

FERTILISER THAT STANDS ITS GROUND.

Keep nitrogen working hard all season.



IS YOUR CANE CROP UTILISING ALL THE NITROGEN YOU'VE PAID FOR?

ENTEC® is a treatment that keeps nitrogen stabilised and available in your soil for weeks, even months longer than with untreated urea.

It promotes more efficient plant uptake. Reduces the risk of leaching and denitrification. And shows significant potential to improve your crop yield.

NITROGEN MANAGEMENT IS A CONSTANT CHALLENGE FOR AUSTRALIAN CANE FARMERS

Some of the most unpredictable rainfall on the planet makes every fertiliser application a management challenge. And because of the increasing pressure to improve nitrogen uptake, using nitrogen efficiently has never been a higher priority.

HOW ENTEC WORKS

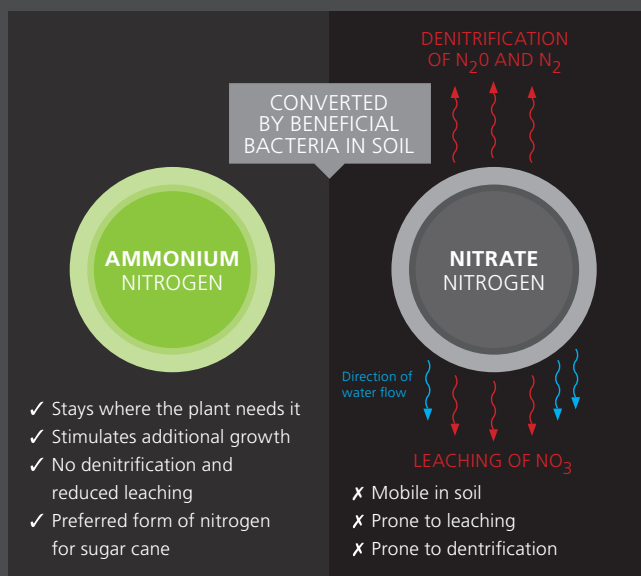
When conventional Urea fertiliser is applied, naturally occurring beneficial soil bacteria can quickly convert the more stable ammonium form of nitrogen into its more mobile nitrate form.

Conventionally, any nitrate not taken up by the plant is potentially lost to leaching and/or denitrification. It's a risk that's particularly acute in cane regions prone to unpredictable rainfall, like dry spells followed by drenching rain.

ENTEC treatment slows down the bacteria that convert ammonium to nitrate, holding nitrogen in the stable ammonium form for longer.

It makes more nitrogen available to the plant when it's needed – while reducing the risk of loss whenever rainfall or irrigation bring on wet conditions.

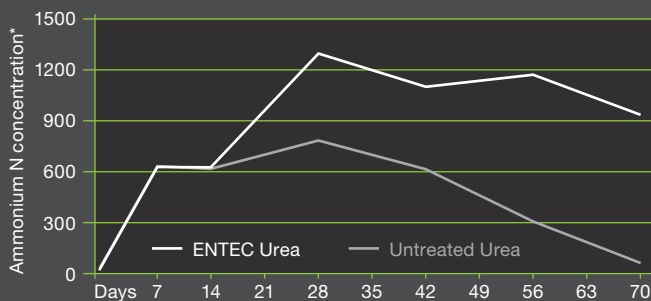
WHAT HAPPENS TO NITROGEN IN FERTILISER?



ENTEC®

**GROWERS ONLY NEED TO HARVEST
AN ADDITIONAL TONNE OF CANE
PER HA TO OFFSET THE USE OF
ENTEC-TREATED FERTILISER.**

ENTEC STABILISES THE NITROGEN IN THE AMMONIUM FORM



This experiment was conducted with urea in a moist acidic chromosol (Pin Gin) soil at 25°C (pHw 4.5) (60% water filled pore space). Source: Suter et al. (2008)
*Unit of Measure is micrograms (µg NH4+ N/g soil)

WHY ENTEC?

LEACHING AND RUN-OFF

ENTEC's stabilisation of the positively-charged ammonium 'sticks' to the negatively-charged clay component and organic carbon in soil – preventing it from being carried beyond the root zone and/or out of the hill, with heavy or untimely rainfall or irrigation. Nitrate is negatively charged – 'repelled' by the soil's natural charge, (which is also negative) – thus more easily lost to leaching and runoff.

REDUCES RISK OF DENITRIFICATION

Unlike nitrate, ammonium has a denitrification potential of zero. Ammonium does not convert to nitrous oxide or dinitrogen gases in wet conditions. ENTEC protects against nitrogen loss to the atmosphere through denitrification.

HELPS THE CROP USE N MORE EFFICIENTLY

ENTEC provides potential for more nitrogen to be used efficiently by the plant when demand and uptake is occurring for stabilised ammonium. And because of its stabilising properties and lower risk of loss, ENTEC means more nitrogen can be used efficiently by the plant whenever moisture – a little or a lot – stimulates uptake.

PROTECTS AGAINST UNCERTAINTY

ENTEC provides a measure of much-needed protection against the worst that cane regions' unpredictable weather can throw at you.

Your nitrogen – and your crop's potential – are better protected whatever happens after your fertiliser is applied.

CAN IMPROVE CROP YIELD AND PROFITABILITY

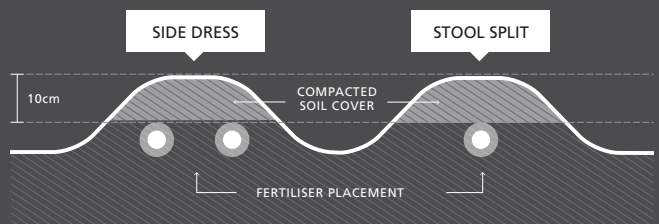
ENTEC's improved nitrogen use efficiency can potentially make a significant difference to cane yield, sugar yield and farm profitability.

OPTIMUM APPLICATION FOR ENTEC

Subsurface banded application to achieve 10cm of compacted soil cover. As a consequence:

- volatilisation potentials are minimised.
- subsurface application results in cooler soil temperatures, and as a consequence ENTEC persists longer.

ENTEC BLEND PLACEMENT IN RATOONS



HOW TO GET ENTEC IN PLAY THIS SEASON

- Determine a crop's nutrient requirement based on soil test results, agronomic advice and any regulatory considerations.
- Ask your IPF dealer about the most appropriate fertiliser product. Compare your standard blend with the advantages of using an equivalent ENTEC blend.
- ENTEC fertiliser is recommended by your IPF dealer or agronomist. On your soil test report, receive your ratoon or plant side dress fertiliser recommendation as an ENTEC blend.
- When ordering fertiliser throughout this season, remember to ask for an ENTEC blend.
- IPF can apply the ENTEC active ingredient to the urea component of the blend for you. The remainder of the blend is otherwise the same. You will know the fertiliser has been ENTEC-treated, as the urea granules in the blend are no longer white in coloration. The urea granules turn 'light blue' in colour after being treated with ENTEC.
- Apply the ENTEC blend as normal with no additional changes required. Research has shown that the use of a Stool Zippa™ further reduces the risk of runoff and may also reduce volatilisation potentials.

ESSENTIAL PROTECTION FOR YOUR NITROGEN INVESTMENT.

"I've used ENTEC for 5 years, and I'm convinced it's a winning product. It reduces the risk of leaching and denitrification, and I'm seeing a more consistent crop every year."

Graeme Blackburn

45-year cane grower, Mirani, Queensland

USE ENTEC TO:

- ✓ Reduce the risk of leaching
- ✓ Reduce runoff
- ✓ Reduce denitrification
- ✓ Improve crop nitrogen uptake
- ✓ Help protect against cane climate uncertainties
- ✓ Potentially improve your cane and sugar yield



EXACTLY HOW MUCH **N** DO YOU NEED?

Only with regular and routine use of strategic nutrient analysis (including soil, plant tissue and water analysis, if irrigating) can you tell just what you're missing, and how much you need to apply for optimum crop efficiency and yield.

Let Nutrient Advantage® lend a hand. For over 50 years, our Nutrient Advantage service has been helping farmers gain a productivity edge through reliable soil and plant tissue testing, and expert, localised nutrient advice.

WANT THE ADVANTAGE?

Visit nutrientadvantage.com.au or call **1800 803 453** and ask about our soil and plant tissue testing services.