

Longsword[®]



- A fast maturing winter wheat derived from Mace
- Wide sowing window, most suited to April sowings
- Will suit early break opportunities or those looking for the added value of grazing
- Widely adapted, suits WA, SA, Vic and NSW cropping districts
- Good physical grain quality package with low screenings and high test weights
- Excellent stem and stripe rust resistance
- Good yellow leaf spot resistance

Breeder's comments

Longsword (tested as RAC2341) is a variety that really stands out on its own. Early in AGT testing it was clear that Longsword was different to the rest: later to flower, but quick to mature; Longsword represented a style of wheat that the Roseworthy programme had not previously bred.

The first of its kind, Longsword is a true winter wheat that is relatively quick to mature, opening up sowing opportunities that haven't previously existed for wheat. Unlike other long season varieties, Longsword has Mace as its major parent, a variety that is specifically suited to the harsh environment of the low and medium rainfall areas. But unlike Mace (a traditional spring wheat), Longsword has three winter genes, meaning that it is a true winter variety with a stronger vernalisation (cold) requirement for flowering. However, once this vernalisation requirement is met Longsword progresses through grainfill quite quickly, similar to its parent Mace.

This unique maturity offers many advantages to growers: it allows a flexible and wide sowing window, while helping to avoid stresses of drought and heat through grain fill that slower maturing winter wheat varieties experience. It also allows a longer safe period for grazing, helping to alleviate the feed-gap often faced by mixed farmers.

We see Longsword as a partnership with growers. We hope it will allow you to explore new sowing opportunities and to better understand how this unique style of wheat might be used to increase your gross margins. We encourage you to give it a try and provide us with your feedback. What we learn together from this variety will help shape AGT's future breeding objectives.

As yet, Longsword has not received a milling classification, and although further testing will be undertaken, growers planting Longsword in 2018 should assume it will be deliverable as feed.

Seed Availability

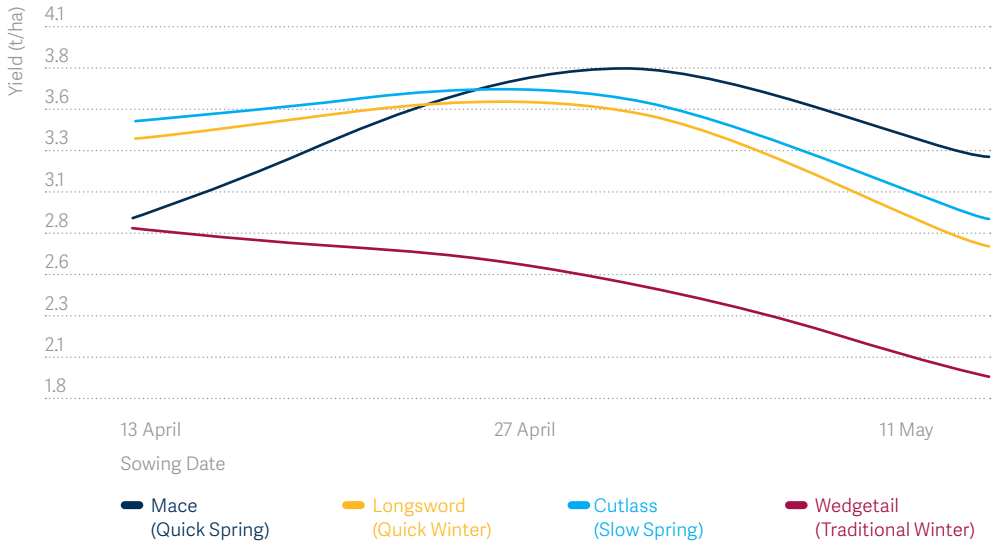
Commercial quantities of Longsword for season 2018 will be available through AGT Affiliates, or your local retailer. Please consult the AGT website for AGT Affiliate contact details.

PBR and EPR

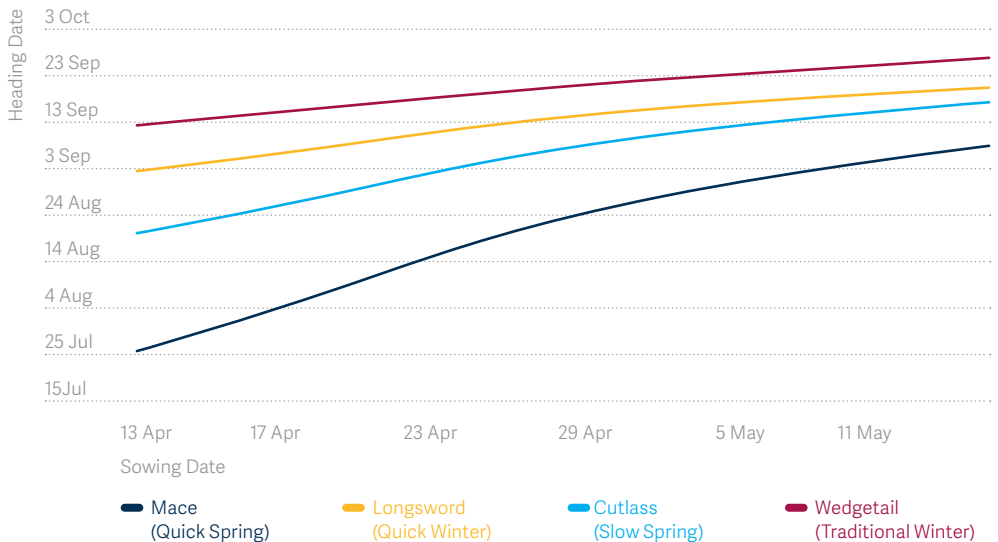
Longsword is protected by Plant Breeders Rights (PBR) and all production (except seed saved for planting) is liable to an End Point Royalty (EPR), which funds future plant breeding. Longsword growers will be subject to a Growers License Agreement that acknowledges that an EPR (rate TBA) has to be paid on all production other than seed saved for planting.



Grain yield of Longsword and comparator varieties, Minnipa 2015 (LSD = 0.3)



Flowering dates x time of sowing, Longsword and comparator varieties, Minnipa 2015



Thank you to Bonnie Flohr (CSIRO, ANU), the GRDC Early Sowing Project, CSIRO, SARDI and La Trobe Uni for data used in the two graphs.

Disease and agronomic characteristics for Longsword and control varieties

	Longsword*	Cutlass	EGA Wedgetail	Kittyhawk	Mace	Scepter	Trojan
Stem Rust	RMR	R	MRMS	MRMS	MR	MR	MRMS
Stripe Rust	MR	MS	MS	RMR	SVS	MSS	MR
Leaf Rust	MS	R	MS	MRMS	MSS	MSS	MRMS
Yellow Leaf Spot	MRMS	MSS	MSS	MRMS	MRMS	MRMS	MSS
CCN Resistance	S	MR	S	S	MRMS	MRMS	MS
Septoria Tritici Blotch	S	MSS	MSS	MSS	S	S	MS
Acid Soil Tolerance	MT	MT	TMT	—	MT	MT	—
Black Point Resistance	MRMS	MS	MS	MRMS	MRMS	MS	MRMS
Type	Winter	Spring	Winter	Winter	Spring	Spring	Spring
Maturity Trigger	Vernalisation	Strong Photoperiod	Strong Vernalisation	Strong Vernalisation	Weak Vernalisation	Weak Vernalisation	Moderate Photoperiod

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
 # Provisional ratings,
 to be used with caution

Source / 2017 Victorian Winter Crop
 Summary, NSW DPI Winter Crop
 Variety Sowing Guide 2017, NVT
 and AGT data.



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