2024
Victoria
Field Crop Variety Guide

Variety Quick Guide

Victoria

	Crop Type	Variety	Quality Classification	Planting Window			Herbicide Tolerance	More information
				Early	Main	Late		
Page 7	Wheat	Anapurna	Feed	✓			-	Page 8
		Ballista$^{\Phi}$	AH		✓	✓	-	Page 10
		Calibre$^{\Phi}$	AH		✓	✓	-	Page 12
		Catapult$^{\Phi}$	AH	✓	✓		-	Page 14
		Hammer CL Plus$^{\Phi}$	AH		✓	✓	Clearfield® (Intervix®)	Page 16
		Illabo$^{\Phi}$	AH	✓			-	Page 18
		Sunblade CL Plus$^{\Phi}$	AH		✓		Clearfield® (Intervix®)	Page 20
		Sunmaster$^{\Phi}$	APH		✓		-	Page 24
		Tomahawk CL Plus$^{\Phi}$ New	APW		✓	✓	Clearfield® (Intervix®)	Page 26
		Willaura$^{\Phi}$	AH	✓			-	Page 28
Page 33	Durum	Bitalli$^{\Phi}$	ADR		✓	✓	-	Page 34
		Patron$^{\Phi}$	ADR		✓	✓	-	Page 36
Page 41	Barley	Beast$^{\Phi}$	Feed*		✓	✓	-	Page 42
		Cyclops$^{\Phi}$	Feed*		✓	✓	-	Page 44
		Minotaur$^{\Phi}$	Feed*		✓		-	Page 46
		Titan AX$^{\Phi}$	Feed*		✓		CoAxium® (Aggressor®)	Page 48
Page 51	Canola	Bandit TT$^{\Phi}$	CAN		✓	✓	Triazine	Page 52
		Outlaw$^{\Phi}$	CAN		✓	✓	-	Page 54
		Renegade TT$^{\Phi}$	CAN		✓	✓	Triazine	Page 56
Page 59	Lupin	Coyote$^{\Phi}$	Feed		✓	✓	Metribuzin	Page 60
		Lawler$^{\Phi}$	Feed		✓	✓	Metribuzin	Page 62

*Under malt evaluation

Thank you!
For paying End Point Royalties.

Your honest declaration of varieties at point of sale allows us to continue developing improved field crop varieties for you to grow.

- EPRs are payable on all AGT varieties
- Most bulk grain buyers automatically deduct EPR's and pay this money back to the breeder on your behalf – correct variety declaration matters!
- EPRs are the only way that AGT generates income to continue breeding

Your EPR's have allowed AGT to grow over our 20 year history. From our beginnings as a small wheat breeding company, EPRs have enabled us to better serve you by:

- Building a world-class breeding facility at Roseworthy, SA

- Purchasing secure irrigated land at Wagga Wagga and Narrabri, NSW, for breeding trial & seed production work

- Developing a breeding centre in Northam, WA, dedicated to servicing Western Australian growers

- Expanding into breeding other field crop types which now include durum, barley, lupin and canola in addition to spring and winter wheat

- Increasing rates of genetic gain with the use of state-of-the-art greenhouses and controlled environment rooms

- Investing in the latest plant breeding technologies including machine learning, robotics, DNA based selection, and advanced data management and analysis

- Building Australia's first in-house tech support team that is fully integrated with the breeding programmes

- Developing high-tech quality laboratories for wheat, barley, durum, canola and lupins to make sure the varieties you grow meet end-use requirements

PBR, EPR and Seed Availability

Variety	EPR rate per tonne (incl. GST)
Anapurna wheat	$3.20
Ballista℗ wheat	$3.50
Calibre℗ wheat	$3.50
Catapult℗ wheat	$3.25
Hammer CL Plus℗ wheat	$4.25
Illabo℗ wheat	$3.50
Sunblade CL Plus℗ wheat	$4.35
Sunmaster℗ wheat	$3.60
Tomahawk CL Plus℗ wheat	$4.15
Willaura℗ wheat	$3.50
Bitalli℗ durum	$3.50
Patron℗ durum	$4.00
Beast℗ barley	$4.00
Cyclops℗ barley	$4.00
Minotaur℗ barley	$4.00
Titan AX℗ barley	$4.55
Bandit TT℗ canola	$10.00
Outlaw℗ canola	$10.00
Renegade TT℗ canola	$10.00
Coyote℗ lupin	$3.00
Lawler℗ lupin	$4.00

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 Growers License Agreement that acknowledges that an EPR must be paid on all production other than seed saved for planting.

Commercial quantities of AGT varieties may be available through AGT Affiliates, or your local retailer.

AGT varieties can be traded between growers upon the completion of a License Agreement as part of AGT's Seed Sharing™ initiative.

Wheat

Main season comparisons

	Ballista®	Calibre®	Sunmaster®	Scepter®	Vixen®
Quality Classification	AH	AH	APH	AH	AH
Maturity	Quick-mid	Quick-mid	Mid	Mid	Quick
Stem Rust	MR	MR	MS	MRMS	MRMS
Stripe Rust	MSS	S	MRMS	MSS	SVS
Leaf Rust	S	S	RMR	MSS	SVS
CCN	MRMS	MRMS	MSS	MRMS	MSS
Yellow Leaf Spot	MS	MRMS	MSS	MRMS	MRMS
Black Point	MS	MS*	MR	MS	MSS
Septoria *tritici* Blotch	SVS	S	S	S	SVS
Powdery Mildew	SVS	S	S	SVS	SVS

Early sowing comparisons

	Anapurna	Catapult®	Denison®	Illabo®	Willaura®	EGA Wedgetail®	LRPB Trojan®	RockStar®
Quality Classification	Feed	AH	APW	AH	AH	APW	APW	AH
Maturity	Slow winter	Mid-slow spring	Slow-very slow spring	Mid quick winter	Slow-very slow spring	Mid winter	Mid-slow spring	Mid-slow spring
Stem Rust	MSS	MR	MS	MRMS	MR	MRMS	MRMS	MRMS
Stripe Rust	RMR	S	S	MRMS	S	MS	S	S
Leaf Rust	MS	S	S	S	MRMS	MSS	MR#	S
CCN	NA	R	MS	NA	MS	NA	MS	MSS
Yellow Leaf Spot	MRMS	MRMS	MRMS	MS	MS	MSS	MSS	MRMS
Black Point	MSS	S	MS	MRMS	MRMS*	MS	MS	MSS
Septoria *tritici* Blotch	MRMS	MSS	MSS	MSS	S	MSS	S	S
Powdery Mildew	RMR	S	S	R	S	NA	S	SVS

Clearfield® comparisons

	Hammer CL Plus®	Sunblade CL Plus®	Tomahawk CL Plus®	Chief CL Plus®	LRBP Anvil CL Plus®	Razor CL Plus®	Sheriff CL Plus®	Valiant CL Plus®
Quality Classification	AH	AH	APW	APW	AH	ASW	APW	AH
Maturity	Quick-mid	Mid	Mid	Mid	Quick	Quick-mid	Mid-slow	Slow
Stem Rust	MR	MS	MR*	MR	MR	MRMS	MS	MR
Stripe Rust	MS	MRMS	MSS*	SVS	S	MS	S	MSS
Leaf Rust	S	MSS	S*	MR	SVS	S	SVS	S
CCN	MRMS	MSS	MRMS*	MS	MRMS	MR	MS	MSS*
Yellow Leaf Spot	MRMS	MSS	MRMS*	MRMS	MSS	MSS	MRMS	MRMS
Black Point	MRMS	MRMS	MS*	MS	S*	MS	MS	MS*
Septoria *tritici* Blotch	MSS	S	S*	S	VS	SVS	S	MSS
Powdery Mildew	S	SVS	SVS	SVS	VS	S	SVS	VS

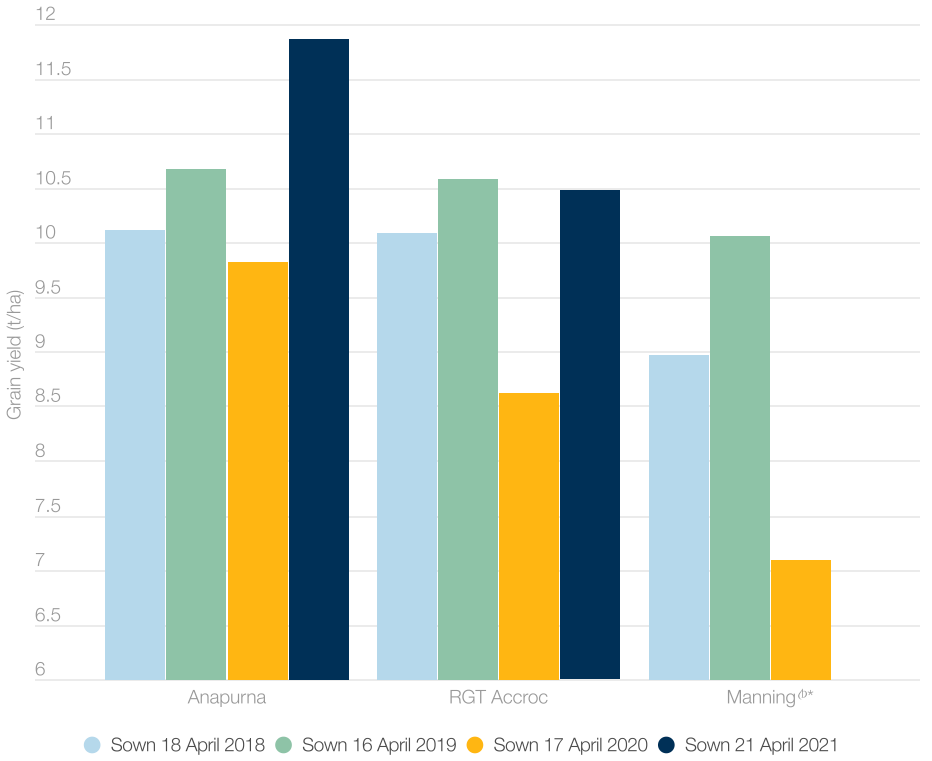
R	Resistant	VS	Very Susceptible
MR	Moderately Resistant	*	Provisional rating
MS	Moderately Susceptible	#	May be more susceptible if alternate strains are present
S	Susceptible		

Source: NVT consensus ratings 2022 and AGT

Anapurna

- Dual purpose winter wheat, suitable for grazing and grain production
- Awned, red grained, feed quality wheat
- Delivers very high grain yields in long season environments
- Slow winter maturity, similar to RGT Accroc
- Good level of septoria *tritici* blotch resistance
- Excellent stripe rust resistance
- Maintains high grain yields in the absence of foliar fungicides
- Excellent lodging resistance in high yield potential environments

Grain yield of Anapurna versus comparators - Millicent, SA



*Not present in 2021 trial

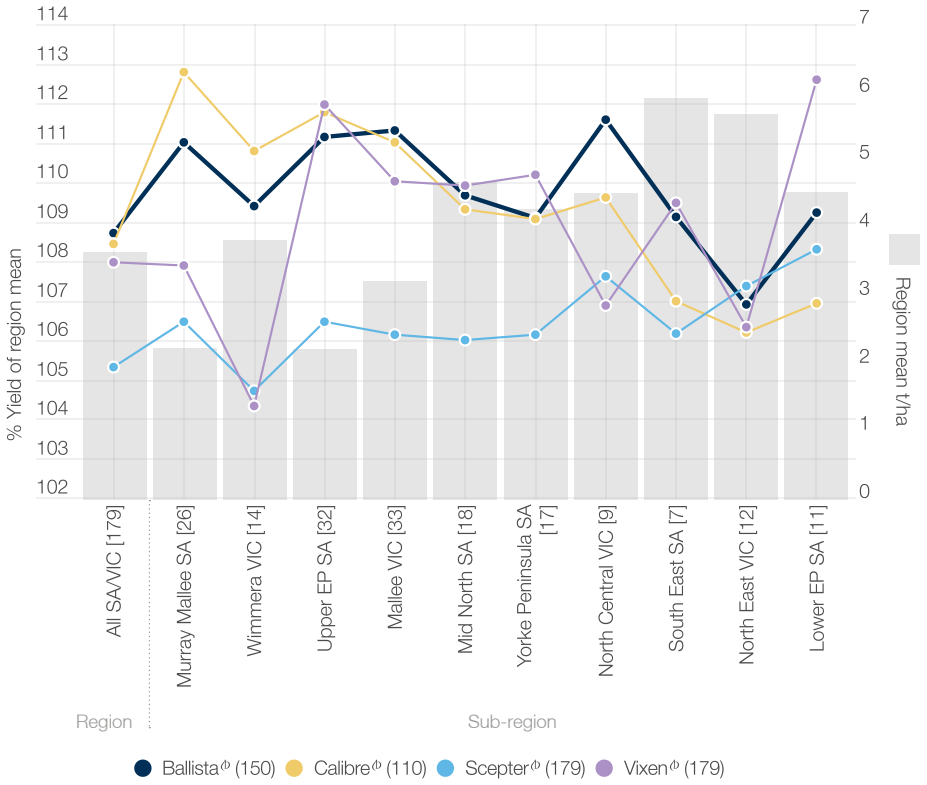
Source: FAR Australia, Hyper Yielding project

More information

Ballista$^{\Phi}$

- Elite yield in SA & western Victoria
- Quick-mid maturity, slightly quicker than Scepter$^{\Phi}$, similar to Mace$^{\Phi}$
- AH quality classification
- Very stable yield across a range of environments and conditions
- CCN resistance equal to Scepter$^{\Phi}$
- An alternative to Scepter$^{\Phi}$, Vixen$^{\Phi}$ & Calibre$^{\Phi}$

Predicted grain yield of Ballista$^{\Phi}$ versus comparators



Source: NVT main season series long term MET analysis 2018-2022.

[ ] Total number of trials per region

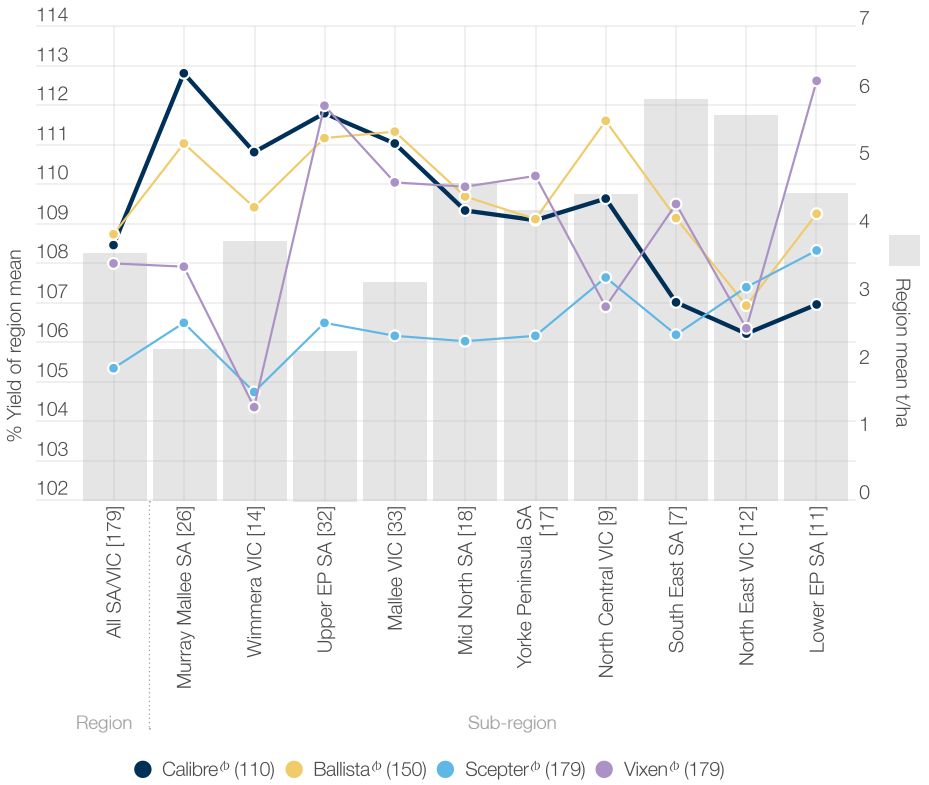
( ) Number of trials that each variety was present in across the SA/Vic dataset [179 trials]

More information

Calibre$^{\Phi}$

- Elite grain yield
- Derived from popular variety Scepter$^{\Phi}$
- Very widely adapted, suited to all growing regions of SA/VIC
- Longer coleoptile than most commonly grown varieties
- Good sprouting tolerance, similar to Scepter$^{\Phi}$, better than Vixen$^{\Phi}$
- Improved powdery mildew resistance over Scepter$^{\Phi}$
- Quick-mid maturity, similar to Mace$^{\Phi}$
- AH quality classification

Predicted grain yield of Calibre$^{\Phi}$ versus comparators



Source: NVT main season series long term MET analysis 2018-2022.

[ ] Total number of trials per region

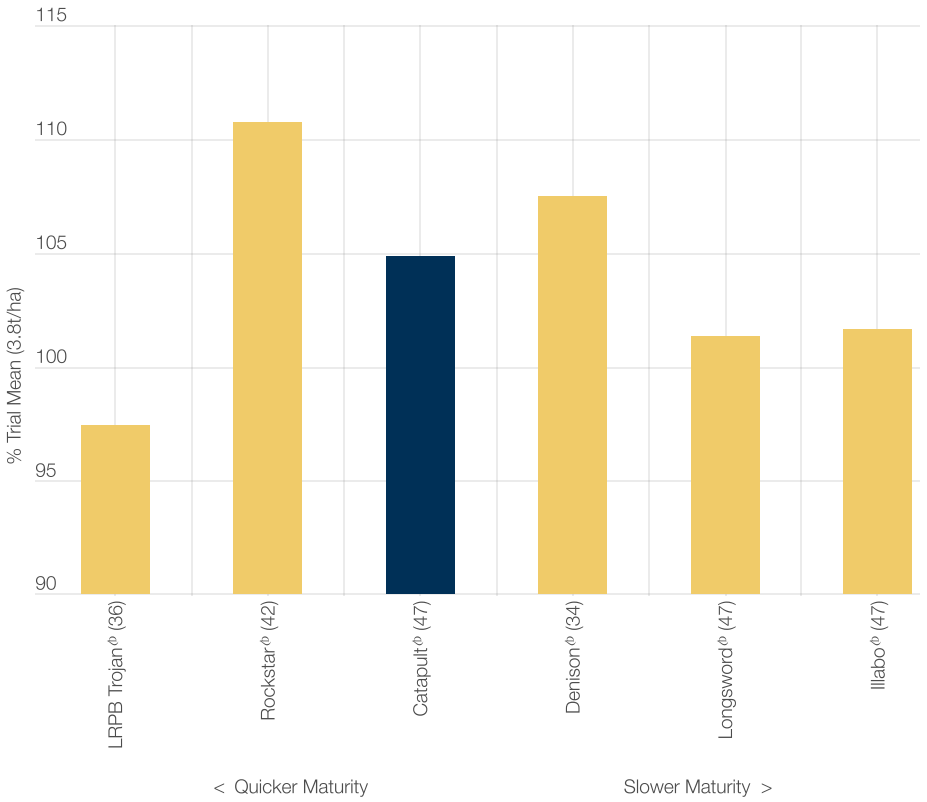
( ) Number of trials that each variety was present in across the SA/Vic dataset [179 trials]

More information

Catapult$^{\Phi}$

- Mid-slow maturity, with a very flexible sowing window
- Safer option for sowing dry when germination date is unknown
- Wide adaptation, will fit the front end of most growers' cropping programs
- Good pre-harvest sprouting tolerance, better than Rockstar$^{\Phi}$
- Excellent choice for wheat-on-wheat situations
- Better CCN resistance than LRPB Trojan$^{\Phi}$ and Rockstar$^{\Phi}$
- Very good physical grain characteristics with an AH quality classification

Predicted grain yield of Catapult$^{\Phi}$ versus comparators



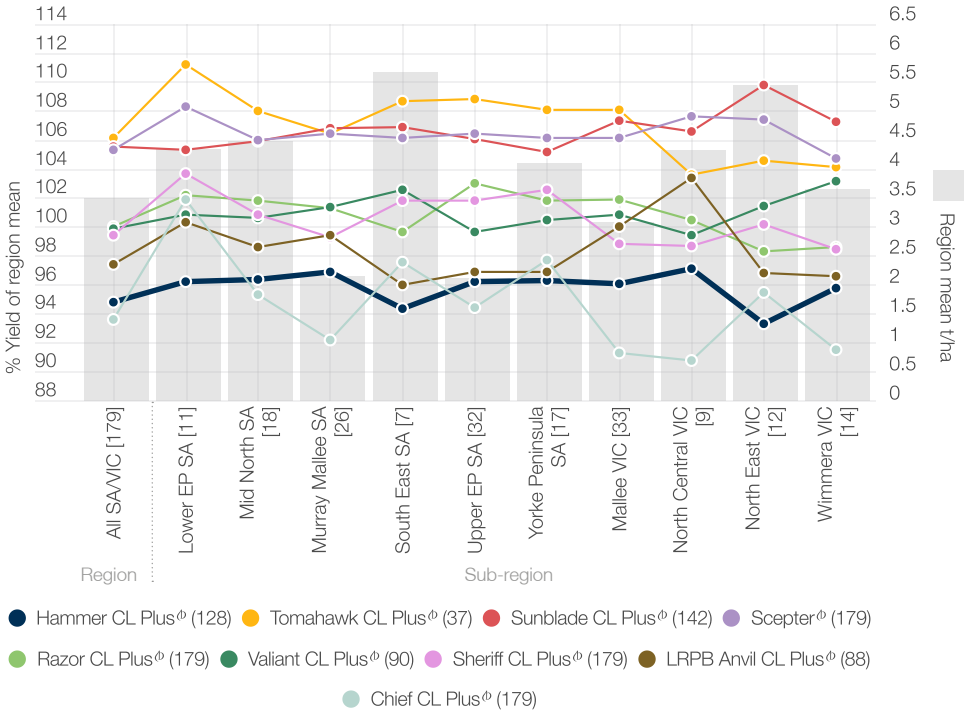
Source: NVT long term MET analysis, early sown trial series 2018-2022 [47 trials across WA/SA/Vic]
( ) Number of trials that each variety was present in across the dataset

More information

Hammer CL Plus Φ

- Closely related to Mace Φ, with similar adaptation and yield
- AH quality classification with low screenings and high test weight
- Suitable for wheat on wheat situations
- Quick-mid maturity, similar to Mace Φ
- Tolerant to Clearfield® Intervix® herbicide

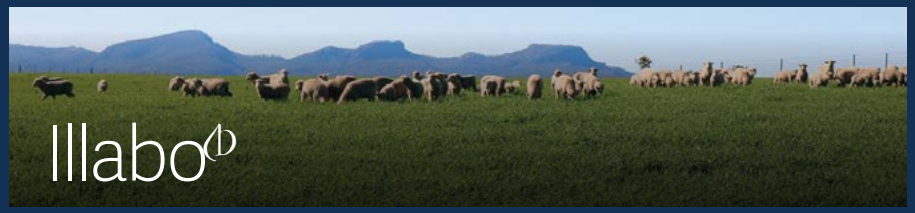
Predicted grain yield of Hammer CL Plus Φ versus comparators



Source: NVT long term MET analysis, main season trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/VIC dataset [179]

Clearfield® Plus
Production System for Wheat

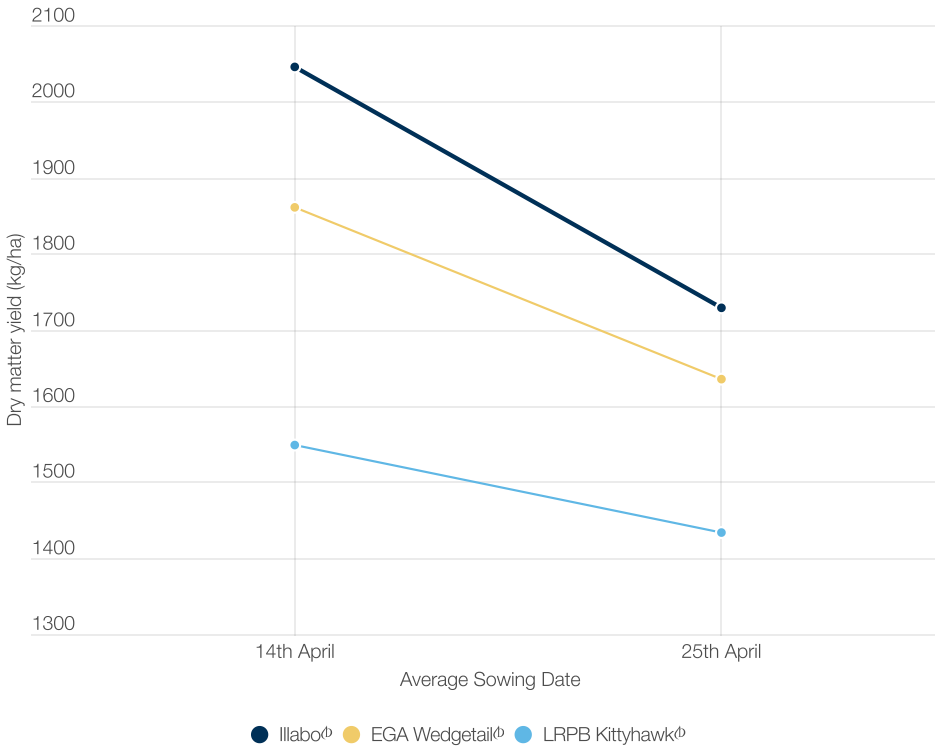
More information



Illabo$^{\Phi}$

- Dual purpose winter wheat for grazing and grain production
- A higher yielding alternative to EGA Wedgetail$^{\Phi}$ and LRPB Kittyhawk$^{\Phi}$
- AH quality classification
- Mid-quick winter maturity, 2-3 days quicker than EGA Wedgetail$^{\Phi}$
- Improved resistance to stripe rust and black point over EGA Wedgetail$^{\Phi}$

Dry matter production of Illabo$^{\Phi}$ in response to sowing date



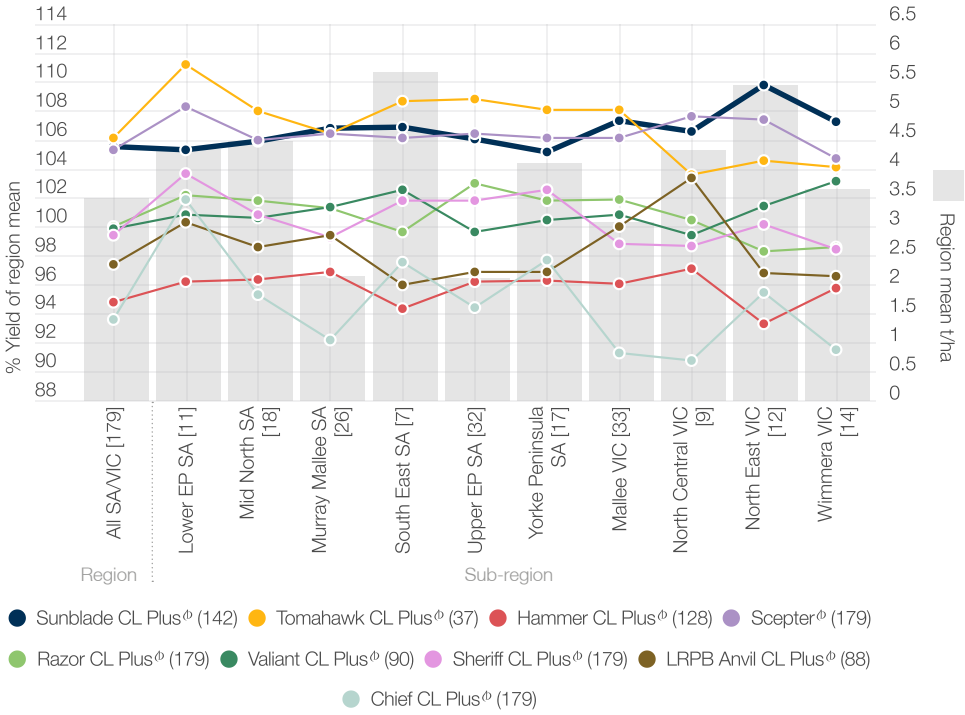
Source: AGT grazing trials, Collingullie NSW, 2017-2020

More information

Sunblade CL Plus Φ

- Elite yields
- Good black point and stripe rust resistance
- Mid-season maturity, slightly slower than Chief CL Plus Φ and Scepter Φ
- AH quality classification
- Moderate grain size, with slightly higher levels of screenings than other Clearfield® varieties
- Tolerant to Clearfield® Intervix® herbicide

Predicted grain yield of Sunblade CL Plus Φ versus comparators



Source: NVT long term MET analysis, main season trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/VIC dataset [179]

Clearfield® Plus
Production System for Wheat

More information

Australian Prime Hard:

A new premium wheat quality grade for Victoria

Key Points

- Historically, New South Wales and Queensland have had access to a market that rewards high protein and functionality: Australian Prime Hard (APH)
- In Victoria, this market has not existed; instead, Australian Hard (AH) has been the highest quality grade
- Recent changes to the Australian wheat quality classification system has opened up opportunities for APH wheat to be grown outside of NSW and Queensland
- A new wheat variety called Sunmaster$^{\Phi}$ is now available with an APH quality classification in Victoria
- No APH segregations or delivery points currently exist in Victoria, however these may develop in response to wider growth of APH classified varieties in these areas

Australian Wheat Quality Classification System

Wheat breeders like Australian Grain Technologies (AGT) are required to assess the quality characteristics of potential new varieties to determine their processing and end-use performance.

Lab assessments for around 30 quality parameters are conducted on grain from trials where new varieties and control varieties are grown together, over a minimum of three seasons and six locations.

This quality data is submitted to the Grains Australia Classification Panel, a group of technical experts who assess the quality of wheat varieties against the technical requirements of each class of wheat.

Based on their quality characteristics, new varieties are then allocated into one of eleven different wheat classes (the maximum grade that variety can then be marketed as), of which there are three premium hard wheat classes (Table 1).

Table 1. Premium hard white wheat classifications

Classification	End-Uses
Australian Prime Hard (APH)	High protein milling white wheat ideally suited for high volume European breads, yellow alkaline noodles, fresh ramen noodles, dry noodles and wonton skins.
Australian Hard (AH)	High to mid protein white-grained wheats, ideal for European pan and hearth breads, Middle Eastern style flat breads, yellow alkaline noodles, dry white salted noodles and steamed products.
Australian Premium White (APW)	Mid protein hard white wheat, for the production of a variety of noodle types, including Hokkien, instant and fresh noodles, and Middle Eastern and sub-continental flat breads and Chinese steamed bread. Can also be widely used as a blending wheat in a range of baking processes internationally and is the mainstay of the domestic baking industry.

Source: Grains Australia

The classification of a variety is determined on a zone-by-zone basis, using data generated from grain grown in that zone.

There are four classification zones in Australia: Northern (Queensland and northern NSW); South Eastern (southern NSW); Southern (Victoria and SA); and Western (WA).

When a grower delivers grain to a bulk handler, the grain parcel will be graded into a segregation based on the variety's classification (this determines the maximum grade the variety is eligible for) and its physical grain quality (protein, screenings, test weight etc.) .

An APH classified variety is eligible for many more milling segregations (APH, AH, APW and lower grades) compared with an ASW classified variety (ASW and lower grades only), and can cascade down to lower grades if specifications are not met.

Higher prices are usually paid for higher protein wheat grades.

Access to APH markets:

The APH classification and associated receival segregation was started in the northern region and later extended into southern NSW, with only growers in Queensland and NSW having access to this market.

In 2012 a GRDC funded research project was initiated to explore whether APH quality wheat could be grown in other Australian regions.

That research concluded that APH classification and segregation should not be excluded from other regions in Australia.

Although high protein is less frequently achieved in the southern region (Victoria and SA), when it is reached in APH classified varieties, the quality was deemed to be of 'APH quality'.

On that basis, the APH classification system was extended into Victoria and SA in 2018.

APH classified wheat varieties in Victoria and now give growers in high protein achieving environments the potential opportunity to deliver into higher grade segregations, potentially benefiting financially from price premiums on offer for growing higher protein wheat.

Wheat varieties suitable for the APH market:

Over the past decade, Suntop$^{\Phi}$ has been successfully grown in the North East of Victoria, where up to 33,000 hectares were planted at the peak of its popularity (in season 2015).

Recently, Suntop$^{\Phi}$ was granted an APH quality classification in Victoria, making it the first ever APH eligible wheat variety in the Southern Zone. Those that still grow Suntop$^{\Phi}$ in Victoria may therefore be able to benefit from growing higher protein grain.

Suntop$^{\Phi}$ has now been superseded by the release of Sunmaster$^{\Phi}$. Sunmaster$^{\Phi}$ has been derived from Suntop$^{\Phi}$ and offers much improved yield and physical grain characteristics compared with its parent.

Although primarily bred for NSW and Queensland environments, Sunmaster$^{\Phi}$ may be a useful variety for growers in Victoria who are interested in, and can capitalise on the marketing opportunities that an APH quality classification offers; or those that have successfully grown Suntop$^{\Phi}$ in the past.

Developing an APH market in Victoria

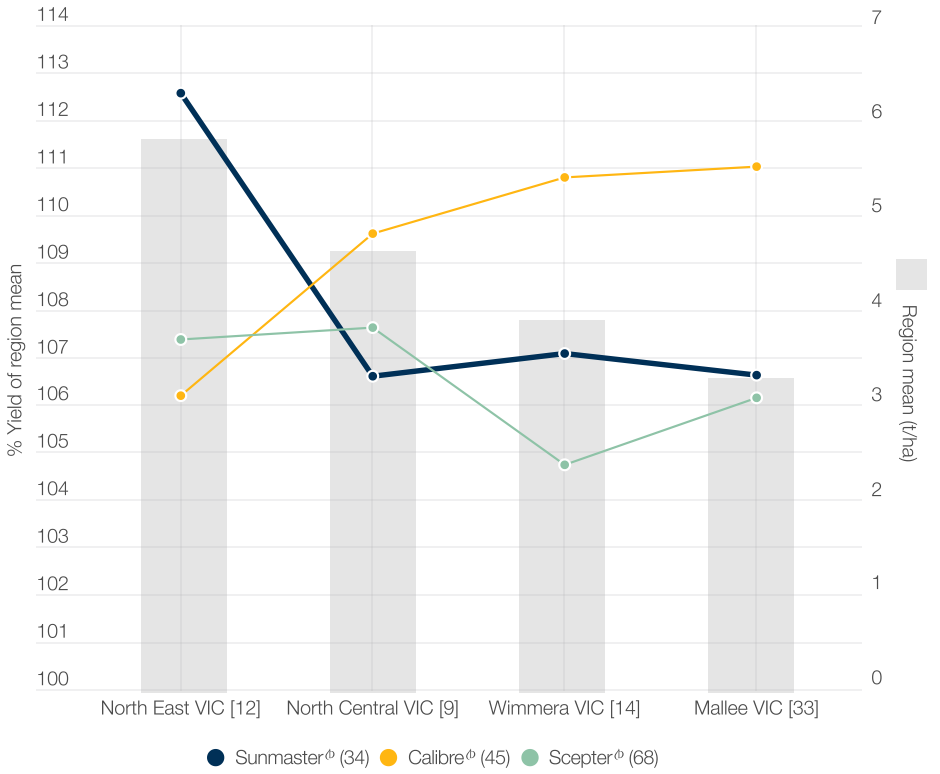
Now that an APH classification exists in Victoria, AGT's breeders will aim to develop improved varieties with APH classification suited to that environment.

Bulk handlers do not currently offer APH segregations in Victoria and SA, however this may change as a critical mass of APH classified varieties are grown. While segregations are being developed, growers of Sunmaster$^{\Phi}$ near the Victorian-NSW border may have the option to deliver APH grain into southern NSW with limited transport costs.

Sunmaster ◊

- One of the first APH quality varieties for Victoria & SA
- Offering a unique grain marketing opportunity
- Particularly well suited to North East Victoria
- Similar maturity and planting window as Scepter◊
- Improved stripe rust resistance over Scepter◊ & Rockstar◊
- Good black point resistance
- Very good leaf rust resistance

Predicted grain yield of Sunmaster◊ versus comparators



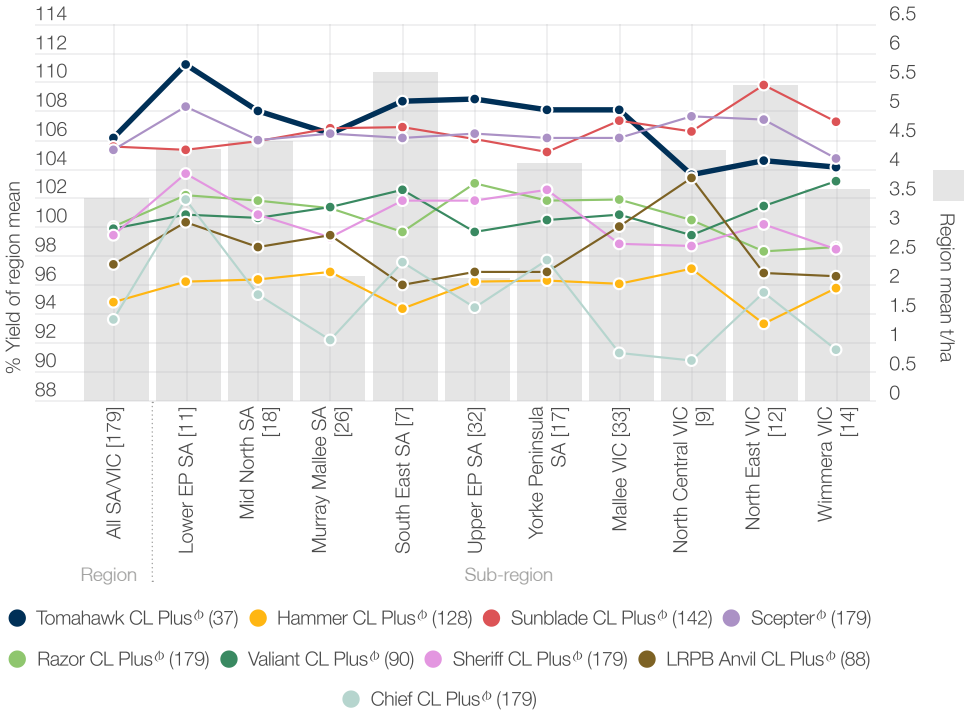
Source: NVT long term MET analysis, main season trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the dataset [68]

More information

Tomahawk CL Plus ΦΦ

- Scepter® type Clearfield® variety with increased yields over Scepter®
- The highest yielding Clearfield® wheat variety across SA/Vic
- Similar disease resistance profile as Scepter®
- Similar grain size and test weight as Scepter®
- Mid-season maturity, similar to Scepter®
- Good sprouting tolerance, similar to Scepter®
- APW quality classification
- Tolerant to Clearfield® Intervix® herbicide

Predicted grain yield of Tomahawk CL Plus® versus comparators



Source: NVT long term MET analysis, main season trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/VIC dataset [179]

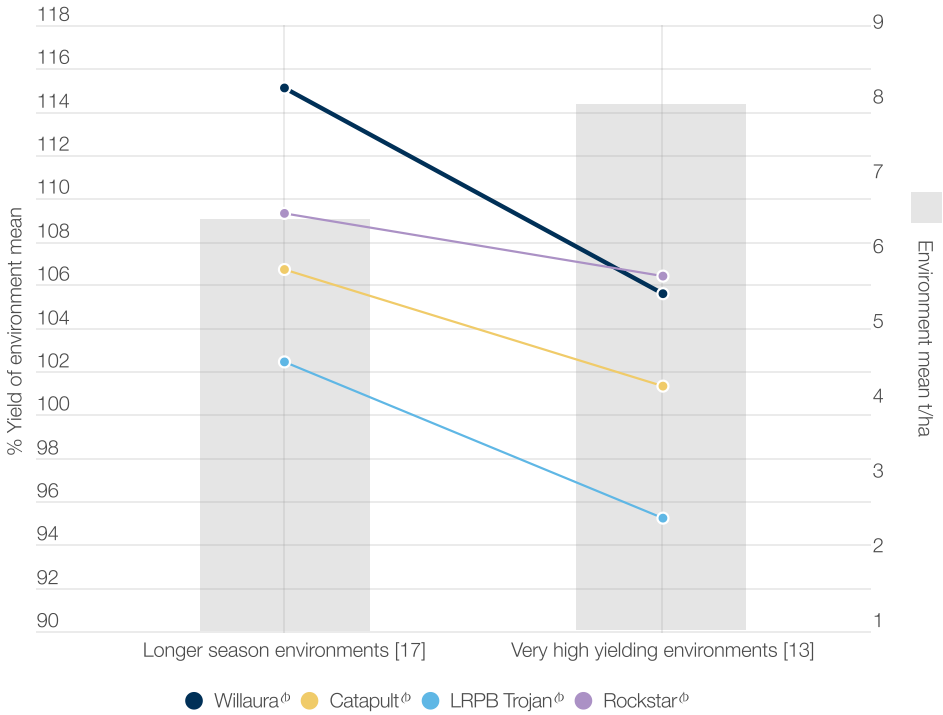
Clearfield® Plus
Production System for Wheat

More information

Willaura$^{\Phi}$

- Slow-very slow maturity, over a week slower than Rockstar$^{\Phi}$, similar to LRPB Beaufort$^{\Phi}$
- Best suited to the higher rainfall environments of Victoria and south east SA
- AH quality classification in Victoria and SA
- Competitive grain yield in longer season environments
- Relatively compact canopy, giving good standability in high yield potential situations

Grain yield across a range of growing conditions



Source: AGT long term MET analysis, early trial series 2018-2022
[ ] Total number of trials per environmental grouping

More information

Tomahawk CL Plus® closes the yield gap

A new wheat variety has been launched that is set to replace currently grown Clearfield® wheat varieties.

Having been in development by Australian Grain Technologies (AGT) over the past seven years, the new variety, named Tomahawk CL Plus®, is set to become a landmark variety in the Clearfield® wheat space.

The variety was officially launched on Wednesday September 13th at significant field days across SA, Victoria and WA, including the Minnipa Agricultural Centre Field Day in SA and Birchip Cropping Group Main Field Day in Victoria; highlighting the wide range of environments that Tomahawk CL Plus® suits.

Clearfield® varieties across many crop types are commonplace on farm these days, with tolerance to imidazolinone herbicides allowing for in-crop control of many weed species. Historically though, wheat varieties carrying this herbicide tolerance trait have come with a yield penalty compared with the leading 'conventional' wheat varieties such as Scepter®.

This is all about to change with the release of Tomahawk CL Plus®.

"We have been striving to reduce the yield gap between Clearfield® and conventional wheats for a long time now and have finally made a breakthrough with Tomahawk CL Plus®, which has yielded towards the top of the pack, a little above Scepter", explains AGT wheat breeder Dr James Edwards.

AGT Wheat Breeder Dr James Edwards introducing Tomahawk CL Plus® to the crowd at the Minnipa Agricultural Centre Field Day on September 13th, 2023.

SA Manager of Variety Support Brad Koster, and Wheat Breeder Dr James Edwards.

"Tomahawk CL Plus® is derived from Scepter and carries a lot of similarities. Other than holding an APW quality classification rather than AH, it's extremely similar. If you've grown Scepter® before, you will be very comfortable with Tomahawk CL Plus®".

"Think of Scepter's® high and stable grain size and test weight, good sprouting tolerance, wide adaptation, mid season maturity and disease resistance package. These are traits that Tomahawk CL Plus® holds, plus Clearfield® tolerance and a nice yield bump".

AGT's Manager of Variety Support for SA, Brad Koster, expects a wide application of the variety.

"There's no doubt growers will be interested in Tomahawk CL Plus® as a direct replacement for varieties like Razor CL Plus®, Chief CL Plus®, Sheriff CL Plus®, Grenade CL Plus® and Kord CL Plus®, but I can also see it being treated as a 'conventional' wheat too, due to its high grain yield and other agronomic advantages".

"If you grow a paddock of Tomahawk CL Plus® and don't need to use the Clearfield® herbicide in-crop, then you won't be wishing you grew a non-Clearfield® variety instead. There is no yield penalty by choosing to grow Tomahawk CL Plus® instead of a variety like Scepter®".

In WA, AGT's Variety Support Manager Floyd Sullivan says this is the breakthrough in Clearfield® wheats that growers have been looking for.

"We've been a bit limited with choice in the Clearfield® wheat market in WA, with Chief CL Plus® becoming the dominant Clearfield® variety, but with a large yield penalty relative to Scepter®".

"Tomahawk CL Plus® has been an absolute standout in AGT and NVT testing so far, and I expect it to become the clear choice for any grower looking to control weeds in-crop or as a plant back option to mitigate the risk of imidazolinone residues".

Durum

Variety comparisons

	Bitalli$^{\phi}$	Patron$^{\phi}$	DBA Aurora$^{\phi}$	DBA Artemis$^{\phi}$	DBA Spes$^{\phi}$
Quality Classification	ADR	ADR	ADR	ADR	ADR
Maturity	Quick-mid	Mid	Mid	Mid	Quick-mid
Stem Rust	RMR	RMR	RMR	MR	R
Stripe Rust	MRMS	MRMS	MRMS	MRMS	MS
Leaf Rust	MR	MR*	RMR	RMR	RMR
Yellow Leaf Spot	MRMS	MRMS	MRMS	MRMS	MRMS
Septoria *tritici* Blotch	MSS	MRMS	MRMS/S	MRMS/S	S
Crown Rot	SVS	SVS*	VS	VS	VS
CCN	MSS	S	MSS	MS	MS
Powdery Mildew	S	SVS	MSS	SVS	S
Black Point	MS	S*	MS	MS	MS

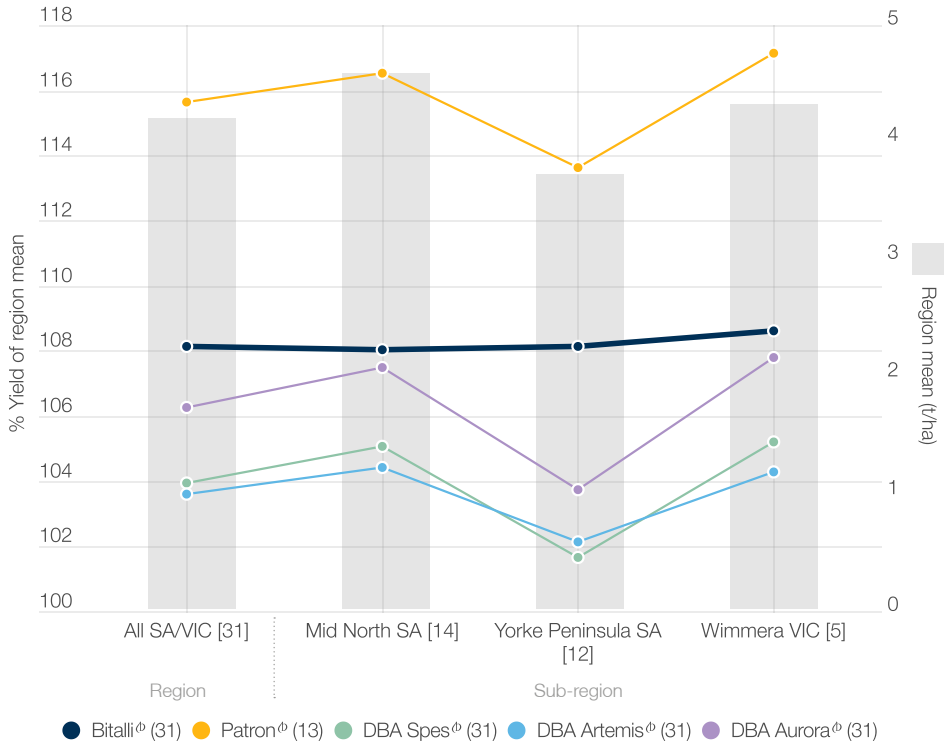
R Resistant
MR Moderately Resistant
MS Moderately Susceptible
S Susceptible
VS Very Susceptible
NA Not Available
/ Mixed reaction
* Provisional rating

Source: NVT consensus ratings 2022 and AGT

Bitalli$^{\Phi}$

- One of the highest yielding durum varieties currently available
- Best suited to low-medium rainfall environments
- ADR quality classification
- Very good physical grain characteristics with low screenings and high test weight
- Quick-mid maturity, providing good adaptation in tough finishes to the growing season
- Small improvement to crown rot resistance over most other varieties

Predicted grain yield of Bitalli$^{\Phi}$ versus comparators



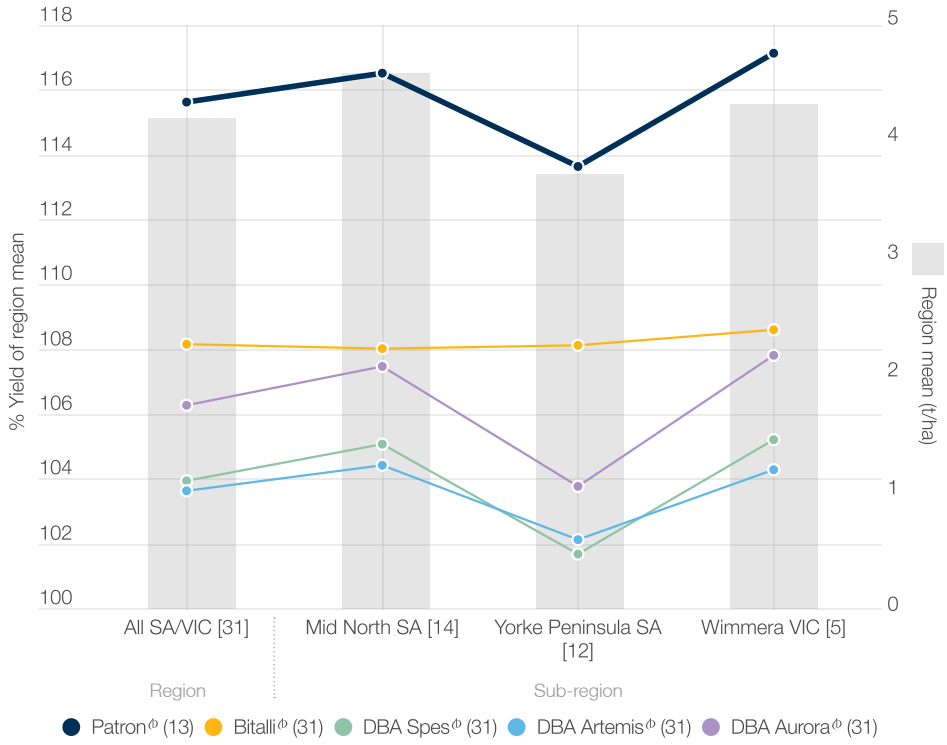
Source: NVT long term MET analysis yield prediction, durum trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/VIC dataset [31]

More information

Patron$^{\Phi}$

- The highest yielding durum variety currently available
- ADR quality classification
- An excellent alternative to DBA Aurora$^{\Phi}$
- Best suited to medium-high rainfall environments
- Very good physical grain quality characteristics
- Mid season maturity, similar to DBA Aurora$^{\Phi}$
- Small improvement in crown rot resistance, comparable to Bitalli$^{\Phi}$

Predicted grain yield of Patron$^{\Phi}$ versus comparators



Source: NVT long term MET analysis yield prediction, durum trial series 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/VIC dataset [31]

More information

AGT renews commitment to supporting rural communities.

For over 20 years, Australian Grain Technologies (AGT) has been contributing to the prosperity of this country's farmers by breeding new and competitive field crop varieties that are more productive, better quality and cost less to grow.

In 2022, to celebrate our 20 year anniversary, we decided to invest further into those farming communities that have supported us over this time.

One such initiative was giving away seed of AGT's first ever canola varieties. Three open-pollinated varieties (two of them triazine tolerant and the other conventional) were launched in August of 2022 and free seed was offered to AGT growers.

Another program embarked upon by AGT in its anniversary year was the establishment of a series of community donations. These donations were offered to growers of AGT varieties across Australia who needed support for projects that would benefit the community in which they lived. The community donations were an acknowledgement that AGT's prolonged success has depended on the support of Australian grain growers and the communities that sustain them.

Rupanyup Primary School in Victoria received a Community Donation to help upgrade their playground

The AGT Community Donation of $10,000 to Rupanyup Primary School allowed for the completion of the school playground

AGT reached out to farming areas that had been strong supporters of the company and asked for ideas on how to help.

Several restoration and renovation projects from Yuna in WA to North Star in NSW were funded by AGT, with grants contributing to building new playgrounds, fixing nurses quarters, creating child-safe playrooms and purchasing a new lawnmower for a local sports club.

What became clear through the process of assessing the numerous requests and awarding these donations was that there is an ongoing need in rural communities for more to be done by businesses like AGT that earn their livelihood from the work done in the field by Australian grain growers.

For this reason, in 2023, AGT once again asked grain growers from around Australia to come up with ideas on how we could help their local communities.

The diversity of requests for funding that AGT received was symbolic of the differing regions, towns and families that comprise the rich tapestry of Australia's grain growing industry. The 2023 Community Donation recipients are evidence of this.

From funding the restoration of what is claimed as Australia's oldest clay tennis court in WA, to enabling a group of young rugby players from the central plains of NSW to travel and compete in competitions they would otherwise be unable to afford. Town hall restoration, a new community hall projector, contributing to building a school playground, sports club changeroom upgrades and even helping to pay for a school musical were all projects that AGT was delighted and proud to contribute to in 2023.

AGT are proud to release new and competitive varieties of wheat, barley, canola, durum and lupins to provide Australian farmers with real solutions that deliver value, as well as doing our part to ensure the global population is well nourished. We see being able to further contribute to farming regions across Australia through community donations as a natural extension of our responsibility to be giving back to the growers who have shown trust in us over the past decades through the adoption of our varieties and the payment of their end-point royalties.

Barley

Plant characteristic comparisons

	Beast$^{\phi}$	Cyclops$^{\phi}$	Minotaur$^{\phi}$	Titan AX$^{\phi}$
Malt Classification	Potential Malt	Potential Malt	Potential Malt	Potential Malt
Herbicide Tolerance	-	-	-	CoAXium® (Aggressor®)
Plant Height	Tall	Moderately Short	Moderately Short	Tall
Early Vigour	Good	Moderate	Moderate	Good
Early Plant Growth Habit	Semi-erect	Erect	Prostrate	Semi-erect
Lodging Tolerance	Medium to Weak	Medium to Strong	Strong	Medium to Weak
Brackling Tolerance	Medium	Medium	Medium to Strong	Medium
Sprouting Tolerance	Good	Good	Good	Good
Coleoptile Length	Medium Long	Short	Long	Medium Long
Rachilla Hair	Long	Short	Long	Long
Head Loss Tolerance	Medium to Weak	Medium	Medium	Medium to Weak

Disease resistance comparisons

	Beast$^{\phi}$	Cyclops$^{\phi}$	Minotaur$^{\phi}$	Titan AX$^{\phi}$	Compass$^{\phi}$	La Trobe$^{\phi}$	Maximus CL$^{\phi}$	RGT Planet$^{\phi}$	Spartacus CL$^{\phi}$
Spot Form of Net Blotch	MS	MS	S	MS	MS	S	MS	SVS	S
Net Form of Net Blotch	MR#	MRMS	MRMS	MS	MS	MR	MRMS	SVS	S
Leaf Rust	S	SVS	SVS	S	SVS	S	S	MR	S
CCN	MR	S	R	MR*	R	R	R	R*	R
Scald	SVS	S	VS	VS	SVS	SVS	SVS	SVS	SVS

R Resistant
MR Moderately Resistant
MS Moderately Susceptible
S Susceptible
VS Very Susceptible

A range of reactions is provided (separated with -) where different strains of the pathogen exist and where the variety may respond differently to them

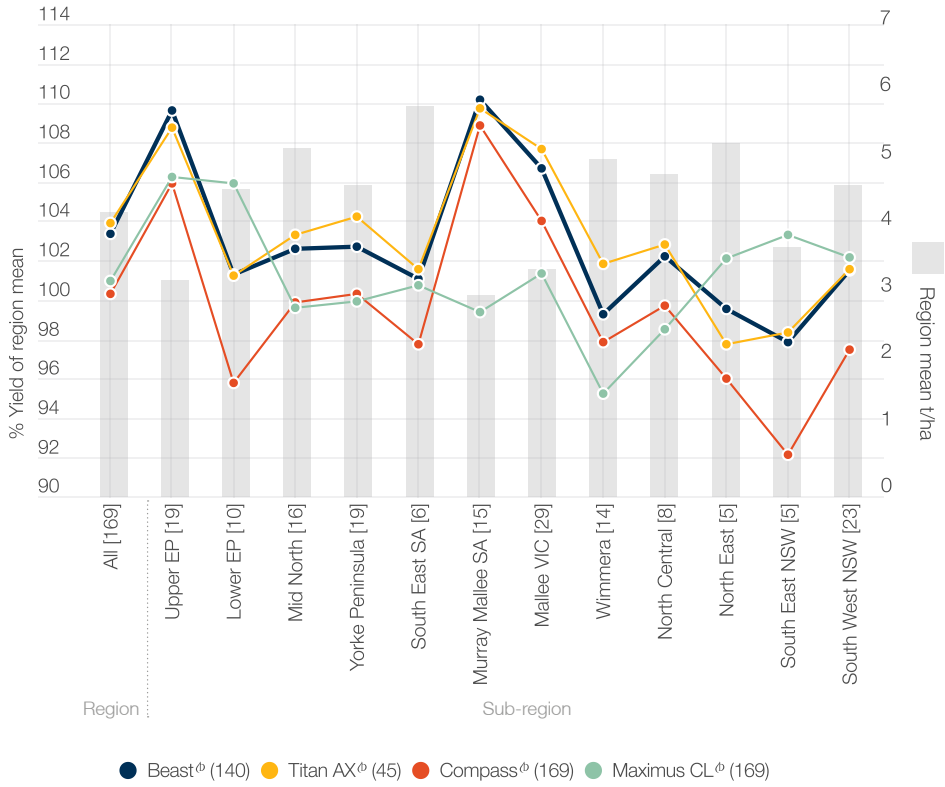
* Provisional rating

Source: NVT consensus ratings 2022

Beast$^{\Phi}$

- Very high yielding in low-medium rainfall environments
- Quick maturity, quicker than Compass$^{\Phi}$
- Excellent performance in stressed, tight finishing environments and seasons
- Compass$^{\Phi}$ plant type, with similar early vigour
- Competitive physical grain quality package, with test weight comparable to most commonly grown varieties and excellent grain size resulting in high retentions
- Has entered the Grains Australia malt accreditation program but is currently deliverable as Barley/Feed

Predicted grain yield of Beast$^{\Phi}$ versus comparators



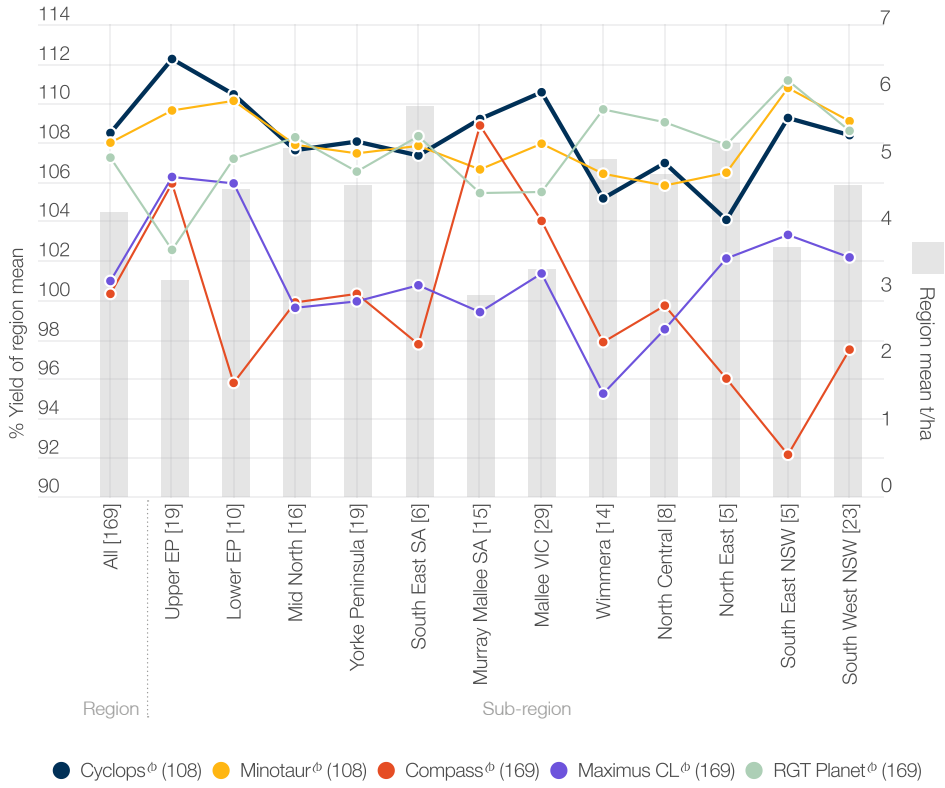
Source: NVT long term MET analysis yield prediction 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/Vic/sNSW dataset [169]

More information

Cyclops$^{\Phi}$

- Exceptional yield potential
- Quick-mid maturity, slightly slower than Spartacus CL$^{\Phi}$
- Wide adaptation to a range of environments and seasonal conditions
- Erect growing Hindmarsh$^{\Phi}$ plant type
- Less susceptible to lodging than taller varieties such as Compass$^{\Phi}$
- Competitive physical grain quality package
- Improved spot-form net blotch resistance over Rosalind$^{\Phi}$ and Spartacus CL$^{\Phi}$
- Has entered the Grains Australia malt accreditation program but is currently deliverable as Barley/Feed

Predicted grain yield of Cyclops$^{\Phi}$ versus comparators



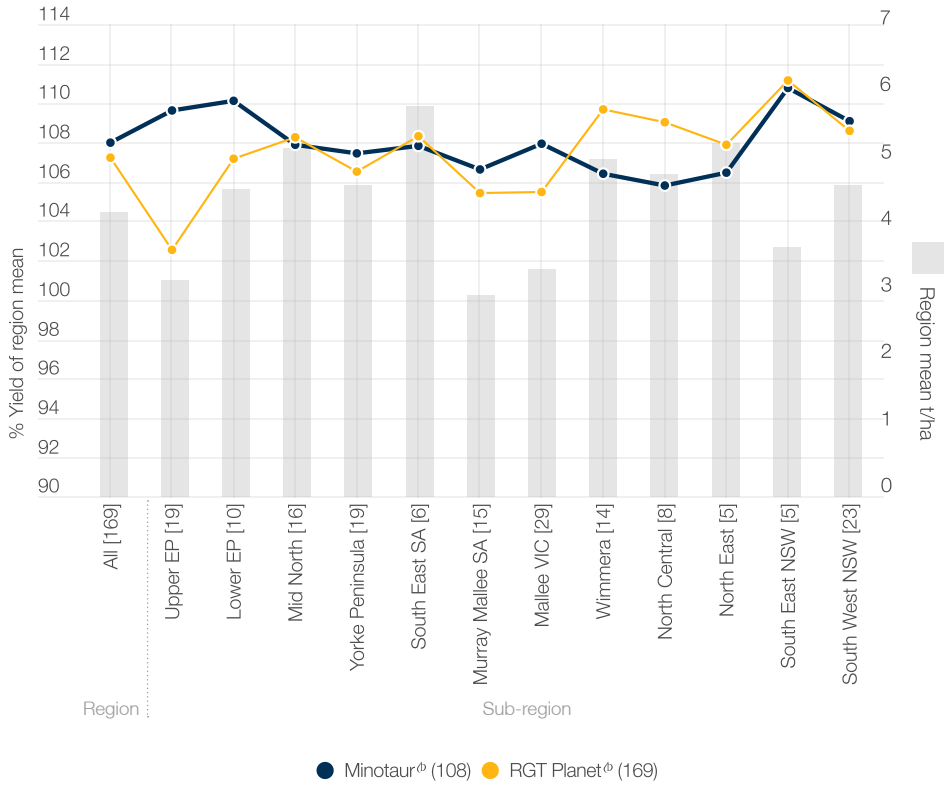
Source: NVT long term MET analysis yield prediction 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/Vic/sNSW dataset [169]

More information

Minotaur$^{\Phi}$

- A lower risk alternative to RGT Planet$^{\Phi}$ with similar top-end yield potential
- Best suited to medium-high rainfall environments
- Mid-slow maturity, slightly slower than RGT Planet$^{\Phi}$
- Broader adaptation than RGT Planet$^{\Phi}$, delivering more stable yields across a wider range of environmental conditions
- Improved test weight compared with RGT Planet$^{\Phi}$
- Has entered the Grains Australia malt accreditation program but is currently deliverable as Barley/Feed

Predicted grain yield of Minotaur$^{\Phi}$ versus comparators



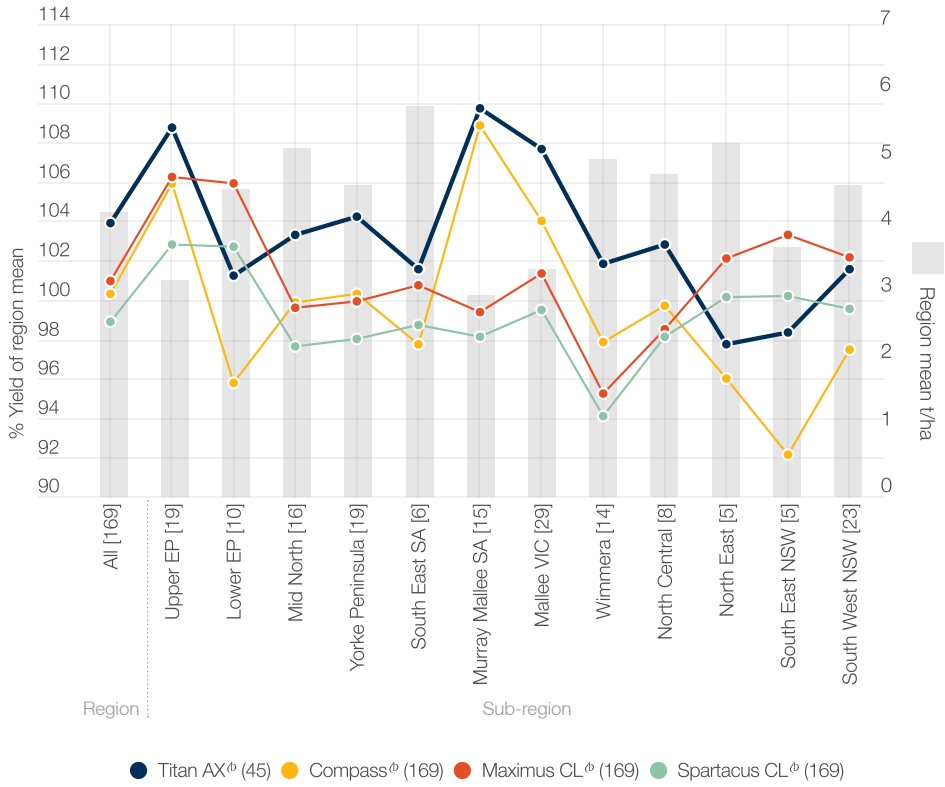
Source: NVT long term MET analysis yield prediction 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/Vic/sNSW dataset [169]

More information

Titan AX$^{\Phi}$

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

Predicted grain yield of Titan AX$^{\Phi}$ versus comparators



Source: NVT long term MET analysis yield prediction 2018-2022
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the SA/Vic/sNSW dataset [169]

More information

Canola

Triazine Tolerant variety comparisons

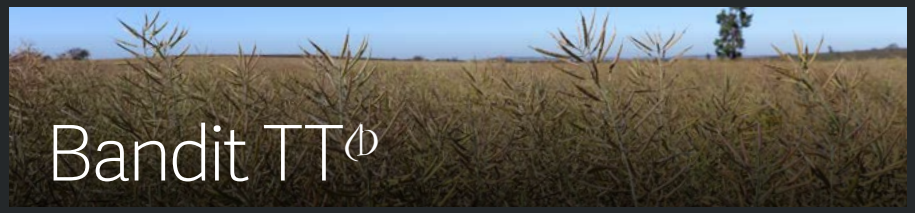
	Bandit TT$^{\Phi}$	Renegade TT$^{\Phi}$	ATR Bonito$^{\Phi}$	ATR Stingray$^{\Phi}$	ATR Wahoo$^{\Phi}$	HyTTec® Trident	HyTTec® Trophy
Type	Triazine Tolerant, Open Pollinated	Triazine Tolerant, Open Pollinated	Triazine Tolerant, Open Pollinated	Triazine Tolerant, Open Pollinated	Triazine Tolerant, Open Pollinated	Triazine Tolerant Hybrid	Triazine Tolerant Hybrid
Plant Height	Medium	Short-Medium	Short-Medium	Short	Medium	Tall	Medium-Tall
Blackleg Rating (Bare)	MRMS	MR	MS	MRMS	MRMS	R	R
Blackleg Rating (Treated)	R	R	R	R	R	R	R
Blackleg Resistance Group	A	A	A	C	A	AD	AD
Flowering Maturity	Early	Early-Mid	Early-Mid	Early	Mid	Early	Early-Mid

Conventional variety comparisons

	Outlaw$^{\Phi}$	AV Garnet$^{\Phi}$	Nuseed Diamond
Type	Conventional, Open Pollinated	Conventional, Open Pollinated	Conventional, Hybrid
Plant Height	Tall	Tall	Medium
Blackleg Rating (Bare)	RMR	MS	RMR
Blackleg Rating (Treated)	R	MR	R
Blackleg Resistance Group	A	A	ABF
Flowering Maturity	Early	Early-mid	Early

R Resistant
MR Moderately Resistant
MS Moderately Susceptible
S Susceptible
VS Very Susceptible

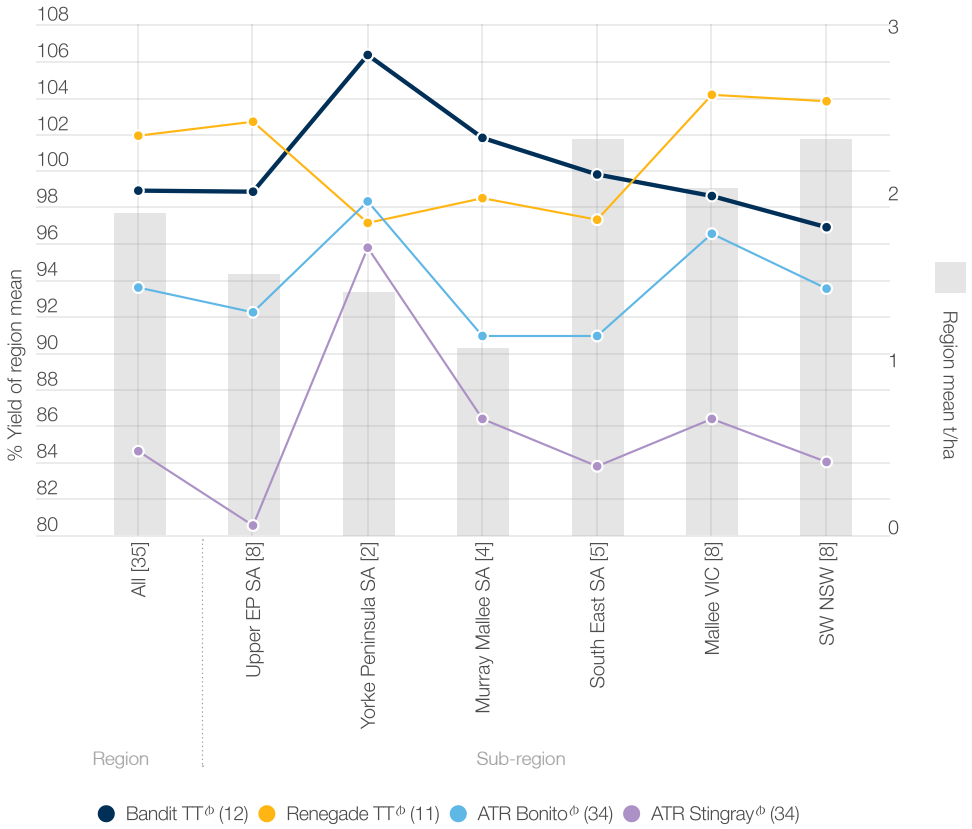
Source: NVT consensus ratings 2022 and AGT data



Bandit TT$^{\Phi}$

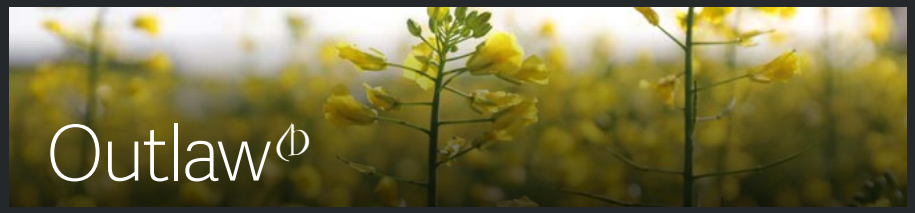
- Triazine Tolerant, Open Pollinated
- Very quick to flower, similar to ATR Stingray$^{\Phi}$ and HyTTec® Trident
- Market leading profitability under stressed conditions
- Best adapted to lower rainfall and lower yield potential environments
- Oil content similar to ATR Stingray$^{\Phi}$
- R blackleg rating (with fungicide), MRMS blackleg rating (without fungicide)
- Group A blackleg resistance

Predicted grain yield – NVT 'low/medium rainfall triazine' (quicker maturing) canola series



Source: NVT long term MET analysis, low/medium rainfall triazine canola trial series 2018-2022

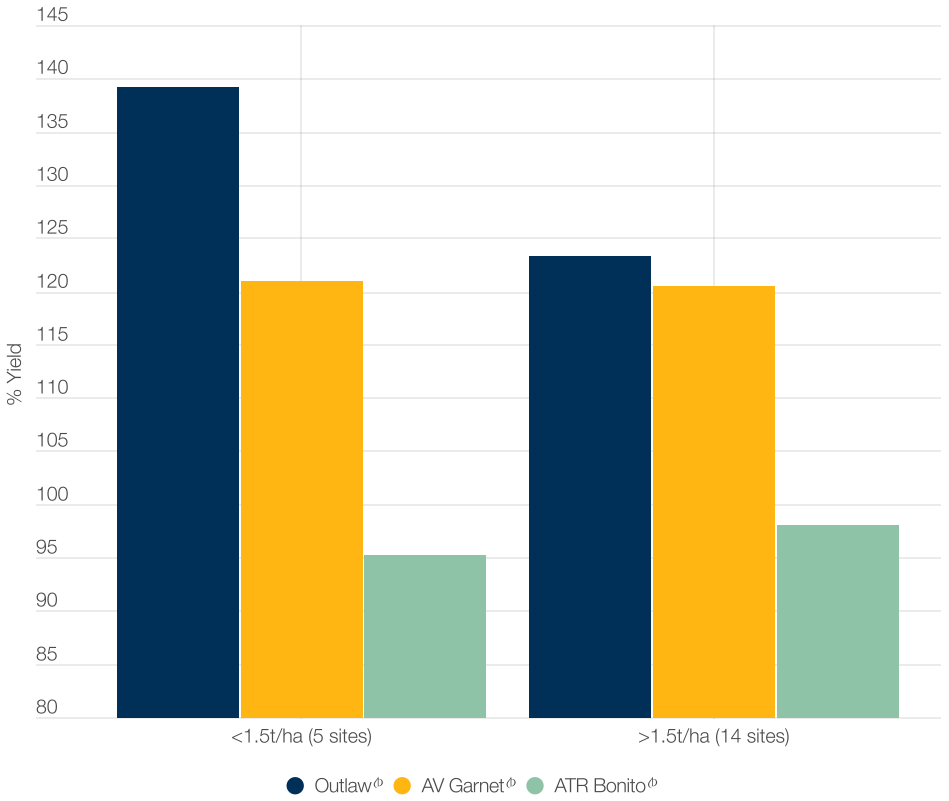
More information



Outlaw$^{\Phi}$

- Conventional, open pollinated (OP)
- Very quick to flower, similar to Nuseed Diamond and quicker than AV Garnet$^{\Phi}$
- Leading grain yield in conventional OP market
- Excellent oil content, nearly 3% higher than AV Garnet$^{\Phi}$ in AGT trials
- R blackleg rating (with fungicide), RMR blackleg rating (without fungicide)
- Group A blackleg resistance

Grain yield of Outlaw$^{\Phi}$ versus comparator varieties



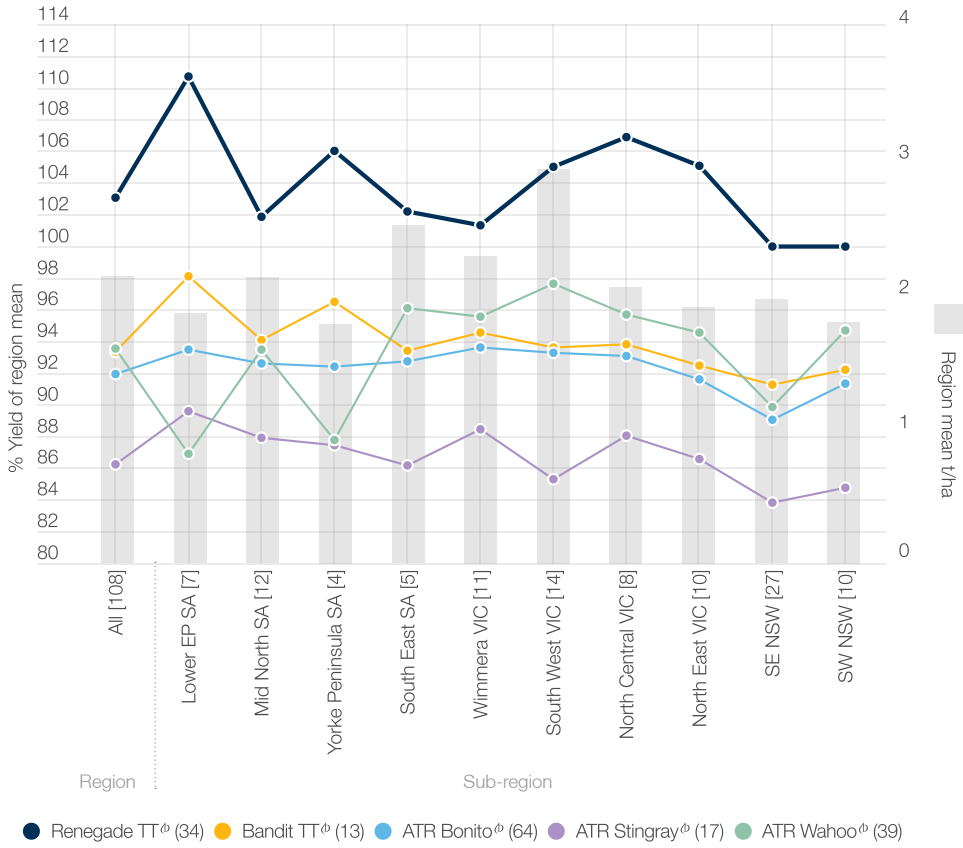
Source: AGT canola trials 2019-2021 (19 sites across WA, SA, Vic, southern NSW)

More information

Renegade TT$^{\Phi}$

- Triazine Tolerant, Open Pollinated
- Quick to flower, between HyTTec® Trident and HyTTec® Trophy, a little quicker than ATR Bonito$^{\Phi}$
- Best performance under medium yield potential conditions with competitive profitability
- Oil content higher than ATR Stingray$^{\Phi}$, similar to HyTTec® Trident
- R blackleg rating (with fungicide), MR blackleg rating (without fungicide)
- Group A blackleg resistance

Predicted grain yield – NVT 'medium/high rainfall' (mid maturing) canola series



Source: NVT long term MET analysis, medium/high rainfall triazine canola trial series 2018-2022

More information

Lupin

Agronomic attribute comparisons

	Coyote$^{\phi}$	Lawler$^{\phi}$	Mandelup$^{\phi}$	PBA Bateman$^{\phi}$
Metribuzin Tolerance	T	T	T	T
Split Seed	T	MI	MTMI	MTMI
Alkaloid Content	Very Low	Low	Low-Moderate	Low-Moderate
Plant Height	Short-Medium	Short	Medium-Tall	Short
Early Vigour	Good	Good	Very Good	Good
Lodging	MR	MS	MRMS	MRMS
Flower Colour	White-Dark Purple	White-Dark Purple	White-Purple	White-Purple
Seed Coat	Brown Speckle	Brown Speckle	Brown Speckle	Brown Speckle

Source: AGT

Disease rating comparisons

	Coyote$^{\phi}$	Lawler$^{\phi}$	Mandelup$^{\phi}$	PBA Bateman$^{\phi}$
Anthracnose	MRMS	MR	MRMS	MRMS
Cucumber Mosaic Virus	MRMS	MR	MS	MR
Grey Spot	R	R	R	R
Pod *Phomopsis*	MRMS	MS	S	MS
Stem *Phomopsis*	S	MR	RMR	RMR

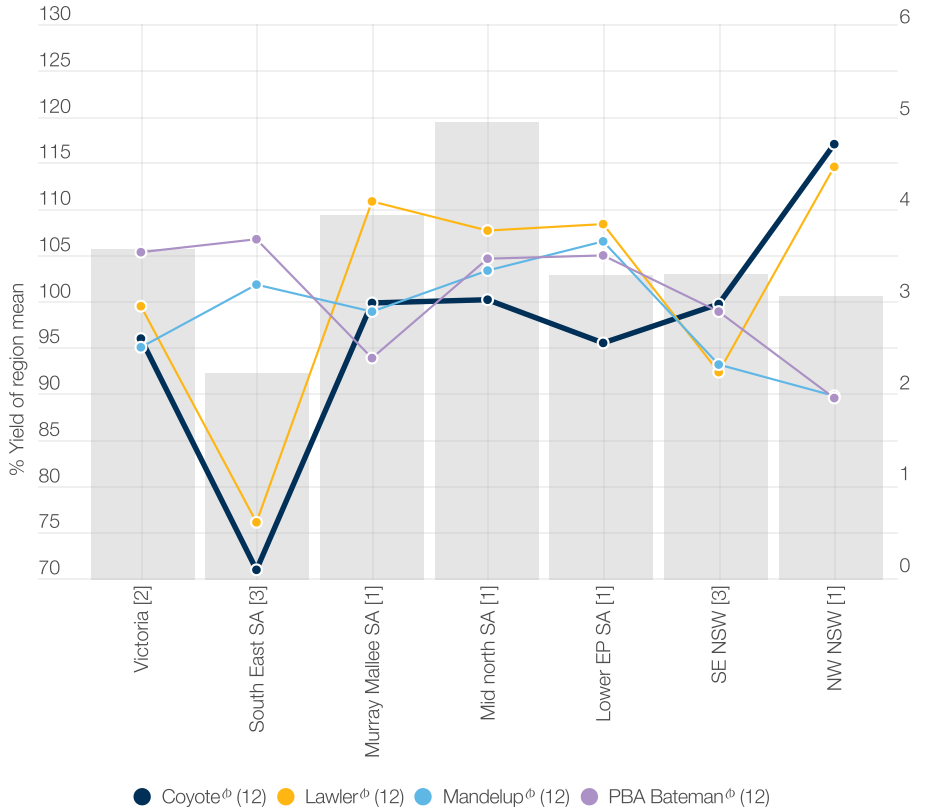
R	Resistant	T	Tolerant
MR	Moderately Resistant	MT	Moderately Tolerant
MS	Moderately Susceptible	MI	Moderately Intolerant
S	Susceptible	I	Intolerant
VS	Very Susceptible	VI	Very Intolerant

Source: NVT consensus ratings 2022 and AGT

Coyote$^{\Phi}$

- Wide adaptation
- Metribuzin tolerant
- Reduced risk of seed splitting compared with some other varieties
- Susceptible to stem *Phomopsis*
- Slower to reach flowering relative to Mandelup$^{\Phi}$, slightly slower than PBA Bateman$^{\Phi}$

Grain yield across NSW, Vic & SA 2022



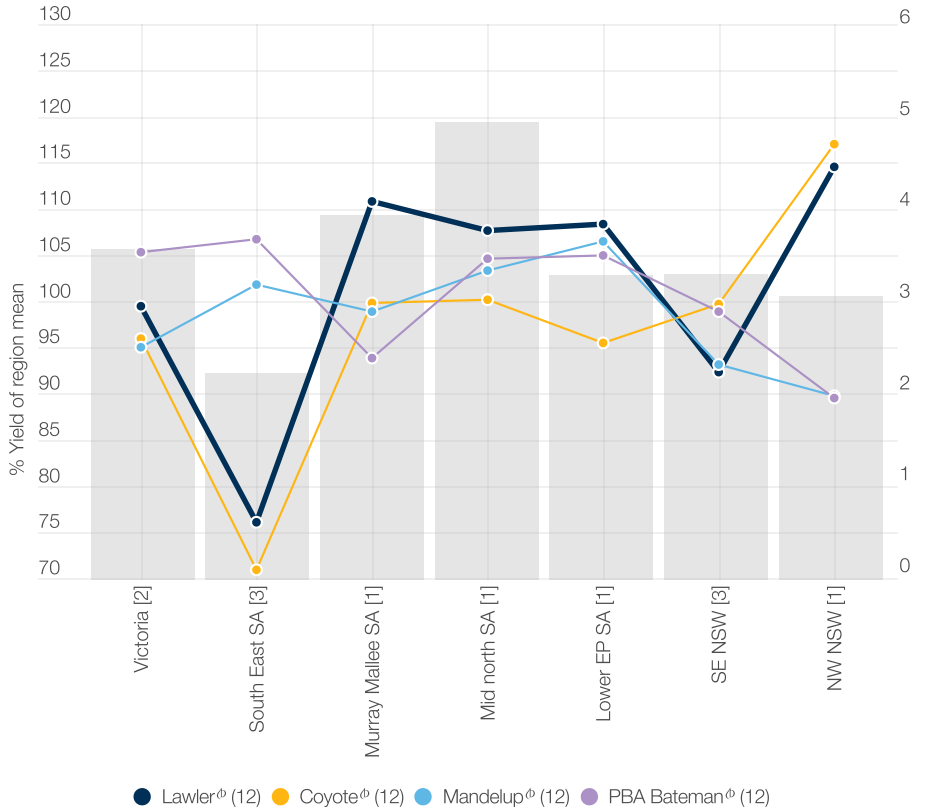
Source: NVT 2022 – NSW, Vic & SA trials
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the regions

More information

Lawler$^{\Phi}$

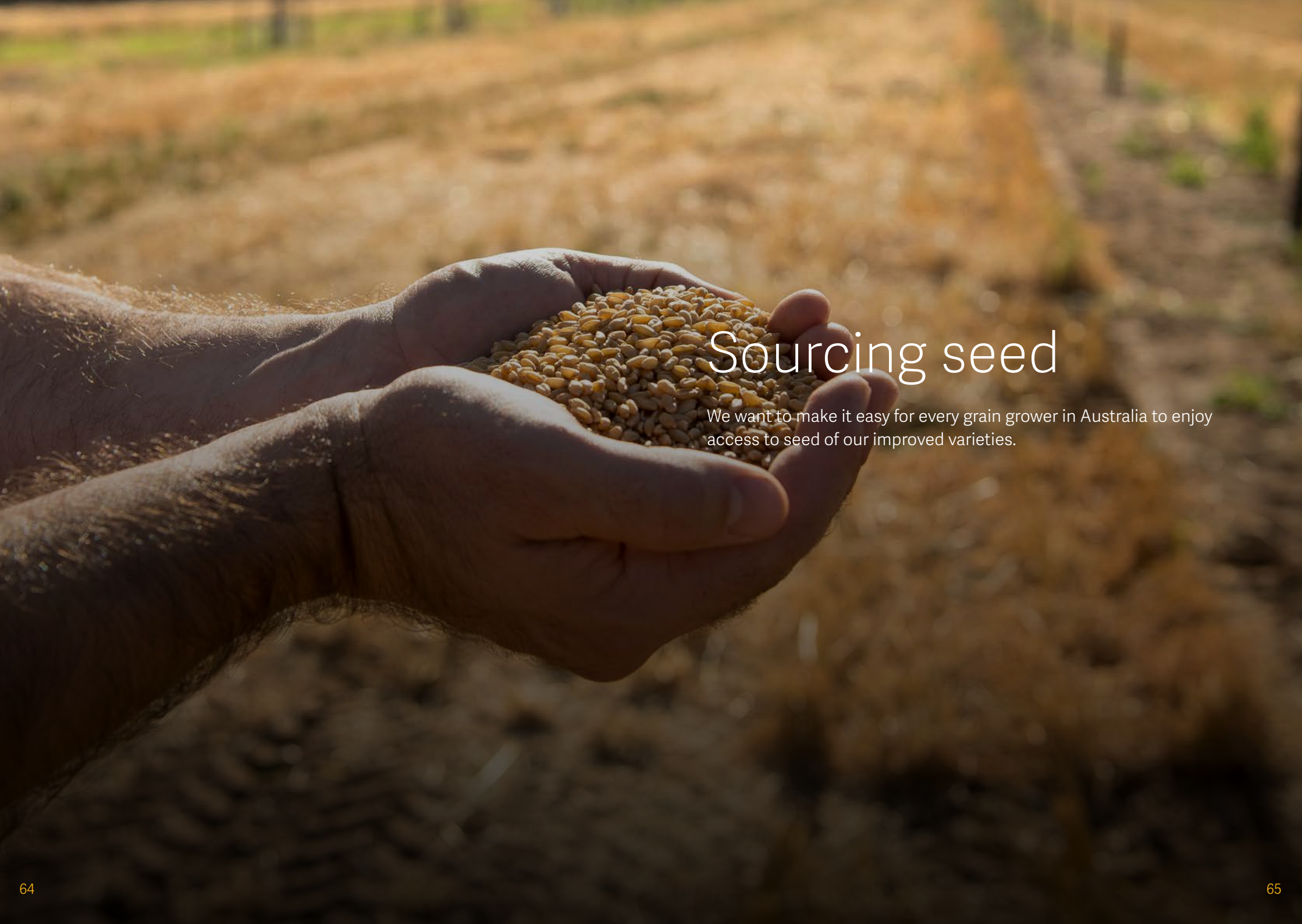
- A high yielding alternative to Mandelup, Coyote$^{\Phi}$ and PBA Bateman$^{\Phi}$
- Improved stem *Phomopsis* resistance over Coyote$^{\Phi}$
- Widely adapted throughout Eastern Australian lupin growing regions
- Metribuzin tolerant
- Similar maturity compared with Mandelup$^{\Phi}$, around 4 days quicker to flower than Coyote$^{\Phi}$

Grain yield across NSW, Vic & SA 2022



Source: NVT 2022 – NSW, Vic & SA trials
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the regions

More information



Sourcing seed

We want to make it easy for every grain grower in Australia to enjoy access to seed of our improved varieties.

AGT Affiliates

AGT Affiliates are responsible for production, grading, sales and distribution of all our new and existing varieties. AGT Affiliates offer both wholesale and retail sales capacity and thereby growers can access seed of our varieties from AGT Affiliates directly, or through most agricultural merchandising retail stores. AGT does not sell seed direct to growers, nor does AGT earn any income from the sale of seed.

AGF Seeds

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F 03 5345 6442
M 0403 264 995
tim.brown@agfseeds.com.au
www.agfseeds.com.au

Baker Seed Co.

628 Springhurst Road
Rutherglen VIC 3685

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aaron.giason@bakerseedco.com.au
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Bordertown SA 5268

Brett Smedley
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F 08 8752 2589
seedsales@tatiaraseeds.com.au
www.tatiaraseeds.com.au

AGT Seed Sharing™

Seed Sharing™ is a low cost way of introducing our improved genetics into your program.

Seed Sharing™ is a licensed farmer to farmer trading scheme whereby grain of selected AGT varieties may be traded between farmers to use as seed.

Farmers who have grown a crop using commercial seed purchased from a recognised seed retailer or AGT Affiliate may sell seed to another farmer at a price or arrangement negotiated between them, providing they complete an AGT Seed Sharing™ License Agreement form. End Point Royalties are not charged on seed sold through Seed Sharing™.

Seed Sharing™ is allowed for all AGT wheat, durum, barley, canola and lupin varieties.

For the full terms and conditions and to download the AGT Seed Sharing™ License Agreement visit: agtbreeding.com.au/sourcing-seed/seed-sharing

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