|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model parameters by mechanistic group** | | **0-5 cm** | | | | **5-10 cm** | | | |
| **AM Fungi** | **EM Fungi** | **Bacteria** | **Total Fungi** | **AM Fungi** | **EM Fungi** | **Bacteria** | **Total Fungi** |
| **Plant Richness** | Total tree richness |  |  |  |  |  |  |  |  |
| AM dominance | β= 7.2  t32= 3.23  p= 0.003 |  | β= 209.7  t35= 3.73  p< 0.001 | β= 26.3  t34= 3.26  p= 0.003 |  |  | β= 145.3  t33= 3.01  p= 0.005 | β= 30.0  t31= 4.93  p< 0.001 |
| **Plant Productivity** | Stand age | β= -0.1  t31= -2.99  p= 0.005 | β= 0.05  t32= 2.081  p= 0.046 | β= -2.3  t34= -2.32  p= 0.027 |  | β= -0.07  t29= -1.77  p= 0.088 |  | β= -2.28  t32= -2.79  p= 0.009 | β= -0.44  t32= -4.87  p< 0.001 |
| Total Basal Area (2020) | β= -7.0  t31=-1.72  p= 0.095 |  |  |  |  |  |  |  |
| Basal Area Increment |  |  |  |  |  |  |  |  |
| **Canopy Structure** | VertSD |  |  |  |  |  |  |  |  |
| VAI |  | β= 2.4  t32= 2.78  p= 0.009 | β= 69.6  t34= 1.76  p= 0.087 |  |  |  |  |  |
| VCI |  |  |  |  |  |  |  |  |
| **Soil Properties** | C:N |  |  |  | β= -1.3  t33= -1.75  p= 0.09 |  |  |  | β= -1.5  t32= -2.76  p= 0.009 |
| pH | β= 4.2  t31= 3.90  p< 0.001 |  | β= 132.8  t34= 5.66  p< 0.001 | β= 10.3  t33= 2.25  p= 0.03 | β= 2.8  t29= 2.15  p= 0.04 |  | β= 98.7  t32= 3.65  p< 0.001 | β= 13.5  t32= 3.48  p= 0.001 |
| Fe (percent) |  |  |  |  |  |  |  |  |
| **Geography** | Latitude |  |  |  | β= -14.1  t34= -2.008  p= 0.052 |  |  |  | β= -12.4  t33= -2.20  p= 0.035 |
| Longitude |  |  |  |  |  |  |  | β= -18.1  t33= -2.40  p= 0.022 |
| **Climate** | MAT |  |  |  | β= 12.7  t34= 2.056  p= 0.048 |  |  |  | β= 11.6  t33= 2.27  p= 0.030 |
| TAP | β= 0.02  t32= 1.70  p= 0.098 |  |  |  |  |  |  |  |