

Trial: RD1207

Location: "Willowbrook", ~ 6 km west of Allora, Qld

Planting date: 9/7/2012

Plot size: 9 x 2 m on 25 cm row spacings

Trial design: Randomised complete block with four replicates

Variety: PBA HatTrick

Soil nitrate level: 23 kg N/ha from 0-60 cm at 18/6/2012 (excluding mineralisation credit)

Basal fertiliser: Nil

Treatments:

Treatment	Nitrogen applied kg/ha	Nitrogen timing	Rhizobia inoculation
1	0	Planting	Nil
2	23	" "	Nil
3	46	" "	Nil
4	0	" "	Plus
5	23	" "	Plus
6	46	" "	Plus
7	23	In-crop	Nil
8	46	" "	Nil
9	23	" "	Plus
10	46	" "	Plus

All Nitrogen was applied as Urea.

Urea at planting: Pre-drilled on the 9/7/2012 with a disc planter offset from planting furrow.
First significant rainfall, ~26 mm between 14-19/7/2012

In-crop Urea: Surface applied on the 5/9/2012, plants ~15 cm diameter and 10 cm tall.
First significant rainfall, ~41 mm on 11-12/10/2012 (4 mm on 18-19/9/2012)

Rhizobia: Nodulator at 4.2 kg/ha applied with the seed into the planting furrow

The trial was well managed for weeds, *Helicoverpa* and *Ascochyta*

Individual Trial Results

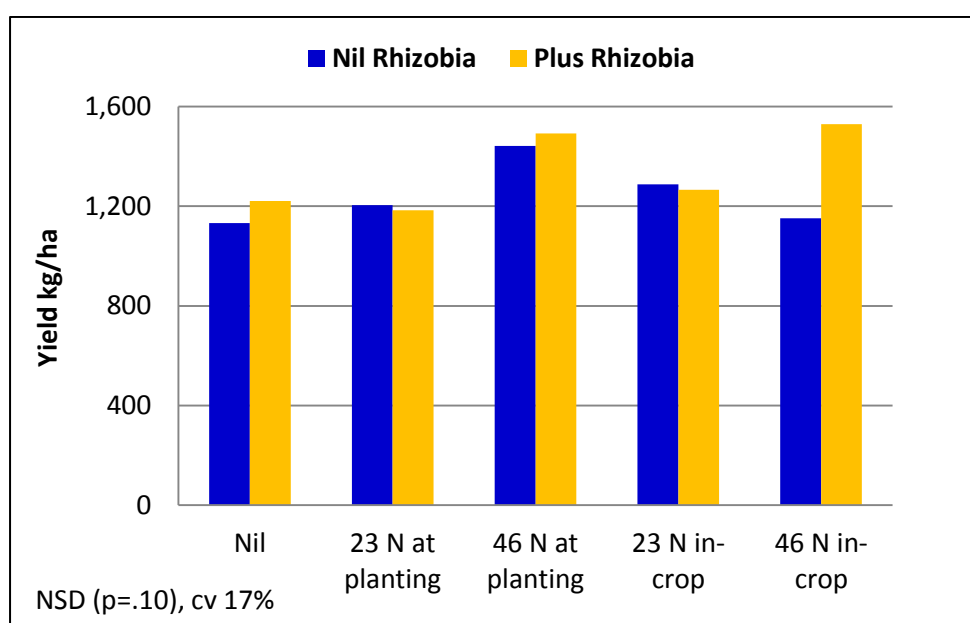
Emergence:

There was no significant impact on emergence between any treatment and the untreated with a mean plant stand of 22/m² on the 8/8/2012 (30 days after planting). However there was a wide range in treatment mean plant stand from ~15-28/m² in this late planted trial.

NDVI:

All plots were assessed with NDVI (Normalised Difference Vegetative Index) on the 6/9/2012. NDVI can provide an indication of 'greenness' or biomass differences between treatments. No treatment had significantly higher NDVI than the untreated plots.

Yield:



Key messages:

- No significant impact on yield from additional nitrogen at either rate or time of application
- Trend to increased yield from 46 kg N/ha at planting but confidence in result is low due to the high variability in both emergence counts and yield
- No significant impact on yield from addition of *Rhizobia*

Conclusion:

There was no consistent indication of yield response to additional nitrogen at this site. With no yield benefit obtained, soil testing for residual nitrogen was not warranted.

Acknowledgments: Thanks to Tim Thorne – trial co-operator and Rob Duncan (NGA) for field activity