Assessing controlled release and deep placement N fertilizer technologies in subtropical sugarcane

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Impact presentation: Drainage losses of $N_2O$ and $NO_3^-$ in Ferralsol is a major N-loss pathway

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*Poster #35*
Three N-fertiliser technologies

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Pelletised C-matrix N fertiliser

- EC: 160 dS/m
- pH (CaCl2): 7.5
- Total Nitrogen: 16%
- Total Carbon: 5.4%
Location of the 6 field trial sites
Assessing mineral N from PCU and C-matrix N fertiliser
Harvesting a 2-year cane trial
Yield from 2-year cane trials

Site 3 June 2016

Site 4 September 2016

Site 5 September 2016

Site 6 November 2016
$N_2O$ emissions
Conclusions

- Release of mineral N is delayed with PCU and C- matrix pellets
- When N content is matched, yield of 2-year sugarcane was not different
- Need to develop N-response curves to PCU vs urea (currently underway) - benefit may be in lower N doses
- Emissions of N$_2$O are lowered due to restricted mineral N content during periods of heavy rain