

SUGARCANE

Recommendation for use of TwinN for sugarcane crops.

TwinN is currently used on sugarcane crops in Australia, Africa and South and Central America where it has enabled significant reductions in the amount of nitrogen fertiliser required to produce high yields. This has a major effect on profit margins returned to producers. Much of the world's sugarcane is grown in high rainfall areas and often in soils with low nutrient retention capacity. This means that a significant proportion of the nitrogen that is applied to the crop is often leached away. TwinN drives development of an improved root system (see TwinN Mechanism of Action) and this assists in more efficient capture of applied nitrogen fertilisers. Some trials in ratoon crops have shown enhanced vigour in the next seasons early shoot development.

Improved Profitability

TwinN can be used to increase profitability by decreasing Nitrogen fertiliser costs and when sugar prices are low this is of value. When sugar prices are higher improved profitability is driven mainly by improved yields and producers usually make small reductions in N and target high yields.

Environmental Benefits

Reduced leaching of nitrogen into waterways

An additional benefit of reduced nitrogen fertiliser application and better nutrient capture is that leaching of nitrogen compounds into rivers, lakes and oceans is greatly reduced. In areas where nitrogen fertilizer use is restricted by legislation, TwinN allows producers to comply with environmental legislation while maintaining good yields.

Reduced Carbon Footprint

TwinN enables reduced application of nitrogen fertilisers, such as urea, that have a very high carbon footprint associated with their manufacture, transport and NO₂ emissions. The capacity to reduce the CO₂ footprint of sugar production is particularly valuable where sugarcane is used for ethanol production. TwinN has been audited for carbon footprint and MAB has purchased carbon credits to allow TwinN to be accounted as carbon footprint neutral.

Fertiliser Recommendations

1. Apply the normal rates of P, K and other nutrients. If these nutrients are limiting then the crop will be unable to respond to TwinN application.
2. Reduce N fertiliser application rates by up to 25%. Some growers who are using lower N rates as their standard practice apply TwinN on top of their normal program to target increased yields.
3. If N fertiliser is applied in two or more applications per season then keep the initial application at standard rates and reduce the later application. This ensures the crop gets a strong early start.

Application

Application timing

- For plant cane, apply TwinN when the new shoots are 10 – 30 cm high. Later applications are effective but early applications help maximise early growth.
- For ratoon crops apply TwinN as soon as new shoots start after harvest. Again, later applications are also effective.

Application methods

Application needs to deliver the microbes into the moist root zone. These are commonly used methods:

- Boomspray onto moist soil before rain using as much water as possible, or immediately before overhead irrigation. Apply using very coarse nozzles and as much water as possible to wash the microbes into the roots. If banding is possible then band the application onto the rows of cane.
- Drip irrigation, micro-sprinkler irrigation, overhead irrigation or any fertigation system
- Liquid inject with a cutting disc such as a stool splitter or using equipment for application of pesticides into the roots. Do not mix TwinN solution with pesticides.



Mapleton Agri Biotec Pty Ltd

137 Obi Obi Road, Mapleton Qld 4560 Australia

Head Office: +61 7 5445 7151

Fax: +61 7 5445 7769

Email: TwinN@mabiotec.com www.mabiotec.com

