AGT-Carnac

- Elite yield, particularly in low-medium yielding environments
- Udon noodle (ANW) quality
- An ideal replacement for popular variety Zen$^{\Phi}$
- Best suited to tougher environments and seasons
- Excellent physical grain quality with low screenings and high test weights
- Mid season maturity, similar to Rottnest$^{\Phi}$, Zen$^{\Phi}$ and Ninja$^{\Phi}$
- Good yellow spot resistance

Breeder's comments

Hot on the heels of the release of Rottnest$^{\Phi}$, our first ever udon noodle wheat for WA, comes complementary variety, AGT-Carnac$^{\Phi}$.

Whilst we see Rottnest$^{\Phi}$ as the highest yielding udon noodle wheat over-all in WA, and offering a very wide adaptation, AGT-Carnac$^{\Phi}$ is viewed as Rottnest's$^{\Phi}$ tougher counterpart.

AGT-Carnac$^{\Phi}$ has produced its best yield performance relative to other udon noodle varieties in sub two tonne per hectare situations. Typically, Zen$^{\Phi}$ has been the go-to variety in low yielding environments, with AGT-Carnac$^{\Phi}$ now producing yields in excess of 6% above Zen$^{\Phi}$, in NVT testing, while offering a very similar adaptation pattern.

Compared with Zen$^{\Phi}$, AGT-Carnac$^{\Phi}$ also offers higher test weights, and a better over-all disease resistance package.

Versus Rottnest$^{\Phi}$, AGT-Carnac$^{\Phi}$ has shown higher yields at the lower yielding range and improved grain size and test weight.

We believe AGT-Carnac$^{\Phi}$ is an ideal replacement for Zen$^{\Phi}$ and a complementary variety to Rottnest$^{\Phi}$ to be used in more marginal country.

The naming convention we have selected for our noodle wheat varieties is 'islands', with Carnac pairing with its more well-known counterpart, Rottnest.

AGT-Carnac

Table 1. Specifications

Background

Tested as	WAGT1170
Released	2025
EPR rate	$3.90/tonne + GST

Disease

Stem Rust resistance*	MRMS (P)
Stripe Rust resistance*	RMR
Leaf Rust resistance*	MSS (P)
Yellow Spot resistance*	MRMS (P)
Powdery Mildew resistance*	S (P)
Septoria Nodorum Blotch (Glume) resistance*	NA
Septoria Nodorum Blotch (Leaf) resistance*	NA

Plant Characteristics

Maturity speed^	Mid
Maturity habit^	Spring
Sowing window^	Main & Late
Novel herbicide tolerance^	None (conventional tolerance)
Head type^	Awned
Plant height^	Moderate
Coleoptile length^	Short
Lodging tolerance^	MTMI

Abiotic Stress

Boron tolerance^	Carries tolerance gene
Acid/aluminium tolerance^	Carries tolerance gene

Grain Quality

Quality classification	ANW
Grain colour	White
Screenings level^	Low
Test weight^	High
Sprouting tolerance^°	I
Black Point resistance*	NA

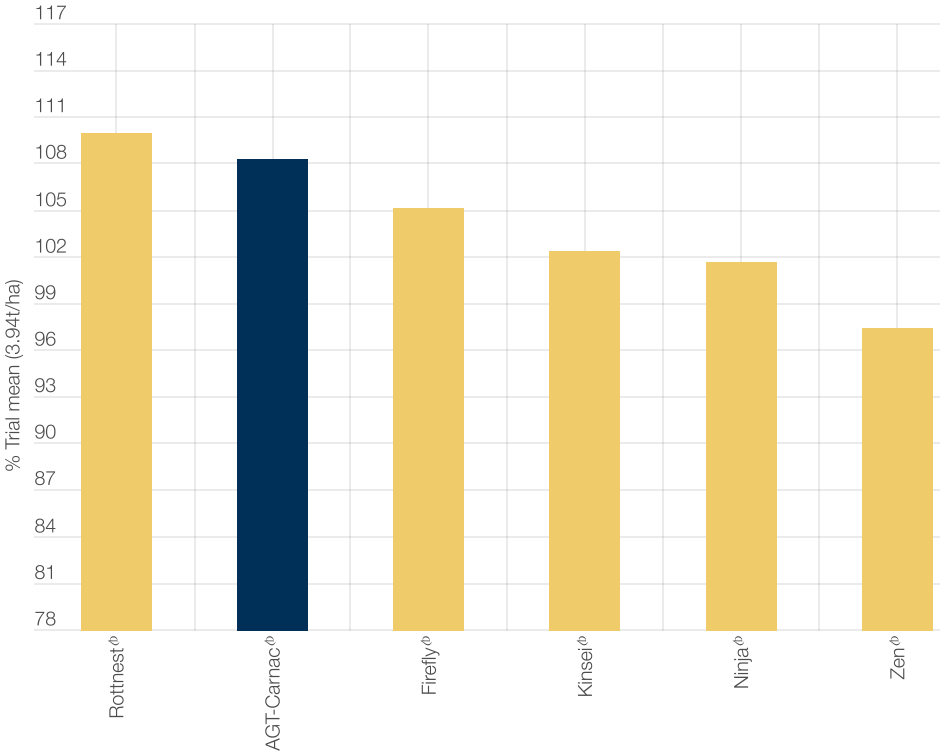
Legend

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

Grain yield

Long term AGT yield testing has shown that AGT-Carnac$^{\Phi}$ has out-yielded closest comparator Zen$^{\Phi}$ by 11%, while yielding slightly below the yield benchmark, Rottnest$^{\Phi}$ (Figure 1).

Figure 1. Predicted grain yield of AGT-Carnac$^{\Phi}$ versus comparators across WA - AGT data

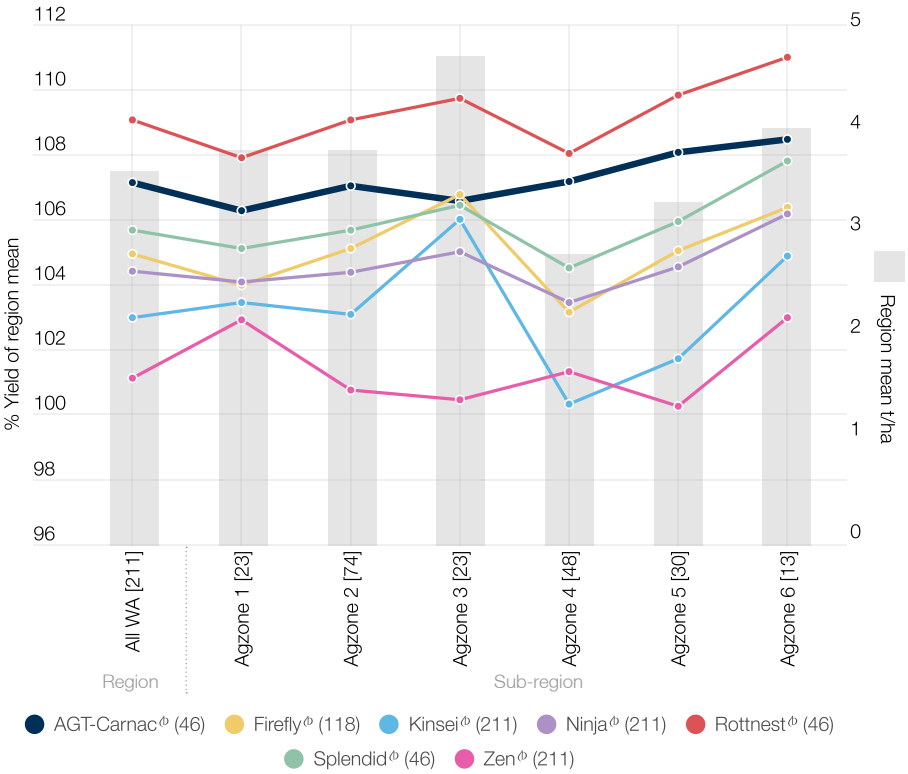


Source: AGT long term MET analysis, main season trial series WA 2021-2024 (35 sites)

Grain yield

NVT long term MET analysis tells a similar story, with AGT-Carnac$^{\Phi}$ yielding higher than all other udon noodle wheat varieties except Rottnest$^{\Phi}$ (Figure 2).

Figure 2. Predicted grain yield of AGT-Carnac$^{\Phi}$ versus comparators across WA regions - NVT main season data



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

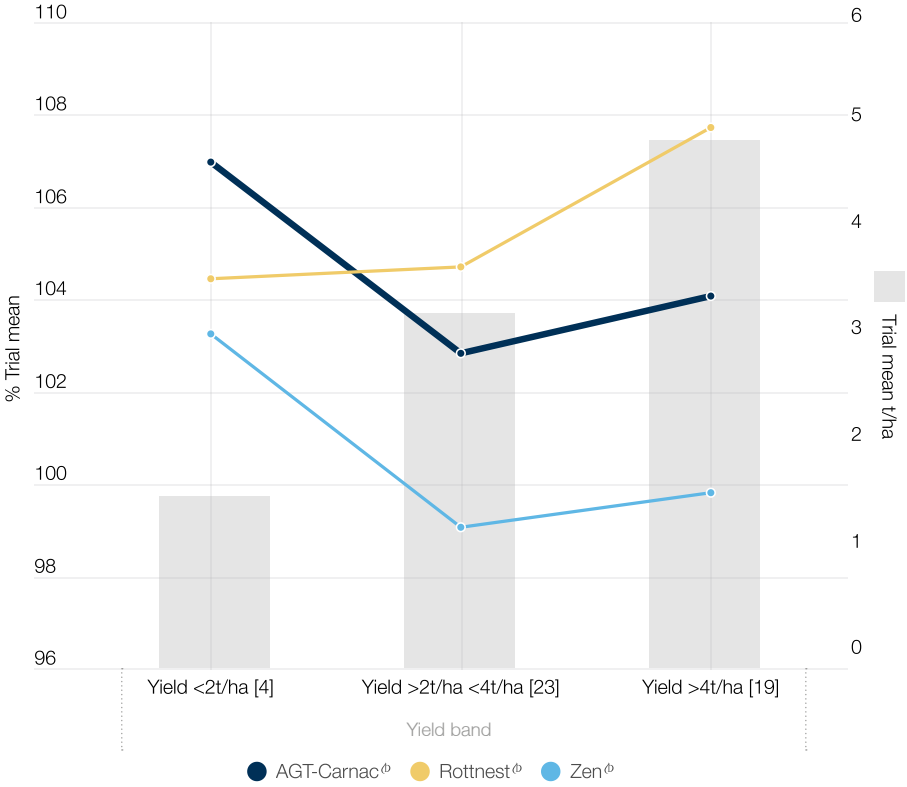
[ ] : Total number of trials per region

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

Grain yield

Viewing the 2024 NVT yield results by yield potential group, we see that AGT-Carnac$^{\Phi}$ has enjoyed a clear yield advantage over both Rottnest$^{\Phi}$ and Zen$^{\Phi}$ in trials that yielded less than 2t/ha. Although lower yielding than Rottnest$^{\Phi}$ at higher yield potentials, AGT-Carnac$^{\Phi}$ has maintained a very clear 4% advantage over Zen$^{\Phi}$ at all yield levels (Figure 3).

Figure 3. Grain yield of AGT-Carnac$^{\Phi}$ versus comparators - yield bands - NVT data



Source: NVT main season trial series 2024

[ ] : Total number of trials per yield band

Variety comparisons

AGT-Carnac$^{\Phi}$ offers a sound disease and physical grain quality package, with higher test weight and lower screenings than many competitors.

Table 2. Variety comparisons

		AGT-Carnac$^{\Phi}$	Firefly$^{\Phi}$	Kinsei$^{\Phi}$	Ninja$^{\Phi}$	Rottnest$^{\Phi}$	Splendid$^{\Phi}$	Zen$^{\Phi}$
Disease	Stem Rust resistance*	MRMS (P)	S	MSS	S	S (P)	MR (P)	S (MRMS)
	Stripe Rust resistance*	RMR	MS	MRMS	MS	MRMS	RMR (P)	MR
	Leaf Rust resistance*	MSS (P)	MSS	MS	S	VS (P)	MSS (P)	S
	Yellow Spot resistance*	MRMS (P)	MRMS	MS	MRMS	MRMS (P)	MRMS (P)	MRMS
	Powdery Mildew resistance*	S (P)	MSS	NA	NA	SVS (P)	SVS (P)	NA
	Septoria Nodorum Blotch (Glume) resistance*	NA	MSS	NA	NA	NA	NA	NA
	Septoria Nodorum Blotch (Leaf) resistance*	NA	MRMS	NA	NA	NA	NA	NA
Plant Characteristics	Maturity speed^	Mid	Mid	Mid-slow	Mid	Mid	Quick-mid	Mid
	Maturity habit^	Spring	Spring	Spring	Spring	Spring	Spring	Spring
	Sowing window^	Main & Late	Main & Late	Main	Main & Late	Main & Late	Main & Late	Main & Late
	Novel herbicide tolerance^	None (conventional tolerance)	None (conventional tolerance)	None (conventional tolerance)	None (conventional tolerance)	None (conventional tolerance)	None (conventional tolerance)	None (conventional tolerance)
	Head type^	Awned	Awned	Awned	Awned	Awned	Awned	Awned
	Plant height^	Moderate	Moderate	Moderately short	Moderately short	Moderate	NA	Short to moderately short
	Coleoptile length^	Short	Short	Short	Short	Short	NA	Short
	Lodging tolerance^	MTMI	MTMI	MI	MTMI	MTMI	NA	MTMI
Abiotic Stress	Boron tolerance^	Carries tolerance gene	Does not carry tolerance gene	Does not carry tolerance gene	Does not carry tolerance gene	Does not carry tolerance gene	NA	Does not carry tolerance gene
	Acid/aluminium tolerance^	Carries tolerance gene	Carries tolerance gene	Carries tolerance gene	Carries tolerance gene	Carries tolerance gene	NA	Carries tolerance gene
Grain Quality	Quality classification	ANW	ANW	ANW	ANW	ANW	ANW	ANW
	Grain colour	White	White	White	White	White	White	White
	Screenings level^	Low	Moderate	Low	Low	Moderate	NA	Very low
	Test weight^	High	Moderate	Moderate	Moderate	Moderate	NA	Moderate
	Sprouting tolerance^°	I	NA	I	I	MII	NA	MII
	Black Point resistance*	NA	S	S	MRMS	NA	NA	MRMS

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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). 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)

PBR 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.

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