Department of Primary Industries
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DPI Primefact

Viand$^{\Phi}$ growing guide

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Viand$^{\Phi}$ is a semi-dwarf medium grain rice variety that is 10–14 days earlier to flower than all current commercial rice varieties.

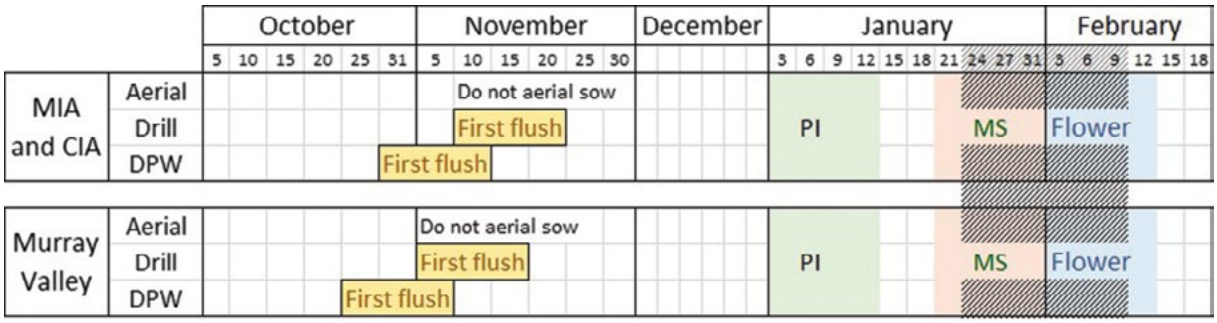
Yield potential: the yield potential of Viand$^{\Phi}$ is similar to Reiziq$^{\Phi}$ but 10–15% lower than V071$^{\Phi}$ (Table 1). The lower grower average yield for Viand$^{\Phi}$ is due to it often being grown later than recommended and in double crop and salvage situations.

Table 1. Grain yield of Viand$^{\Phi}$, Reiziq$^{\Phi}$ and V071$^{\Phi}$ from experiments and commercial fields over the last 4 seasons.

4 year average yield (t/ha)	Viand$^{\Phi}$	Reiziq$^{\Phi}$	V071$^{\Phi}$
Experiment average	11.4	11.3	12.5
Grower average	8.4	10.6	12.0

Sowing method and date: Viand$^{\Phi}$ should only be drill sown as it is more prone to lodging when aerial sown. As Viand$^{\Phi}$ is an early maturity variety, it is sown later than all other varieties, so microspore (MS) and flowering coincide with the highest probability of warm temperatures (Table 2).

Table 2. Recommended sowing and first flush dates for Viand$^{\Phi}$ and the subsequent panicle initiation (PI), microspore (MS) and flowering timing when sown in the recommended period for each district and sowing method. The hatched area shows the time of least risk of low temperatures.



MIA – Murrumbidgee Irrigation Area, CIA – Coleambally Irrigation Area, DPW – delayed permanent water.

The recommended sowing and first flush dates for Viand$^{\Phi}$ are shown in Table 3.

If Viand$^{\Phi}$ receives its first flush later than the recommended time, do not delay permanent water (PW) application. Delayed permanent water (DPW) slows crop development, which can increase the risk of cold susceptibility and late harvest.

Left: at plant populations below 100 plants/m², even plant distribution become important.

Table 3. Target sowing and first flush dates for Viand$^{\Phi}$ for different sowing methods and regions.

MIA/CIA		Murray Valley	
Drill	Delayed permanent water	Drill	Delayed permanent water
15–31 October	5–20 October	10–25 October	1–15 October

MIA: Murrumbidgee Irrigation Area. CIA: Coleambally Irrigation Area.

Establishment vigour: Viand$^{\Phi}$ has strong establishment vigour. This is further improved by establishing it when temperatures are warmer, due to it being earlier to flower (Figure 1). It is therefore sown later than Reiziq$^{\Phi}$ and V071$^{\Phi}$.

Figure 1. The difference in maturity between Viand$^{\Phi}$ (left) and V071$^{\Phi}$ (right) at flowering.

Sowing rate: Viand$^{\Phi}$ should be sown at 130 kg/ha, aiming to establish between 100 and 200 plants/m². Sowing rates can be reduced by 10–20% if sowing at a consistent seed depth and good establishment conditions.

Dense plant populations increase lodging potential and should be avoided when growing Viand$^{\Phi}$.

Sow a compound fertiliser containing phosphorus and zinc with the seed when drill sowing.

Cold tolerance: Viand$^{\Phi}$ has a moderate tolerance to cold stress during the reproductive period. It is better than Reiziq$^{\Phi}$ but not as good as Sherpa$^{\Phi}$ and V071$^{\Phi}$. It should be sown at the correct time and deep water applied over the MS period to reduce cold risk.

Plant height: Viand$^{\Phi}$ is, on average, 850 mm tall, 40 mm taller than Reiziq$^{\Phi}$.

Lodging potential: Viand$^{\Phi}$ is moderately susceptible to lodging, which can be induced by applying excessive nitrogen (N) pre-permanent water (PW). Aerial sowing and dense plant stands also increase lodging potential.

Grain shattering: Viand$^{\phi}$ has moderate susceptibility to shedding grain so should be harvested as soon as the crop is mature.

Nitrogen management: Viand$^{\phi}$ N applications should be split **70:30 between pre-PW and PI** to reduce lodging and cold susceptibility risks.

It is recommended to apply between **180 and 260 kg/ha urea at pre-PW** to Viand$^{\phi}$. This should provide enough N for the crop to have sufficient growth by PI to reach maximum yield potential without greatly increasing lodging potential (Figure 2).

Fields with a history of legumes might require less N pre-PW and some continuously cropped fields with heavy clay soils might require more N.

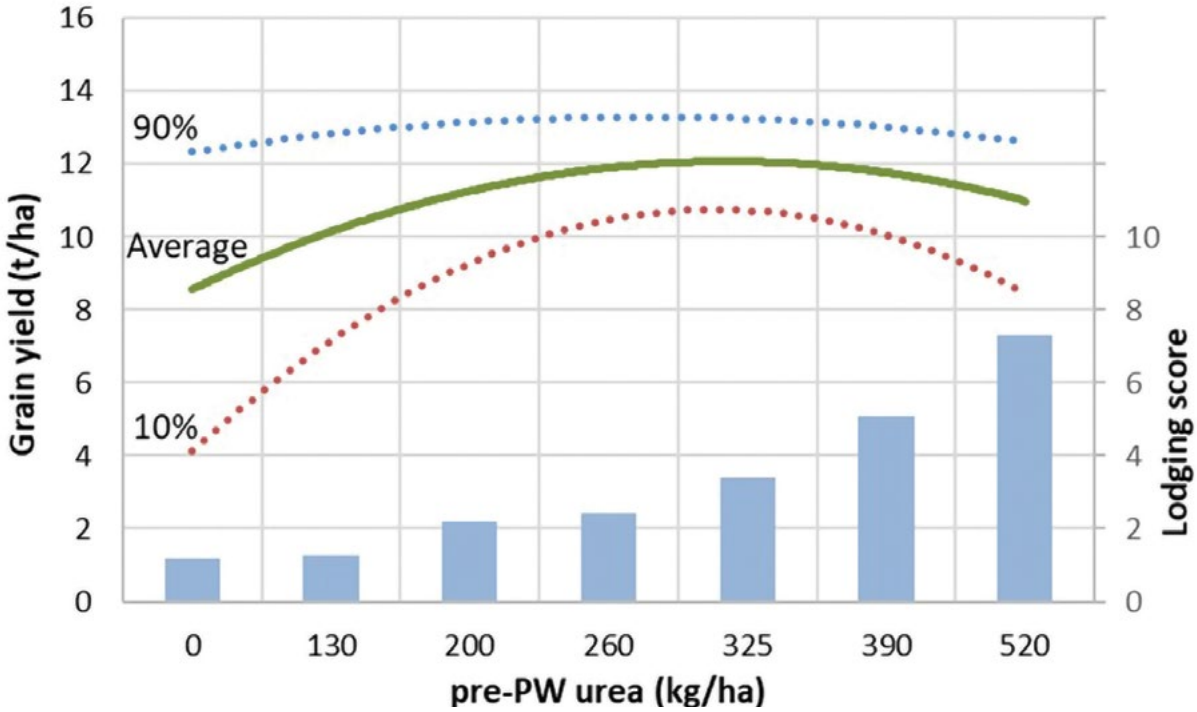


Figure 2. Viand$^{\phi}$ grain yield (average, 10 and 90 percentile) and average lodging score (0=standing, 10=flat) results for pre-permanent water (PW) nitrogen (N) rates (no panicle initiation (PI) applied nitrogen). Results are from 208 plots in 20 experiments conducted over 7 seasons with a range of soil types, fertility levels and sowing methods.

Any major field variability in N should be amended pre-PW. Red edge imagery of previous rice crops grown in the field is a good resource for identifying soil N variability.

Panicle initiation nitrogen (PI N): Viand$^{\phi}$ produces a high grain yield with less lodging and reduced cold susceptibility when N is split between pre-PW and PI.

A similar grain yield was produced, but with less lodging, when N was applied in split treatments or all at pre-PW in an experiment at Jerilderie (Figure 3).

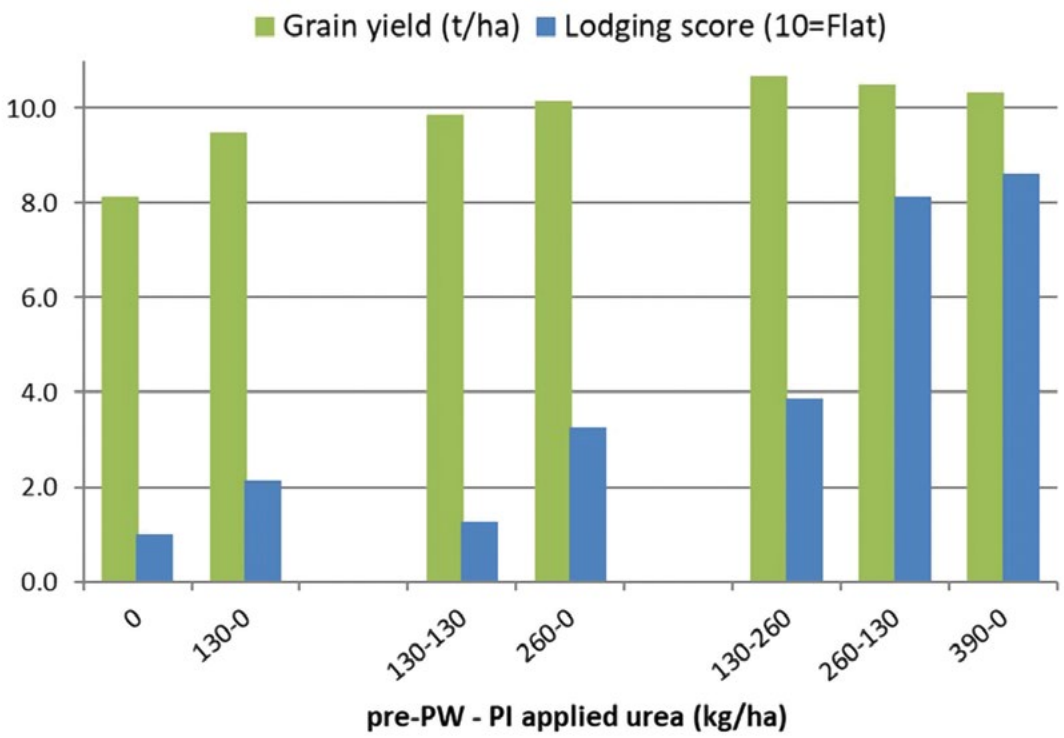


Figure 3. Grain yield and lodging score results from a Viand® nitrogen (N) rate × timing experiment conducted at Jerilderie. The green bars are grain yield (t/ha @ 14%) and the blue bars are the lodging score (0=standing, 10=flat) for the range of nitrogen treatments applied pre-permanent water (PW) and at panicle initiation (PI).

For maximum grain yield with reduced lodging, use the PI tissue test to determine PI N top-dressing rates. Higher than required N rates applied at PI can increase lodging and reduce profitability.

Harvest: be prepared to start harvesting Viand® 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.

Acknowledgements

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