

TwinN – nitrogen fixing microbes



Increase yields

Decrease input costs

Boost mid-season crop vigour

- **TwinN** microbes fix N_2 from the atmosphere into your crop

- **TwinN** microbes improve root growth



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Cotton growers face continual challenges to adapt their production systems to match appropriate input costs against predicted cotton prices. This is not an easy task. Cotton farmers have a Top 20 – the most profitable 20% of growers – who are doing well. They are followed by a lot of growers who are struggling if cotton prices remain relatively low. The basics of what puts a grower in the Top 20 are, not surprisingly, controlling input costs when prices are lower, while squeezing out that bit of extra yield per ha that takes growers into the profit zone. TwinN can be a useful tool to help growers control nitrogen costs and increase yields.

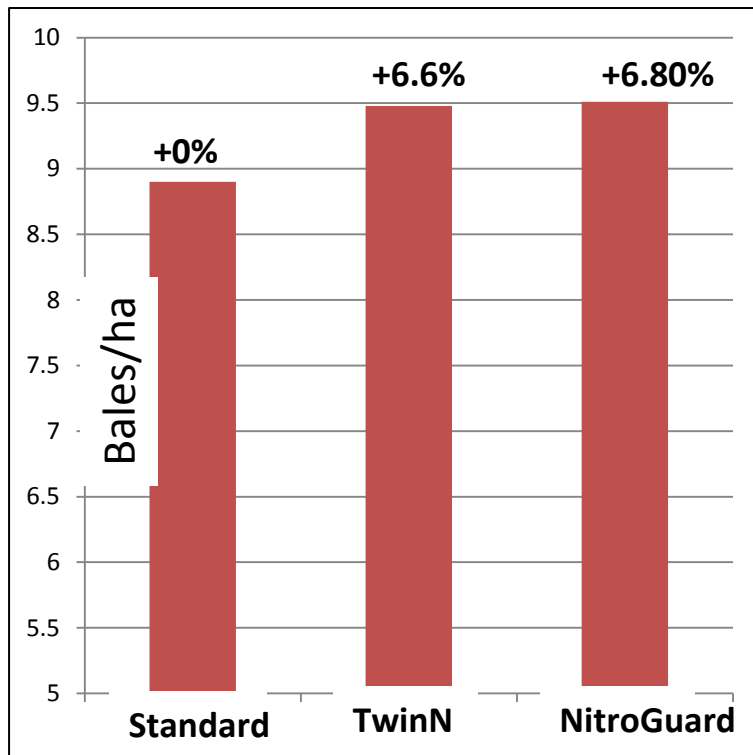
TwinN is a microbial bio-fertiliser that fixes nitrogen into the crop and increases root growth, enabling more efficient capture of applied nitrogen fertiliser. This technology aligns exactly with the Top 20 goals since it can be used to decrease N requirements by about 30 U to provide cost savings and target smaller yield increases. Or it can be applied on top of standard N rates when cotton prices are high and yield maximisation is the only goal. Growers who used TwinN in their 2012 crop are recording 0.5 – 1 bales per ha yield increase with cuts to N ranging from zero cut to 30 – 40 U/ha reductions.

TwinN is applied by overhead irrigation, via liquid injection under knife point, or water run up the furrow. It has taken MAB some time to work out how to apply TwinN in cotton farming systems and we are grateful to a number of growers who worked out how to use the product in their systems then told us how it was done. Application is generally at start of squaring although later applications are also effective.

Because the TwinN application is done at start of squaring or later farmers have some flexibility in their N nutrition strategy. If cotton price projections are improving farmers can apply TwinN plus any later N fertiliser applications to target maximum yield. If prices aren't looking like improving, growers can reduce input costs by using TwinN to reduce N costs.

Information on TwinN and results from trials in various crops are available on www.mabiotec.com, TwinN@mabiotec.com, Office 0754 457 151 or via Rob Bower 0458 989 282

TwinN liquid inject application trials - Cotton - Narrabri, NSW, 2013



TwinN and NitroGuard Trial

Conducted by Kalyx Australia Pty Ltd

Site: 'Riverstone', Narrabri

Standard: 200kgN/ha

TwinN: 200 kgN/ha plus TwinN 14/12/12 at early-mid-squaring (15 nodes) via liquid inject tines into roots (150L/ha).

NitroGuard: as per TwinN

RESULT

Additional 0.6 bales/ha for both TwinN and NitroGuard over the farmer Standard



TwinN water run application trials Cotton - Darling Downs, Qld, 2012

- Pursehouse Rural conducted an independent TwinN to look at evenness of distribution of TwinN and two N fertiliser products along an 800 m row via water run application
- TwinN plus 160 kgN/ha was compared to two synthetic fertiliser programs (240 kgN/ha) that provided an additional 80 U/ha of N.
- **USE OF TwinN PRODUCED EQUAL YIELDS DESPITE AN 80 U/HA N REDUCTION (note that MAB recommends up to only 30 - 40 U reduction)**

TOTAL YIELD

TwinN plus 160 kgN/ha	7.1 T/ha
Conventional 240 kgN/ha	7.1 T/ha



**CONTACT MAB FOR MORE
INFORMATION ON COTTON RESULTS**

TwinN solution delivered into head ditch