**Supplementary Table 3. Descriptive statistics of soil chemical parameters by field**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | P | K | Mg | Ca | Ctot | Ntot | C/N | pH | HWC | CEC |
|  | % | % | **%** | **%** | gC/kg soil | g/kg | - | - | gC/kg soil | cmolc/kg |
| **Management x field** |  |  |  |  |  |  |  |  |  |  |
| 1-SandCONV | 9.0±2.2 | 10.5±1.9 | **10.2±0.8a** | 105±10 | 15.1±2.4 | 0.15±0.01 | 10.3±0.9 | 5.2±0.2 | 0.34±0.03 | 10.0±0.6 |
| 1-SandAECO | 7.3±4.5 | 11.0±2.0 | **7.2±0.2b** | 102±20 | 15.3±0.9 | 0.15±0.007 | 10.4±0.1 | 5.0±0.4 | 0.39±0.06 | 9.4±0.2 |
| 2-SandCONV | **8.2±0.6a** | 12.5±0.9 | 7.0±0.3 | 86±11 | 14.0±0.4 | 0.13±0.005 | 10.9±0.3 | 5.3±0.1 | 0.32±0.05 | 8.4±0.2 |
| 2-SandAECO | **6.7±0.2a** | 14.2±3.3 | 6.6±1.2 | 80±6 | 15.5±3.5 | 0.15±0.03 | 10.6±0.7 | 5.1±0.02 | 0.37±0.07 | 8.6±0.7 |
| 3-SandCONV | 8.6±2.5 | 13.8±3.8 | **5.3±0.7b** | **67±4b** | **9.1±0.8b** | **0.08±0.003b** | 11.2±0.6 | 5.6±0.2 | 0.21±0.05 | 7.3±1.8 |
| 3-SandAECO | 7.2±0.7 | 11.4±1.9 | **6.8±0.5a** | **111±7a** | **15.1±2.3a** | **0.14±0.02a** | 10.7±0.5 | 5.8±0.2 | 0.30±0.05 | 8.7±0.5 |
| 1-SiltCONV | 11.9±2.6 | 18.6±2.2 | **19.9±1.4a** | 251±55 | **12.9±0.6b** | 0.14±0.01 | 9.2±0.4 | 6.4±0.1 | **0.26±0.03b** | 17.6±2.9 |
| 1-SiltAECO | 16.1±3.1 | 15.4±4.3 | **8.9±1.6b** | 368±70 | **18.3±2.0a** | 0.18±0.02 | 10.2±0.1 | 6.9±0.4 | **0.49±0.08a** | 16.0±1.2 |
| 2-SiltCONV | **10.5±0.8b** | **17.5±0.6a** | **15.2±1.2a** | 302±6 | 13.6±0.6 | **0.15±0.005a** | 9.2±0.1 | **6.3±0.2b** | 0.26±0.06 | **20.1±1.2a** |
| 2-SiltAECO | **24.2±5.0a** | **11.2±1.5b** | **5.2±0.1b** | 499±156 | 12.6±0.7 | **0.12±0.002b** | 10.1±0.7 | **7.3±0.1a** | 0.27±0.02 | **11.0±0.1b** |
| 3-SiltCONV | 13.9±2.6 | 13.6±3.9 | **12.2±1.4a** | 469±103 | **15.4±0.8a** | **0.16±0.004a** | 9.9±0.3 | 7.5±0.1 | 0.33±0.03 | **16.3±0.8a** |
| 3-SiltAECO | 19.0±2.0 | 9.3±2.0 | **5.1±1.1b** | 792±389 | **11.1±0.9b** | **0.12±0.004b** | 9.5±1.0 | 7.6±0.2 | 0.25±0.05 | **9.7±0.4b** |

Mean and standard deviation of the soil physical and chemical parameters for each management type (CONV=conventional and AECO=agroecological) in the six paired-fields (3 paired-fields in each site: 1, 2 and 3). The management effect was assessed in the six paired-fields separately using a pairwise test with the routine Permanova implemented in Primer6. Letters “a” and “b” represent the highest and the lowest values between the two management types for each pair. The significant tests are in bold. P, K, Mg and Ca=exchangeable cations; Ctot= carbon total; Ntot=total nitrogen; C/N=carbon to nitrogen ratio; HWC=hot water carbon; CEC=cation exchange capacity.