

Corrections

AGRICULTURAL SCIENCES

Correction for “Reducing environmental risk by improving N management in intensive Chinese agricultural systems,” by Xiao-Tang Ju, Guang-Xi Xing, Xin-Ping Chen, Shao-Lin Zhang, Li-Juan Zhang, Xue-Jun Liu, Zhen-Ling Cui, Bin Yin, Peter Christie, Zhao-Liang Zhu, and Fu-Suo Zhang, which appeared in issue 9, March 3, 2009, of *Proc Natl Acad Sci USA* (106: 3041–3046; first published February 17, 2009; 10.1073/pnas.0813417106).

The authors note that the following errors occurred in their manuscript. On page 3041, left column, in line 4 of the second paragraph, “4,642 (a 98% increase)” should instead read

“4,642 kg per hectare (a 98% increase).” On page 3041, right column, in the Author contributions footnote, “X.L.-Z.,” should instead read “Z.-L.Z.” On page 3042, Table 1, in the footnote indicated by a dagger, “regain” should instead read “region.” On page 3043, right column, in line 17 of the first full paragraph, “43.5%” should instead read “31.5%.” Also on page 3043, in Table 2, under the heading “Wheat-south” in row 2, “18.4 ± 6.3” should instead read “34.5 ± 1.1,” and in row 6, “43.5” should instead read “31.5.” On page 3044, right column, in line 10 of the first full paragraph, “dinitrification” should instead read “denitrification.” These errors do not affect the conclusions of the article. The corrected Tables 1 and 2 appear below.

Table 1. Average grain yields and total N losses of the optimum N fertilization (ON) compared with farmers’ N practices (FN) (Field Study 1 and 2)

Crop and site of field experiment	N fertilization	N rate		Grain yield		Total fertilizer N loss*	
		Rate, kg of N per hectare	Ratio of FN to ON	Yield, kg·ha ⁻¹	Ratio of FN to ON	Total loss, kg of N per hectare	Ratio of FN to ON
Rice in Taihu (<i>n</i> = 26)	ON [†]	200		8,270		102	
	FN	300	1.5	8,012	0.97	174	1.7
Wheat in Taihu (<i>n</i> = 9)	ON [†]	153		3,700		76	
	FN	250	1.6	4,084	1.10	155	2.0
Wheat in NCP [‡] (<i>n</i> = 121)	ON [§]	128		6,024		25	
	FN	325	2.5	5,764	0.96	71	2.8
Maize in NCP [‡] (<i>n</i> = 148)	ON [§]	158		8,900		52	
	FN	263	1.7	8,500	0.95	108	2.1

*Total fertilizer N losses calculated with the models of Fig. 1B simulated from ¹⁵N field experiments.

[†]Regional mean optimal N application rate calculated from the mean of economically optimum N rates of field experiments in Taihu region (5, 12).

[‡]Data including Field Study 1 and also summarized from ref. (15, 16); NCP, North China Plain.

[§]In-season nitrogen management based on soil N_{min} test on the NCP (8, 13, 15, 16).

Table 2. Different N loss pathways expressed as a percentage (mean ± SD) of N application rate in farmers’ N practices (Field Study 3, Lysimeter Study)

Component	Taihu region		North China Plain	
	Rice	Wheat-south	Wheat-north	Maize
N rate (kg of N per hectare)	300	250	325	263
Recovery rate (%) [*]	29.6 ± 4.9	34.5 ± 1.1	31.0 ± 3.6	25.5 ± 5.2
Retention rate (%) [*]	21.7 ± 5.1	28.5 ± 4.6	45.7 ± 5.4	33.9 ± 2.3
Loss pathway				
NH ₃ volatilization (%)	11.6 ± 4.7	2.1 ± 1.4	19.4 ± 5.2	24.7 ± 5.6
Leaching out of 1 m soil depth (%)	0.3 ± 0.5	3.4 ± 2.1	2.7 ± 2.6	12.1 ± 8.5
Denitrification (%)	36.4 [†]	31.5 [†]	0.1 ± 0.04	3.3 ± 1.6

*Measured from corresponding ¹⁵N field experiments.

[†]Calculated by difference method.

www.pnas.org/cgi/doi/10.1073/pnas.0902655106