|  |  |  |  |  |  |
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| **Table Sx**. Model selection for net ecosystem productivity (NEP) and respiration (NER) with candidate GAM models\* assessed in each time point, corresponding to 10, 31, 59, and 89 days post addition of burned or unburned plant material to experimental mesocosms. | | | | | |
| *Metric* | *Time* | *Model* | *df* | *AIC* | *ΔAIC* |
| NEP | T1 | ~Treatment + s(plant material, by= Treatment) | 8.1 | **214.2** | -0.2 |
|  |  | ~Treatment + s(plant material) | 6.1 | 213.5 |  |
|  |  | ~s(plant material) | 5.0 | 214.4 |  |
|  | T2 | ~Treatment + s(plant material, by= Treatment) | 6.4 | **177.5** | -8.1 |
|  |  | ~Treatment + s(plant material) | 7.7 | 176.3 |  |
|  |  | ~s(plant material) | 4.2 | 185.6 |  |
|  | T3 | ~Treatment + s(plant material, by= Treatment) | 11.0 | **175.7** | -5.5 |
|  |  | ~Treatment + s(plant material) | 7.3 | 175.2 |  |
|  |  | ~s(plant material) | 6.1 | 181.2 |  |
|  | T4 | ~Treatment + s(plant material, by= Treatment) | 7.4 | **187.4** | -5.2 |
|  |  | ~Treatment + s(plant material) | 5.8 | 192.2 |  |
|  |  | ~s(plant material) | 4.8 | 192.5 |  |
|  |  |  |  |  |  |
| NER | T1 | ~Treatment + s(plant material, by= Treatment) | 8.0 | 207.9 |  |
|  |  | ~Treatment + s(plant material) | 6.1 | 203.6 |  |
|  |  | ~s(plant material) | 5.1 | **203.3** | 0.0 |
|  | T2 | ~Treatment + s(plant material, by= Treatment) | 5.0 | 189.6 |  |
|  |  | ~Treatment + s(plant material) | 9.6 | **173.3** | -6.4 |
|  |  | ~s(plant material) | 8.3 | 179.7 |  |
|  | T3 | ~Treatment + s(plant material, by= Treatment) | 11.6 | **164.9** | -5.8 |
|  |  | ~Treatment + s(plant material) | 7.4 | 167.6 |  |
|  |  | ~s(plant material) | 6.3 | 170.8 |  |
|  | T4 | ~Treatment + s(plant material, by= Treatment) | 7.5 | **196.9** | -7.0 |
|  |  | ~Treatment + s(plant material) | 6.0 | 202.9 |  |
|  |  | ~s(plant material) | 4.9 | 203.9 |  |
| *\*Treatment +* *s(plant material, by= Treatment)* GAM has parametric terms (*Treatment*) and separate smoothers for each treatment. *Treatment + s(plant material)* GAM has a global smoother allowing for off-set intercepts according to treatments. The *s(plant material)* GAM fits a global smoother to all data. *Bold* represents the selected models. Delta AIC (*ΔAIC*) is the difference between the selected model and the global smoother model | | | | | |
|  | | | | | |