

Minotaur[®]



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

Breeder's comments

Minotaur^ϕ (tested as AGTB0213) enters the market as a clear step-up from the landmark European variety RGT Planet^ϕ. While RGT Planet^ϕ is a direct introduction from Europe, Minotaur^ϕ is the result of an Australian by European cross, bringing together European yield potential with Australian adaptation to our tough growing conditions. Minotaur^ϕ has demonstrated adaptation across a broader range of seasonal conditions and regions than RGT Planet^ϕ, which can be penalised under drier, stressed conditions.

In addition to competitive yields, Minotaur^ϕ offers a strong physical grain quality package, delivering higher test weight, lower screenings and better retention compared with RGT Planet^ϕ. The yield stability combined with improved grain characteristics means that Minotaur^ϕ is a safer variety to use than RGT Planet^ϕ for growers looking to mitigate the risk of highly variable seasons.

Minotaur^ϕ has a mid-slow maturity, reaching awn peep a couple of days later than RGT Planet^ϕ and is ideally suited to medium-high yield potential environments. Minotaur^ϕ has a relatively compact plant type with moderate resistance to lodging.

Minotaur^ϕ has been accepted into the Barley Australia malt accreditation program, with stage 1 malt evaluation commencing in 2021. Minotaur^ϕ is deliverable into the Barley/Feed grade.

Seed availability

Commercial quantities of Minotaur^ϕ may be available through AGT Affiliates, or your local retailer. Please consult the AGT website for AGT Affiliate contact details. Minotaur^ϕ is able to be traded between growers upon the completion of a License Agreement as part of AGT's Seed Sharing™ initiative.

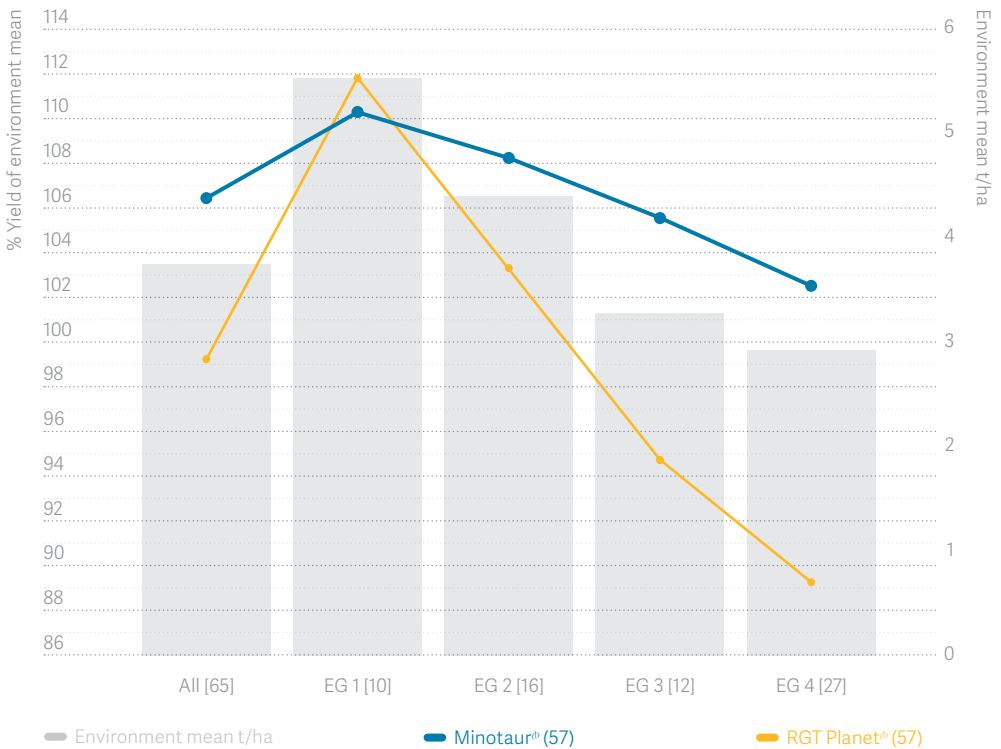
PBR and EPR

Minotaur^ϕ is protected by Plant Breeders Rights (PBR) (denoted by the ^ϕ symbol) and all production (except seed saved for planting) is liable to an End Point Royalty (EPR), which funds future plant breeding. Minotaur^ϕ growers will be subject to a Growers License Agreement that acknowledges that an EPR of \$4/tonne + GST has to be paid on all production other than seed saved for planting.

Grain yield

Minotaur[®] has delivered yields that are more stable across a wider range of seasonal conditions and regions compared to RGT Planet[®] (Figures 1 & 2). Minotaur[®] out-yields RGT Planet[®] in most environments, except in very high yielding, softer conditions (Figure 3). Three years of head-to-head AGT observations across SA, Vic and southern NSW showed that Minotaur[®] out-yielded RGT Planet[®] in 24 out of 30 trials (7% yield).

Figure 1 Grain yield of Minotaur[®] versus RGT Planet[®] across a range of growing conditions – AGT long term data



Source: AGT long term MET analysis, all Australian trial sites 2017-2020.

[] Total number of trials per environmental grouping

() Number of trials that each variety was present in across the dataset [65]

EG Environmental Group, a statistical correlation of performance across 65 trial sites and seasons (2017-2020) where single experiments are grouped based on relative performance of varieties within those trials.

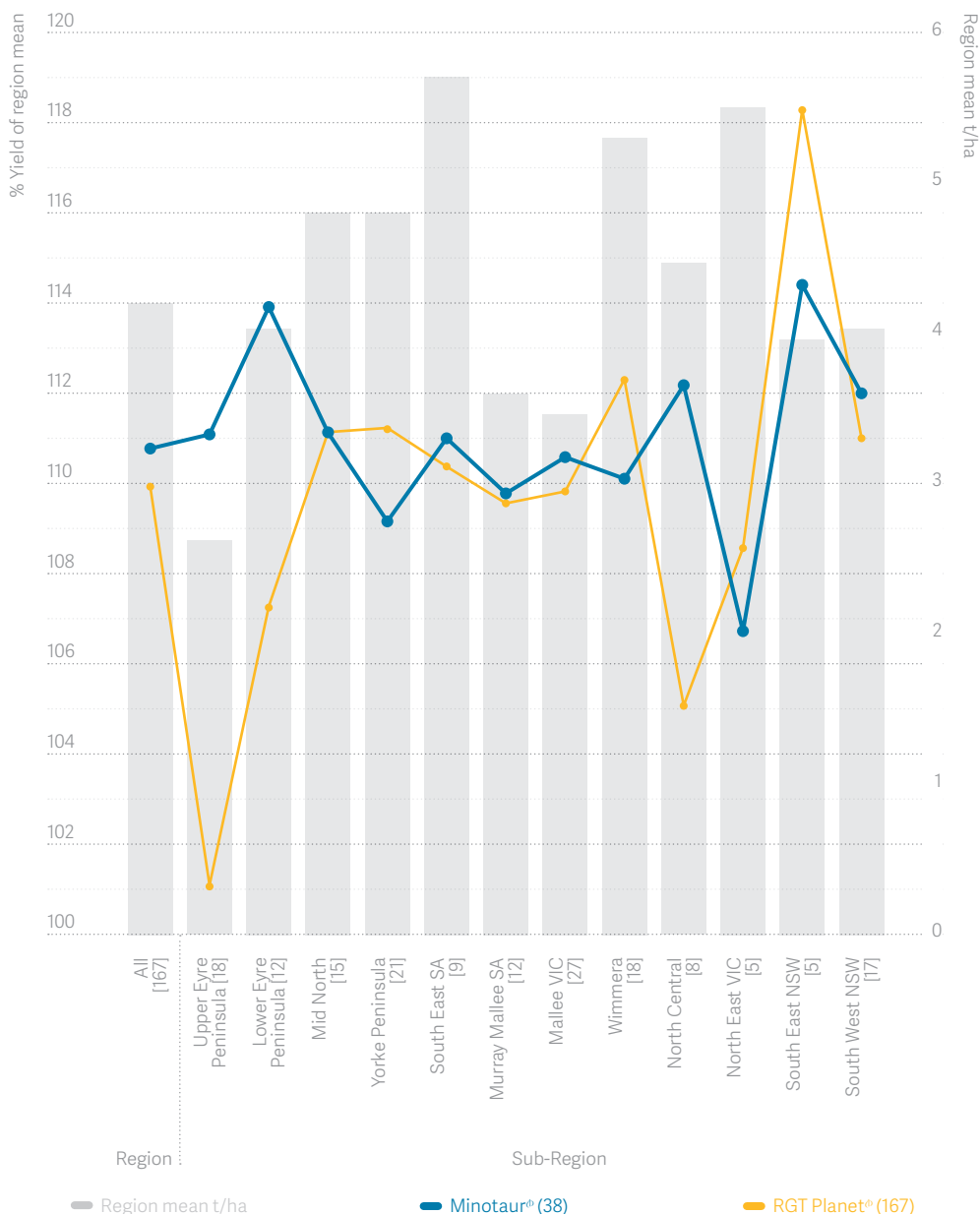
EG 1 Favourable seasons and environments, with high yield potential

EG 2 Average style of season, with moderate yield potential

EG 3 Drier growing season but with a longer, favourable finish

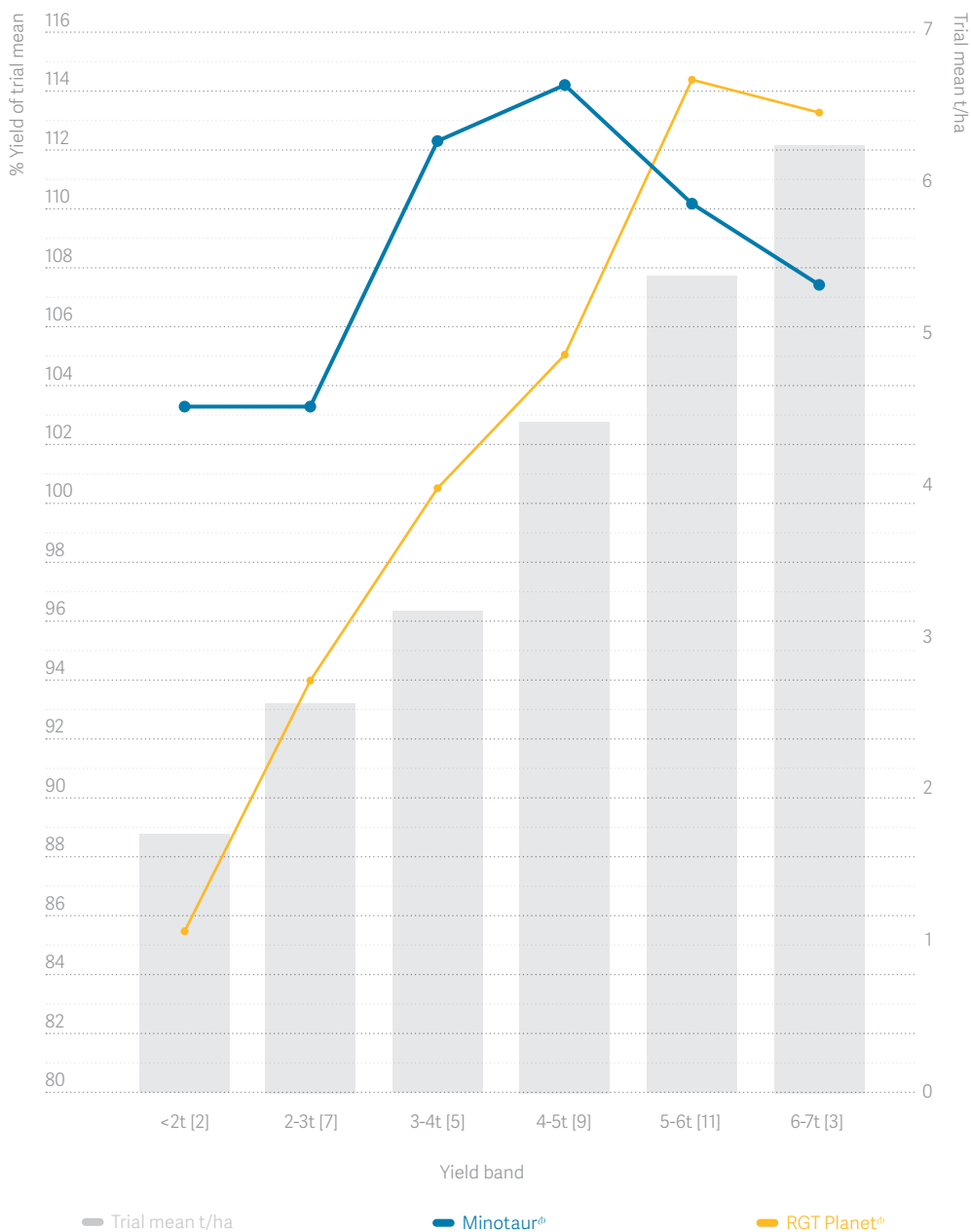
EG 4 Shorter growing season with terminal drought stress

Figure 2 Grain yield of Minotaur[®] versus RGT Planet[®] – NVT long term data



Source NVT main season series long term MET analysis 2016-2020
 [] Total number of trials per region
 () Number of trials that each variety was present in across the South Australian, Victorian and southern New South Wales dataset [167]

Figure 3 Grain yield of Minotaur[®] versus RGT Planet[®] across yield potential ranges

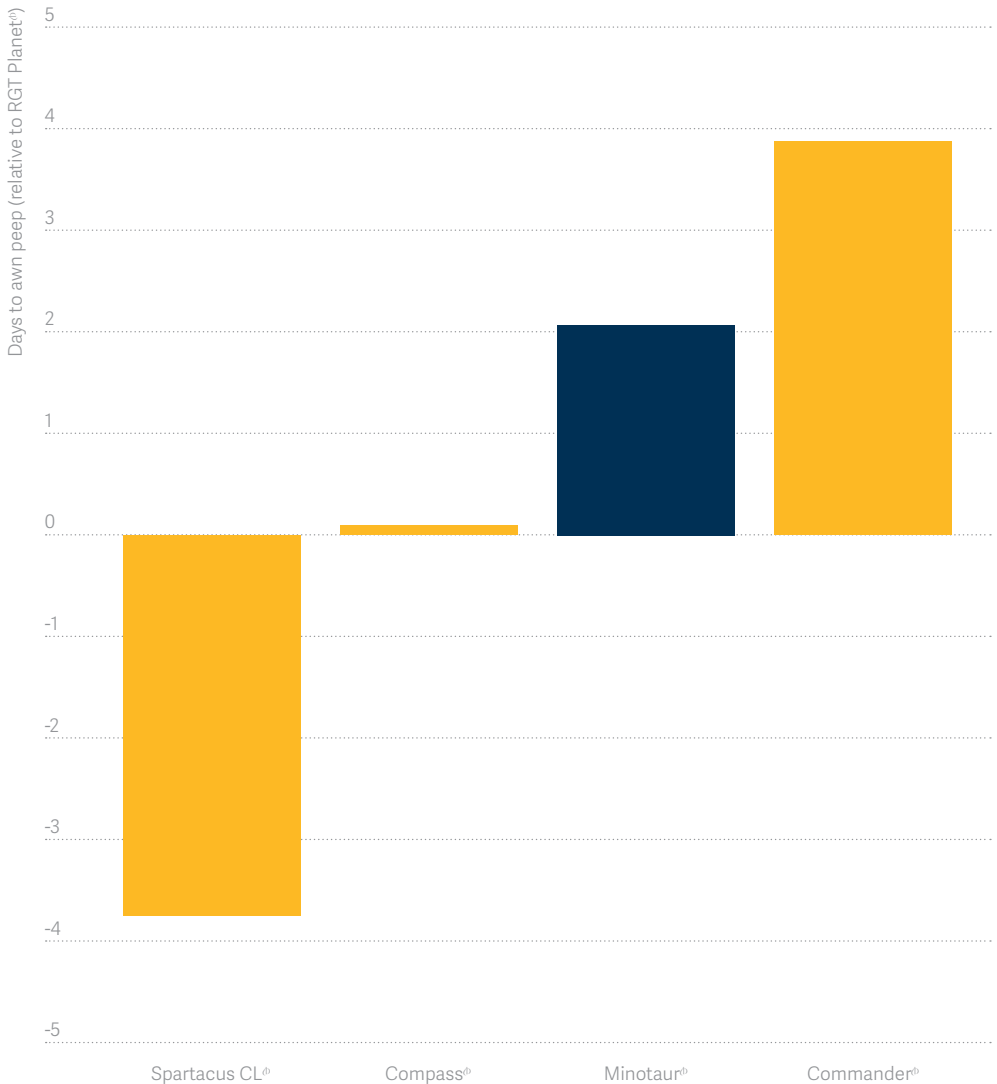


Source NVT main season series 2020 (SA/VIC/sNSW)
 [] Total number of trials per yield band

Maturity

Minotaur[®] has a mid-slow maturity, slightly slower to reach awn peep than RGT Planet[®].

Figure 4 Awn peep of Minotaur[®] and comparator varieties relative to RGT Planet[®]



Source AGT main season barley trials, 2018-2020 (WA/SA, average of 6 trials)

Grain quality

Minotaur[®] has shown improved test weight and grain size compared to RGT Planet[®].

Figure 5 Test weight of Minotaur[®] versus comparators

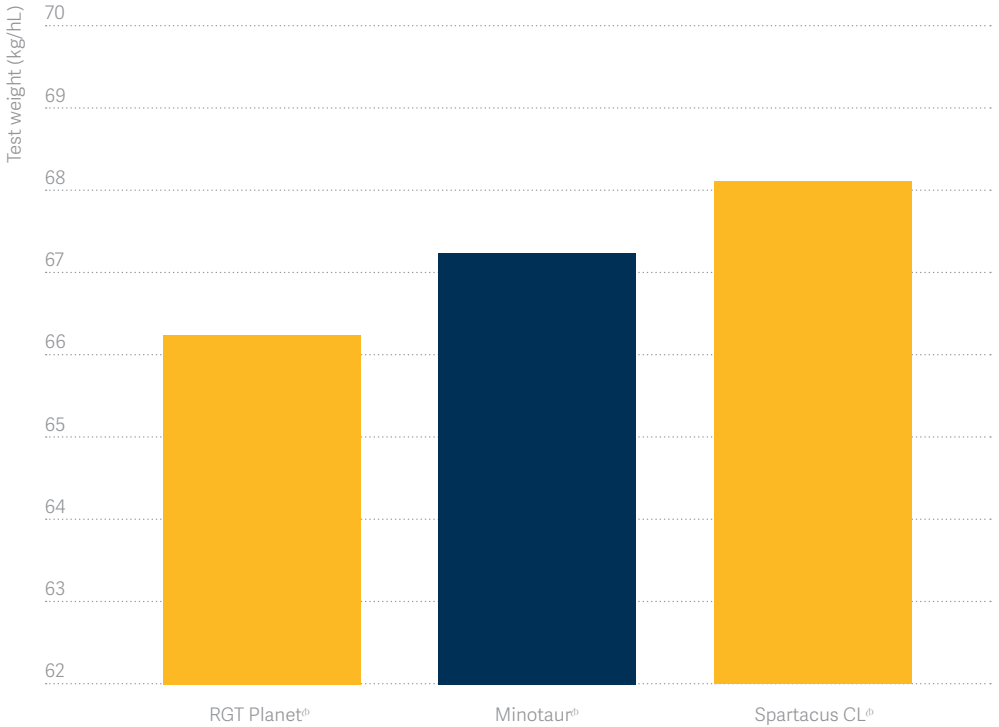


Figure 6 Screenings of Minotaur[®] versus comparators

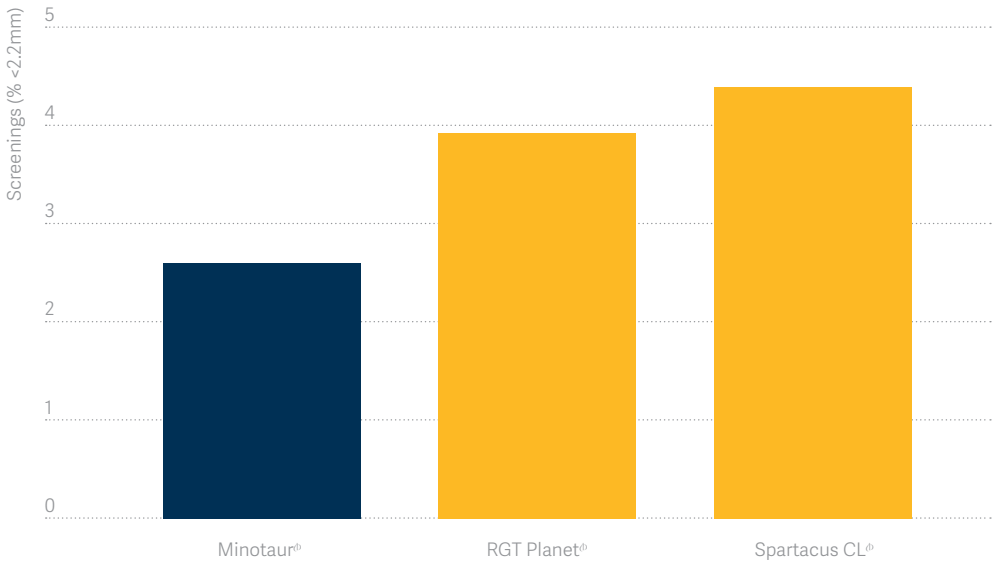
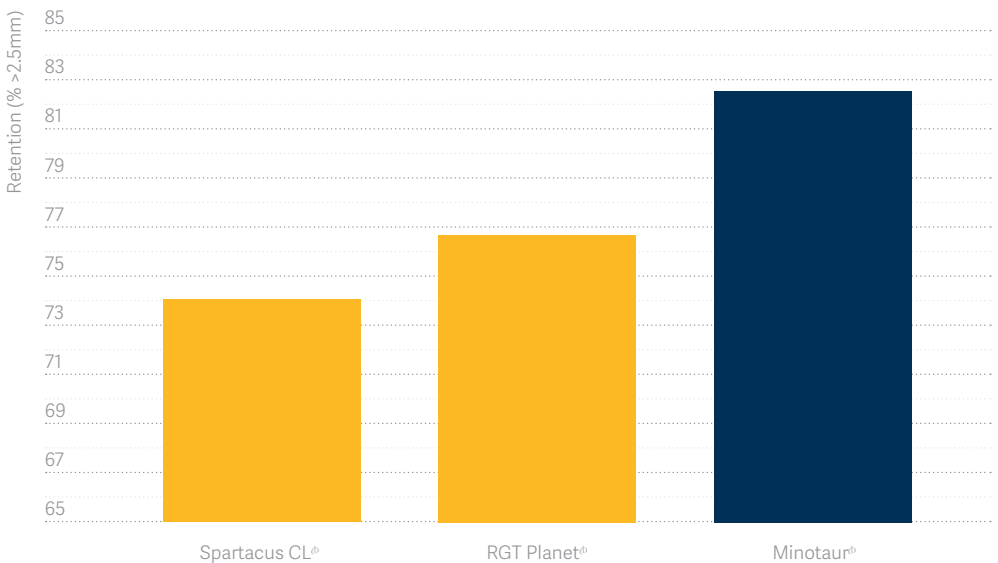


Figure 7 Retention of Minotaur[®] versus comparators



Source NVT main season trial series 2020 (37 trials in SA/VIC/sNSW)

Disease resistance

Minotaur[®] has improved levels of resistance to net form and spot form net blotch in some environments when compared with RGT Planet[®], but has lower levels of resistance to scald.

Table 1 Variety comparisons

Variety	Scald	Leaf Rust	SFNB	NFNB	CCN	
South Australia	Minotaur [®]	S-SVS	MS-SVS	S	MR-S	R*
	RGT Planet [®]	R-MSS	MR-MS	SVS	MR-S	R*
	Spartacus CL [®]	R-SVS	MR-S	S	S-VS	R
Victoria	Minotaur [®]	SVS	SVS	S	MS*	R*
	RGT Planet [®]	MSS	MS	SVS	SVS	R*
	Spartacus CL [®]	SVS	S	SVS	S	R
New South Wales	Minotaur [®]	SVS*	SVS*	SVS*	MRMS	R*
	RGT Planet [®]	S	MR-MS	SVS	S	R*
	Spartacus CL [®]	VS	MR-S	SVS	MR-S	R

R Resistant
 MR Moderately Resistant
 MS Moderately Susceptible
 S Susceptible
 VS Very Susceptible
 * Provisional rating

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



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