

New Zealand Greenhouse Gas Inventory Approval for change to emission factor, parameter or methodology

Reviewer	Keith Smith
Date of review	29 March 2010

Inventory sector ¹	Agriculture
Name of EF, variable or category	Frac _{GAS} F _{N_{UI}} , where N _{UI} refers to N modified by the addition of the urease inhibitor nBTPT
Current value of emission factor, variable or methodology Tier	0.1
Suggested value of emission factor, variable or methodology Tier	0.06
Use from year (start year)	Not specified
Recommend that a change to the new value or methodology is approved	Yes/no (comments) Yes, approval recommended, in view of the clear experimental evidence.

Please comment on whether the supporting review or report sufficiently covers the following topics and provides adequate justification for a change.

	Yes/no	Comment
Is the need for a change well documented?	Yes	Evidence for NZ published studies and from overseas studies presented. Look convincing.
Is the proposed change scientifically defensible?	Yes	
Has any documentation been peer-reviewed or published?	Yes	4 recent peer-reviewed NZ papers, and several overseas ones cited in detail.
Is the proposed methodology, EF or variable consistent with IPCC GPG?	Yes	
Is any new EF, variable or methodology comparable with any other countries?	No?	I am not aware of any comparable evaluation of Frac _{GAS} F for UI-modified N fertiliser
Is the level of uncertainty reported?	No	Should be possible to calculate from the data in Table 1 of the desk-top study by Saggart et al 2009.
Is there a comparison with IPCC default emission factors, variables or Tier 1 methodology	Yes	The report cites the IPCC default factor of 0.10, currently used.

¹ Energy, Industrial Processes, Solvents, Agriculture, LUCF, Waste