

# Titan AX<sup>®</sup>



- The world's first CoAXium® barley variety
- Tolerant to Aggressor® (Group 1) herbicide
- Derived from popular variety Compass<sup>Φ</sup>
- Mid season maturity, slightly later than Compass<sup>Φ</sup>, similar to RGT Planet<sup>Φ</sup>
- Wide adaptation but particularly suited to low-medium rainfall or Mallee type environments
- Agronomically very similar to Compass<sup>Φ</sup>
- Has entered the Grains Australia malt accreditation program but is currently deliverable as Barley/Feed

## Breeder's comments

Titan AX<sup>®</sup> is the first barley variety in the world to carry tolerance to Sipcam Aggressor<sup>®</sup> 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<sup>®</sup> 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 Titan AX<sup>®</sup> being the first variety to be released.

Titan AX<sup>®</sup> is derived from widely adapted and popular variety Compass<sup>®</sup>, a plant type that particularly lends itself to low-medium rainfall or Mallee style environments where early vigour and longer straw is preferred; and where lodging is less of an issue. However, AGT data suggests that Titan AX<sup>®</sup> performs consistently well across a range of growing conditions and therefore should be a suitable option for all growers that see value in tolerance to Aggressor<sup>®</sup> herbicide.

Titan AX<sup>®</sup> has been accepted into the Grains Australia malt accreditation program, with stage 2 malt evaluation conducted in 2025. Titan AX<sup>®</sup> is deliverable into the Barley/Feed grade.

## CoAXium<sup>®</sup> Barley Production System

Titan AX<sup>®</sup> has been specifically developed to carry tolerance to Sipcam Aggressor<sup>®</sup> herbicide. Aggressor<sup>®</sup> 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<sup>®</sup> tolerant only). Sipcam Aggressor<sup>®</sup> 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<sup>®</sup> herbicide and the CoAXium<sup>®</sup> stewardship program is administered by Sipcam.

Visit [www.coaxium.com.au](http://www.coaxium.com.au) for more information.

# Titan AX<sup>Ⓐ</sup>

Table 1. Specifications

## Background

Tested as	AGTB0325
Released	2022
EPR rate	\$4.55/tonne + GST

## Disease

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

## Plant Characteristics

Maturity speed <sup>^</sup>	Mid
Maturity habit <sup>^</sup>	Spring
Sowing window <sup>^</sup>	Main
Novel herbicide tolerance <sup>^</sup>	CoAXium® (Aggressor® herbicide)
Head type <sup>^</sup>	Awned
Early growth habit <sup>^</sup>	Semi-erect
Plant height <sup>^</sup>	Very tall
Coleoptile length <sup>^</sup>	Moderate
Rachilla hair length <sup>^</sup>	Long
Lodging tolerance <sup>^</sup>	I

## Grain Quality

Quality classification	Potential MALT
Screenings level <sup>^</sup>	Long
Retentions level <sup>^</sup>	High
Test weight <sup>^</sup>	Moderate
Sprouting tolerance <sup>^∘</sup>	MI
Black Point resistance*	MSS

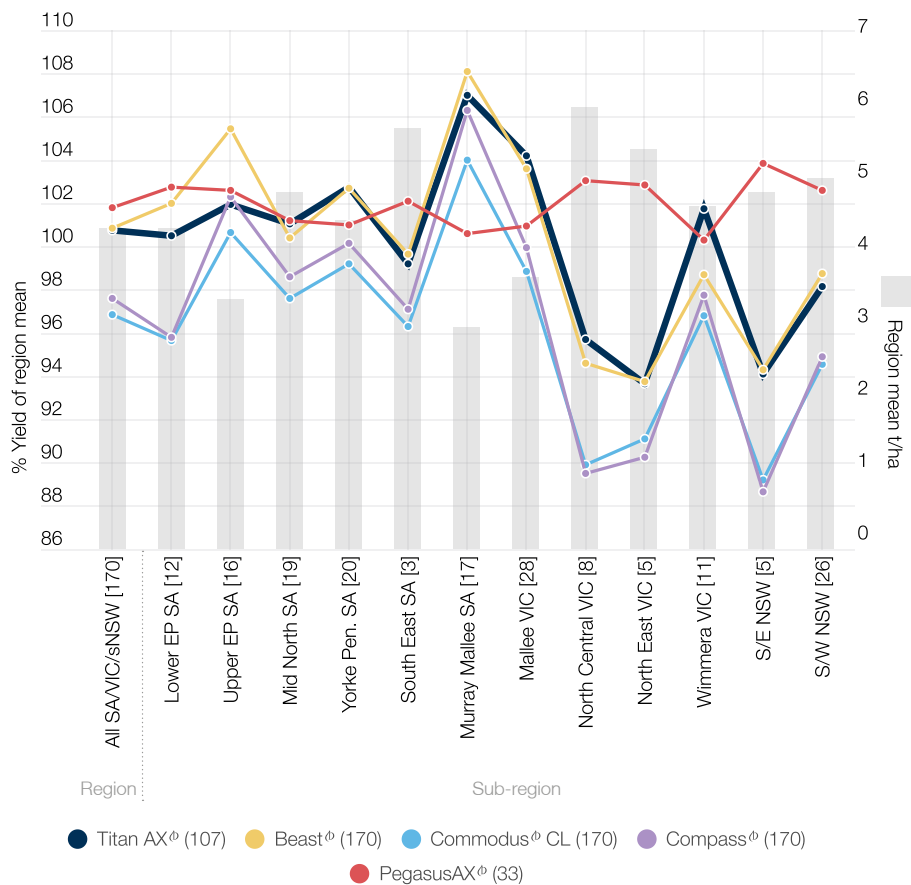
## Legend

R	Resistant	VI	Very Intolerant	∘	Rating based on Germination Index Values
MR	Moderately Resistant	(P)	Provisional rating	^	AGT ratings/data interpretation. Comprehensive AGT agronomic trait ratings and data can be found at: <a href="https://bit.ly/TraitRatings">https://bit.ly/TraitRatings</a>
MS	Moderately Susceptible	NA	Not Available		
S	Susceptible	/	Pathotype differences		
VS	Very Susceptible	-	Range		
T	Tolerant	,	Mixed phenotype		
MT	Moderately Tolerant	#	May be more susceptible to alternate pathotypes		
MI	Moderately Intolerant	*	NVT consensus ratings 2025		
I	Intolerant				

Grain yield

Titan AX<sup>®</sup> has demonstrated high and stable yields across a range of environment types, similar to Beast<sup>®</sup>. Titan AX<sup>®</sup> has recorded around 4% yield improvement over Commodus<sup>®</sup> CL and 3% over Compass<sup>®</sup> over-all across SA/Vic/southern NSW (Figure 1).

Figure 1. Predicted grain yield of Titan AX<sup>®</sup> versus comparators across SA/Vic/southern NSW regions



Source: NVT long term MET analysis, main season trial series 2020-2024

[ ] : Total number of trials per region

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

Variety comparisons

Titan AX<sup>®</sup> has a disease resistanc profile similar to Beast<sup>®</sup>, Commodus<sup>®</sup> CL and PegasusAX<sup>®</sup>, with a slower maturity.

Titan AX<sup>®</sup> offers a very good physical grain quality package, similar to Commodus<sup>®</sup> CL.

Table 2. Variety comparisons

		Titan AX <sup>®</sup>	Beast <sup>®</sup>	Commodus <sup>®</sup> CL	Compass <sup>®</sup>	PegasusAX <sup>®</sup>
Disease	Leaf Rust resistance* (SA)	SVS	S	S	SVS	MS
	Leaf Rust resistance* (VIC)	SVS	S	S	SVS	MRMS
	Leaf Rust resistance* (NSW)	SVS	S	SVS	SVS	MR
	Powdery Mildew resistance*	MSS	S	MSS	S	S
	Net Blotch (Net Form) resistance* (SA)	MRMS-S	MRMS-S	MRMS-MSS	MRMS-S	MRMS
	Net Blotch (Net Form) resistance* (VIC)	MS	MRMS	MSS	MS	MRMS
	Net Blotch (Net Form) resistance* (NSW)	MS	MSS	MS	MSS	MRMS (P)
	Net Blotch (Spot Form) resistance* (SA)	MSS	MSS	MSS	MS	MSS
	Net Blotch (Spot Form) resistance* (VIC)	MS	MS	MSS	MS	MSS
	Net Blotch (Spot Form) resistance* (NSW)	MSS	MS	MSS	MS	MSS
	Scald resistance* (SA)	VS	SVS	MSS-SVS	MSS-SVS	MSS
	Scald resistance* (VIC)	VS	SVS	SVS	SVS	S
	Scald resistance* (NSW)	SVS	SVS	S	SVS	MSS (P)
	Barley Yellow Dwarf Virus resistance*	MS	MS	MRMS	MS	MS
	CCN resistance*	MR (P)	MR	R	R	R
	Pratylenchus Neglectus resistance*	MR	MRMS	MRMS	MRMS	MR
	Pratylenchus Neglectus tolerance*	NA	MI	TMT	TMT	NA
	Pratylenchus Thornei resistance*	MR	MRMS	MRMS	MR	MRMS
	Pratylenchus Thornei tolerance*	TMT	TMT	MTMI	TMT	IVI
	Crown Rot resistance*	MSS	S	S	MSS	MSS (P)
Plant Characteristics	Maturity speed <sup>^</sup>	Mid	Very quick	Quick	Quick	Quick
	Maturity habit <sup>^</sup>	Spring	Spring	Spring	Spring	Spring
	Sowing window <sup>^</sup>	Main	Main & Late	Main & Late	Main & Late	Main & Late
	Novel herbicide tolerance <sup>^</sup>	CoAXium <sup>®</sup> (Aggressor <sup>®</sup> herbicide)	None (conventional tolerance)	Clearfield <sup>®</sup> (Intervix <sup>®</sup> herbicide)	None (conventional tolerance)	CoAXium <sup>®</sup> (Aggressor <sup>®</sup> herbicide)
	Head type <sup>^</sup>	Awned	Awned	Awned	Awned	Awned
	Early growth habit <sup>^</sup>	Semi-erect	Semi-erect	Semi-erect	Semi-erect	Erect
	Plant height <sup>^</sup>	Very tall	Very tall	Tall	Very tall	Moderate
	Coleoptile length <sup>^</sup>	Moderate	Moderate	Moderate	Moderate	Short
	Rachilla hair length <sup>^</sup>	Long	Long	Long	Long	Long
	Lodging tolerance <sup>^</sup>	I	I	I	I	MTMI
Grain Quality	Quality classification	Potential MALT	FEED	MALT	MALT	FEED
	Screenings level <sup>^</sup>	Low	Very low	Low	Low	Moderately high
	Retentions level <sup>^</sup>	High	Very high	High	High	Moderately low
	Test weight <sup>^</sup>	Moderate	Moderate	Moderate	Moderate	Moderately high
	Sprouting tolerance <sup>^o</sup>	MI	MTMI	MI	MI	MI
	Black Point resistance*	MSS	MSS	MS	MSS	MSS (P)



### *Seed Availability*

Please contact an AGT Affiliate or your local retailer for seed. Consult the AGT website for AGT Affiliate contact details ([www.agtbreeding.com.au/affiliates](http://www.agtbreeding.com.au/affiliates)). AGT varieties can be traded between growers upon the completion of a License Agreement as part of AGT's Seed Sharing™ initiative ([www.agtbreeding.com.au/seedsharing](http://www.agtbreeding.com.au/seedsharing))

### *PBR and EPR*

Varieties denoted by the ® 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.

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[agtbreeding.com.au](http://agtbreeding.com.au)

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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 absense of NVT data, AGT data has been provided.