

**Table S4-** Soil chemical attributes in the treatments with different managements and fertilization.

Treatments	Al cmolc. dm <sup>-3</sup>	Ca cmolc. dm <sup>-3</sup>	pH (H <sub>2</sub> O)	K g kg <sup>-1</sup>	P g kg <sup>-1</sup>	OM g kg <sup>-1</sup>
0 - 10 cm						
CC-F1	0.04 A	4.06 B	5.65 A	111.25 B	3.82 A	4.06 AB
CC-F2	0.02 A	5.49 A	5.51 AB	139.00 B	7.82 A	4.59 A
ICL-F1	0.03 A	3.56 B	5.35 B	108.00 B	12.31 A	3.78 B
ICL-F2	0.03 A	5.37A	5.55 A	169.75 A	13.87 A	3.59 B
SE	0.018	0.34	0.06	12.85	3.87	0.25
10 - 20 cm						
CC-F1	0.62 A	0.60 B	5.41 B	49.25 B	8.67 A	2.20 B
CC-F2	0.20 B	1.56 AB	5.62 AB	78.75 A	8.88 A	2.34 B
ICL-F1	0.29 B	1.08 B	5.66 AB	53.00 B	2.59 A	2.60 AB
ICL-F2	0.14 B	2.29 A	5.67 A	55.50 B	3.33 A	3.13 A
SE	0.06	0.40	0.08	5.91	2.20	0.26
20 – 30 cm						
CC-F1	0.21 B	0.37 B	5.23 B	31.25 AB	2.25 A	2.23 A
CC-F2	0.40 A	0.75 B	5.33 AB	46.75 A	2.77 A	2.25 A
ICL-F1	0.30 AB	0.60 B	5.50 AB	28.50 B	0.82 B	2.21 A
ICL-F2	0.21 B	1.14 AB	5.61 A	38.00 AB	1.07 B	2.35 A
SE	0.04	0.25	0.10	5.52	0.28	0.23

ICL-F1: integrated crop-livestock with half of the recommended P and K rates; ICL-F2: integrated crop-livestock with the recommended P and K rates; CC-F1: Continuous crop with half of the recommended P and K rates; CC-F2: continuous crop with the recommended P and K rates. Means followed by the same letters for each soil attribute, do not differ from each other, by the test Tukey-Kramer (P<0.05).

SE = Standard error