

PegasusAX[®]



- Carries CoAXium® herbicide tolerance (Aggressor® herbicide)
- A derivative of Rosalind[Ⓟ] with a similar plant type, offering a shorter plant structure and lower risk of lodging than the 'Compass[Ⓟ]' plant types like Titan AX[Ⓟ]
- Wide adaptation
- Quick-mid maturity, similar to Maximus[Ⓟ] CL and Rosalind[Ⓟ]
- Similar grain size as some other high yielding feed varieties including Rosalind[Ⓟ]
- FEED quality only

Breeder's comments

PegasusAX^ϕ carries tolerance to Sipcam Aggressor[®] herbicide (Group 1, Quizalofop-P-Ethyl), which allows growers to control susceptible populations of barley grass, brome grass, annual ryegrass, wild oats and other grass weeds in the barley phase of the rotation; offering an alternative to Clearfield[®] technology which growers have relied on for some time now.

Opportunistically discovered by Eyre Peninsula farmer Shannan Larwood in 2010, and further developed by the University of Adelaide, this novel herbicide tolerance trait has been bred into a range of widely adapted, high yielding backgrounds; with PegasusAX^ϕ being released to complement its stablemate Titan AX^ϕ.

Whilst Titan AX^ϕ is in a 'Compass^ϕ' style plant type (generally typified by good early vigour, a tall plant type more prone to lodging, and more suited to low-medium rainfall environments), PegasusAX^ϕ is in a 'Hindmarsh^ϕ' type background, offering a shorter, more compact plant type, and better suitability to medium-high rainfall environments.

Like it's parent Rosalind^ϕ, PegasusAX^ϕ produces smaller grain. PegasusAX^ϕ is a feed only variety.

PegasusAX^ϕ has produced yields similar to Titan AX^ϕ, and higher than Maximus^ϕ CL.

CoAXium[®] Barley Production System

PegasusAX^ϕ has been specifically developed to carry tolerance to Sipcam Aggressor[®] herbicide. Aggressor[®] is a Group 1 Quizalofop-P-Ethyl herbicide, offering post-emergent knockdown of major grass weeds including brome grass, barley grass, annual ryegrass, wild oats, and volunteer wheat and barley (non-Sipcam Aggressor[®] tolerant only). Sipcam Aggressor[®] herbicide has a wide application window and flexibility to be mixed with herbicides to control broadleaf weeds, with no carryover on soil or grain residue issues. Distribution of Sipcam Aggressor[®] herbicide and the CoAXium[®] stewardship program is administered by Sipcam.

Visit www.coaxium.com.au for more information.

PegasusAX¹

Table 1. Specifications

Background

Tested as	AGTB0667
Released	2024
EPR rate	\$4.15/tonne + GST

Disease

	NSW	SA	Vic
Leaf Rust resistance*	MRMS (P)	MS (P)	MRMS (P)
Powdery Mildew resistance*	S (P)	S (P)	S (P)
Net Blotch (Net Form) resistance*	NA	MRMS (P)	MR (P)
Net Blotch (Spot Form) resistance*	MSS (P)	MSS (P)	MSS (P)
Scald resistance*	MSS (P)	MSS (P)	S (P)
Barley Yellow Dwarf Virus resistance*	MS (P)	MS (P)	MS (P)
CCN resistance*	R	R	R
Pratylenchus Neglectus resistance*	MR (P)	MR (P)	MR (P)
Pratylenchus Neglectus tolerance*	NA	NA	NA
Pratylenchus Thornei resistance*	MRMS	MRMS	MRMS
Pratylenchus Thornei tolerance*	NA	NA	NA
Crown Rot resistance*	NA	NA	NA

Plant Characteristics

Maturity [^]	Quick-Mid
Maturity habit [^]	Spring
Sowing window [^]	Main & Late
Novel herbicide tolerance [^]	CoAXium® (Aggressor® herbicide)
Head type [^]	Awned
Early growth habit [^]	Erect
Rachilla hair [^]	Long

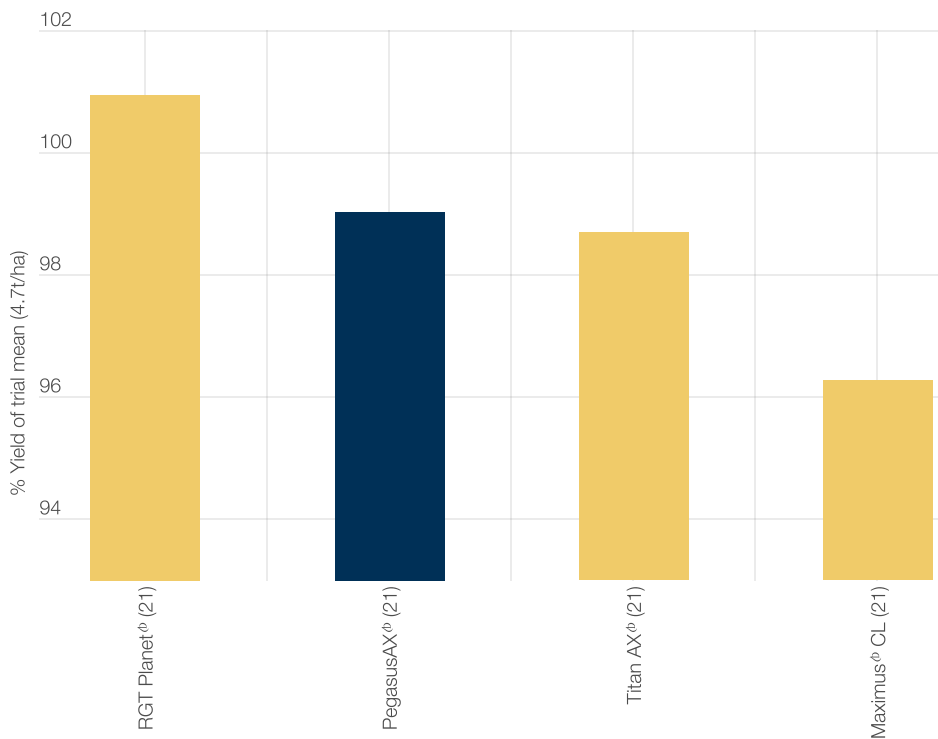
Grain Quality

Quality classification	FEED
Black Point resistance*	MSS (P)

Grain yield

PegasusAX[®] has been fast-tracked through our breeding program due to its excellent yield performance, yielding similarly to Titan AX[®] and higher than Maximus[®] CL (Figure 1). PegasusAX[®] was entered into a limited number of NVT trials in 2023, with wider testing being carried out in 2024. Please consult the NVT website for current data: <https://nvt.grdc.com.au/>

Figure 1. Predicted grain yield of PegasusAX[®] versus comparators - AGT data



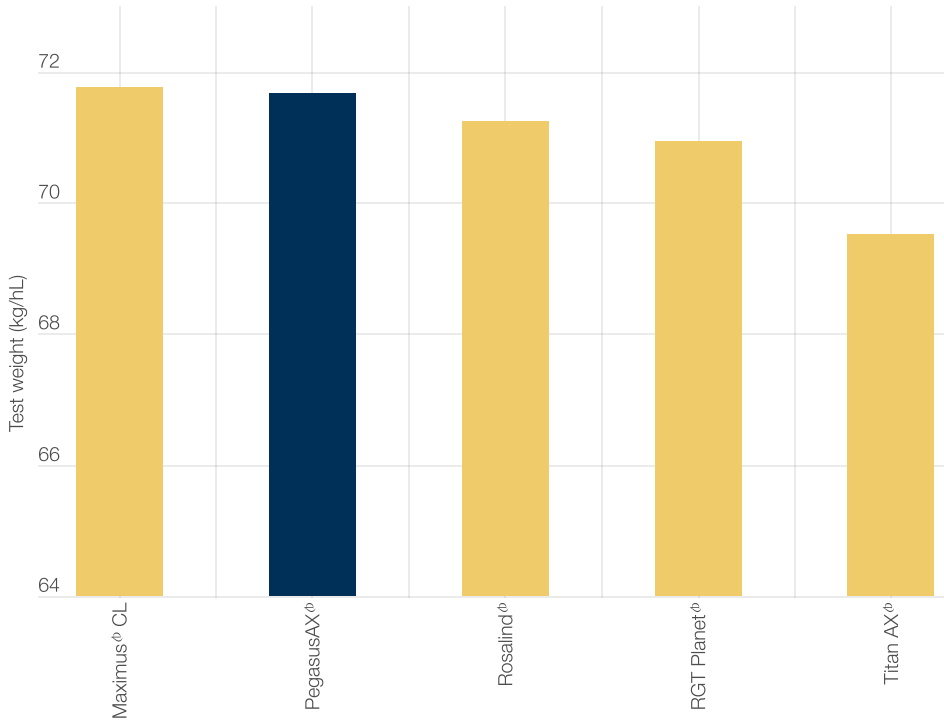
Source: AGT main season trial series 2021-2023 (21 trials across SA/VIC/southern NSW)

() : Number of trials that each variety was present in across the dataset

Grain quality

PegasusAX[®] has produced grain with good test weight; with higher levels of screenings and lower retention than Titan AX[®], similar to Rosalind[®] (Figures 2, 3 & 4).

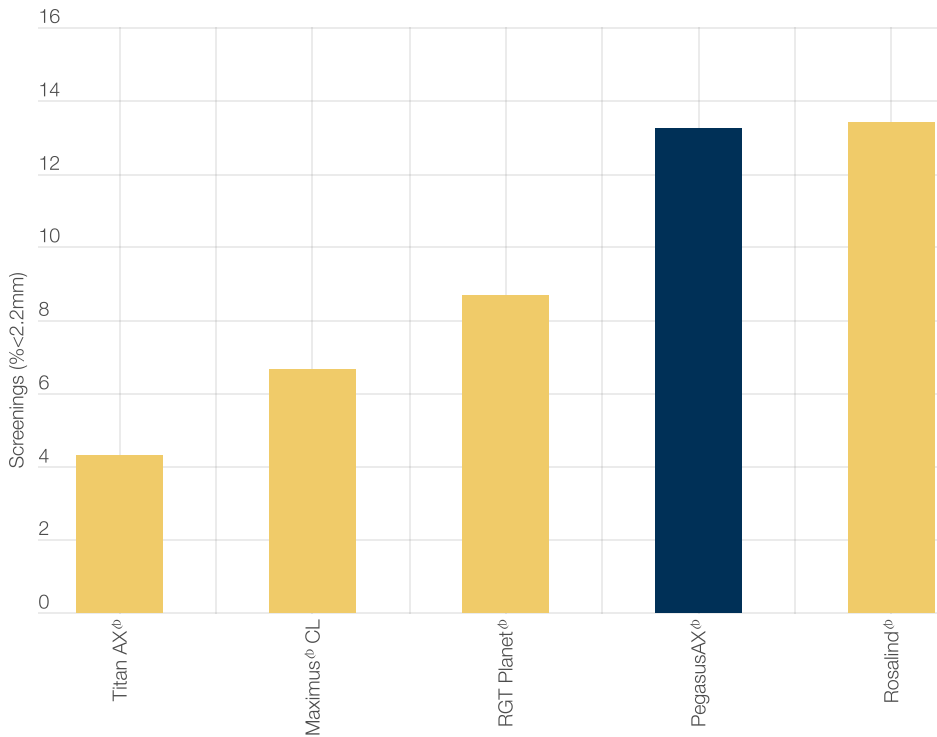
Figure 2. Test weight of PegasusAX[®] versus comparators



Source: NVT main season barley trial series 2023 (7 trials across SA's Upper Eyre Peninsula and Murray Mallee where all varieties were present)

Grain quality

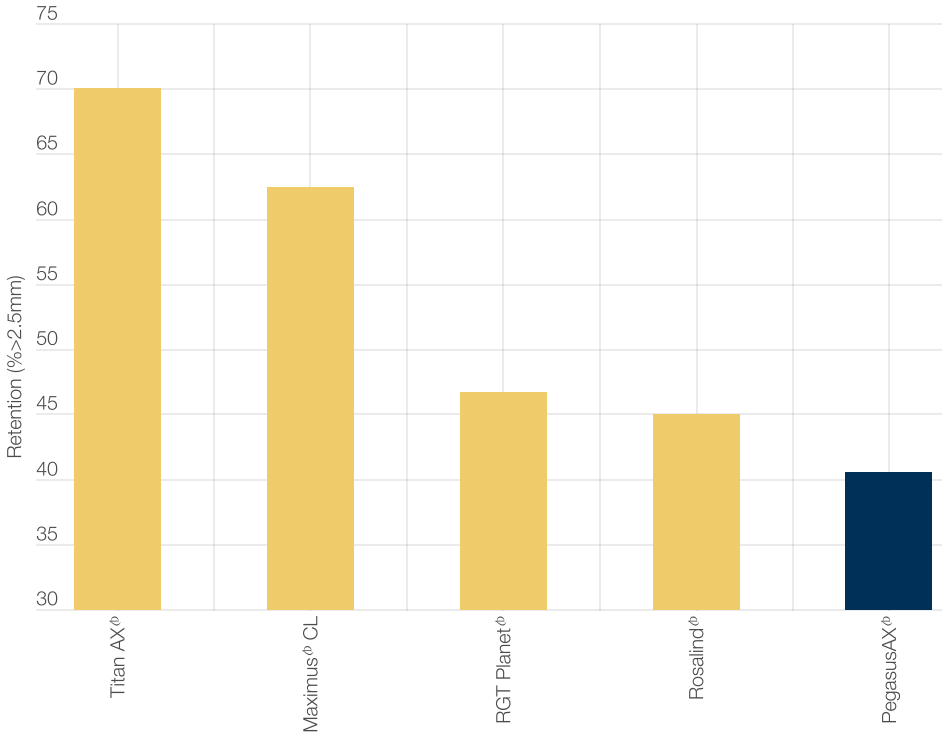
Figure 3. Screenings of PegasusAX[®] versus comparators



Source: NVT main season barley trial series 2023 (7 trials across SAs Upper Eyre Peninsula and Murray Mallee where all varieties were present)

Grain quality

Figure 4. Retention of PegasusAX[®] versus comparators

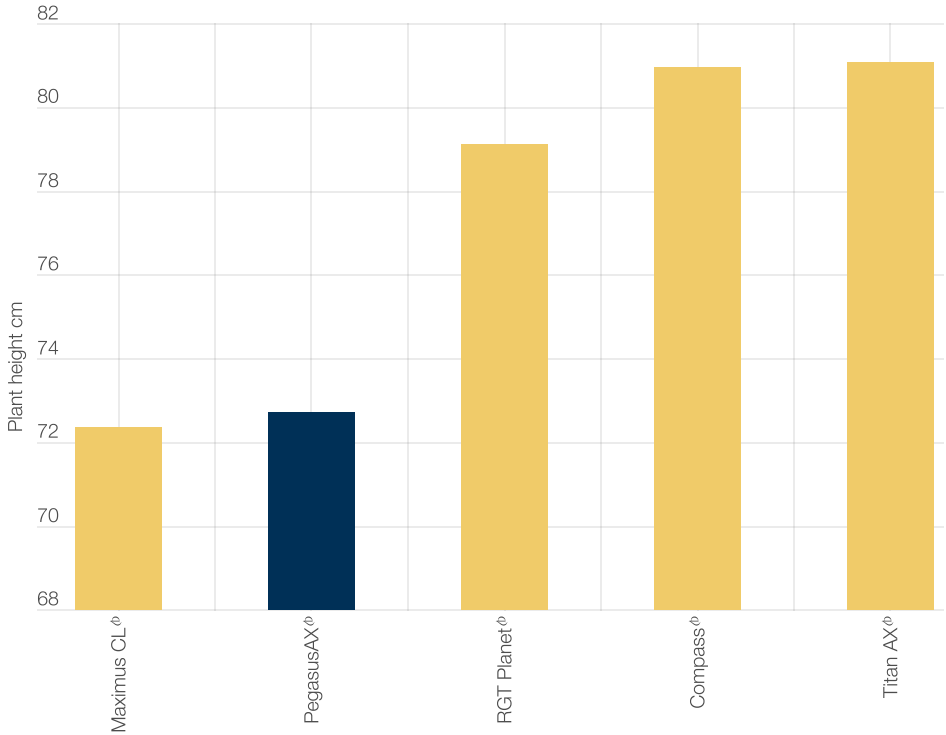


Source: NVT main season barley trial series 2023 (7 trials across SA's Upper Eyre Peninsula and Murray Mallee where all varieties were present)

Plant height and lodging

PegasusAX[®] shares a similar plant type to the Hindmarsh[®] family of barley varieties (which includes Maximus[®] CL), which is shorter, and therefore offers less risk of lodging than Compass[®] (and others closely related to Compass[®] including Titan AX[®]) (Figures 5 & 6).

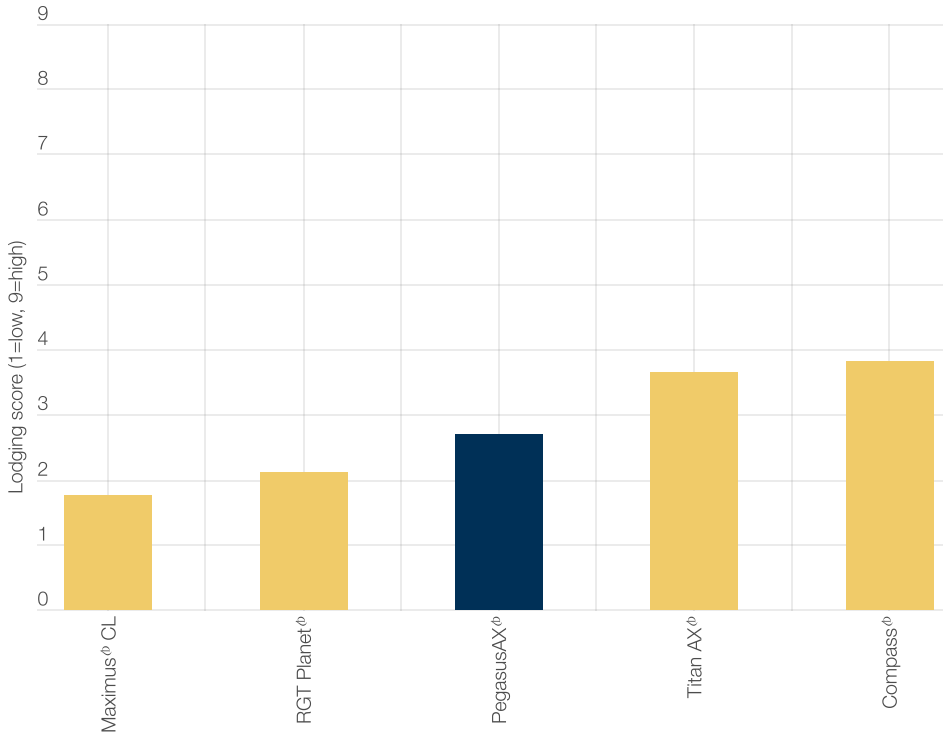
Figure 5. Plant height of PegasusAX[®] versus comparators



Source: AGT barley trials (4 trials across Australia, 2022-2023)

Plant height and lodging

Figure 6. Lodging of PegasusAX[®] versus comparators



Source: AGT barley trials (21 trials across Australia, 2021-2023)

Disease

Table 2. Variety comparisons

	PegasusAX ^o	Maximus ^o CL	RGT Planet ^o	Rosalind ^o	Titan AX ^o
Quality Classification	FEED	MALT	MALT	FEED	Potential MALT
Maturity [^]	Quick-mid	Quick-mid	Mid	Quick-mid	Mid-slow
Leaf Rust resistance* (SA)	MS (P)	S	S	MSS	SVS
Leaf Rust resistance* (VIC)	MRMS (P)	S	MRMS	MRMS	SVS
Leaf Rust resistance* (NSW)	MRMS (P)	MSS	MR	MR	SVS
Powdery Mildew resistance*	S (P)	S	RMR	MSS	MSS
Net Blotch (Net Form) resistance* (SA)	MRMS (P)	MR-MS	MRMS-SVS	MRMS	MRMS-S
Net Blotch (Net Form) resistance* (VIC)	MR (P)	MRMS	SVS	MR	MS
Net Blotch (Net Form) resistance* (NSW)	NA	MRMS	MSS	MR	MS
Net Blotch (Spot Form) resistance* (SA/VIC)	MSS (P)	MS	SVS	S	MS
Net Blotch (Spot Form) resistance* (NSW)	MSS (P)	MS	SVS	MSS	MSS
Scald resistance* (SA)	MSS (P)	R-SVS	R-SVS	MR-S	VS
Scald resistance* (VIC)	S (P)	SVS	SVS	S	VS
Scald resistance* (NSW)	MSS (P)	S	MSS	MSS	SVS
Barley Yellow Dwarf Virus resistance*	MS (P)	MRMS	MRMS	MRMS-MS	MS
CCN resistance*	R	R	R (P)	R	MR (P)
Pratylenchus Neglectus resistance*	MR (P)	MRMS	MRMS	MRMS	MR
Pratylenchus Neglectus tolerance*	NA	MT	MT	MT	NA
Pratylenchus Thornei resistance*	MRMS	MRMS	MR	MRMS	MR
Pratylenchus Thornei tolerance*	NA	MI	MI	TMT	TMT
Crown Rot resistance*	NA	S	MSS	S	S
Black Point resistance*	MSS (P)	MSS	MRMS	MS	MSS

Legend

R	Resistant	MI	Moderately Intolerant	,	Mixed phenotype
MR	Moderately Resistant	I	Intolerant	#	May be more susceptible to alternate pathotypes
MS	Moderately Susceptible	VI	Very Intolerant	*	NVT consensus ratings 2024
S	Susceptible	(P)	Provisional rating	^	AGT ratings/data interpretation
VS	Very Susceptible	NA	Not Available		
T	Tolerant	/	Pathotype differences		
MT	Moderately Tolerant	-	Range		



Seed Availability

Please contact an AGT Affiliate or your local retailer for seed. Consult the AGT website for AGT Affiliate contact details (agtbreeding.com.au/sourcing-seed/agt-affiliates).

AGT varieties can be traded between growers upon the completion of a License Agreement as part of AGT's Seed Sharing™ initiative (agtbreeding.com.au/sourcing-seed/seed-sharing).

PRB and EPR

Varieties denoted by the ^ϕ symbol are protected by Plant Breeders Rights (PBR) and all production (except seed saved for planting) is liable to an End Point Royalty (EPR), which funds future plant breeding. Growers of PBR protected varieties will be subject to a Grower License Agreement that acknowledges that an EPR must be paid on all production other than seed saved for planting.

Contact

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The information contained in this brochure is based on knowledge and understanding at the time of writing. Growers should be aware of the need to regularly consult with their advisors on local conditions and currency of information. Wherever possible, independent NVT data has been used in this publication. In the absence of NVT data, AGT data has been provided.