

Supporting Information

Table S1 Results (F values) of linear mixed effect model testing of the effects of fertilization treatment (F), sampling time (T), soil layer or plant organs (D), and their interactions on soil and plant N index.

F values	Fertilization treatment (F)	Sampling time (T)	Soil layer or plant organ (D)	F*T	F*D	T*D	F*T*D
<i>Soil</i>							
TN_soil	1.4	4.4**	334.1**	1.6	1.5	4.3**	0.2
¹⁵ N-TN	3.1*	104.7**	673.6**	3.2*	3.6**	62.5**	2.2*
Soil%	1.4	103.3**	563.7**	1.9*	4.0**	59.9**	1.2
<i>Plant</i>							
Dry weight	1.7	442.6**	2248.5**	0.8	1.2	380.0**	0.2
TN_plant	1.1	1213.8**	100.6**	3.9**	0.5	14.7**	0.4
N uptake	0.7	136.7**	931.5**	0.6	0.8	66.4**	0.2
%Ndff	26.6**	294.9**	1.6	1.5	0.5	0.6	0.6
Plant%	5.6**	526.0**	879.8**	2.9*	1.8*	171.1**	1.4

Only five N-fertilized treatments were included during the analysis. In the table, soil% or plant% indicates the ¹⁵N recovery in a special soil layer or plant organ. * P < 0.05. ** P < 0.01.

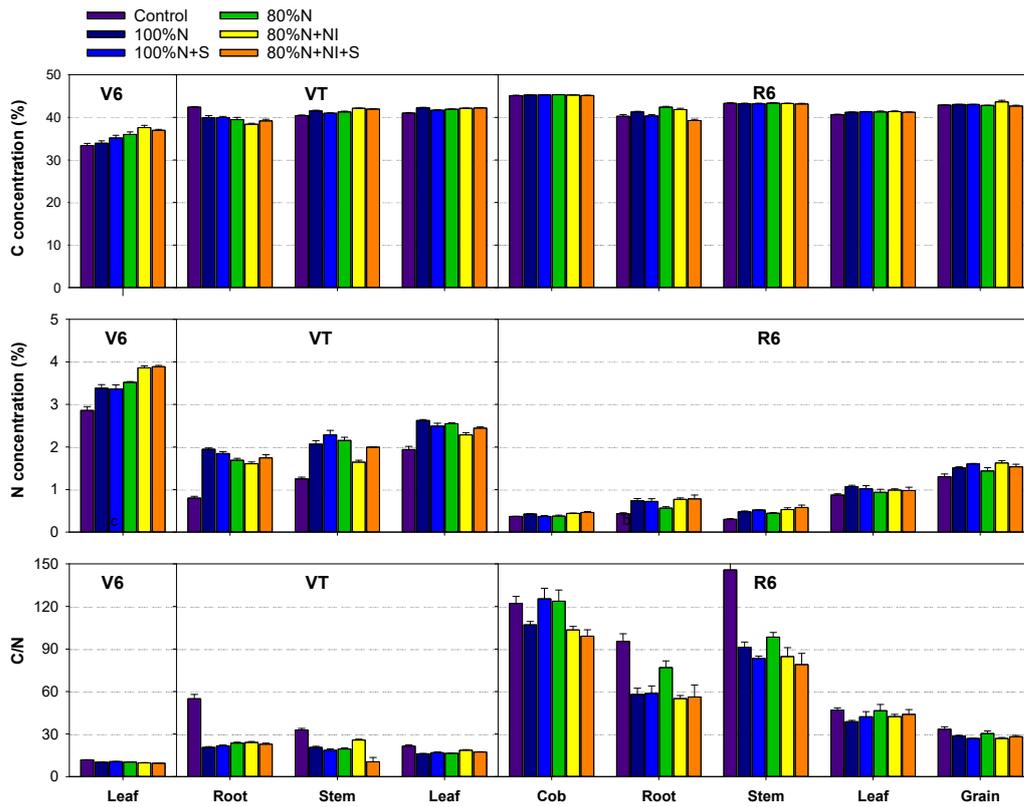


Figure S1 Carbon concentration (top), N concentration (middle) and C/N (bottom) in different organs of maize at three sampling periods during cultivation.

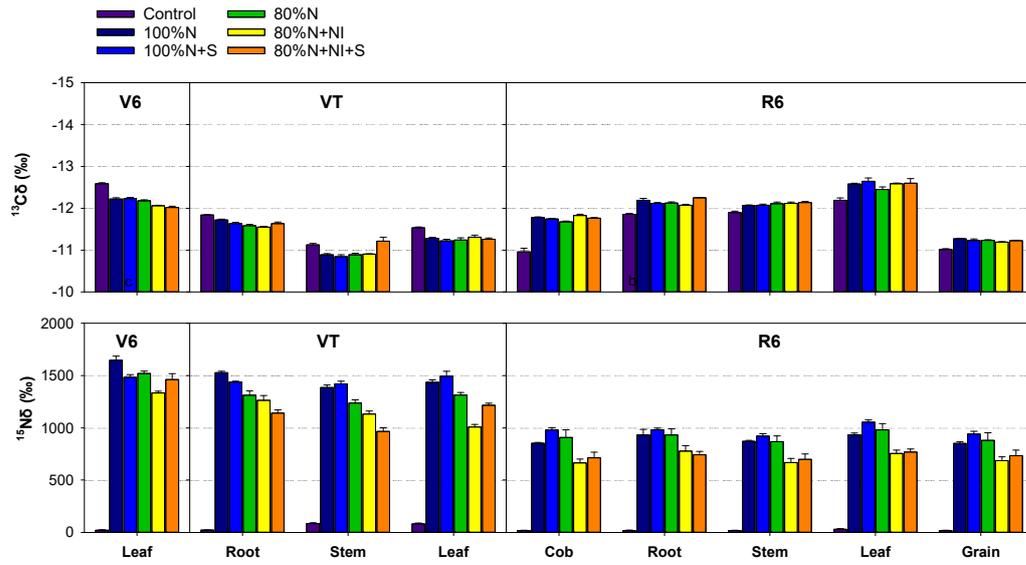


Figure S2 $^{13}\text{C}\delta$ (top), and $^{15}\text{N}\delta$ (bottom) in different organs of maize at three sampling periods during cultivation.