

DS PASCAL



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- High yielding early season line
- Market leading pre-harvest sprouting tolerance
- Excellent yield under irrigation
- Australian Premium White (APW) Classification in Southern NSW, Victoria and South Australia
- Good standability and harvestability

BREEDING - FAWWON105/CFR00-687-55

DS Pascal (ADV08.0062) is a Dow Seeds line from the Advantage wheats program in collaboration with CSIRO.

The cross and initial screenings were undertaken in New Zealand by Plant and Food Research, involving parents from a CIMMYT nursery in Turkey and a New Zealand breeding line. The line was imported through quarantine and extensively tested in Australia since 2010 and first entered NVT (National Variety Trials) testing in 2013.

PRE-HARVEST SPROUTING TOLERANCE

DS Pascal exhibits market leading Pre-Harvest Sprouting (PHS) tolerance, being significantly better than Estoc and Yitpi when comparing germination index, and on par with industry PHS donor line SUN325b (Figure 1).

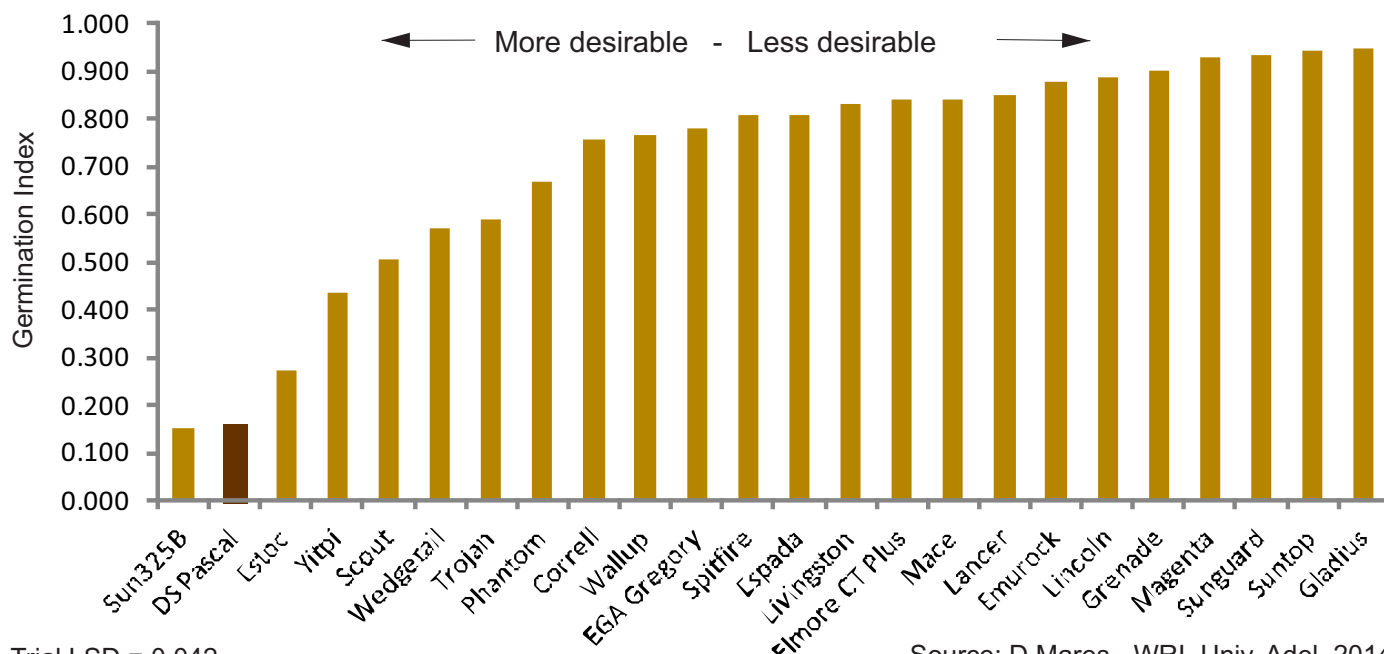
In a single rain affected harvest near Cowra in 2014, DS Pascal was observed to have acceptable (421) falling number, whereas Chara was rejected (220) and Gregory and Janz were both below 340.

PLANT TYPE

DS Pascal is an early season spring line, with heading date 1-2 days quicker than Bolac, making it suitable for sowing mid-late April and early May, providing a reasonably wide sowing window in southern NSW and Victoria.

DS Pascal is of medium height, with good standability and high yield potential under irrigation, with an appropriate sowing date.

Figure 1. Pre-harvest sprouting tolerance - Germination Index



Trial LSD = 0.042

Source: D Mares - WRI, Univ. Adel. 2014



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Table 1. Yield data from non-frost affected NVT sites 2014 in southern NSW and Dow Seeds MET (Multi-Environment Trial) data 2011-14, early sown trials

Region	South west		South west		South east		South east					
Nearest Town	Mayrung		Benerembah		Cumnock		Dow Seeds MET Data, 2011-14 early sown					
Water Regime	Irrigated		Irrigated		Dryland		Dryland					
Sowing date	1 May 2014		13 May 2014		9 Apr 2014		April sown trials			Early May sown trials		
Variety	T/ha	%	T/ha	%	T/ha	%	T/ha	%	No. Trials	T/ha	%	No. Trials
DS Pascal	8.27	112	7.96	100	3.66	138	4.13	114	6	5.04	104	14
Bolac	7.2	97	7.71	96	-	-	3.41	94	16	4.80	99	14
Chara	7.25	98	8.13	102	-	-	3.85	107	5	5.08	105	14
EGA Gregory	7.1	96	7.76	97	-	-	3.75	104	5	5.08	105	14
EGA Wedgetail	7.55	102	7.68	96	2.71	102	3.3	92	5	4.56	94	14
Flanker	7.39	100	7.77	97	-	-	-	-	0	-	-	-
Kiora	7.85	106	8.63	108	-	-	-	-	0	-	-	-
Lancer	7.4	100	7.98	100	3.12	117	3.55	98	1	4.87	101	1
Mitch	7.59	102	7.91	99	-	-	-	-	0	-	-	-
Suntop	7.64	103	8.19	103	-	-	3.62	100	2	5.24	108	10
Trojan	7.55	102	9.06	113	3.25	122	4.26	118	2	-	-	-
Viking	7.29	98	8.45	106	3.32	125	-	-	-	-	-	-
Site Mean	7.41	-	7.99	-	2.65	-	3.61	-	-	4.84	-	-
CV (%)	3.58	-	3.24	-	4.14	-	-	-	-	-	-	-
LSD (T/ha)	0.44	6	0.44	6	0.2	8	0.27	-	-	0.08	-	-

Note: - denotes no data is available



DS Pascal in front centre right plot.
Internal trials, Lake Bolac, south west Victoria.

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Table 2. Yield data from NVT MET data 2010-14 south west Victoria and Dow Seeds MET Data 2013-14 Victoria and South Australia

NVT MET Data SW Vic 2010-14				Dow Seeds MET Data 2013-14								
Variety	Pred. Av Yield (T/ha)	% Means	Total No. Trials	April sown Vic/SA trials (T/ha)	% Site mean	South west Vic (T/ha)	% Site mean	North east Vic (T/ha)	% Site mean	South east SA (T/ha)	% Site mean	Total No. Trials
DS Pascal	4.975	105	6	4.672	108	5.587	110	2.806	101	4.721	103	35
Bolac	4.744	100	15	4.420	102	5.258	104	2.725	98	4.772	104	31
Chara	4.579	97	15	4.529	105	5.274	104	2.790	100	4.428	96	23
Derrimut	4.582	97	6	-	-	-	-	-	-	-	-	-
EGA Gregory	4.561	96	9	4.072	94	4.329	85	2.790	100	4.488	98	25
Elmore CL Plus	4.644	98	9	-	-	-	-	-	-	-	-	-
Estoc	4.466	94	12	-	-	-	-	-	-	-	-	-
Forrest	4.697	99	12	4.427	102	4.911	97	2.831	102	4.760	104	30
Kellalac	4.494	95	15	4.693	109	4.775	94	2.805	101	4.757	104	21
Kiora	5.177	109	9	-	-	-	-	-	-	-	-	-
Scout	4.88	103	12	4.405	102	5.132	101	2.788	100	4.683	102	23
Trojan	5.062	107	6	4.52	105	5.38	106	-	-	4.6	100	5
Viking	4.783	101	6	-	-	-	-	-	-	-	-	-
Yenda	4.673	99	3	-	-	-	-	-	-	-	-	-
MET Means	4.737	100		4.319	100	5.078	100	2.787	100	4.595	100	

Note: - denotes no data is available

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Table 3. Disease resistance rating

Varieties	Stripe Rust	Stem Rust	Leaf Rust *New Pathotype	CCN	Crown Rot	Powdery Mildew	RLN – <i>P. Neglectus</i>	RLN - <i>P. Thornei</i>	<i>Septoria tritici</i>	Yellow Leaf Spot	Black Point
DS Pascal	MR	MS-S	MR-MS	-	MS-S	R-MR	MS-S	-	MS-S	MS	-
Bolac	R-MR	MR-MS	S	S	S	R-MR	MS-S	MS	MS	S	MS-S
Kiora	R-MR	R-MR	MR-MS (P)	MS	S	R-MR	MS	MR-MS	MS-S	MS-S	MR-MS
EGA Gregory	MR	MR	MR	S	S	R-MR	MS-S	MS-S	MS	S	MS
Suntop	MR-MS	MR	MR-MS (P)	S	MS-S	MR	MS-S	MR-MS(P)	S	MS-S	MR-MS
Lancer	MR	R	R-MR	S	MS-S	R	S-VS	MS	MS	MS	MR-MS
Trojan	MR	MR-MS	MR-MS(P)	MS	MS	MS-S	MS-S	MS	MS	MS-S	MR-MS
Scout	MS	MR	MR-MS(P)	R	S	MR	S-VS	S-VS	MS-S	S-VS	S
Yitpi	MR-MS	MS	S(P)	-	S	MR-MS	MS-S	S	MS-S	S-VS	MS
Phantom	MR	MS	MS-S(P)	MR-MS	MS-S	MR-MS	S-VS	S	MS	S-VS	MR-MS
Derrimut	MS-S	MR	MS(P)	R	MS	MR-MR	MS-S	S-VS	S	S	MS-S

Resistance Ratings

R = Resistant, R-MR = Resistant–Moderately Resistant, MR–MS = Moderately Resistant–Moderately Susceptible, MS = Moderately Susceptible, MS–S = Moderately Susceptible–Susceptible, S = Susceptible, S–VS = Susceptible–Very Susceptible, VS = Very Susceptible, - = no data available, (P) = provisional rating.



PBR and EPR

DS Pascal is protected by Plant Breeders Rights (PBR). In regard to propagating material (planting seed) of this variety, any unauthorised commercial production or reproduction, conditioning for propagation, offering for sale, sale, import, export or stocking of propagating material is an infringement under the Plant Breeders Rights Act 1994. Grower to grower trading of seed of DS Pascal is allowed from 2018-19.

DS Pascal growers will be subject to a Licence Agreement at the point of purchase that acknowledges an End Point Royalty (EPR) payment of \$4.25/tonne excluding GST to be paid on all production other than retained planting seed.

DISCLAIMER

The information contained in this document is a guide only and is written in good faith on the best knowledge and understanding at the time of writing. Grade eligibility is subject to meeting appropriate receival standards.

SEED AVAILABILITY

Seed is available through all accredited agents.

CONTACTS Dow Seeds

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