Ballista
Variety snapshot

- Improved yield over Scepter\(^{(b)}\) and Vixen\(^{(b)}\) in the Mallee
- Quick-mid maturity, slightly quicker than Mace\(^{(b)}\)
- AH quality classification
- Stable yield across a range of environmental conditions
- CCN resistance equal to Scepter\(^{(b)}\) and Mace\(^{(b)}\)
Breeder’s comments

With the release of Ballista™ for SA and Victorian growers, a new yield benchmark for the Mallee has been set.

Ballista™ (tested as RAC2598) has been released off the back of outstanding results in our yield trials over many years, and continues to build upon the strength of it’s Mace™ parentage.

We believe Ballista™ will be most closely compared with Scepter™ and newer variety Vixen™. Compared with Scepter™, Ballista™ offers consistently higher yields across a broad range of environments and growing conditions, while carrying very similar disease resistance attributes. Versus Vixen™, Ballista™ produces higher yields in the Mallee, but does not have the very quick maturity of Vixen™, giving Ballista™ a wider and more flexible sowing window. Perhaps the most important difference between Ballista™ and Vixen™, particularly for Mallee environments, is CCN resistance; where Vixen™ is rated MSS and Ballista™ is MRMS, like Scepter™.

Overall, Ballista™ has been released primarily for Mallee environments where very high yield, AH quality, CCN resistance and Mace™ type maturity are attributes that growers are looking for in a new variety.

Seed availability

Commercial quantities of Ballista™ may be available through AGT Affiliates, or your local retailer. Please consult the AGT website for AGT Affiliate contact details. Ballista™ 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

Ballista™ 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. Ballista™ growers will be subject to a Growers License Agreement that acknowledges that an EPR of $3.50/tonne + GST has to be paid on all production other than seed saved for planting.
Grain yield
Limited testing in NVT has shown that Ballista™ offered a yield advantage over Scepter™ and Vixen™ in Mallee environments (Figure 1). AGT trials over a number of years has also confirmed the yield potential of Ballista™ across a range of growing conditions (Figure 2).

**Figure 1  Grain yield of Ballista™ and comparator varieties across the SA & Victorian Mallee**

![Graph showing grain yield comparison between Ballista, Vixen, and Scepter varieties across the SA & Victorian Mallee region.]

**Source**  NVT long term MET analysis, main season trial series 2015-2019

( ) Number of trials that each variety was present in across the SA/Vic Mallee dataset [44 trials]

**Figure 2  Grain yield of Ballista™ and comparator varieties in SA & western Victoria**

![Graph showing grain yield comparison between Ballista, Vixen, and Scepter varieties in different regions of SA & western Victoria.]

**Source**  AGT long term MET analysis, main season trial series 2016-2019

[ ] Total number of trials per region

( ) Number of trials that each variety was present in across the SA/western Vic dataset [24]
Disease resistance

Ballista® has a very similar disease resistance package to popular variety Scepter®, with both boasting improved CCN resistance over Vixen®; an important trait to have in a variety, particularly in Mallee environments.

<table>
<thead>
<tr>
<th>Quality classification</th>
<th>Ballista®*</th>
<th>Mace®</th>
<th>Scepter®</th>
<th>Vixen®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity</td>
<td>Quick-mid</td>
<td>Quick-mid</td>
<td>Mid</td>
<td>Very quick-quick</td>
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<tr>
<td>Stem rust</td>
<td>MRMS</td>
<td>MRMS</td>
<td>MRMS</td>
<td>MRMS</td>
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<td>Stripe rust</td>
<td>MSS</td>
<td>SVS</td>
<td>MSS</td>
<td>MRMS</td>
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<tr>
<td>Leaf rust</td>
<td>MSS</td>
<td>MSS</td>
<td>MSS</td>
<td>SVS</td>
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<tr>
<td>CCN</td>
<td>MRMS</td>
<td>MRMS</td>
<td>MRMS</td>
<td>MSS</td>
</tr>
<tr>
<td>Yellow leaf spot</td>
<td>MSS</td>
<td>MRMS</td>
<td>MRMS</td>
<td>MRMS</td>
</tr>
</tbody>
</table>

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

Source / 2020 SARDI Cereal Disease Guide, NVT and AGT data

Figure 3  Head emergence of Ballista® and comparator varieties relative to Mace®

Maturity

AGT trials in 2019 showed that Ballista® reached head emergence about a week later than Vixen® and was slightly quicker to head than Mace® and Scepter®. Those that are familiar with the maturity of Mace® should feel comfortable in planting Ballista® in the same sowing window.
Dan Vater, Marketing Manager, SA  0427 188 919
Rob Harris, Marketing Manager, Vic  0429 576 044
James Edwards, Wheat Breeder  0427 055 659
Adam Norman, Wheat Breeder  0400 656 012
End Point Royalty Office  (08) 7111 0201
agtbreeding.com.au

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