**Supplementary Table 1** ANOVA table showing effect of treatment, depth and particle size on C recovered and dung-derived C.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *df* | Sum of squares | Mean Square | F | *p* |
| **C recovered (g/kg soil)** |  |  |  |  |  |
| Tmt | 1 | 0.001149 | 0.001149 | 0 | 0.9923 |
| Depth | 3 | 4129.71 | 1376.57 | 11.09 | **< 0.0001** |
| Size | 3 | 2780.106 | 926.702 | 74.78 | **< 0.0001** |
| Tmt\*Depth | 3 | 99.66659 | 33.2222 | 2.68 | **0.0496** |
| Tmt\*Size | 3 | 227.6537 | 75.88456 | 6.12 | **0.0006** |
| Size\*Depth | 9 | 3777.963 | 419.7737 | 33.87 | **< 0.0001** |
| Tmt\*Size\*Depth | 9 | 294.6558 | 32.73953 | 2.64 | **0.0077** |
| Error | 128 | 1586.168 | 12.39194 |  |  |
| Total | 159 | 12895.93 |  |  |  |
| **C from C4 dung (g/kg soil)** |  |  |  |  |  |
| Tmt | 1 | 1.53875 | 1.53875 | 7.62 | **0.0066** |
| Depth | 3 | 181.6133 | 60.53777 | 299.62 | **< 0.0001** |
| Size | 3 | 22.89901 | 7.633002 | 37.78 | **< 0.0001** |
| Tmt\*Depth | 3 | 1.966115 | 0.655372 | 3.24 | **0.0243** |
| Tmt\*Size | 3 | 1.14359 | 0.381197 | 1.89 | 0.1351 |
| Size\*Depth | 9 | 25.76734 | 2.863037 | 14.17 | **< 0.0001** |
| Tmt\*Size\*Depth | 9 | 2.407955 | 0.267551 | 1.32 | 0.2306 |
| Error | 128 | 25.86102 | 0.202048 |  |  |
| Total | 159 | 263.1982 |  |  |  |