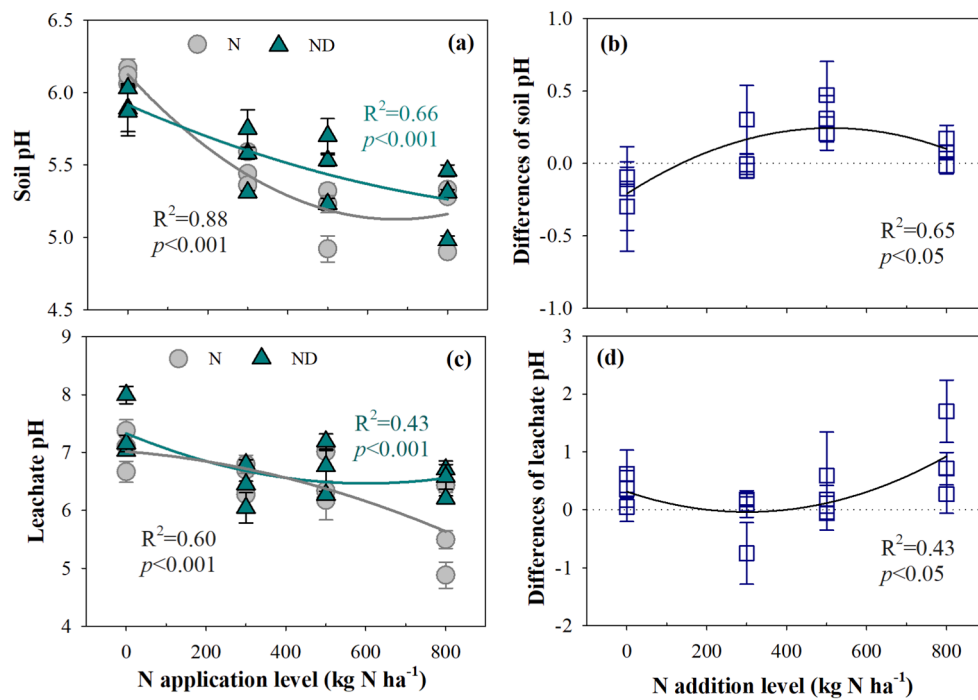


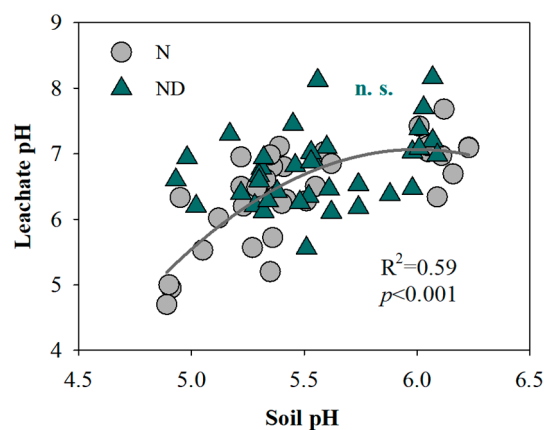
## Supplemental material

**Table S1** Three-way ANOVA analysis of urea-N application, DMPP addition and sampling date on soil pH, leachate pH and leachate N loss. (*p* values in boldface indicate significant effects)

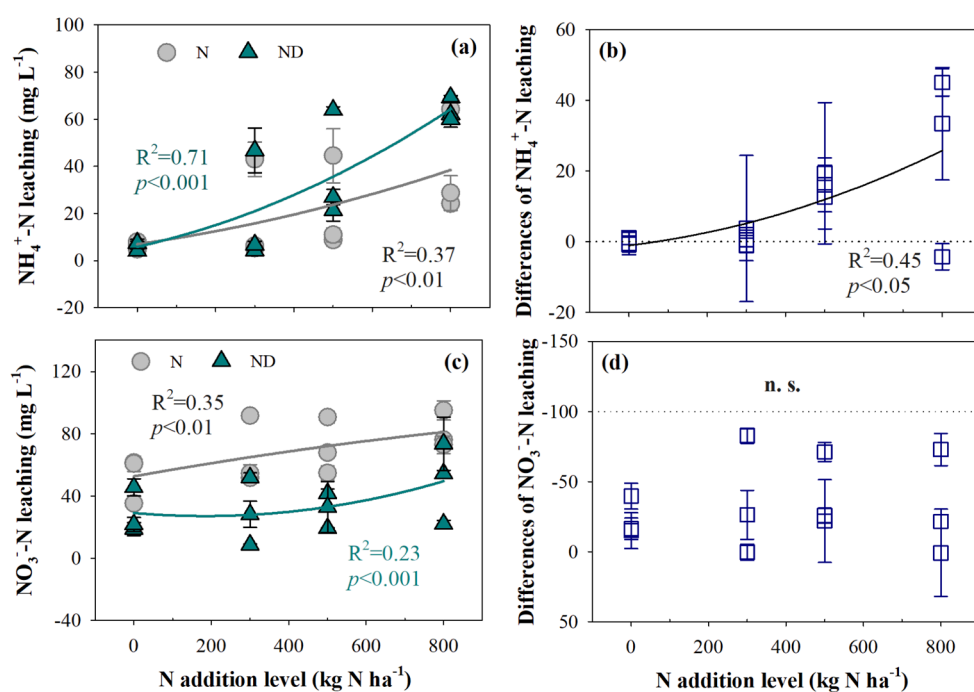
Treatments	Soil pH	Leachate pH	NH <sub>4</sub> <sup>+</sup> -N loss	NO <sub>3</sub> <sup>-</sup> -N loss	Inorganic N loss
Urea-N	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
DMPP	<b>&lt;0.05</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
Sampling date	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.05</b>	<b>&lt;0.001</b>
Urea-N × Sampling date	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.01</b>	<b>=0.001</b>
DMPP × Sampling date	=0.60	<b>&lt;0.001</b>	=0.06	<b>&lt;0.001</b>	<b>&lt;0.001</b>
Urea-N × DMPP	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	=0.14	<b>=0.02</b>
Urea-N × DMPP × Sampling date	<b>&lt;0.05</b>	<b>&lt;0.01</b>	<b>&lt;0.001</b>	<b>&lt;0.05</b>	<b>&lt;0.001</b>



**Figure S1** Relationships of DMPP with mean soil pH (a)/leachate pH (c) and with the differences of mean soil pH (b)/leachate pH (d) between treatment and control (Grey dots: soil/leachate pH under N fertilizer; green triangles: soil/leachate pH under N+DMPP; N: N fertilizer; ND: N+DMPP)



**Figure S2** Relationship of soil pH and leachate pH with increasing urea-N rates across DMPP addition (Grey dots: urea-N application; green triangles: urea-N+DMPP combination)



**Figure S3** Relationships of DMPP with leachate  $\text{NH}_4^+\text{-N}$  (a)/ $\text{NO}_3^-\text{-N}$  (c) and with the differences of mean leachate  $\text{NH}_4^+\text{-N}$  (b)/leachate  $\text{NO}_3^-\text{-N}$  (d) between treatment and control (Grey dots: leachate  $\text{NH}_4^+\text{-N}/\text{NO}_3^-\text{-N}$  under N fertilizer; green triangles: leachate  $\text{NH}_4^+\text{-N}/\text{NO}_3^-\text{-N}$  under N+DMPP; N: N fertilizer; ND: N+DMPP)