

**Table S2. Effect of soils on the mineral P fertilizer replacement value (PFRV) expressed in % estimated based on different approaches (DM yield, P uptake, Olsen P) and on the increase in the DTPA extractable Fe after crop for both P fertilizer rates (50 and 100 mg P kg<sup>-1</sup> soil)**

Soil	n	PFRV <sub>DM</sub>			PFRV <sub>P Uptake</sub>			PFRV <sub>Olsen P</sub>			Increase in DTPA extractable Fe					
		50 mg kg <sup>-1</sup>	100 mg kg <sup>-1</sup>		50 mg kg <sup>-1</sup>	100 mg kg <sup>-1</sup>		50 mg kg <sup>-1</sup>	100 mg kg <sup>-1</sup>		50 mg kg <sup>-1</sup>		100 mg kg <sup>-1</sup>			
Soil 1	3	±	-22 ± 45	ab	-33 ± 33	ab	50 ± 28	a	-4 ± 2	def	1 ± 5	c	0,07 ± 0,40	c	1,09 ± 0,51	c
Soil 10	3	3 ± 28	41 ± 22	a	14 ± 8	a	12 ± 4	ab	104 ± 12	a	47 ± 6	ab	16,21 ± 0,51	ab	26,82 ± 2,57	b
Soil 11	3	-87 ± 151	-109 ± 12	b	-16 ± 21	a	-3 ± 6	b	-43 ± 14	f	-13 ± 5	c	1,72 ± 0,90	c	0,33 ± 0,93	c
Soil 12	3	-17 ± 13	26 ± 59	ab	6 ± 3	a	5 ± 1	b	-3 ± 15	def	-4 ± 1	c	0,23 ± 0,07	c	0,39 ± 0,25	c
Soil 2	3	-10 ± 10	0 ± 11	ab	-10 ± 14	a	-4 ± 7	b	-27 ± 3	def	-5 ± 1	c	0,09 ± 0,32	c	1,67 ± 1,33	c
Soil 3	3	28 ± 30	14 ± 53	ab	17 ± 20	a	6 ± 15	ab	5 ± 2	cde	5 ± 0	c	-0,70 ± 0,53	c	0,48 ± 0,34	c
Soil 4	3	34 ± 16	0 ± 5	ab	14 ± 9	a	-4 ± 7	b	-8 ± 2	def	-1 ± 1	c	0,25 ± 0,09	c	0,50 ± 0,15	c
Soil 5	3	-26 ± 83	-157 ± 127	ab	3 ± 19	a	-23 ± 8	bc	-16 ± 2	def	-2 ± 1	c	-0,07 ± 0,16	c	0,13 ± 0,15	c
Soil 6	3	-16 ± 26	-79 ± 47	ab	-120 ± 8	b	-50 ± 11	c	28 ± 12	bcd	3 ± 3	c	0,01 ± 0,07	c	-0,37 ± 0,24	c
Soil 7	3	21 ± 20	24 ± 50	ab	1 ± 1	a	2 ± 11	b	30 ± 12	bcd	18 ± 2	bc	4,34 ± 1,93	bc	5,28 ± 0,83	c
Soil 8	3	54 ± 14	48 ± 6	a	23 ± 13	a	17 ± 5	ab	58 ± 5	ab	54 ± 8	ab	26,95 ± 6,11	a	34,18 ± 2,71	a
Soil 9	3	27 ± 30	47 ± 16	a	28 ± 52	a	12 ± 4	ab	50 ± 7	bc	76 ± 23	a	11,31 ± 5,01	bc	30,57 ± 1,98	ab
ANOVA		NS	< 0,05		< 0,001		< 0,01		P value	< 0,001		< 0,001		< 0,001		< 0,001

Mean ± standard error

NS, not significant

Means followed by the same letter are not significantly different according to the Tukey test at P < 0.05

The subindices for the P fertilizer replacement value abbreviation (PFRV) indicates: DM, on a dry matter basis, Puptake, on a P uptake basis, and OlsenP on a Olsen P after crop basis