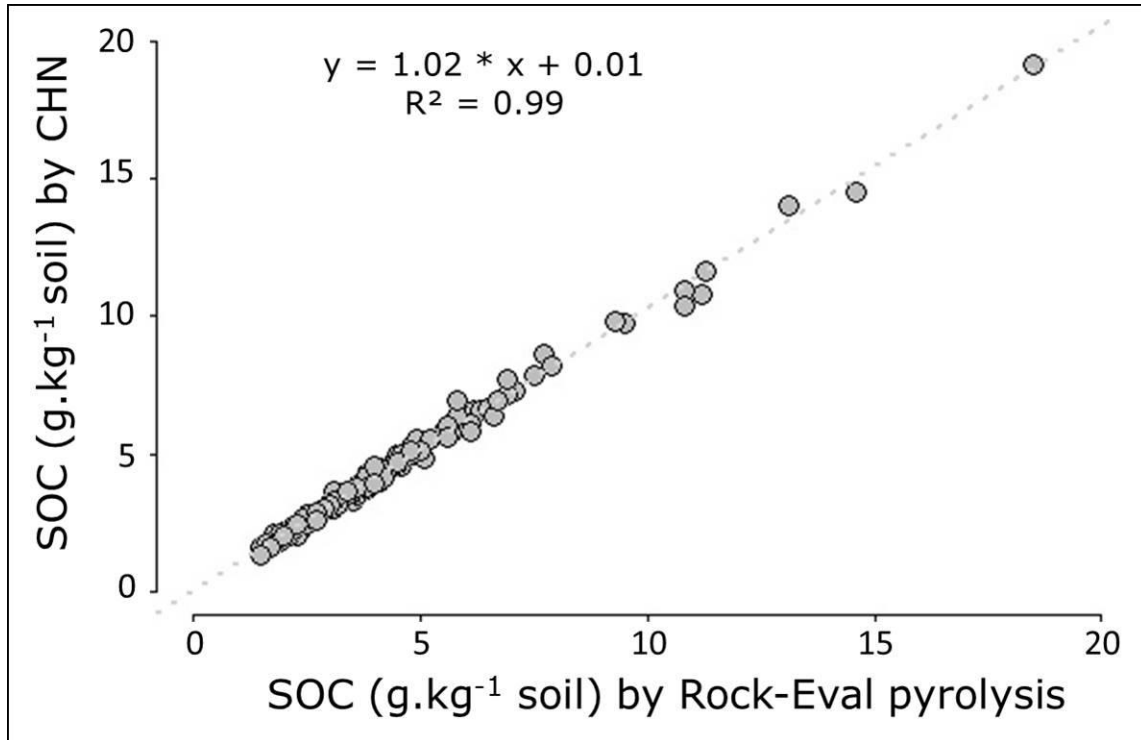


1 **Supplementary materials**

- 2 Supplementary Material S1. Correlation between SOC contents (g.kg<sup>-1</sup> soil) measured by  
3 Rock-Eval pyrolysis and by dry combustion with a CHN analyser.

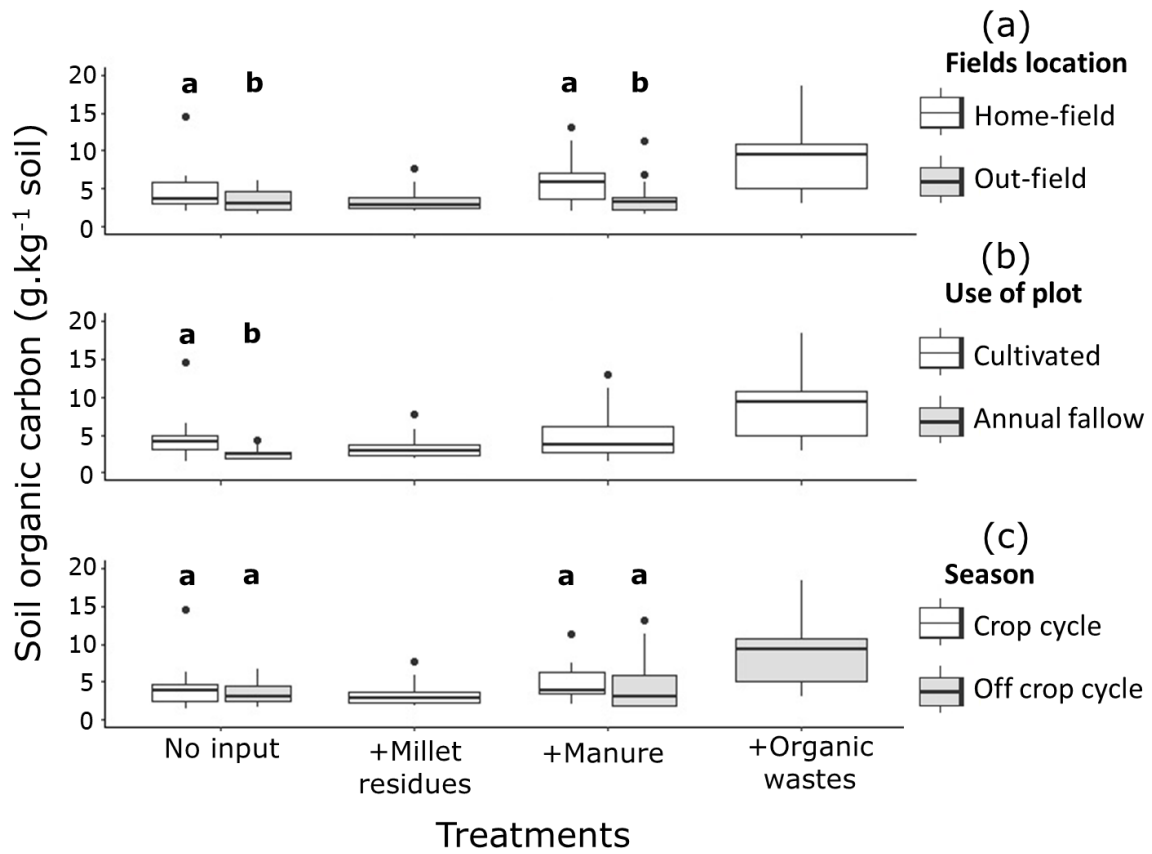


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7 Supplementary material S2. SOC ( $\text{g.kg}^{-1}$  soil) in the different situations, according to (a)  
8 the field location, (b) the use of the plot, and (c) the season.

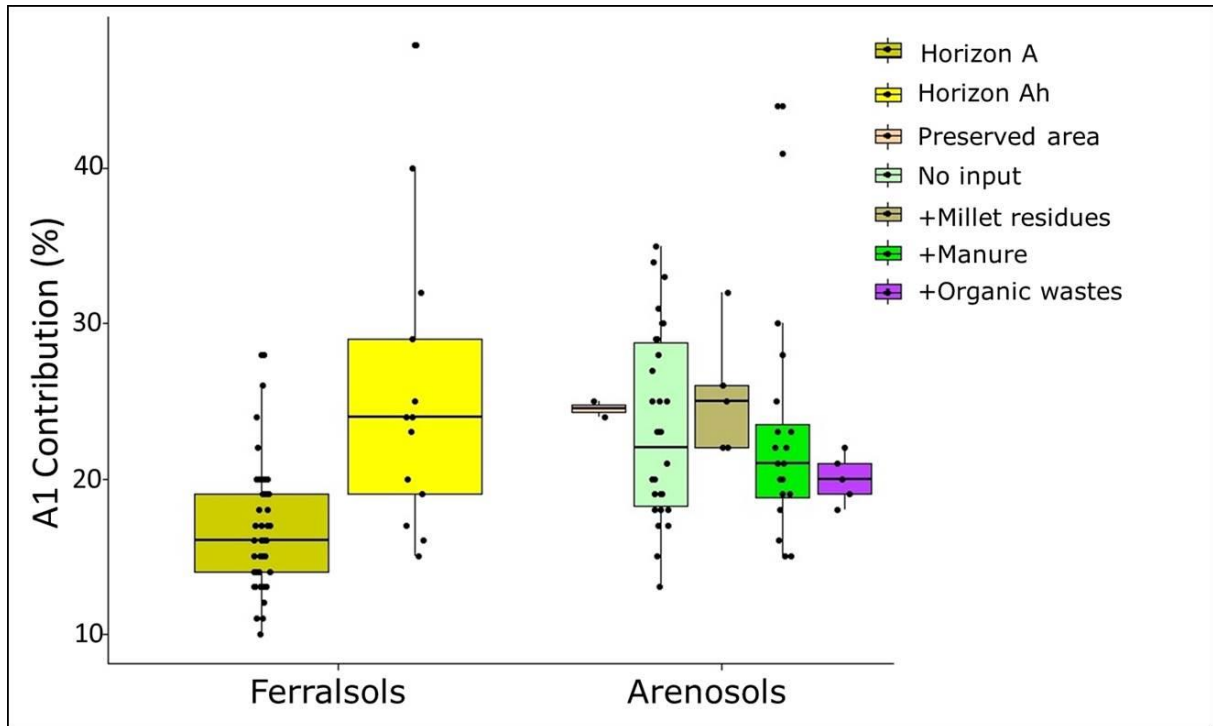


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12 Supplementary Material S3. A1 contributions (%) in the S2 thermograms obtained by  
13 Rock-Eval pyrolysis of the surface layers (0-10 cm) of Senegalese Arenosols (this  
14 study) compared to values in the A or Ah horizons (depth  $\leq 15$  cm) of Gabonese  
15 Ferralsols (serving as the external reference set; Sebag et al., 2016).

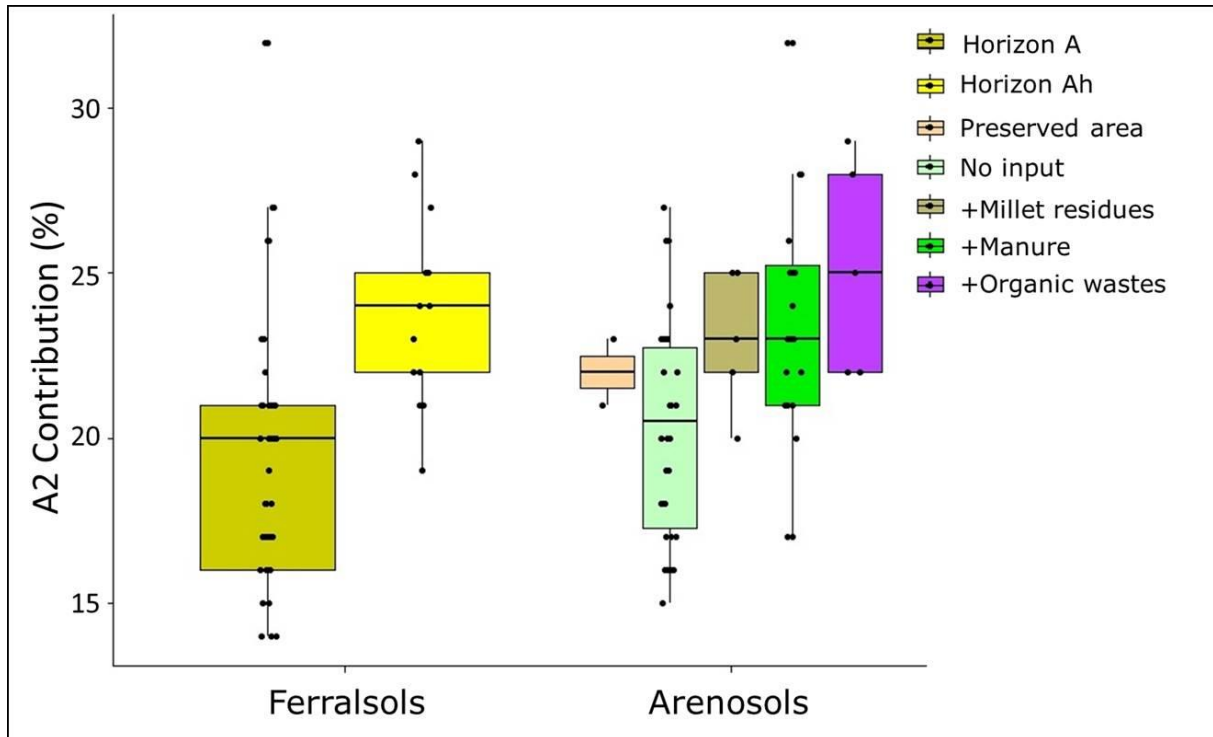


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19 Supplementary Material S4. A2 contributions (%) in the S2 thermograms obtained by  
20 Rock-Eval pyrolysis of the surface layers (0-10 cm) of Senegalese Arenosols (this  
21 study) compared to values in the A or Ah horizons (depth  $\leq 15$  cm) of Gabonese  
22 Ferralsols (serving as the external reference set; Sebag et al., 2016).

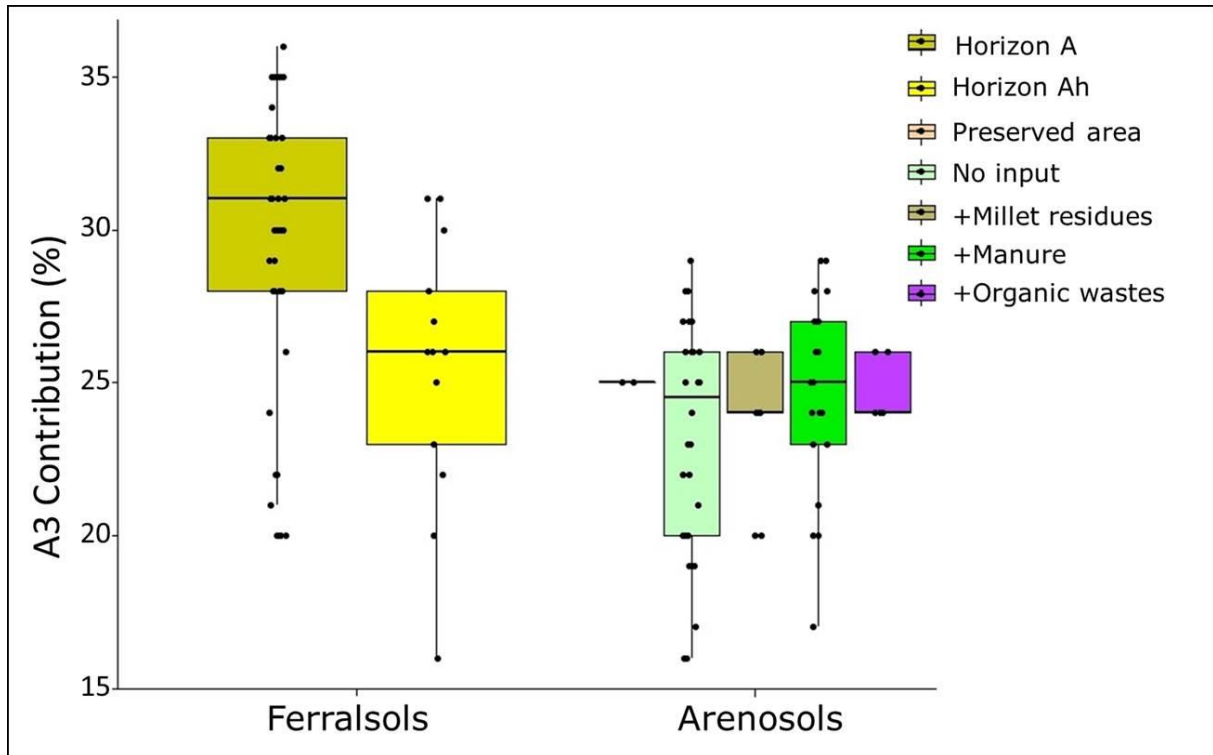


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26 Supplementary Material S5. A3 contributions (%) in the S2 thermograms obtained by  
27 Rock-Eval pyrolysis of the surface layers (0-10 cm) of Senegalese Arenosols (this  
28 study) compared to values in the A or Ah horizons (depth  $\leq 15$  cm) of Gabonese  
29 Ferralsols (serving as the external reference set; Sebag et al., 2016).

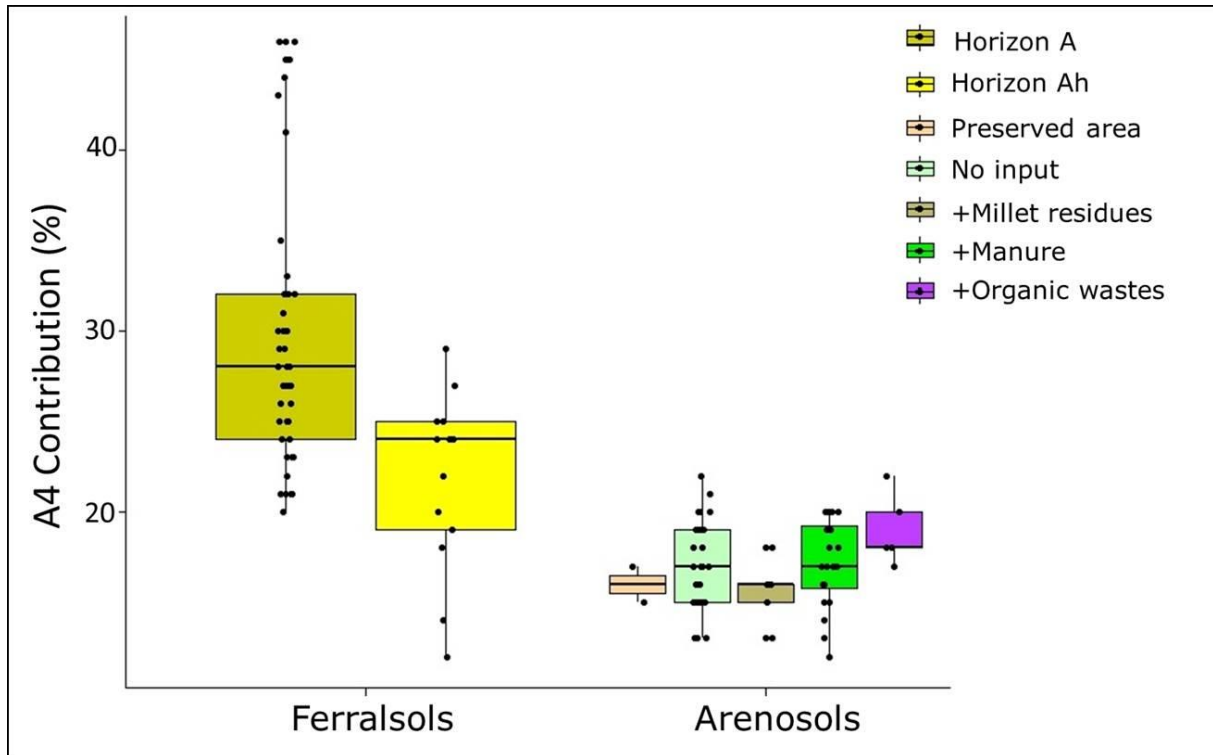


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33 Supplementary Material S6. A4 contributions (%) in the S2 thermograms obtained by  
34 Rock-Eval pyrolysis of the surface layers (0-10 cm) of Senegalese Arenosols (this  
35 study) compared to values in the A or Ah horizons (depth  $\leq 15$  cm) of Gabonese  
36 Ferralsols (serving as the external reference set; Sebag et al., 2016).



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