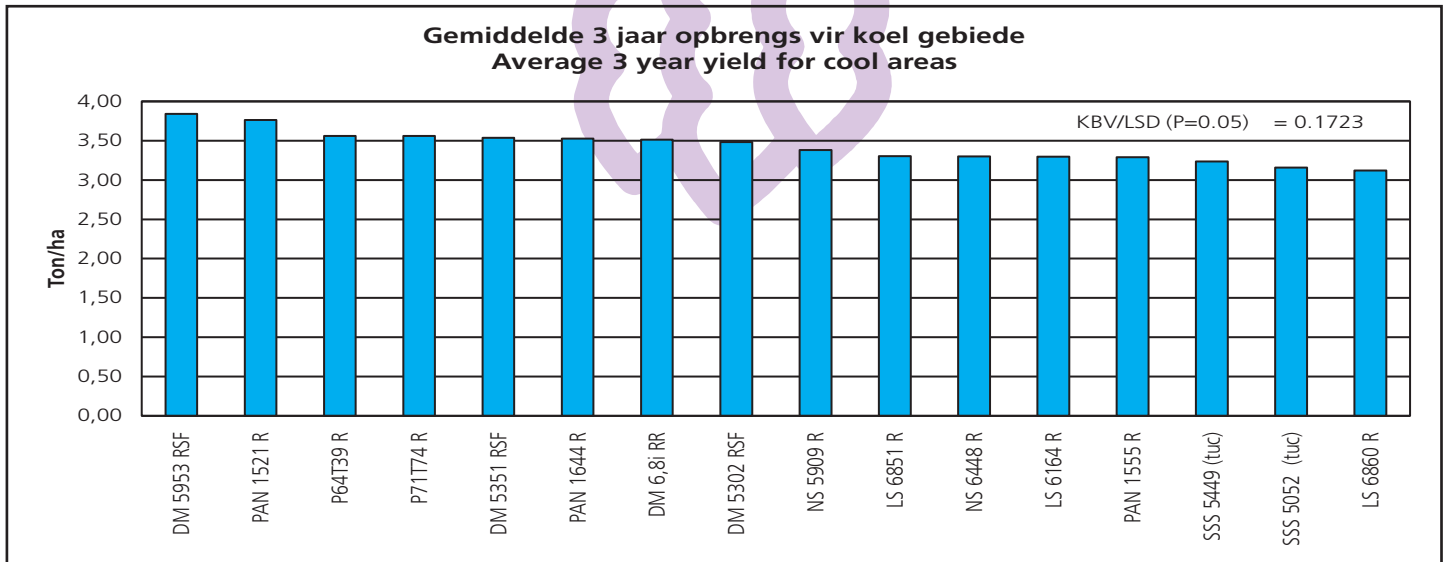
Kultivar/ Cultivar	Volwassen - heidsgroe - pering/Maturity Grouping	Groei - wyse/ Growth habit ¹	Hilum kleur/ Hilum colour ²	Peulhoogte/Pod height ³			Opspring/Shattering ⁴			Verskaffer/ Supplier
				Koel/Cool	Matig/ Moderate	Warm	Koel/Cool	Matig/ Moderate	Warm	
PAN 1479 R	4.7	I	BL	5	8	8	1.14	1.00	1.00	Pannar
DM 5953 RSF	4.8	I	IB	7	10	10	1.05	1.00	1.00	GDM Seeds
NS 5258 R	4.9	I	BL	5	9	9	1.24	1.00	1.00	Limagrain (K2)
RA 4918 R	4.9	I	BL	7	10	12	1.24	1.00	1.00	Agri Seed
DM 5351 RSF	5.1	I	IB	7	11	10	1.10	1.00	1.00	GDM Seeds
SSS 5449 (tuc)	5.2	I	B	10	12	13	1.14	1.00	1.00	Syngenta (Sensako)
Y540	5.4	I	B	9	11	14	1.00	1.00	1.00	Southern Hemisphere Seeds
RA 565 R	5.5	I	B	11	13	13	1.00	1.00	1.00	Agri Seed
LS 6851 R	5.5	D	B	9	13	8	1.00	1.00	1.00	Limagrain
SSS 5052 (tuc)	5.5	I	B	11	14	16	1.00	1.00	1.00	Sensako
P57T19 R	5.7	I	DB	14	16	17	1.00	1.00	1.00	Corteva Agriscience RSA
PAN 1555 R	5.7	I	B	14	16	21	1.00	1.00	1.00	Pannar
PAN 1521 R	5.7	I	IB	13	15	17	1.00	1.00	1.00	Pannar
DM 5302 RSF	5.7	I	LB	10	12	11	1.00	1.00	1.00	GDM Seeds
RA5921 R	5.9	I	LB	10	10	14	1.00	1.00	1.00	Agri Seed
PAN 1588 R	5.9	I	IB	13	14	16	1.00	1.00	1.00	Pannar
NS 5909 R	5.9	I	IB	13	16	17	1.00	1.00	1.00	Limagrain (K2)
RA 660 R	6.0	I	B	11	14	16	1.00	1.00	1.00	Agri Seed
DM 59R03	6.0	I	LB	14	15	19	1.00	1.00	1.00	GDM Seeds
LS 6164 R	6.1	I	LB	14	14	21	1.00	1.00	1.00	Limagrain
LS 6860 R	6.2	I	B	14	16	20	1.00	1.00	1.00	Limagrain
P62T16R	6.2	I	B	13	15	17	1.00	1.00	1.00	Corteva Agriscience RSA
Y627	6.2	I	B	11	13	19	1.00	1.00	1.00	Southern Hemisphere Seeds
PAN 1692 R	6.3	I	BL	14	14	16	1.00	1.00	1.00	Pannar
P64T39 R	6.4	I	KL	14	15	19	1.00	1.00	1.00	Pioneer
NS 6448 R	6.4	SD	LB	10	14	13	1.00	1.00	1.00	Limagrain (K2)
RA650RS	6.5	I	B	15	15	19	1.00	1.00	1.00	Agri Seed
Y657	6.5	I	B	13	15	23	1.00	1.00	1.00	Southern Hemisphere Seeds
DM 68R09	6.6	I	B	11	14	18	1.00	1.00	1.00	GDM Seeds
PAN 1644 R	6.7	I	IB	11	15	21	1.00	1.00	1.00	Pannar
DM 6.8i RR	6.8	I	B	11	18	21	1.00	1.00	1.00	GDM Seeds
P71T74 R	7.1	I	KL	14	16	24	1.14	1.00	1.00	Pioneer

¹ D - Bepaald/Determinate; I - Onbepaald/Indeterminate; SD - Semi-bepaald/Semi Determinate

² BL - Swart/Black; IB - Onvolledig swart/imperfect black; B - Bruin/Brown; LB - Ligbruin/Buf; G - Grys/Grey; KL - Kleurloos/Buf

³ Peulhoogte in cm/Pod height in cm

⁴ Geneigtheid tot oopspring geëvalueer op 'n skaal van 1-5, waar 1 = min en 5 = baie/Tendency to shatter evaluated on a scale from 1-5, where 1 = few and 5 = numerous



Tabel 4 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2019/20, 2020/21 en 2021/22 vir die koeler droëland produksiegebiede by verskillende opbrengspotensiaal

Table 4 Yield probability (%) of cultivars in the 2019/20, 2020/21 and 2021/22 for the cooler dryland production areas at different yield potentials

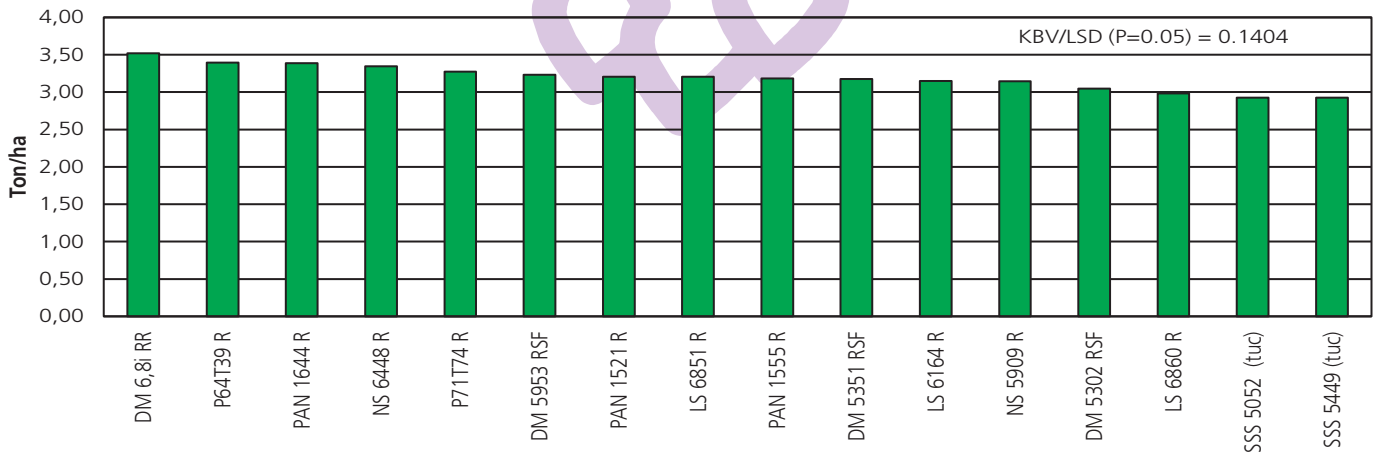
Kultivar Cultivar	Opbrengswaarskynlikheid/Yield potential (t/ha)								Regressielyn/Regression line	
	1.5	2	2.5	3	3.5	4	4.5	5	Fprob	R ²
DM 5953 RSF	91	88	84	79	73	65	57	50	0.0038	0.38
DM 5351 RSF	79	75	70	64	57	51	44	38	0.0027	0.40
SSS 5449 (tuc)	65	58	51	44	36	29	23	19	<0.001	0.64
LS 6851 R	65	60	53	46	39	33	27	23	<0.001	0.67
SSS 5052 (tuc)	25	25	26	26	27	28	30	31	<0.001	0.79
PAN 1555 R	36	36	37	39	40	41	43	44	<0.001	0.79
PAN 1521 R	88	85	81	77	71	64	58	51	<0.001	0.74
DM 5302 RSF	79	74	68	61	53	46	38	31	<0.001	0.58
NS 5909 R	26	31	36	43	49	56	62	68	<0.001	0.89
LS 6164 R	43	42	42	41	40	40	40	40	<0.001	0.83
LS 6860 R	11	15	20	25	32	39	47	56	<0.001	0.88
P64T39 R	49	51	53	55	57	59	60	61	<0.001	0.63
NS 6448 R	19	23	29	35	43	50	58	65	<0.001	0.72
PAN 1644 R	41	45	49	52	57	60	64	67	<0.001	0.84
DM 6,8i RR	37	41	46	51	56	61	66	70	<0.001	0.86
P71T74 R	19	27	37	48	60	71	79	86	<0.001	0.85

Tabel 5 Graanopbrengs (T ha⁻¹) van kultivars gedurende die 2020/21 en 2021/22 groeiseisoene ten opsigte van die verskillende lokaliteite wat in die koeler droëland produksiegebiede geleë is

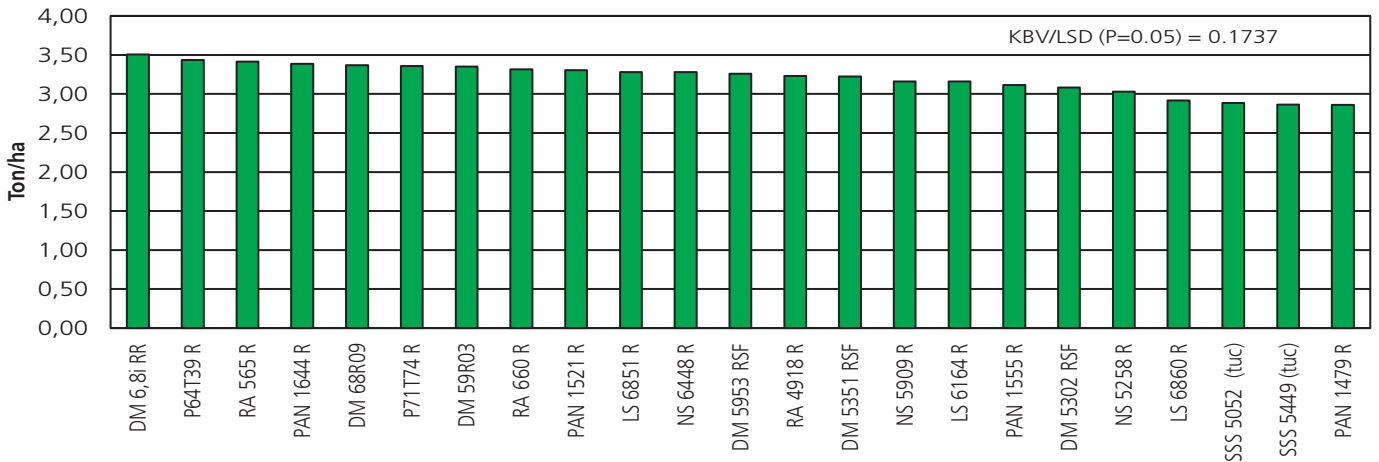
Table 5 Grain yield (T ha⁻¹) of cultivars during the 2020/21 and 2021/22 growing season for the various localities situated in the cooler dryland production areas

Kultivar / Cultivar	2020/21										2021/22								
	Bapsfontein	Belfast	Bethlehem PD1	Bethlehem PD2	Clarens	Kinross	Standerton	Villiers	Winterton	Gem/Mean	Bapsfontein PD2	Belfast	Bethlehem PD1	Bethlehem PD2	Clarens	Delmas	Standerton	Winterton	Gem/Mean
PAN 1479 R	2.98	3.95	3.01	2.07	2.12	1.80	2.13	1.90	3.40	2.60	2.79	3.06	2.69	1.49	1.07	3.55	3.40	4.05	2.76
DM 5953 RSF	2.87	3.73	4.59	4.52	3.09	3.58	2.43	2.36	4.61	3.53	2.26	4.68	4.19	3.71	3.62	4.00	3.26	5.20	3.86
NS 5258 R	3.00	3.33	3.37	2.17	1.83	2.42	2.43	2.38	4.47	2.82	3.00	4.08	3.39	1.88	2.05	4.08	2.86	5.06	3.30
RA 4918 R	3.08	4.06	3.63	2.73	2.09	2.17	2.50	2.61	4.53	3.05	2.78	4.31	3.34	2.40	1.77	4.44	3.62	4.92	3.45
DM 5351 RSF	2.29	4.14	4.12	3.20	2.05	3.15	2.87	2.79	4.58	3.24	3.60	4.54	3.51	2.72	2.92	4.60	3.48	4.92	3.79
SSS 5449 (tuc)	2.92	2.51	3.22	2.98	2.13	3.13	2.50	2.62	3.49	2.83	3.08	4.11	3.63	2.42	3.30	4.00	3.77	4.79	3.64
Y540	-	-	-	-	-	-	-	-	-	-	3.33	4.58	4.29	2.24	2.50	3.99	2.91	5.13	3.62
RA 565 R	2.99	2.70	3.51	2.62	2.49	3.07	3.39	2.52	5.08	3.15	3.43	3.50	4.03	1.83	2.98	4.52	3.89	5.30	3.69
LS 6851 R	3.61	2.28	3.31	3.48	2.81	2.86	3.02	2.89	4.09	3.15	3.07	3.97	3.81	2.33	3.15	3.14	3.88	4.84	3.52
SSS 5052 (tuc)	3.99	1.97	3.47	3.13	2.67	2.53	3.19	2.05	3.92	2.99	2.78	2.93	3.49	1.56	2.21	3.97	3.85	4.13	3.12
P57T19 R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.09	3.67	4.50	3.58	3.22	3.67	3.97	5.18	3.86
PAN 1555 R	3.27	3.44	3.28	3.01	2.79	3.59	2.72	2.96	4.28	3.26	3.51	3.21	4.01	2.25	1.01	3.98	4.36	4.45	3.35
PAN 1521 R	3.90	3.75	4.52	4.11	2.97	4.11	3.27	2.54	4.28	3.72	2.67	4.12	4.36	3.43	2.81	3.39	4.21	4.63	3.70
DM 5302 RSF	3.12	3.64	4.45	3.04	2.54	2.87	3.28	2.64	3.40	3.22	3.33	4.54	4.21	2.80	3.54	3.62	4.58	4.60	3.90
RA5921 R	-	-	-	-	-	-	-	-	-	-	3.41	4.43	3.75	2.44	2.49	4.11	3.78	4.54	3.62
PAN 1588R	-	-	-	-	-	-	-	-	-	-	3.04	3.28	3.68	1.64	2.34	3.49	4.19	4.49	3.27
NS 5909 R	3.58	2.61	3.74	3.04	2.77	3.41	3.19	2.59	4.23	3.24	2.06	3.18	3.90	2.73	1.85	3.57	4.44	5.28	3.38
RA 660 R	3.64	2.05	3.65	3.01	3.00	2.02	3.05	3.08	4.56	3.12	3.44	4.16	4.19	1.92	2.57	3.91	3.93	5.03	3.64
DM 59R03	2.81	1.91	4.97	3.57	2.89	3.71	3.12	2.78	4.00	3.31	2.93	4.01	4.03	3.87	3.02	3.69	5.05	4.17	3.84
LS 6164 R	3.23	2.54	3.63	3.39	2.71	3.08	2.68	2.98	4.28	3.17	2.97	3.62	4.28	3.04	1.83	3.27	4.79	4.13	3.49
LS 6860 R	2.21	2.00	4.16	3.04	2.22	2.93	2.63	3.11	4.36	2.96	2.71	3.24	3.61	2.58	1.33	3.72	4.43	4.85	3.31
P62T16R	-	-	-	-	-	-	-	-	-	-	3.32	3.70	4.37	2.52	0.99	3.06	4.26	4.76	3.37
Y627	-	-	-	-	-	-	-	-	-	-	3.35	3.79	3.45	2.34	2.02	3.54	4.07	6.17	3.59
PAN 1692 R	-	-	-	-	-	-	-	-	-	-	3.14	3.55	3.52	2.25	2.64	3.63	4.04	5.59	3.55
P64T39 R	3.40	2.64	4.26	4.57	2.42	3.95	3.08	2.47	4.61	3.49	3.13	2.98	4.70	3.97	1.74	3.40	4.61	3.84	3.55
NS 6448 R	3.49	3.04	3.65	2.78	2.58	2.99	2.75	2.42	4.94	3.18	2.98	3.81	3.93	2.39	1.11	3.31	4.69	6.56	3.60
RA6520RS	-	-	-	-	-	-	-	-	-	-	1.36	3.20	4.19	3.08	0.27	3.43	3.80	4.95	3.03
Y657	-	-	-	-	-	-	-	-	-	-	3.93	5.02	3.93	2.32	3.52	4.16	4.47	6.09	4.18
DM 68R09	3.50	2.71	4.25	2.52	2.52	3.50	3.47	2.46	4.23	3.24	3.55	3.97	4.55	2.82	1.64	3.79	3.93	2.92	3.40
PAN 1644 R	3.81	2.20	4.56	3.22	2.71	3.55	3.24	2.90	4.97	3.46	2.78	4.14	4.37	2.41	2.96	4.19	4.04	5.05	3.74
DM 6,8i RR	3.88	3.51	4.02	3.85	2.73	2.90	3.03	3.10	4.64	3.39	1.92	3.86	3.41	2.90	1.53	3.75	4.33	5.32	3.38
P71T74 R	3.48	2.15	3.44	3.72	2.42	3.34	2.95	3.18	5.50	3.35	2.72	4.07	4.62	3.09	1.89	3.72	4.90	4.75	3.72
DM 52R19	2.22	3.50	3.36	2.62	1.77	2.47	2.91	2.30	4.09	2.80	-	-	-	-	-	-	-	-	-
PAN 1532 R	3.04	2.87	3.15	2.89	1.81	3.01	3.20	1.32	4.03	2.87	-	-	-	-	-	-	-	-	-
LG60155R	2.79	1.80	4.05	4.28	2.27	3.55	3.06	2.36	3.84	3.11	-	-	-	-	-	-	-	-	-
RA 568 R	3.28	2.94	3.47	2.98	2.80	2.20	3.26	2.65	4.25	3.09	-	-	-	-	-	-	-	-	-
DM 60T05	3.86	2.87	3.98	3.35	2.89	2.50	3.18	2.08	4.92	3.29	-	-	-	-	-	-	-	-	-
SSS 6560 (tuc)	3.01	2.38	3.76	2.85	2.18	2.99	2.85	2.57	3.92	2.94	-	-	-	-	-	-	-	-	-
P61T38 R	3.15	2.83	3.78	2.93	2.60	3.58	2.85	2.83	4.39	3.22	-	-	-	-	-	-	-	-	-
Gem/Mean	3.21	2.87	3.81	3.19	2.50	3.03	2.94	2.58	4.33	3.16	2.98	3.85	3.94	2.59	2.25	3.77	4.06	4.87	3.54

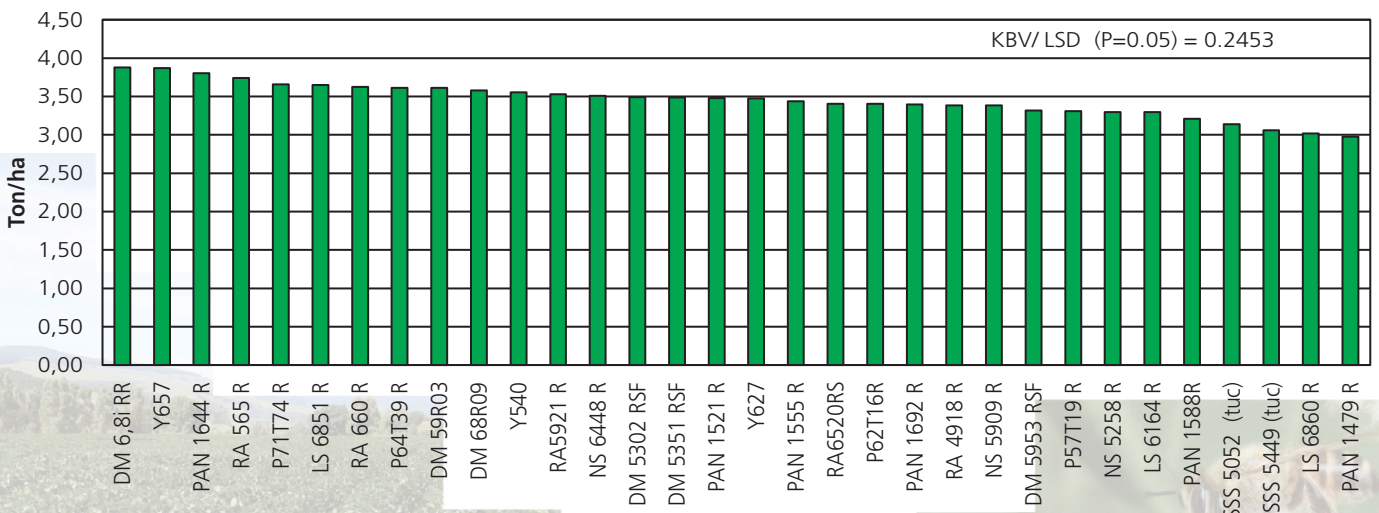
Gemiddelde 3 jaar opbrengs vir matige gebied
Average 3 year yield for moderate areas



Gemiddelde 2 jaar opbrengs vir matige gebiede
Average 2 year yield for moderate areas



Gemiddelde 1 jaar opbrengs vir matige gebiede
Average 1 year yield for moderate areas



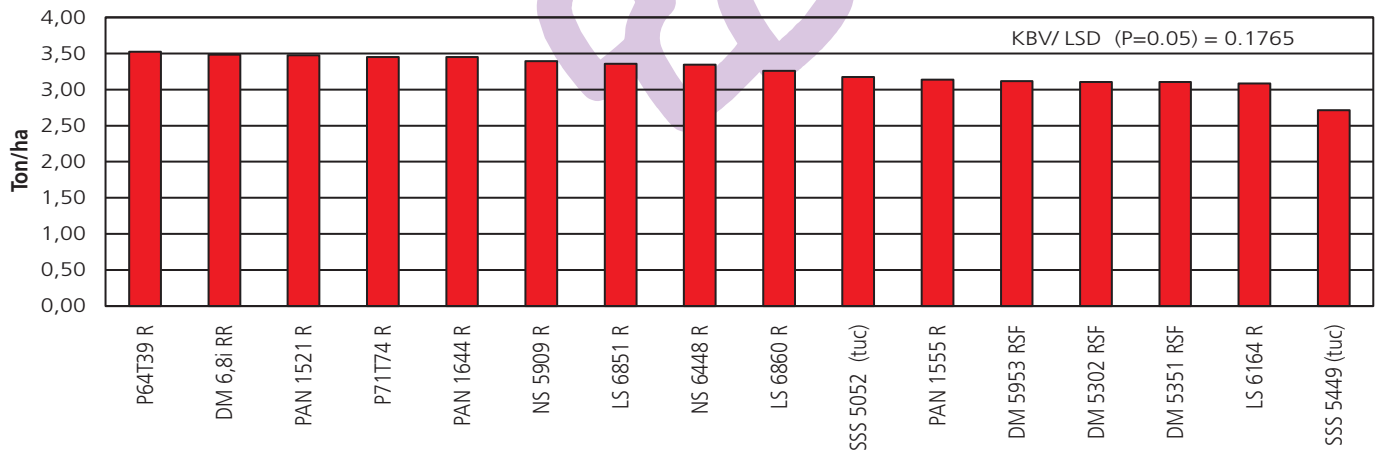
Tabel 6 Opbrengswaarskynlikheid (%) van kultivars geëvalueer in 2019/20, 2020/21 en 2021/22 vir die matige droëland produksiegebiede by verskillende opbrengspotensiaal
Table 6 Yield probability (%) of cultivars evaluated in 2019/20, 2020/21 and 2021/22 for the moderate dryland production areas at different yield potentials

Kultivar / Cultivar	Opbrengswaarskynlikheid/Yield potential (t/ha)								Regressielyne/Regression	
	1.5	2	2.5	3	3.5	4	4.5	5	Fprob	R ²
DM 5953 RSF	66	62	58	53	48	44	40	36	<0.001	0.78
DM 5351 RSF	12	22	36	54	71	83	92	96	<0.001	0.92
SSS 5449 (tuc)	40	37	33	29	26	24	22	20	<0.001	0.82
LS 6851 R	40	42	43	46	47	49	51	53	<0.001	0.93
SSS 5052 (tuc)	49	40	32	24	18	13	9	7	<0.001	0.81
PAN 1555 R	32	34	35	38	41	42	46	49	<0.001	0.94
PAN 1521 R	70	65	59	53	46	40	34	29	<0.001	0.90
DM 5302 RSF	36	34	33	33	32	31	32	31	<0.001	0.88
NS 5909 R	50	47	41	36	31	27	25	22	<0.001	0.94
LS 6164 R	57	54	52	50	47	45	43	40	<0.001	0.87
LS 6860 R	39	35	31	28	25	23	22	20	<0.001	0.89
P64T39 R	69	69	69	70	69	68	68	67	<0.001	0.87
NS 6448 R	63	65	66	68	69	68	69	69	<0.001	0.91
PAN 1644 R	62	64	65	67	69	70	71	72	<0.001	0.87
DM 6,8i RR	67	70	73	75	77	78	80	80	<0.001	0.80

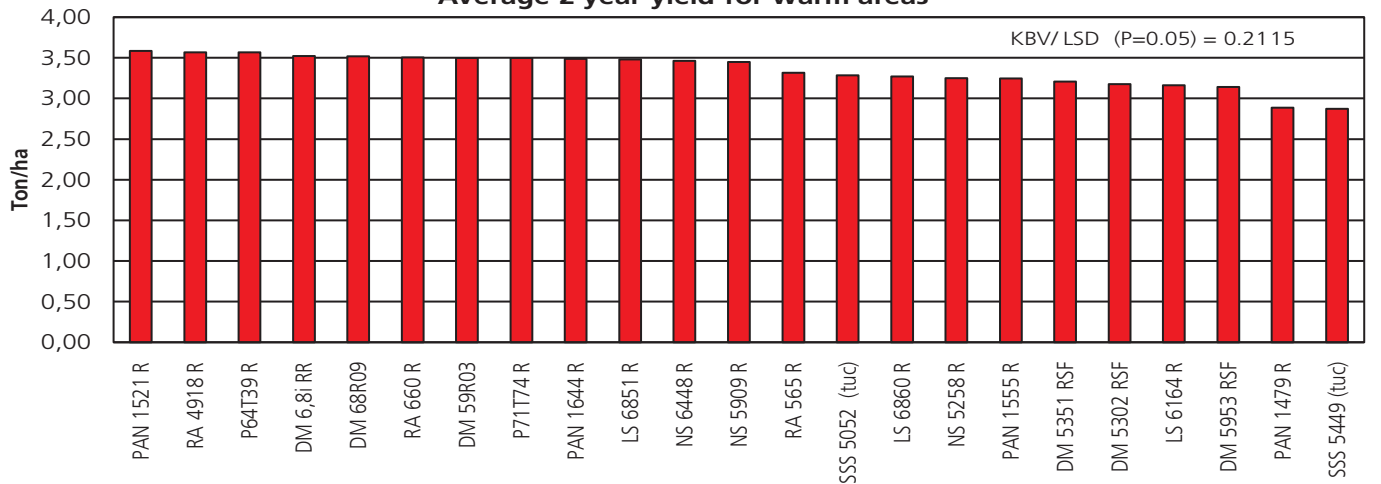
Tabel 7 Graanopbrengs (T ha⁻¹) van kultivars gedurende die 2020/21 en 2021/22 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die matige droëland produksiegebiede geleë is
Table 7 Grain yield (T ha⁻¹) of cultivars during the 2020/21 and 2021/22 growing season for the various localities situated in the moderate dryland production areas

Kultivar / Cultivar	2020/21									2021/22							
	Barberspan	Bergville	Cedara	Greytown	Kroonstad	Leeudoringstad	Potchefstroom	Stoffberg	Gem/Mean	Barberspan	Bergville	Cedara	Greytown	Kroonstad	Leeudoringstad	Potchefstroom	Gem/Mean
PAN 1479 R	1.73	3.40	4.30	2.27	2.39	1.95	2.57	3.46	2.76	2.64	2.84	4.10	2.86	2.64	1.68	4.07	2.98
DM 5953 RSF	3.32	4.20	4.34	2.60	2.38	2.07	3.11	3.63	3.21	2.40	2.90	4.65	2.77	2.95	2.55	4.99	3.32
NS 5258 R	1.25	3.36	4.51	2.40	2.36	2.03	2.66	3.80	2.80	1.51	2.91	4.29	3.41	2.94	2.70	5.34	3.30
RA 4918 R	1.71	3.58	4.75	2.51	3.53	2.00	2.83	3.85	3.10	1.64	3.33	4.13	3.13	3.23	2.78	5.46	3.38
DM 5351 RSF	1.65	3.48	4.83	2.54	2.91	1.40	3.25	3.92	3.00	3.13	2.99	5.28	3.52	2.90	1.13	5.46	3.49
SSS 5449 (tuc)	1.69	2.42	3.67	2.33	3.07	1.83	2.40	4.12	2.69	2.42	2.85	4.01	3.10	2.72	1.39	4.92	3.06
Y540	-	-	-	-	-	-	-	-	-	3.15	3.44	4.22	2.87	2.99	3.22	4.99	3.56
RA 565 R	1.73	4.32	4.07	2.84	3.02	1.69	3.44	3.90	3.12	2.71	3.57	4.48	3.05	3.46	3.86	5.07	3.74
LS 6851 R	1.87	3.90	4.40	2.25	3.07	1.77	3.03	3.34	2.95	2.36	4.01	4.68	2.96	3.77	2.89	4.90	3.65
SSS 5052 (tuc)	1.64	4.14	2.83	2.53	2.34	1.58	3.08	3.15	2.66	2.48	3.04	4.23	2.77	3.26	1.46	4.71	3.14
P57T19 R	-	-	-	-	-	-	-	-	-	2.29	3.51	4.80	2.79	3.16	1.48	5.12	3.31
PAN 1555 R	1.66	3.91	4.09	2.62	3.21	1.23	2.61	3.34	2.83	2.41	3.77	4.45	2.61	3.54	2.47	4.80	3.44
PAN 1521 R	2.55	4.27	4.52	2.47	3.23	2.07	2.78	3.34	3.15	2.32	3.95	4.37	2.57	3.63	2.61	4.89	3.48
DM 5302 RSF	1.44	3.38	3.70	2.60	2.59	1.68	2.72	3.67	2.72	2.79	2.89	4.22	3.19	3.81	2.53	5.03	3.49
RA5921 R	-	-	-	-	-	-	-	-	-	2.61	3.72	4.49	2.92	3.02	3.46	4.50	3.53
PAN 1588R	-	-	-	-	-	-	-	-	-	2.21	3.44	3.68	2.73	3.43	2.35	4.61	3.21
NS 5909 R	2.12	3.89	4.19	2.56	2.93	1.98	2.67	3.39	2.97	2.88	3.73	4.46	2.92	3.34	1.72	4.63	3.38
RA 660 R	1.45	3.82	3.78	2.93	3.24	2.35	2.99	3.81	3.05	2.96	3.36	4.83	3.00	3.40	2.33	5.51	3.63
DM 59R03	1.53	4.41	3.86	2.39	3.12	2.16	3.36	4.16	3.12	2.95	3.73	4.24	2.69	3.20	3.12	5.34	3.61
LS 6164 R	1.68	3.85	4.26	2.30	3.55	1.97	3.02	3.71	3.04	2.15	3.08	4.29	2.75	3.57	2.04	5.19	3.30
LS 6860 R	1.27	3.66	3.90	2.68	2.86	1.92	2.92	3.40	2.83	2.38	3.06	4.33	2.45	3.06	1.46	4.37	3.02
P62T16R	-	-	-	-	-	-	-	-	-	2.00	3.61	4.32	2.64	3.42	2.36	5.47	3.40
Y627	-	-	-	-	-	-	-	-	-	2.44	3.92	4.02	2.94	3.18	3.12	4.72	3.48
PAN 1692 R	-	-	-	-	-	-	-	-	-	2.43	3.14	4.38	2.87	3.28	2.48	5.19	3.40
P64T39 R	1.95	4.23	3.89	2.87	3.63	2.28	3.39	4.02	3.28	3.68	3.64	4.40	2.54	3.44	2.07	5.51	3.61
NS 6448 R	2.04	4.12	3.90	2.51	3.17	1.86	3.32	3.70	3.08	3.02	3.17	4.87	2.76	3.41	2.45	4.91	3.51
RA6520RS	-	-	-	-	-	-	-	-	-	2.05	3.82	4.14	3.30	3.46	2.09	4.98	3.41
Y657	-	-	-	-	-	-	-	-	-	3.18	4.45	4.02	2.90	3.44	3.81	5.30	3.87
DM 68R09	1.74	4.40	4.18	2.83	3.16	2.07	3.01	4.07	3.18	2.96	3.30	4.67	2.92	3.65	2.66	4.90	3.58
PAN 1644 R	1.25	4.22	4.25	2.59	3.31	1.72	3.10	3.75	3.02	2.98	3.67	4.88	2.98	3.69	3.63	4.81	3.80
DM 6,8i RR	1.67	3.65	5.09	2.45	2.82	2.32	3.67	3.78	3.18	3.38	3.14	5.09	2.66	3.75	4.07	5.06	3.88
P71T74 R	2.30	3.81	4.31	2.53	3.17	1.71	3.39	3.54	3.09	2.92	3.30	4.99	2.51	3.33	3.28	5.27	3.66
DM 52R19	1.76	3.50	5.01	2.51	2.15	1.75	3.58	4.31	3.07	-	-	-	-	-	-	-	-
PAN 1532 R	1.49	4.06	3.91	2.47	2.91	1.68	3.11	3.33	2.87	-	-	-	-	-	-	-	-
LG60155R	1.63	3.88	2.11	2.64	2.81	1.64	3.18	3.81	2.71	-	-	-	-	-	-	-	-
RA 568 R	1.19	3.53	3.57	2.51	3.51	1.85	2.72	3.45	2.79	-	-	-	-	-	-	-	-
DM 60T05	1.79	4.24	4.13	2.53	3.26	1.87	2.87	3.99	3.08	-	-	-	-	-	-	-	-
SSS 6560 (tuc)	1.73	3.78	3.59	2.70	3.09	1.28	2.81	4.22	2.90	-	-	-	-	-	-	-	-
P61T38 R	1.78	3.98	4.12	2.61	2.66	1.57	3.25	4.11	3.01	-	-	-	-	-	-	-	-
Gem/Mean	1.75	3.85	4.07	2.55	2.98	1.84	3.03	3.74	2.98	2.61	3.42	4.44	2.88	3.31	2.54	5.00	3.46

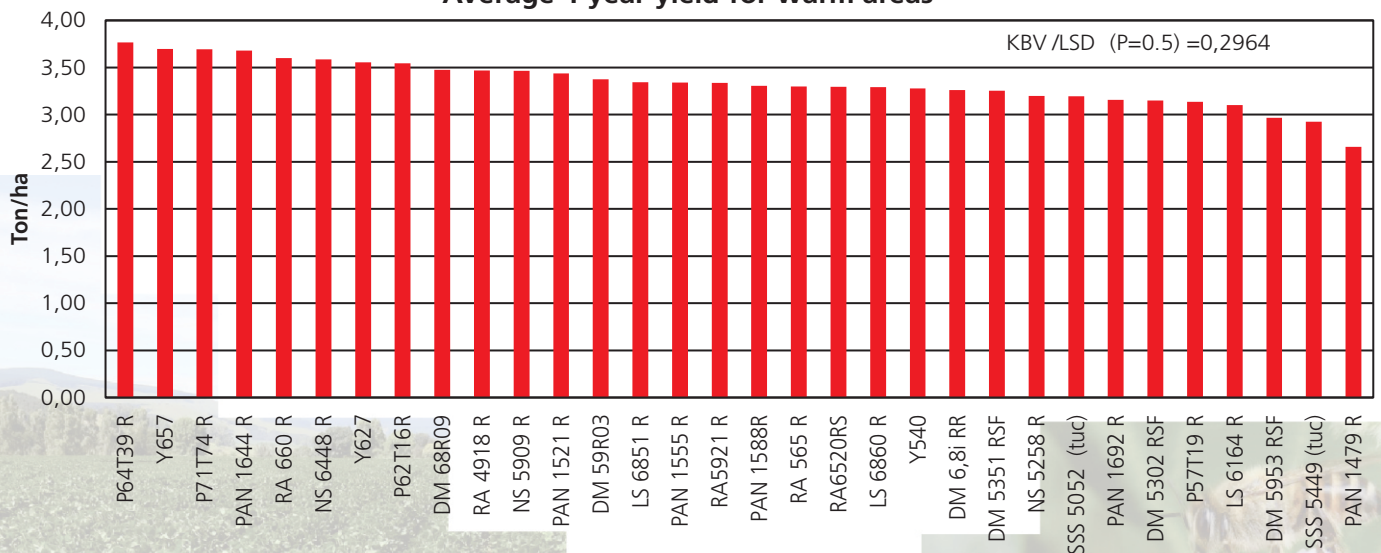
Gemiddelde 3 jaar opbrengs vir warm gebiede
Average 3 year yield for warm areas



Gemiddelde 2 jaar opbrengs vir warm gebiede
Average 2 year yield for warm areas



Gemiddelde 1 jaar opbrengs vir warm gebiede
Average 1 year yield for warm areas



Tabel 8 Opbrenghwaarskynlikheid (%) van kultivars geëvalueer in 2019/20, 2020/21 en 2021/22 vir die warm droëland produksiegebiede by verskillende opbrengspotensiaal

Table 8 Yield probability (%) of cultivars evaluated in 2019/20, 2020/21 and 2021/22 for the warm dryland production areas at different yield potentials

Kultivar / Cultivar	Opbrengswaarskynlikheid/Yield potential (t/ha)							Regressielyne/Regression line	
	2.0	2.5	3.0	3.5	4.0	4.5	5.0	Fprob	R ²
DM 5953 RSF	46	44	43	42	41	39	39	<0.001	0.69
DM 5351 RSF	38	39	40	41	42	43	44	<0.001	0.84
SSS 5449 (tuc)	30	26	22	18	15	13	11	<0.001	0.78
LS 6851 R	62	60	57	55	52	49	47	<0.001	0.82
SSS 5052 (tuc)	42	43	44	44	45	46	47	<0.001	0.91
PAN 1555 R	48	46	44	41	39	37	35	<0.001	0.83
PAN 1521 R	63	64	64	65	65	65	65	<0.001	0.88
DM 5302 RSF	36	37	40	42	45	48	50	<0.001	0.80
NS 5909 R	53	54	57	58	60	62	63	<0.001	0.78
LS 6164 R	52	47	41	36	31	27	24	<0.001	0.82
LS 6860 R	56	53	51	49	47	44	42	<0.001	0.77
P64T39 R	63	64	65	66	67	67	68	<0.001	0.83
NS 6448 R	53	54	56	56	58	58	59	<0.001	0.90
PAN 1644 R	50	54	59	64	69	72	76	<0.001	0.88
DM 6.8i RR	55	58	61	64	66	68	70	<0.001	0.80
P71T74 R	55	57	59	61	62	64	65	<0.001	0.74

Tabel 9 Graanopbrengs (kg/ha⁻¹) van kultivars gedurende die 2020/21 en 2021/22 groeiseisoen ten opsigte van die verskillende lokaliteite wat in die warm droëland produksiegebiede geleë is

Table 9 Grain yield (kg/ha⁻¹) of cultivars during the 2020/21 and 2021/22 growing season for the various localities situated in the warm dryland production areas

Kultivar/ Cultivar	2020/21							2021/22						
	Brits	Groblersdal (Agricol)	Groblersdal (Agri Seed)	Marble Hall	Schweizer- Reneke PD1	Schweizer- Reneke PD2	Gem	Groblersdal (Agri-Seeds)	Groblersdal ARC	Hoopstad	Pyramid	Schweizer- Reneke PD1	Schweizer- Reneke PD2	Gem/Mean
PAN 1479 R	3.51	3.72	3.47	2.99	2.80	2.22	3.12	3.00	3.05	3.99	2.47	2.38	1.06	2.66
DM 5953 RSF	3.96	3.36	3.40	3.52	3.33	2.32	3.32	3.15	3.74	5.38	2.04	2.11	1.38	2.97
NS 5258 R	4.32	3.79	3.20	2.47	3.91	2.13	3.30	3.51	3.42	5.07	2.31	3.49	1.37	3.20
RA 4918 R	5.12	4.08	3.45	3.09	3.78	2.47	3.66	3.44	4.55	5.46	2.58	3.34	1.44	3.47
DM 5351 RSF	3.31	3.51	3.50	2.48	4.31	1.85	3.16	3.33	4.21	4.95	1.74	3.61	1.69	3.26
SSS 5449 (tuc)	3.23	2.47	2.91	2.19	3.71	2.42	2.82	3.64	3.49	4.16	2.33	2.70	1.22	2.92
Y540	-	-	-	-	-	-	-	3.42	3.81	5.27	2.07	3.45	1.66	3.28
RA 565 R	3.92	3.41	3.45	2.98	3.59	2.65	3.33	3.44	4.59	5.05	2.32	2.88	1.51	3.30
LS 6851 R	4.02	4.39	3.50	2.68	4.14	2.95	3.61	3.82	4.82	4.15	2.88	2.52	1.85	3.34
SSS 5052 (tuc)	3.70	3.79	3.40	2.90	4.23	2.25	3.38	4.04	4.30	4.35	1.80	3.18	1.49	3.19
P57T19 R	-	-	-	-	-	-	-	3.09	3.76	4.60	2.46	3.32	1.59	3.14
PAN 1555 R	3.50	3.60	2.86	2.37	4.59	1.98	3.15	3.52	4.08	4.31	2.33	3.91	1.90	3.34
PAN 1521 R	4.67	4.31	3.65	3.37	4.17	2.24	3.73	3.86	4.58	4.22	2.42	3.89	1.65	3.44
DM 5302 RSF	4.24	3.31	3.29	2.58	3.31	2.46	3.20	3.39	4.69	4.99	2.76	1.80	1.28	3.15
RA5921 R	-	-	-	-	-	-	-	3.99	4.21	4.45	2.38	3.21	1.79	3.34
PAN 1588R	-	-	-	-	-	-	-	4.08	4.80	3.40	2.30	3.43	1.83	3.31
NS 5909 R	5.32	3.06	3.10	2.63	4.16	2.33	3.43	3.79	5.22	4.01	2.25	3.73	1.79	3.47
RA 660 R	4.07	2.99	3.38	2.72	4.63	2.68	3.41	3.54	4.73	4.58	3.10	3.49	2.15	3.60
DM 59R03	4.66	3.44	3.65	3.71	4.00	2.26	3.62	3.43	4.33	4.20	2.42	3.43	2.45	3.37
LS 6164 R	3.91	3.38	3.38	2.82	3.17	2.68	3.22	3.23	4.72	3.85	2.25	3.02	1.53	3.10
LS 6860 R	4.66	3.35	2.71	2.46	3.82	2.50	3.25	3.39	4.70	3.67	2.59	3.60	1.81	3.29
P62T16R	-	-	-	-	-	-	-	3.67	5.07	4.40	2.57	3.63	1.93	3.55
Y627	-	-	-	-	-	-	-	3.94	5.07	4.21	2.25	4.02	1.85	3.56
PAN 1692 R	-	-	-	-	-	-	-	3.49	4.36	3.73	2.55	3.35	1.46	3.16
P64T39 R	4.48	3.53	3.30	2.81	3.99	2.08	3.36	3.89	4.56	5.45	2.61	4.07	2.03	3.77
NS 6448 R	3.72	3.87	2.87	2.93	4.16	2.50	3.34	3.61	5.22	4.69	2.96	3.36	1.68	3.59
RA6520RS	-	-	-	-	-	-	-	3.54	4.73	3.98	2.00	3.52	1.99	3.29
Y657	-	-	-	-	-	-	-	4.07	5.36	4.85	1.64	4.20	2.07	3.70
DM 68R09	3.84	4.46	3.07	2.87	4.26	2.87	3.56	3.53	4.85	4.46	2.44	3.37	2.20	3.47
PAN 1644 R	3.76	3.68	3.34	2.15	4.77	2.09	3.30	4.21	4.94	5.20	2.70	3.11	1.91	3.68
DM 6,8i RR	4.81	4.47	3.32	3.05	4.55	2.48	3.78	2.91	4.33	5.01	2.07	3.18	2.06	3.26
P71T74 R	3.80	4.39	3.03	2.64	3.69	2.24	3.30	3.78	4.93	4.96	2.76	3.80	1.94	3.70
DM 52R19	3.97	4.43	3.75	2.67	3.25	1.89	3.33	-	-	-	-	-	-	-
PAN 1532 R	3.95	3.87	3.45	3.01	3.40	2.30	3.33	-	-	-	-	-	-	-
LG60155R	4.54	3.43	2.96	2.92	3.31	2.07	3.21	-	-	-	-	-	-	-
RA 568 R	4.52	4.54	3.38	2.21	4.05	2.47	3.53	-	-	-	-	-	-	-
DM 60T05	4.46	4.50	3.40	3.46	4.21	2.22	3.71	-	-	-	-	-	-	-
SSS 6560 (tuc)	3.50	4.12	3.35	2.74	4.04	2.43	3.37	-	-	-	-	-	-	-
P61T38 R	3.20	3.70	3.61	2.76	3.98	2.30	3.26	-	-	-	-	-	-	-
Gem/Mean	4.09	3.76	3.30	2.81	3.91	2.34	3.37	3.59	4.48	4.53	2.39	3.32	1.74	3.34

VERDERE INLIGTING



Volledige inligting oor die Nasionale Sojaboon Kultivarproewe en 'n nuttige bron van inligting oor sojaboonproduksie naamlik "Sojaboon produksiehandleiding" is beskikbaar by:

LNR-Graangewasse
 Privaatsak X1251, Chris Hani Straat 114, Potchefstroom 2520
 Tel.: 018 299 6100 | Faks: 018 294 7146

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

ERKENNING

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FURTHER INFORMATION



Detailed information regarding the National Soybean Cultivar Trials and an information guide regarding Soybean production can be obtained from:

ARC-Grain Crops
 Private Bag X1251, Chris Hani Street 114, Potchefstroom 2520
 Tel.: 018 299 6100 | Fax: 018 294 7146

*** Cultivars that are discussed in this report are the only cultivars evaluated and recommended by the ARC.**

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Oil & Protein Seed Development Trust



Olie- & Proteïensade Ontwikkelingstrust