Sonneblomkultivaraanbevelings vir 2013/2014

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Die handhawing van ‘n hoë vlak van doeltreffendheid, is die grondslag vir die finansiële sukses van graanproduksie. Die seleksie van goed aangepaste kultivars is ’n goedkoop en eenvoudige manier om doeltreffendheid te bevorder en daarvoor is inligting oor die prestasie van kultivars nodig.

Die doel van die nasionale sonneblom-kultivarevaluasieproewe is om dié inligting te verskaf, waaruit sinvolle kultivarkeuses vir ‘n bepaalde opbrengspotensiaal gemaak kan word.

Die kultivar-aanbevelings in dié dokument spruit voort uit samewerking tussen die LNR-IGG, Olie- en Proteïensadeontwikkelingstrust, verskeie saadmaatskappye en ‘n landboubesigheid.

Sewentien kultivars, waarvan ses nuwes, is in 15 veldproewe gedurende 2012/2013 geëvalueer. Tabel 1 toon die groeiseisoenlengtes van dié kultivars asook die gemiddelde opbrengste wat in 2011/2012 en 2012/2013 behaal is.

Tabel 2 toon die oessekerheidswaardes van die kultivars wat in 2012/2013 geëvalueer is, aan. Oessekerheidswaardes, wat die verwagte toekomstige prestasie van kultivars is, word aan die einde van Tabel 3 verder verduidelik.

Weens die jaarlikse toevoeging en onttrekking van kultivars, is ‘n meerjarige oesskerheidsevaluasie op slegs ‘n beperkte aantal kultivars moontlik. Tabel 3 toon oessekerheidswaardes van 11 kultivars wat in 2011/2012 en 2012/2013 geëvalueer is, aan.

Tabel 3 kan gebruik word om ‘n kern seleksie van kultivars te maak. Hierdie kern kan aangevul word met kultivars uit Tabelle 1 en 2. Dit is altyd raadsaam om minstens twee kultivars te plant en om nuwe kultivars slegs op ‘n beperkte skaal in te sluit.

Sunflower cultivar recommendations for 2013/2014

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Maintaining a high level of efficiency is the basis for the financial success of grain production. The selection of well-adapted cultivars is a simple and easy way to foster efficiency for which information on the performance of cultivars is needed.

The aim of the sunflower cultivar trials is to generate such information from which a thorough selection of cultivars for a given yield potential can be made.

The cultivar recommendations in this document stem from such an evaluation, made possible by collaboration among the ARC-GCI, the Oil, Protein Seed Development Trust, several seed companies and an agri-business.

Seventeen cultivars, of which six were new introductions, were evaluated in 15 field trials during 2012/2013. Table 1 shows the growing season lengths of the cultivars as well as their mean seed yields of 2011/2012 and 2012/2013.

Table 2 shows yield reliability values for the cultivars tested in 2012/2013. Yield reliability values, which are the future expected performances of cultivars, are further explained at the end of Table 3.

Since new cultivars are introduced and some removed annually, a multi-season reliability analysis is only possible for a limited number of cultivars. Table 3 shows yield reliability values for 11 cultivars that were evaluated in 2011/2012 and 2012/2013.

Table 3 can be used to select a core of cultivars. Cultivars selected from Tables 1 and 2 can be added to the core selection. It is advisable to use at least two cultivars and to include new cultivars on a limited scale only.

Tabel 1 Dae tot blom en saadopbrengs van kultivars in 2011/2012 en 2012/2013 geëvalueer

***Table 1 Days to flowering and seed yield of cultivars evaluated in* 2011/2012 and 2012/2013**

Kultivar/ *Cultivar*	Dae tot 50% blom/*Days to 50% flowering*	Opbrengs/*Yield* (t ha^{-1})		
		2011/2012	2012/2013	Gemiddeld/ *Mean*
AGSUN 5264	64	2.13	2.09	2.11
AGSUN 5270	64	-	2.25	-
AGSUN 5271	65	-	2.13	-
AGSUN 5272	66	-	2.12	-
AGSUN 5278	65	2.19	2.20	2.20
AGSUN 5279	63	-	2.12	-
AGSUN 8251	65	2.11	2.25	2.18
CAP 4000	62	2.08	1.66	1.87
PAN 7033	66	2.13	2.10	2.12
PAN 7049	64	2.20	2.19	2.20
PAN 7057	65	2.13	2.11	2.12
PAN 7080	65	2.25	2.26	2.26
PAN 7031 CL	65	-	2.09	-
PAN 7095 CL	65	-	2.27	-
PHB 65A25	68	2.02	2.00	2.01
SY4045	62	1.92	2.10	2.01
SY4200	67	2.07	1.98	2.03

Kultivarseleksie uit die oessekerheidstabel

Bepaal eerstens die opbrengspotensiaal van ‘n land en stel dan ‘n opbrengsmikpunt. Die langtermyn gemiddelde opbrengs is gewoonlik ‘n goeie aanduiding van die opbrengspotensiaal wat dikwels ook as die mikpunt dien. Raadpleeg vervolgens die oessekerheidstabelle. Kultivars met die hoogste oessekerheidswaardes, wat in die kolom onder ‘n bepaalde opbrengsmikpunt getoon word, is dié wat die beste in die bepaalde omstandighede behoort te presteer.

Cultivar selection from the yield reliability table

Determine the yield potential for a particular field and set a yield target. The long-term mean yield of a particular field is usually a good indicator of the yield potential which can also serve as yield target. Consult the yield reliability tables next. Cultivars with the highest yield reliability values, in the column below a particular yield target, are those with the highest probability to perform well under the particular conditions.

Tabel 2 Oessekerheid (t ha^{-1}) van kultivars by verskillende opbrengsmikpunte, gemiddelde opbrengs en opbrengsstabiliteit (D-parameter) in 2012/2013 behaal

Table 2 Yield reliability (t ha^{-1}) of cultivars at different yield targets, mean yield recorded and yield stability (D-parameter) obtained in 2012/2013

Kultivar/Cultivar	Opbrengsmikpunt/Yield target (t ha^{-1})						Mean (t ha^{-1})	D-parameter††
	1	1.5	2	2.5	3	3.5		
AGSUN 5264	**0.77***	**1.27**	**1.77**	2.27	2.78	3.28	2.09	0.02
AGSUN 5270	**0.78**	**1.33**	**1.87**	**2.42**	**2.96**	**3.51**	2.25	0.03
AGSUN 5271	0.50	1.05	1.60	2.16	2.71	3.27	2.13	0.08
AGSUN 5272	0.48	1.02	1.57	2.11	2.65	3.20	2.12	0.10
AGSUN 5278	**0.89**	**1.37**	**1.85**	**2.32**	**2.80**	3.28	2.20	0.03
AGSUN 5279	0.43	1.00	1.58	2.16	2.73	3.31	2.12	0.09
AGSUN 8251	0.68	1.20	1.73	2.25	2.78	3.30	2.25	0.09
CAP 4000	0.42	0.78	1.14	1.50	1.86	2.21	1.66	0.10
PAN 7033	0.74	1.22	1.71	2.19	2.68	3.16	2.10	0.04
PAN 7049	0.62	1.19	1.75	**2.32**	**2.88**	**3.45**	2.19	0.05
PAN 7057	0.72	1.24	**1.77**	**2.29**	**2.82**	**3.34**	2.11	0.03
PAN 7080	**0.82**	**1.35**	**1.88**	**2.41**	**2.93**	**3.46**	2.26	0.04
PAN 7031 CL	0.71	1.20	1.69	2.18	2.67	3.16	2.09	0.05
PAN 7095 CL	**0.87**	**1.30**	1.73	2.17	2.60	3.04	2.27	0.10
PHB 65A25	0.74	1.19	1.64	2.08	2.53	2.98	2.00	0.03
SY4045	0.58	1.08	1.59	2.10	2.60	3.11	2.10	0.08
SY4200	0.72	1.15	1.59	2.03	2.46	2.90	1.98	0.04

* Vet gedrukte waardes is hoër as die kolomgemiddeld / *Bold printed values are higher than the column mean.*
†† Laer D-parameter waardes dui op groter opbrengsstabiliteit */ Lower D-parameter values indicate higher yield stability.*

Tabel 3 Oessekerheid (t ha^{-1}) by verskillende opbrengsmikpunte, gemiddelde opbrengs en opbrengsstabiliteit (D-parameter) in 2011/2012 en 2012/2013 behaal

Table 3 Yield reliability* (t ha^{-1}) *at different yield targets, mean yield recorded and yield stability (D-parameter)* obtained in *2011/2012 and 2012/2013

Kultivar/ Cultivar	Opbrengsmikpunt/Yield target (t ha^{-1})						Mean (t ha^{-1})	D-parameter††
	1	1.5	2	2.5	3	3.5		
AGSUN 5264	**0.79***	**1.30**	**1.81**	2.32	2.83	3.34	2.11	0.03
AGSUN 5278	**0.80**	**1.33**	**1.86**	**2.39**	**2.93**	**3.46**	2.19	0.03
AGSUN 8251	0.59	1.15	1.72	2.29	2.85	3.42	2.18	0.08
CAP4000	0.40	0.83	1.27	1.70	2.13	2.56	1.85	0.15
PAN 7033	0.69	1.21	1.72	2.24	2.75	3.27	2.12	0.05
PAN 7049	0.69	1.23	1.78	2.33	2.88	3.42	2.19	0.06
PAN 7057	0.66	1.21	1.75	2.30	2.84	3.39	2.12	0.04
PAN 7080	0.68	1.26	**1.84**	**2.43**	**3.01**	**3.59**	2.25	0.06
PHB 65A25	0.72	1.19	1.66	2.14	2.61	3.08	2.01	0.04
SY 4045	0.70	1.16	1.61	2.07	2.53	2.98	2.02	0.06
SY 4200	0.58	1.07	1.56	2.05	2.54	3.03	2.02	0.08

* Vet gedrukte waardes is hoër as die kolomgemiddeld */ Bold printed values are higher than the column mean*
†† Laer D-parameter waardes dui op groter opbrengsstabiliteit / *Lower D-parameter values indicate higher yield stability*

Oessekerheid

Oessekerheid is die onderste 90%-betroubaarheidsgrens van die regressie tussen ‘n betrokke kultivar se opbrengste en die gemiddelde opbrengste van al die kultivars van proewe op verskeie lokaliteite. Die oessekerheidswaarde van ‘n kultivar, by ‘n bepaalde opbrengspotensiaal, is die opbrengs wat daardie kultivar in nege uit die tien gevalle behoort te oortref. Oessekerheid neem die opbrengsgeneigdheid, gemiddelde opbrengs en riskantheid in ag en is daarom ‘n betroubare maatstaf vir kultivarkeuse.

Yield reliability

Yield reliability is the lower 90% confidence limit of the regression between the yields of a particular cultivar and the trial mean yields of all cultivars at several localities. The yield reliability of a cultivar at a selected yield potential, is the yield that the particular cultivar is expected to exceed nine out of ten times. The yield reliability takes the yield tendency, mean yield and risk into account and is therefore a reliable measure for cultivar selection.