

# YRK5 growing guide

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YRK5 is a tall 'Japanese quality' short grain variety that is similar in grain quality characteristics to Opus<sup>®</sup> but with shorter growth duration.

## Yield potential

The yield potential of YRK5 is around 85% of Reiziq<sup>®</sup>.

Table 1. Grain yield of YRK5 from research experiments and Murray Valley commercial fields

Variety	2 year experiment average yields (t/ha)	2 year average grower yields (t/ha)	Top 20% of growers 2 year average yield (t/ha)
YRK5	10.6	7.3	9.7

## Establishment vigour

Establishment experiments show YRK5 to have strong establishment vigour.

## Sowing method and date

As YRK5 is prone to lodging it should **only be drill sown**. Drill sown crops have better root anchorage and resistance against stem bending which improves their lodging susceptibility.

YRK5 is 10 days earlier to flower than Reiziq<sup>®</sup> and therefore needs to be sown later (Table 2) for microspore to occur during the period of highest probability of warm temperatures.

YRK5 is not recommended for December sowing, delayed maturity will result in a late harvest. Do not delay permanent water if sowing later than the recommended sowing window as this will slow crop development and increase the risk of a late harvest.

Table 2. Target first flush dates for YRK5 across different management methods in the Murray Valley

Variety	Ideal sow/first flush time		
	Aerial / Dry Broadcast	Drill	Delayed permanent water
YRK5	Do not aerial sow	1 to 20 Nov	25 Oct to 10 Nov

## Sowing rate

It is recommended that YRK5 be sown between 100 and 130 kg/ha. The lower rate can be used in reliable establishment conditions without compromising yield.

## Cold tolerance

YRK5 has a moderate tolerance to cold stress during the reproductive period.

## Plant height

YRK5 is 13 cm taller than Reiziq<sup>®</sup>, similar height to Koshihikari.

## Lodging potential

YRK5 is susceptible to lodging. YRK5 should **only be drill sown** with careful management of nitrogen to reduce lodging.

## Nitrogen management

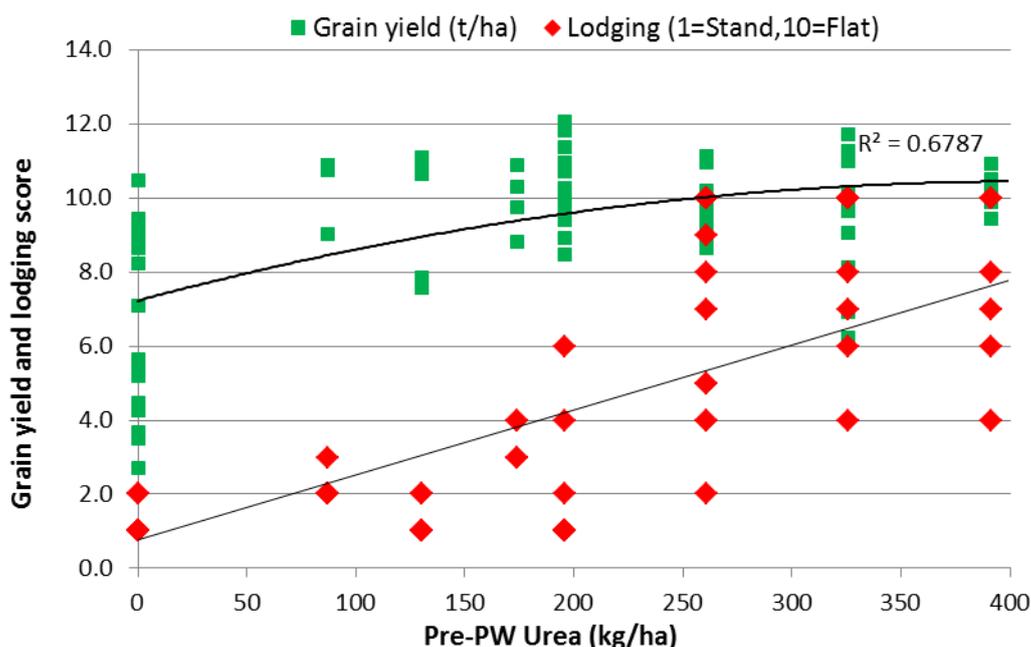
### Pre-permanent water nitrogen

Nitrogen management of YRK5 presents a trade-off between grain yield and lodging.

As pre-PW nitrogen application increases grain yield increases before levelling off above 250 kg/ha urea (Figure 1). But below this level lodging starts to increase above 150 kg/ha urea.

It is recommended to only apply between **75 and 150 kg/ha urea** to YRK5 pre-PW to reduce lodging potential. Some fields with a history of legumes may require less pre-PW applied nitrogen and some continuous crop fields with heavy clay soils may require more nitrogen.

Figure 1. Grain yield and lodging score results for pre-PW nitrogen application rates. Results from 125 plots in 8 experiments conducted over 3 seasons and a range of soil types and fertility levels.



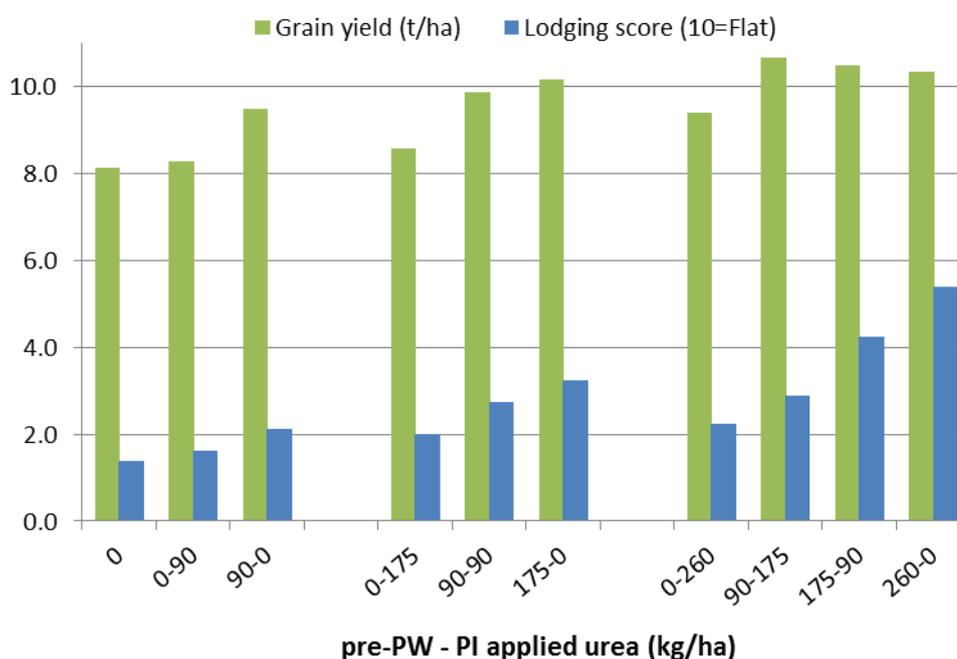
## Panicle initiation nitrogen

Data and experience show that YRK5 produces a high grain yield with less lodging when nitrogen is **split at least 50:50 between pre-PW and PI**.

The experiment conducted at Jerilderie in 2017/18 season shows that the 90-175 kg/ha urea pre-PW-PI split produced the highest grain yield with minimal lodging (Figure 2).

For maximum yield with reduced lodging it is important to use the NIR Tissue Test to determine PI topdressing rates, as high rates of nitrogen at PI can also increase lodging.

**Figure 2. Grain yield and lodging score results from YRK5 nitrogen rate by timing experiment conducted at Jerilderie in 2017/18. The green bars are grain yield (t/ha @ 14%) and the blue bars are the lodging score (1=standing, 10=flat) for the range on nitrogen treatments applied pre-PW and at PI.**



## Harvest

Be prepared to commence harvest as soon as the grain moisture drops to 22%. Delaying harvest will increase the risk of lodging which can cause difficult harvesting conditions.

## Acknowledgments

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