## Continuous decrease in soil organic matter despite increased plant productivity in an 80-years-old phosphorus-addition experiment

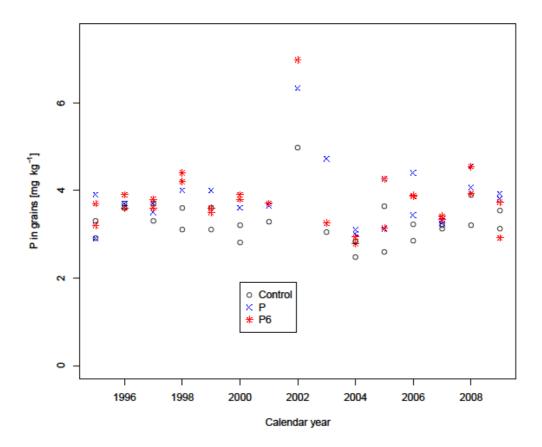
## **Supplementary Information**

**Table S1:** Soil texture in the uppermost 20 cm of the soil in both halves of the experiment (that started in 1941 and 1936).

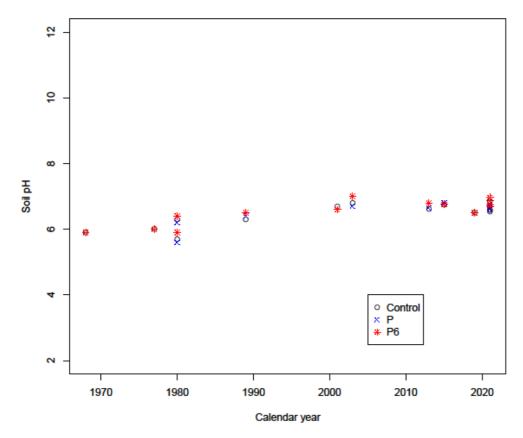
Experiment	Clay (%)	Fine Silt (%)	Medium Silt (%)	Coarse Silt (%)	Fine Sand (%)	Medium Sand (%)	Coarse Sand (%)
1941	46.2	15.1	16.8	13.6	2.6	4.2	1.5
1936	45.2	15.9	16.5	14.6	2.6	3.9	1.3

**Table S2** Results of the model comparison based on Akaike Information Criterion (AIC) and the residual standard error.

Variable	Linear	model	Monoexponential model		
	AIC	Residual	AIC	Residual	
		standard		standard	
		error		error	
TOC	160.57	1.63	160.37	1.63	
TN	-50.35	0.12	-50.68	0.12	
TOP	412.20	35.15	412.21	35.16	
TP	450.25	55.91	450.34	55.97	
Phytate-P	345.51	15.59	345.47	15.58	



**Figure S1** Concentrations of P in the yields (grains) of the three treatments (measured on a composite sample derived from all field replicates).



**Figure S2** Soil pH (measured in water) for three treatments of the field experiment (Control, P and P6).