| **outcome variable** | **formula** | **LRT** | **pval** | **BIC** | **AIC** | **AICc** | **deltaAICc** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| plant CN ratio | yi\_smd ~ change\_f + exclusion + spatial\_resolution -1 | 13.29 | 0.01 | 132.51 | 121.62 | 125.77 | -1.91 |
| plant C content | yi\_smd ~ overall\_criterion -1 | 8.61 | 0.0135 | 295.88 | 283.78 | 284.56 | -4.13 |
| plant abundance bryophytes | yi\_smd ~ exclusion -1 | 3.98 | 0.046 | 406.30 | 395.22 | 395.57 | -1.84 |
| plant abundance dwarf shrubs | yi\_smd ~ herb\_fgr\_change + exclusion +   spatial\_resolution -1 | 19.26 | 0.0017 | 650.17 | 623.58 | 624.32 | -8.65 |
| plant abundance graminoids | yi\_smd ~ change\_f -1 | 15.80 | 0.0033 | 915.78 | 891.44 | 891.93 | -7.41 |
| plant abundance lichens | yi\_smd ~ change\_f -1 | 10.65 | 0.0138 | 490.77 | 472.63 | 473.21 | -4.23 |
| plant abundance tall shrubs | yi\_smd ~ error\_type -1 | 8.12 | 0.0436 | 140.07 | 128.97 | 131.07 | -0.58 |
| plant diversity | yi\_smd ~ distance\_to\_treeline + habitat\_type -1 | 11.51 | 0.0093 | 137.09 | 124.43 | 125.98 | -4.37 |
| plant fitness | yi\_smd ~ error\_type -1 | 6.12 | 0.0133 | 271.75 | 263.05 | 263.72 | -3.85 |
| plant height | yi\_smd ~ change\_f + error\_type + exclusion +   habitat\_type + overall\_criterion + study\_length -1 | 42.74 | <0.001 | 299.68 | 260.61 | 266.32 | -13.27 |
| plant productivity | yi\_smd ~ permafrost\_D + recent\_warming + temperature | 11.45 | 0.0095 | 170.61 | 158.15 | 159.76 | -4.27 |
| plant species richness | yi\_smd ~ permafrost\_D | 3.91 | 0.0481 | 132.82 | 123.60 | 124.18 | -1.67 |
| plant structure | yi\_smd ~ year.c | 5.11 | 0.0238 | 371.00 | 360.62 | 361.04 | -2.93 |
| soil C labile | yi\_smd ~ error\_type -1 | 7.25 | 0.0266 | 90.81 | 85.14 | 88.67 | -0.99 |
| soil moisture | yi\_smd ~ error\_type + year.c -1 | 18.33 | <0.001 | 111.09 | 102.29 | 105.65 | -9.83 |