

# TWINN CROP TRIAL



Independent trial of TwinN in irrigated cotton,  
Narrabri, NSW Australia, 2012-13

## SUMMARY OF TRIAL

A replicated trial in cotton compared plots treated with TwinN and NitroGuard plus standard fertiliser rates versus the standard farm fertiliser program. The trial was conducted by Kalyx Australia Pty Ltd, an independent company. The yields were 8.90 bales/ha for the standard farm program, 9.48 bales/ha (+6.6% yield increase) for TwinN and 9.51 bales/ha (+6.8% yield increase) for NitroGuard.

Returns per hectare for an extra 0.6 bales/ha at \$440/bale (minus costs of TwinN or NitroGuard) were improved by \$240/ha by use of either TwinN or NitroGuard.

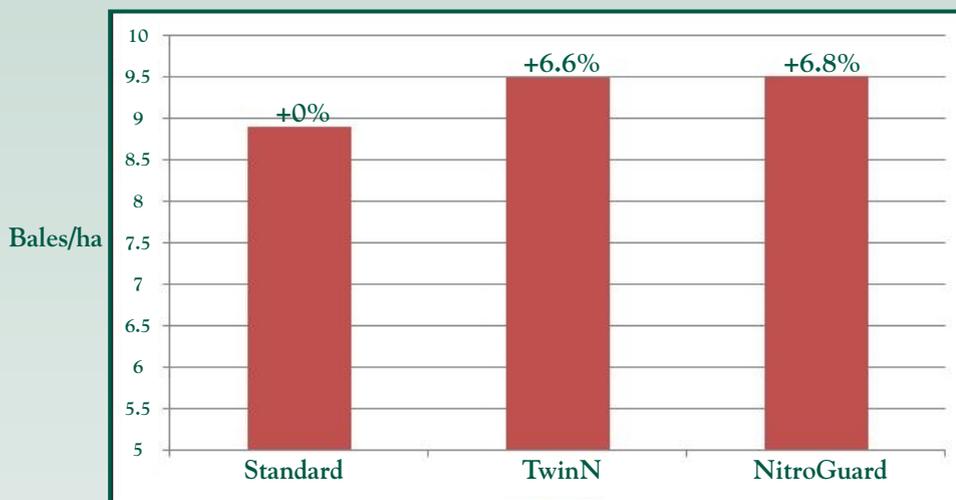


Figure 1 Yield for the standard farm practice (200kgN/ha) and TwinN and NitroGuard treatments

## TREATMENTS

1. **Standard** - standard farm fertiliser program including 200kgN/ha
2. **TwinN** - standard farm program plus TwinN at early- mid-squaring
3. **Nitroguard** - Standard farm program plus NitroGuard at early- mid-squaring

Nitrogard is a new product which supplies TwinN microbes plus additional microbes species.

For further details contact Mapleton Agri Biotec Pty Ltd.

## TRIAL DETAILS

Trial by Kaylyx australia Pty Ltd on "Riverstone" near Narrabri. Six reps per treatment.  
Cv. Sicot 74 BRF.

TwinN and NitroGuard applied by liquid inject tine at 155L/ha using 30psi into moist soil.  
Application was 4/12/12 at early to mid-squaring.



Mapleton Agri Biotec Pty Ltd

137 Obi Obi Road, Mapleton Qld 4560 Australia

Phone: +61 7 5445 7151  
Email: [TwinN@mabiotec.com](mailto:TwinN@mabiotec.com)  
[www.mabiotec.com](http://www.mabiotec.com)



## SOIL HEALTH EFFECTS

TwinN microbes act to improve soil health in several ways:

- ◆ Reduced nitrogen fertiliser results in less “burning off” of soil carbon, less acidification of soils and better soil health in general.
- ◆ Increased root growth and soil microflora result in increased soil carbon over time. This improves retention of nutrients and water.
- ◆ TwinN assists in developing a more ‘balanced’ soil microflora. Trial by US Dept of Agriculture showed TwinN decreased *Fusarium* levels and increased populations of beneficial fluorescent pseudomonads (indicators of healthy soil) in TwinN treated plots.

## TwinN RECOMMENDATIONS FOR COTTON

- ◆ Apply standard pre-plant and early N fertiliser rates.
- ◆ reduce later applications of N fertiliser to give a total of up to 25% N reductions (up to a maximum of 40 U of N less). Note: Keep other nutrients at standard levels
- ◆ Or - apply TwinN over the top of standard fertiliser program (as in this trial)
- ◆ Apply TwinN at start of squaring (approximately one month post emergence)
- ◆ TwinN can be applied later in the crop cycle to boost yields if cotton prices look good but if N rates have been reduced then apply TwinN at squaring
  - Apply TwinN by liquid injection in enough water to deliver the microbes into the moist part of the root zone, under knife point (disc blade), to a depth of 50-75mm into the root zone. Ideally, apply into moist soil. In this trial 155L/ha was used to deliver TwinN and NitroGuard.
  - OR - apply TwinN by overhead irrigation to water TwinN into the root zone
  - Or - apply via water run if you are set up to apply nitrogen fertiliser via flood irrigation.
  - Do not mix TwinN with agrochemicals in application water



For all enquiries, call +61 7 5445 7151 or email [orders@TwinN.com.au](mailto:orders@TwinN.com.au).  
Visit [www.mabiotec.com](http://www.mabiotec.com) for more information.

For technical enquiries contact Rob Bower 0458 989 282 or [robbower@mabiotec.com](mailto:robbower@mabiotec.com)