Department of Primary Industries
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# Reiziq$^{\Phi}$ growing guide

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Reiziq$^{\Phi}$ is a semi-dwarf medium grain rice variety that has elongated grain length.

## Yield potential

Reiziq$^{\Phi}$ has a high potential grain yield (Table 1).

**Table 1. Grain yield of Reiziq$^{\Phi}$ from research experiments and commercial fields**

| Variety | District | 5 year experiment avg yields (t/ha) | 5 year grower avg yields (t/ha) | Top 20% of growers 5 year avg yield (t/ha) |
|---|---|---|---|---|
| Reiziq$^{\Phi}$ | MIA/CIA | 12.5 | 11.4 | 13.5 |
| | MV | 11.6 | 9.9 | 12.4 |

## Establishment vigour

Experiments show Reiziq$^{\Phi}$ to have strong establishment vigour.

## Sowing method and date

All sowing methods are suitable for growing Reiziq$^{\Phi}$. The recommended sowing and first flush windows for Reiziq$^{\Phi}$ are listed in Table 2.

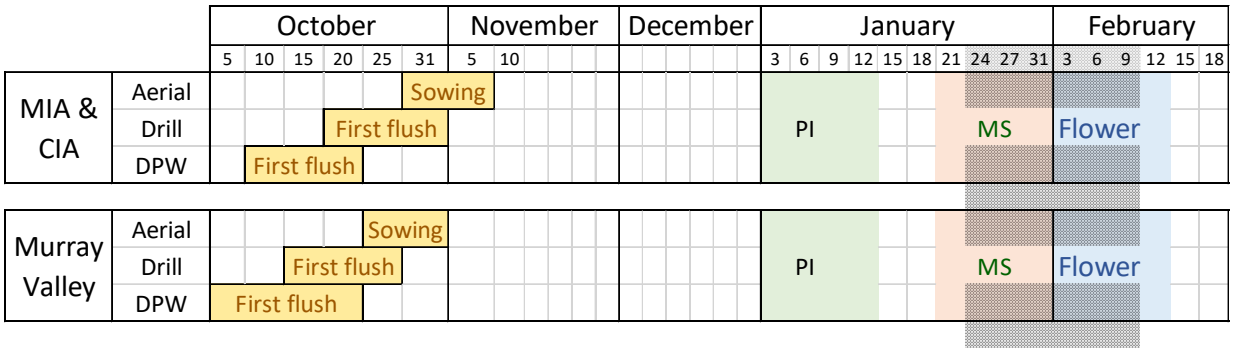
**Table 2. Target sowing and first flush dates for Reiziq$^{\Phi}$ across different sowing methods and regions**

| Variety | MIA/CIA - Ideal sow/first flush time | | | Murray Valley – Ideal sow/first flush time | | |
|---|---|---|---|---|---|---|
| | Aerial / Dry Broadcast | Drill | Delayed permanent water | Aerial / Dry Broadcast | Drill | Delayed permanent water |
| Reiziq$^{\Phi}$ | 25 Oct to 5 Nov | 15 to 31 Oct | 5 to 20 Oct | 20 to 31 Oct | 10 to 25 Oct | 1 to 20 Oct |

Sowing Reiziq$^{\Phi}$ earlier or later than recommended will increase the risk of exposure to low temperatures during microspore and flowering, which can reduce grain yield. Recommended

sowing times are aimed at ensuring the critical microspore and flowering periods align with the period of least risk of low temperatures (Figure 1).

**Figure 1. Recommended sowing and first flush dates for Reiziq$^{\Phi}$ and the subsequent panicle initiation (PI), microspore (MS) and flowering timings when sown in the recommended period for each district and sowing method. Hatched area shows time of least risk of low temperatures.**




## Sowing rate

It is recommended that Reiziq$^{\Phi}$ be sown at 120 to 150 kg/ha for all sowing methods, aiming to establish between 100 to 200 plants m$^2$. The lower seed rate can be used in reliable establishment conditions with accurate seed placement, without compromising yield.

## Cold tolerance

Reiziq$^{\Phi}$ has a moderate tolerance to cold stress during the early pollen microspore and flowering reproductive periods.

## Plant height

Reiziq$^{\Phi}$ is on average 81 cm in height at commerial nitrogen rates.

## Lodging potential

Reiziq$^{\Phi}$ has moderate resistance to lodging but it can be induced by applying excessive nitrogen pre-permanent water (PW). The impact of pre-PW nitrogen application rates on lodging of Reiziq$^{\Phi}$ is shown in Figure 2.

## Grain shattering

Early harvest of Reiziq$^{\Phi}$ is recommended as it is susceptible to shedding grain once the crop is mature. It is the most prone of all current commercial varieties for shattering.

## Nitrogen management

Reiziq$^{\Phi}$ is a durable variety with a long plateau before grain yield declines or lodging becomes a problem from excess nitrogen application (Figure 2).

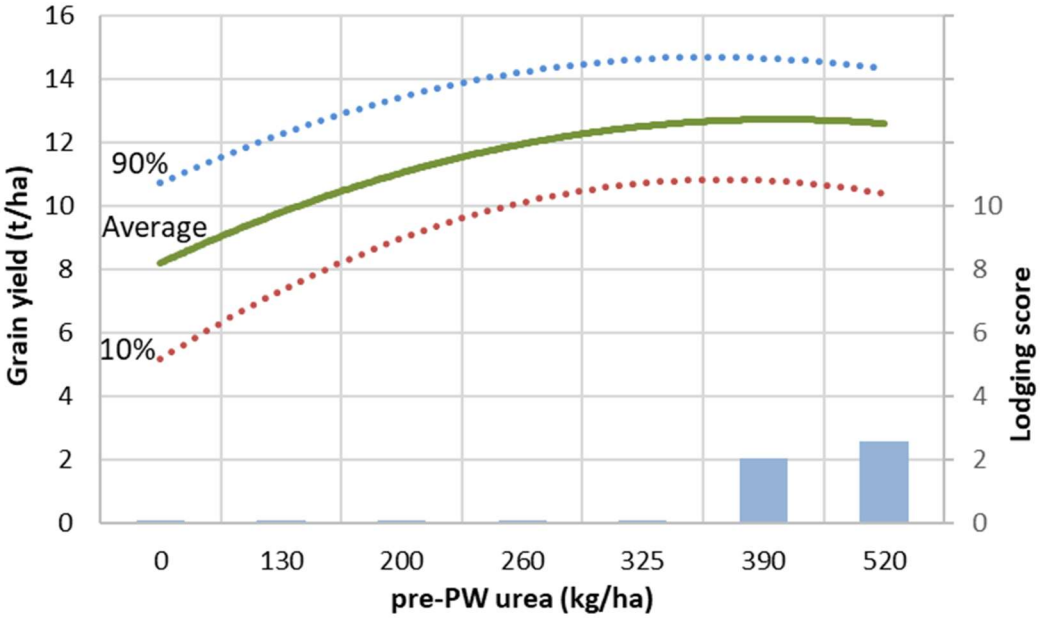
In warm seasons maximum grain yield can be achieved by applying all the required nitrogen pre-PW. However, in seasons where low temperatures occur during microspore or flowering excess pre-PW nitrogen can increase sterility and reduce grain yield.

It is recommended to apply between **220 and 350 kg/ha urea** to Reiziq$^{\Phi}$ pre-PW. Fields with a history of legumes may require less pre-PW nitrogen and some continuous cropped fields with heavy clay soils may require more pre-PW nitrogen.

As it is difficult to determine exactly how much nitrogen should be applied pre-PW, aim to apply 80 to 90% of the total required nitrogen pre-PW and then top up at PI if required.

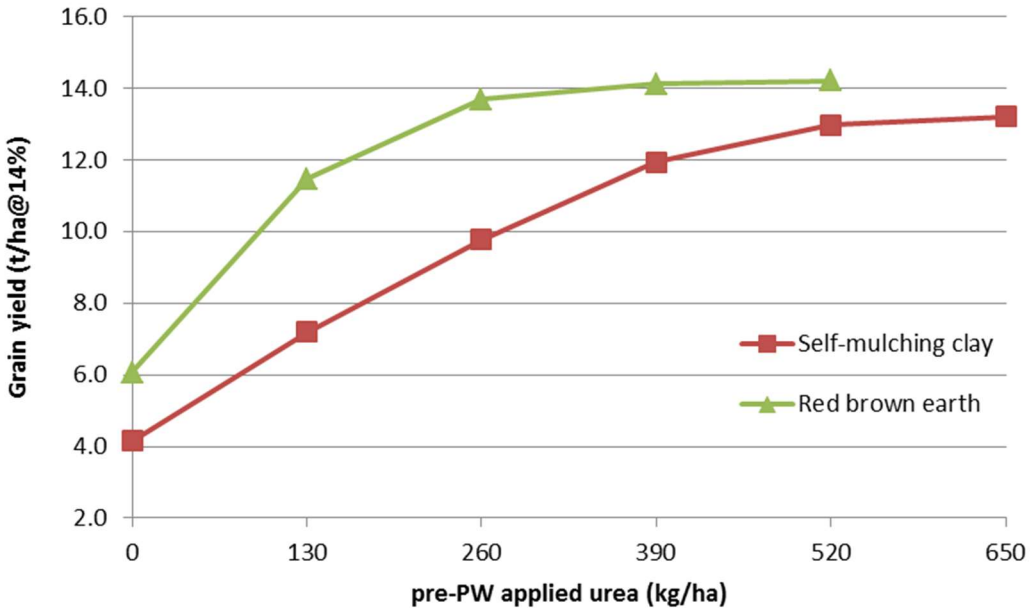
Any major nitrogen variability within the field should be addressed with variable rate pre-PW nitrogen applications. Red edge imagery of previous rice crops grown in the field are a good resource for identifying within field nitrogen variability.

**Figure 2. Reiziq$^{\Phi}$ grain yield (average, 10 and 90 percentile) and average lodging score (0=standing, 10=flat) results for pre-PW nitrogen application rates (no PI applied nitrogen). Results from 281 plots in 32 experiments conducted over 5 seasons covering a range of soil types, fertility levels and sowing methods.**




Soil type can have a large influence on a crops pre-PW nitrogen requirements. Self-mulching clay soils can require more nitrogen than lighter textured red-brown earth soils (Figure 3).

**Figure 3. Grain yield of Reiziq$^{\Phi}$ over a range of pre-PW nitrogen rates from two experiments on different soil types (no PI nitrogen applied). Both soil types had an intensively cropped history.**




### Panicle initiation nitrogen

For maximum grain yield with reduced lodging it is important to use red edge imagery and the NIR Tissue Test to determine PI nitrogen topdressing rates. Higher than required nitrogen rates applied at PI can increase lodging and reduce profitability.

Applying higher than required rates of nitrogen prior to permanent water increases a rice crops susceptibility to cold stress more than extra nitrogen applied at panicle initiation.

## Harvest

Be prepared to commence harvest of Reiziq$^{\phi}$ as soon as the grain moisture drops to 22%. Delaying harvest after the crop is mature will increase the risk of grain shedding and lodging and reduced grain quality.

### Acknowledgements

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