NH_3 emissions from grazing pasture following urea and urease inhibitor treatments (Poster # 12)

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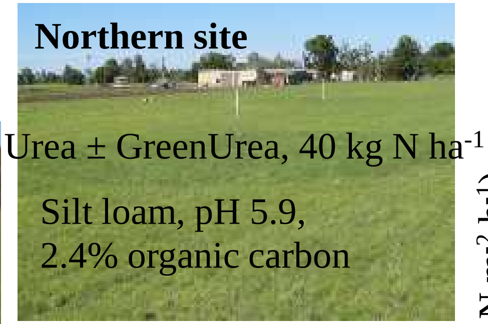
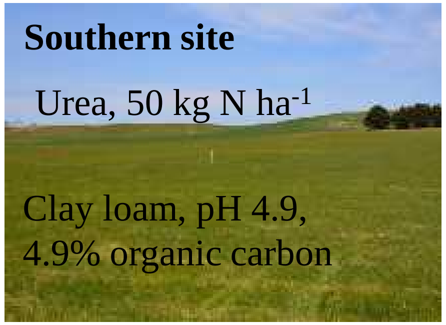
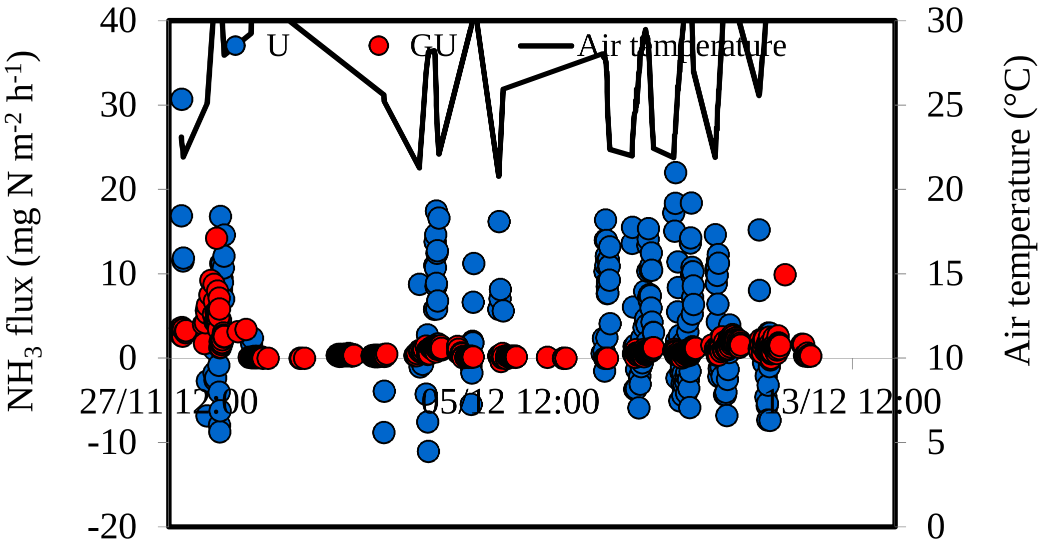
- **Two sites**:
- Pasture applied with **Urea/urea + urease inhibitor (Green UreaNV™)**
- Emissions calculated with **Inverse-dispersion** model combined with **open-path NH_3 concentration sensor**







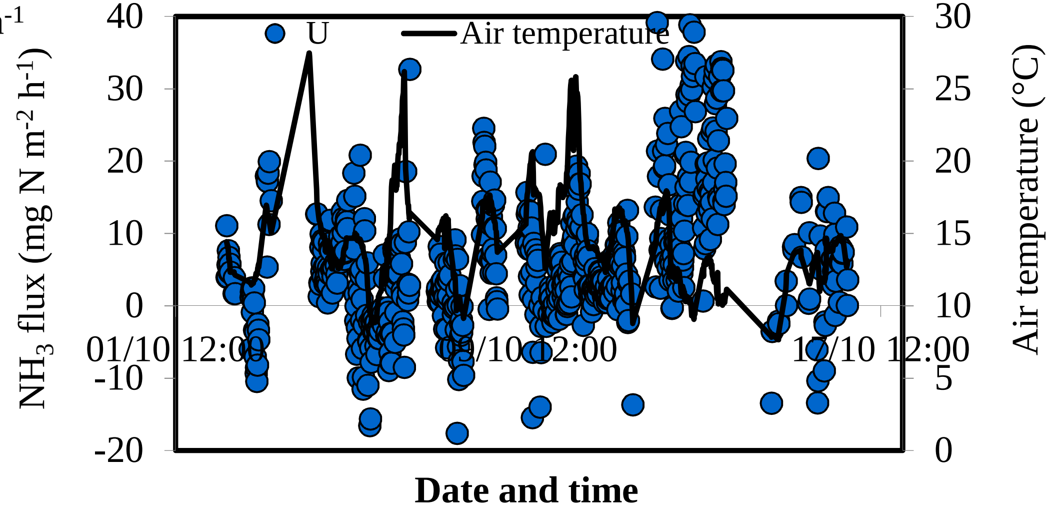


Table 1 Daily average NH_3 fluxes from the northern and southern sites. Total N loss as volatilised NH_3 over the measurement periods (12-15 days) at the northern and southern sites are also calculated

		Daily average NH_3 (mg N m^{-2} h^{-1})	N loss as volatilised NH_3 (%)
Northern site	Urea	4.39 ± 0.46	39.5
	Green UreaNV™	1.25 ± 0.15	11.3
Southern site	Urea	6.40 ± 1.23	59.5

Conclusions

1. Inverse-dispersion technique combined with open-path NH_3 laser is able to measure gases loss from fertilizer treated large-scale fields.
2. Nitrogen loss as volatilised NH_3 from the urea application accounted for 40 and 60% of total applied N for the northern and southern sites, respectively.
3. Urease inhibitor effectively reduces NH_3 emissions by ~ 70% compared with urea treatment.