|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table S3**. Model selection for percent dissolve organic carbon (DOC), total dissolved nitrogen (TDN), and total dissolved phosphorus (TDP) with candidate GAM models\* assessed in each time point, corresponding to 0, 10, 31, 59, and 89 days post addition of burned or unburned plant material to experimental mesocosms. TDP was only measured at Time-2 (Day-31). | | | | | | |
| *Metric* | *Time* | *Model* | | *df* | *AIC* | *ΔAIC* |
| **DOC** | Day-0 | | ~Treatment + s(plant material, by= Treatment) | 5.5 | 3.2 |  |
|  |  | | ~Treatment + s(plant material) | 4.0 | 1.0 |  |
|  |  | | ~s(plant material) | 3.1 | **-0.8** | 0.0 |
|  | Day-10 | | ~Treatment + s(plant material, by= Treatment) | 10.9 | **146.8** | -15.2 |
|  |  | | ~Treatment + s(plant material) | 6.6 | 157.8 |  |
|  |  | | ~s(plant material) | 5.5 | 162.0 |  |
|  | Day-31 | | ~Treatment + s(plant material, by= Treatment) | 12.5 | **117.7** | -40.3 |
|  |  | | ~Treatment + s(plant material) | 6.3 | 160.0 |  |
|  |  | | ~s(plant material) | 5.3 | 158.0 |  |
|  | Day-59 | | ~Treatment + s(plant material, by= Treatment) | 8.2 | **64.0** | -12.1 |
|  |  | | ~Treatment + s(plant material) | 4.0 | 69.7 |  |
|  |  | | ~s(plant material) | 3.0 | 76.1 |  |
|  | Day-89 | | ~Treatment + s(plant material, by= Treatment) | 6.3 | 110.9 |  |
|  |  | | ~Treatment + s(plant material) | 5.4 | 109.3 |  |
|  |  | | ~s(plant material) | 4.4 | **108.6** | 0.0 |
|  |  | |  |  |  |  |
| **TDN** | Day-0 | | ~Treatment + s(plant material, by= Treatment) | 5.0 | **-85.1** | -0.6 |
|  |  | | ~Treatment + s(plant material) | 4.0 | -83.4 |  |
|  |  | | ~s(plant material) | 3.0 | -84.5 |  |
|  | Day-10 | | ~Treatment + s(plant material, by= Treatment) | 8.9 | -7.8 |  |
|  |  | | ~Treatment + s(plant material) | 6.2 | -10.6 |  |
|  |  | | ~s(plant material) | 5.3 | **-12.6** | 0.0 |
|  | Day-31 | | ~Treatment + s(plant material, by= Treatment) | 6.3 | -11.7 |  |
|  |  | | ~Treatment + s(plant material) | 6.9 | **-18.1** | -3.0 |
|  |  | | ~s(plant material) | 5.5 | -15.0 |  |
|  | Day-59 | | ~Treatment + s(plant material, by= Treatment) | 11.3 | **-39.6** | -13.6 |
|  |  | | ~Treatment + s(plant material) | 6.1 | -26.2 |  |
|  |  | | ~s(plant material) | 5.1 | -26.0 |  |
|  | Day-89 | | ~Treatment + s(plant material, by= Treatment) | 7.0 | **-23.7** | -6.4 |
|  |  | | ~Treatment + s(plant material) | 4.8 | -20.6 |  |
|  |  | | ~s(plant material) | 3.6 | -17.4 |  |
|  |  | |  |  |  |  |
| **TDP** | Day-31 | | Treatment + s(plant material, by=Treatment) | 9.9 | **100.1** | -16.8 |
|  |  | | Treatment + s(plant material) | 5.9 | 117.9 |  |
|  |  | | s(plant material) | 4.8 | 116.9 |  |
| *\*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 | | | | | | |
|  | | | | | | |