|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table Sx**. Generalized additive models (GAM) testing treatment (burned vs. unburned) and factor-smooth interaction effects on the carbon isotope values of carbon dioxide (δ13CO2) and methane (δ13CH4) at three time points. Separate smoothers were fit for burned and unburned data, and anova tables were generated by *anova.gam*(). | | | | | |
| **δ13CO2** | |  |  |  |  |
|  | *Effect* | *df /edf* | *Ref.df* | *F* | *p-value* |
|  |  |  |  |  |  |
| Day-0 | Treatment | 1.000 | – | 5.711 | **0.024** |
|  | s(plant material) | 1.000 | 1.000 | 0.611 | 0.441 |
|  |  |  |  |  |  |
| Day-10 | s(plant material) | 2.904 | 3.559 | 13.320 | **<0.001** |
|  |  |  |  |  |  |
| Day-59 | s(plant material) | 2.104 | 2.596 | 19.000 | **<0.001** |
|  |  |  |  |  |  |
| Day-89 | Treatment | 1.000 | – | 2.703 | 0.114 |
|  | s(plant material) : burned | 3.051 | 3.735 | 4.359 | **0.014** |
|  | s(plant material) : unburned | 1.793 | 2.219 | 7.092 | **0.003** |
|  |  |  |  |  |  |
| **δ13CH4** | |  |  |  |  |
|  |  |  |  |  |  |
| Day-0 | s(plant material) | 1.928 | 2.384 | 1.275 | 0.376 |
|  |  |  |  |  |  |
| Day-10 | s(plant material) | 2.589 | 3.180 | 4.048 | **0.017** |
|  |  |  |  |  |  |
| Day-59 | s(plant material) | 3.093 | 3.785 | 2.746 | 0.060 |
|  |  |  |  |  |  |
| Day-89 | Treatment | 1.000 | – | 0.200 | 0.659 |
|  | s(plant material) : burned | 3.879 | 4.714 | 3.399 | **0.021** |
|  | s(plant material) : unburned | 1.000 | 1.000 | 3.595 | 0.071 |
| *Treatment* indicates the parametric term in GAM, *s(plant material)* is the smooth term for either burned or unburned treatments. *df / edf* column indicates either *df* (degrees of freedom) for parametric terms or *edf* (effective degrees of freedom) for smoother terms; *Ref.df* = reference degree of freedom, where dashes indicate NA for parametric terms. Significant effects (p<0.05) are in bold. | | | | | |