**Table A**

|  |  |  |  |
| --- | --- | --- | --- |
| Factors | C/N ratio | | |
|  | Df | F | *P* |
| *treatment* | 4,16 | 0.95 | 0.46 |
| *time* | 2,187 | 346 | **< .0001** |
| *mesh* | 1,206 | 215 | **< .0001** |
| *treatment × time* | 8,187 | 1.14 | 0.34 |
| *treatment × mesh* | 4,206 | 7.40 | **< .0001** |
| *mesh × time* | 2,206 | 20.8 | **< .0001** |
| *treatment × mesh × time* | 8,206 | 1.48 | 0.17 |

Factor *‘treatment*’ represents the five different management practices (Asc, Ami, Ssc, Smi, Ctr; for abbreviations see Fig 1),the factor *‘time’* is the effect of the three different time periods for which the bags were left in the fields (25d, 50d, 75d), and factor *‘mesh’* the two mesh sizes (5 mm and 20 μm) used in every plot. The model also includes the random effects of the factors *‘block’* and *‘replicate’*; these two factors and their interactions are not shown.

**Table B**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Factors | N mass loss (g) | | |  | C mass loss (g) | | |
|  | Df | F | *P* |  | Df | F | *P* |
| *treatment* | 4,16 | 6.42 | **0.002** |  | 4,16 | 4.18 | **0.02** |
| *time* | 2,187 | 836 | **<.0001** |  | 2,187 | 2146 | **<.0001** |
| *mesh* | 1,206 | 176 | **<.0001** |  | 1,206 | 679 | **<.0001** |
| *treatment × time* | 8,187 | 2.70 | **0.01** |  | 8,187 | 5.41 | **<.0001** |
| *treatment × mesh* | 4,206 | 2.61 | **0.04** |  | 4,206 | 9.71 | **<.0001** |
| *mesh × time* | 2,206 | 11.1 | **<.0001** |  | 2,206 | 43.3 | **<.0001** |
| *treatment × mesh × time* | 8,206 | 2.02 | **0.04** |  | 8,206 | 1.31 | 0.24 |

Factor *‘treatment*’ represents the five different management practices (Asc, Ami, Ssc, Smi, Ctr; for abbreviations see Fig 1),the factor *‘time’* is the effect of the three different time periods for which the bags were left in the fields (25d, 50d, 75d), and factor *‘mesh’* the two mesh sizes (5 mm and 20 μm) used in every plot. The model also includes the random effects of the factors *‘block’* and *‘replicate’*; these two factors and their interactions are not shown.

**Table C**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Factors | Soil pH | | |  | Soil organic C content | | |  | Acari abundance / m2 | | |
|  | Df | F | *P* |  | Df | F | *P* |  | Df | F | *P* |
| *treatment* | 4,16 | 0.61 | 0.66 |  | 4,16 | 0.49 | 0.74 |  | 4,16 | 1.52 | 0.24 |
| *time* | 1,18 | 4.53 | **0.04** |  | 1,18 | 34.1 | **< .0001** |  | 1,18 | 59.8 | **<.0001** |
| *treatment × time* | 4,18 | 1.10 | 0.39 |  | 4,18 | 0.90 | 0.49 |  | 4,18 | 2.18 | 0.11 |
|  | Soil meso fauna abundance / m2 | | |  | Plantfeeding Nematoda abundance / g | | |  | Omnivorous Nematoda abundance / g | | |
|  | Df | F | *P* |  | Df | F | *P* |  | Df | F | *P* |
| *treatment* | 4,16 | 1.52 | 0.24 |  | 4,16 | 1.56 | 0.23 |  | 4,16 | 1.95 | 0.15 |
| *time* | 1,18 | 33.1 | **<.0001** |  | 1,18 | 40.0 | **< .0001** |  | 1,18 | 11.3 | **0.003** |
| *treatment × time* | 4,18 | 3.38 | **0.03** |  | 4,18 | 1.12 | 0.38 |  | 4,18 | 1.45 | 0.26 |
|  | Soil Nematoda abundance / g | | |  |  |  |  |  |  |  |  |
|  | Df | F | *P* |  |  |  |  |  |  |  |  |
| *treatment* | 4,16 | 1.05 | 0.41 |  |  |  |  |  |  |  |  |
| *time* | 1,18 | 7.08 | **0.02** |  |  |  |  |  |  |  |  |
| *treatment × time* | 4,18 | 0.92 | 0.47 |  |  |  |  |  |  |  |  |

Factor *‘treatment’* represents the five different management practices (Asc, Ami, Ssc, Smi, Ctr; for abbreviations see Fig 1) andthe factor *‘time’* is the effect of the two sampling dates of soil cores (25d, 75d). The model also includes the random effect of the factors *‘block’*, which is not shown.

**Table D**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | RDA 1 | RDA 2 | RDA 3 | RDA 4 |
| Eigenvalue | 4.08 | 1.88 | 1.09 | 0.86 |
| Proportion explained (%) | 11.0 | 5.08 | 2.93 | 2.34 |
| Acc. eigenvalue | 4.08 | 1.88 | 1.09 | 0.86 |
| Acc. proportion explained (%) | 51.6 | 23.8 | 13.7 | 10.9 |

**Table E**

|  |  |  |
| --- | --- | --- |
|  | RDA 1 | RDA 2 |
| Ash mixed in | -0.91 | 0.35 |
| Ash scattered | -0.60 | 0.61 |
| Straw mixed in | 0.51 | **-2.11** |
| Straw scattered | **1.92** | 0.99 |
| Control | -0.92 | 0.16 |

**Table F**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Df | Var | Perm | F | *P* |
| RDA 1 | 1 | 4.08 | 199 | 2.81 | **0.005** |
| RDA 2 | 1 | 1.88 | 199 | 1.29 | 0.15 |
| RDA 3 | 1 | 1.09 | 99 | 0.75 | 0.81 |
| RDA 4 | 1 | 0.86 | 99 | 0.59 | 0.93 |
| Treatment | 4 | 7.91 | 199 | 1.36 | **0.02** |