| Model | df | logLik | AICc | Delta AIC | Weight | R2 |
| --- | --- | --- | --- | --- | --- | --- |
| Biomass (g AFDM/m2) |
| s(Temperature, Date) + s(N) | 13 | -663.3 | 1355.5 | 0.00 | 0.55 | 0.53 |
| s(Temperature, Date) + s(N, Date) | 17 | -658.6 | 1355.9 | 0.37 | 0.45 | 0.52 |
| te(Temperature, N, Date) | 32 | -646.8 | 1372.5 | 17.01 | 0.00 | 0.52 |
| s(Temperature) + s(N) | 8 | -680.8 | 1380.6 | 25.05 | 0.00 | 0.38 |
| te(Temperature, N) | 15 | -674.0 | 1381.1 | 25.59 | 0.00 | 0.38 |
| s(Temperature) + s(N, Date) | 12 | -677.0 | 1381.9 | 26.41 | 0.00 | 0.36 |
| s(N) | 7 | -710.5 | 1437.8 | 82.23 | 0.00 | 0.27 |
| s(N, Date) | 11 | -708.6 | 1442.7 | 87.20 | 0.00 | 0.27 |
| s(Temperature, Date) | 7 | -730.5 | 1477.0 | 121.51 | 0.00 | 0.27 |
| s(Temperature) | 4 | -739.1 | 1488.4 | 132.89 | 0.00 | 0.18 |
| Intercept-only | 3 | -755.0 | 1518.1 | 162.57 | 0.00 | 0.06 |
| ER (µM C/m2/h) |
| s(Temperature, Date) + s(N, Date) | 7 | -584.1 | 1185.0 | 0.00 | 0.33 | 0.09 |
| s(Temperature, Date) | 6 | -585.9 | 1186.0 | 1.07 | 0.20 | 0.05 |
| s(Temperature, Date) + s(N) | 6 | -585.9 | 1186.0 | 1.07 | 0.19 | 0.05 |
| te(Temperature, N) | 11 | -578.9 | 1188.3 | 3.27 | 0.06 | 0.01 |
| s(Temperature) + s(N, Date) | 5 | -588.0 | 1188.5 | 3.52 | 0.06 | 0.06 |
| s(Temperature) | 3 | -590.2 | 1188.9 | 3.95 | 0.05 | 0.04 |
| s(Temperature) + s(N) | 3 | -590.2 | 1188.9 | 3.95 | 0.05 | 0.04 |
| s(N, Date) | 3 | -590.6 | 1189.9 | 4.91 | 0.03 | 0.03 |
| s(N) | 3 | -592.2 | 1190.9 | 5.91 | 0.02 | 0.00 |
| Intercept-only | 3 | -592.2 | 1190.9 | 5.91 | 0.02 | 0.00 |
| te(Temperature, N, Date) | 15 | -578.2 | 1200.2 | 15.27 | 0.00 | 0.13 |
| GPP (µM C/m2/h) |
| s(Temperature, Date) + s(N) | 11 | -633.1 | 1294.9 | 0.00 | 0.90 | 0.18 |
| s(Temperature, Date) + s(N, Date) | 10 | -637.2 | 1300.6 | 5.71 | 0.05 | 0.20 |
| s(Temperature, Date) | 7 | -642.5 | 1302.3 | 7.42 | 0.02 | 0.17 |
| s(Temperature) + s(N) | 7 | -642.1 | 1302.5 | 7.64 | 0.02 | 0.09 |
| s(Temperature) | 3 | -650.4 | 1309.5 | 14.59 | 0.00 | 0.10 |
| s(Temperature) + s(N, Date) | 3 | -650.4 | 1309.5 | 14.59 | 0.00 | 0.10 |
| te(Temperature, N) | 12 | -639.4 | 1310.2 | 15.34 | 0.00 | 0.08 |
| Intercept-only | 3 | -655.9 | 1318.3 | 23.40 | 0.00 | 0.00 |
| s(N, Date) | 3 | -655.9 | 1318.3 | 23.40 | 0.00 | 0.00 |
| s(N) | 3 | -655.9 | 1318.3 | 23.40 | 0.00 | 0.00 |
| te(Temperature, N, Date) | 21 | -626.5 | 1321.6 | 26.77 | 0.00 | 0.23 |
| NEP (µM C/m2/h) |
| s(Temperature, Date) + s(N) | 10 | -617.6 | 1261.8 | 0.00 | 0.53 | 0.18 |
| s(Temperature, Date) | 7 | -622.8 | 1263.4 | 1.58 | 0.24 | 0.17 |
| s(Temperature, Date) + s(N, Date) | 10 | -619.6 | 1263.7 | 1.94 | 0.20 | 0.19 |
| s(Temperature) | 3 | -630.4 | 1269.5 | 7.70 | 0.01 | 0.08 |
| s(Temperature) + s(N, Date) | 3 | -630.4 | 1269.5 | 7.70 | 0.01 | 0.08 |
| s(Temperature) + s(N) | 3 | -630.4 | 1269.5 | 7.70 | 0.01 | 0.08 |
| te(Temperature, N) | 12 | -621.4 | 1274.5 | 12.68 | 0.00 | 0.13 |
| Intercept-only | 3 | -635.5 | 1277.4 | 15.61 | 0.00 | 0.00 |
| s(N) | 3 | -635.5 | 1277.4 | 15.61 | 0.00 | 0.00 |
| s(N, Date) | 3 | -635.5 | 1277.4 | 15.61 | 0.00 | 0.00 |
| te(Temperature, N, Date) | 20 | -610.0 | 1282.5 | 20.74 | 0.00 | 0.23 |
| N fixation (µM N/m2/h) |
| te(Temperature, N) | 14 | -245.8 | 530.6 | 0.00 | 0.99 | 0.53 |
| s(Temperature) + s(N) | 7 | -261.6 | 540.4 | 9.82 | 0.01 | 0.48 |
| s(Temperature, Date) + s(N) | 8 | -261.3 | 542.5 | 11.93 | 0.00 | 0.45 |
| s(Temperature) + s(N, Date) | 8 | -262.3 | 545.1 | 14.53 | 0.00 | 0.45 |
| s(Temperature, Date) + s(N, Date) | 9 | -262.0 | 547.2 | 16.64 | 0.00 | 0.42 |
| te(Temperature, N, Date) | 19 | -245.1 | 548.6 | 18.06 | 0.00 | 0.48 |
| s(N) | 6 | -268.6 | 551.5 | 20.94 | 0.00 | 0.26 |
| s(N, Date) | 7 | -269.5 | 556.3 | 25.70 | 0.00 | 0.25 |
| s(Temperature) | 4 | -288.8 | 587.9 | 57.34 | 0.00 | 0.08 |
| s(Temperature, Date) | 5 | -288.6 | 589.9 | 59.34 | 0.00 | 0.06 |
| Intercept-only | 3 | -297.1 | 600.9 | 70.32 | 0.00 | 0.00 |
| NH4 uptake (µM N/m2/h) |
| s(Temperature) + s(N) | 7 | -475.4 | 969.2 | 0.00 | 0.69 | 0.42 |
| s(Temperature, Date) + s(N) | 8 | -475.3 | 971.7 | 2.54 | 0.19 | 0.45 |
| s(Temperature) + s(N, Date) | 8 | -476.4 | 973.2 | 4.05 | 0.09 | 0.35 |
| s(Temperature, Date) + s(N, Date) | 9 | -476.4 | 975.7 | 6.55 | 0.03 | 0.39 |
| te(Temperature, N) | 11 | -475.2 | 979.8 | 10.62 | 0.00 | 0.41 |
| s(Temperature) | 3 | -486.3 | 981.3 | 12.09 | 0.00 | 0.20 |
| s(Temperature, Date) | 4 | -486.1 | 983.1 | 13.97 | 0.00 | 0.21 |
| s(N) | 3 | -491.1 | 990.6 | 21.43 | 0.00 | 0.03 |
| Intercept-only | 3 | -492.1 | 990.6 | 21.46 | 0.00 | 0.00 |
| te(Temperature, N, Date) | 14 | -475.2 | 990.8 | 21.62 | 0.00 | 0.40 |
| s(N, Date) | 3 | -491.8 | 991.1 | 21.91 | 0.00 | 0.01 |
| Tot. N Assim (µM N/m2/h) |
| te(Temperature, N) | 11 | -476.2 | 982.1 | 0.00 | 0.30 | 0.40 |
| s(Temperature) | 3 | -487.1 | 983.0 | 0.92 | 0.19 | 0.23 |
| s(Temperature) + s(N, Date) | 4 | -486.9 | 983.4 | 1.29 | 0.16 | 0.24 |
| s(Temperature) + s(N) | 4 | -486.6 | 983.5 | 1.37 | 0.15 | 0.25 |
| s(Temperature, Date) | 4 | -486.9 | 984.8 | 2.68 | 0.08 | 0.24 |
| s(Temperature, Date) + s(N, Date) | 5 | -486.7 | 985.1 | 3.06 | 0.06 | 0.25 |
| s(Temperature, Date) + s(N) | 5 | -486.3 | 985.3 | 3.17 | 0.06 | 0.26 |
| te(Temperature, N, Date) | 15 | -475.0 | 991.5 | 9.39 | 0.00 | 0.42 |
| Intercept-only | 3 | -494.5 | 995.4 | 13.28 | 0.00 | 0.00 |
| s(N, Date) | 3 | -494.4 | 995.4 | 13.34 | 0.00 | 0.00 |
| s(N) | 3 | -494.0 | 995.8 | 13.73 | 0.00 | 0.01 |