|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table S5**. Model selection for percent dissolved oxygen (% DO) with candidate GAM models\* assessed in each time point, corresponding to Days-10, 31, 59, and 89 post addition of burned or unburned plant material to experimental mesocosms. Dawn and dusk measurements represent discrete back-to-back measurements over a 24 h period. | | | | | | | | | | | |
| *Metric* | *Time* | *Model* | | *df* | | | | *AIC* | | *ΔAIC* | |
| % DO | Day-10 | dawn-1 | ~Treatment + s(plant material, by= Treatment) | | 9.7 | | | | 226.4 | |  |
|  |  |  | ~Treatment + s(plant material) | | | 6.7 | | | **221.5** | | -3.9 |
|  |  |  | ~s(plant material) | | | 5.6 | | | 225.4 | |  |
|  |  | dusk-1 | ~Treatment + s(plant material, by= Treatment) | | | 9.3 | | | 258.5 | |  |
|  |  |  | ~Treatment + s(plant material) | | | 6.5 | | | **254.3** | | -3.1 |
|  |  |  | ~s(plant material) | | | 5.4 | | | 257.4 | |  |
|  |  | dawn-2 | ~Treatment + s(plant material, by= Treatment) | | | 9.9 | | | 230.6 | |  |
|  |  |  | ~Treatment + s(plant material) | | | 6.8 | | | **228.9** | | -4.7 |
|  |  |  | ~s(plant material) | | | 5.6 | | | 233.6 | |  |
|  | Day-31 | dawn-1 | ~Treatment + s(plant material, by= Treatment) | | | | 8.4 | | **231.2** | | -4.8 |
|  |  |  | ~Treatment + s(plant material) | | | | 4.0 | | 237.8 | |  |
|  |  |  | ~s(plant material) | | | | 3.0 | | 236.0 | |  |
|  |  | dusk-1 | ~Treatment + s(plant material, by= Treatment) | | | | 8.2 | | **246.9** | | -4.3 |
|  |  |  | ~Treatment + s(plant material) | | | | 4.0 | | 251.7 | |  |
|  |  |  | ~s(plant material) | | | | 3.0 | | 251.2 | |  |
|  |  | dawn-2 | ~Treatment + s(plant material, by= Treatment) | | | | 8.8 | | **229.5** | | -7.4 |
|  |  |  | ~Treatment + s(plant material) | | | | 4.0 | | 238.5 | |  |
|  |  |  | ~s(plant material) | | | | 3.0 | | 237.0 | |  |
|  | Day-59 | dawn-1 | ~Treatment + s(plant material, by= Treatment) | | | | 10.0 | | **198.3** | | -22.8 |
|  |  |  | ~Treatment + s(plant material) | | | | 6.5 | | 222.3 | |  |
|  |  |  | ~s(plant material) | | | | 5.5 | | 221.1 | |  |
|  |  | dusk-1 | ~Treatment + s(plant material, by= Treatment) | | | | 12.4 | | **215.3** | | -22.9 |
|  |  |  | ~Treatment + s(plant material) | | | | 6.9 | | 237.2 | |  |
|  |  |  | ~s(plant material) | | | | 5.9 | | 238.2 | |  |
|  |  | dawn-2 | ~Treatment + s(plant material, by= Treatment) | | | | 10.2 | | **195.7** | | -25.4 |
|  |  |  | ~Treatment + s(plant material) | | | | 6.6 | | 221.4 | |  |
|  |  |  | ~s(plant material) | | | | 5.5 | | 221.1 | |  |
|  | Day-89 | dawn-1 | ~Treatment + s(plant material, by= Treatment) | | | | 6.5 | | 208.2 | |  |
|  |  |  | ~Treatment + s(plant material) | | | | 5.0 | | 208.2 | |  |
|  |  |  | ~s(plant material) | | | | 4.1 | | **206.3** | | 0.0 |
|  |  | dusk-1 | ~Treatment + s(plant material, by= Treatment) | | | | 7.1 | | **229.0** | | -2.0 |
|  |  |  | ~Treatment + s(plant material) | | | | 5.6 | | 232.5 | |  |
|  |  |  | ~s(plant material) | | | | 4.7 | | 231.0 | |  |
|  |  | dawn-2 | ~Treatment + s(plant material, by= Treatment) | | | | 6.0 | | 198.5 | |  |
|  |  |  | ~Treatment + s(plant material) | | | | 4.0 | | 196.6 | |  |
|  |  |  | ~s(plant material) | | | | 3.1 | | **195.0** | | 0.0 |
| *\*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 | | | | | | | | | | | |