

Wonambi triticale

Wonambi is a later-maturing spring type, with good disease resistance profile and drought hardiness. **Wonambi** is a tall, tip-awned variety producing dense, smooth, 'red' grain. **Wonambi** is suitable for grazing, forage conservation and grain production.

ORIGIN & BREEDING

The original breeder is Katharine V. Cooper, assisted by Michael G. Elleway, KV Cooper & MG Elleway, Farmers & Seedgrowers, Triticale Specialists, PO Box 689, Stirling, South Australia 5152. Most of the work has been undertaken at Sherlock in the South Australian mallee.

Wonambi derives from a cross between *Rufus* and *Treat*, undertaken in the field by Kath Cooper at Sherlock, South Australia, in 2005. Selection for desirable characteristics, including head and grain type, rust resistance and reliable performance in local drought conditions followed. Single plant to row selection continued annually until uniformity for suitable plant type was obtained. A later maturing plant selection in 2010 gave rise to line RTL1, registered with the Australian Grains Genebank in Horsham, in April, 2016, with name *Kowari* and accession number: AGG9941007TRITI. As Heritage Seeds subsequently (September 2017) released an oat variety named *Kowari*, the preferred name for the triticale variety became **Wonambi** in May 2018. *Kowari* remains a synonym.



Kath Cooper with seed multiplication of **Wonambi** at Sherlock, South Australia.

DISEASE RESISTANCE

Wonambi obtained the following disease ratings from two years (2016 and 2017) of preliminary testing by National Variety Trials pathologists.

PATHOGEN	RATING
Stem rust	R
Stripe rust	RMR
Leaf rust	RMR
Cereal cyst nematode	MS
Pratylenchus neglectus	MR
Pratylenchus thornei	MS
Yellow leaf spot	MR
Nodorum blotch	RMR
Septoria tritici blotch	RMR
Powdery mildew	R
Bunt	R
Flag smut	R
Crown rot	MS
Black Point	RMR
R – Resistant, RMR – Resistant/Moderately Resistant, MR – Moderately Resistant, MS – Moderately Susceptible	

Triticale is known to be generally tolerant of Russian Wheat Aphid, and this could be observed at Sherlock in the 2017 season with low rainfall (179mm GSR), where **Wonambi** produced the usual average crop yield of 1t/ha for such a season, but wheat crops either yielded < 0.25t/ha of grain, or were sprayed out as not worth taking any further, they were so badly affected by RWA attack (and drought).

GRAIN AND FORAGE PRODUCTION

Due to triticales not able to be included in the National Variety Trial yield trials since 2016, when RTL1 became available for such testing, minimal public data is available. Most information in support of **Wonambi** comes from experience at Sherlock, where we have been impressed with equivalent or greater yields of particularly high test weight grain by **Wonambi** compared to other triticale varieties in trials, even in drier, hotter, shorter seasons, where the later heading **Wonambi** might be expected to perform worse. Thus 75kg/hL grain compared to 70kg/hL for *Rufus*, in 2017, is a typical result, and test weights of up to 80kg/hL have been obtained at Sherlock for watered rows of **Wonambi**.

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Wonambi has performed on a par with longer season cereals, including *Wedgetail* and *Manning* wheats, for dry matter cuts and subsequent grain yields, in NSW DPI mixed forage trials and performed well against dual purpose barley, rye and oats in Victoria (confidential information).

In the Hyperyielding Cereal Project in Tasmania, 2017 (Source Nick Poole, FAR), **Wonambi's** grain yield of 10.62 t/ha and 106% of the site mean, was within the range of wheat varieties included in the European and new lines wheat cultivar trial. It should be noted that the test weight of **Wonambi** grain of 77.9 kg/hL was in the highest statistical grouping and the screenings % of 1.5 was the lowest of all trial entries.

The University of Sydney, Narrabri, included **Wonambi** in a trial of triticale and wheat varieties in 2017. **Wonambi** produced the second highest yield of 4.55t/ha, with *Yowie* triticale the top yielder with 4.8t/ha. *Scout* was the highest yielding wheat at 3.74t/ha.

OTHER PLANT CHARACTERISTICS

Maturity: While we have classified **Wonambi** as a later maturing, spring type triticale, it appears to respond to the environment it is growing in. At Sherlock in the SA mallee, in hot, dry seasons, **Wonambi** has been pushed to head quicker than in cooler, wetter seasons, and has anthesed as heads emerge, without the usual extension of stem length. Thus **Wonambi** headed 2-3 weeks later than *Rufus* at Sherlock, depending on the season. In NSW DPI mixed cereal trials at Wagga, 2016, similar heading and anthesis dates were reported for **Wonambi**, *Wedgetail* and *Manning* wheats (source: Mehrshad Barary). At Sherlock we have not been able to sow **Wonambi** until May, due to lack of

soil moisture. The sowing date for the Hyperyielding Cereal Project was 27th April, 2017 and there is as yet no data to suggest that any earlier sowing date would be beneficial. At Narrabri, 2017, on the basis of Plant habit, 3rd September, **Wonambi** was classified as being of later maturing spring type (source: Angela Pattison).

Unless grazed or droughted, **Wonambi** is generally a tall variety and is expected to benefit from the application of growth regulators in higher rainfall conditions, as in the Hyperyielding Cereal Project, where some lodging was experienced. **Wonambi** has long, tapering heads with long tip awns, but otherwise reduced awns compared with many standard triticale varieties, such as *Yowie*. **Wonambi** has a large root system and has competed well with weeds on our farm. The ability of **Wonambi** to retain green colour forage on our property in drought seasons has been impressive.

The wider range of herbicides which can be applied to **Wonambi** triticale compared to an oat variety, and the ability of triticale to maintain good feed quality forage in wetter and higher nitrogen environments, as well as larger biomass production in dry conditions, makes **Wonambi** a desirable forage option for all environments. **Wonambi** is suitable for growing in hay mixtures with legumes, as a cover crop for lucerne establishment, vineyard and other horticultural green manure and soil improvement purposes.

SEED PRODUCTION AND SALES

Wonambi triticale is currently in seed production at Naracoorte, and will be made available for sale, 2019, through **Naracoorte Seeds**.

– Dr Kath Cooper

FOR MORE INFORMATION

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