Table A1. Analysis of variance of **Grain C content** at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 6 | 0.5 | 0.6 |
| Crop | 1 | 9 | 289.2 | <0.0001 |
| N Level\* Crop | 2 | 9 | 0.3 | 0.8 |

Table A2. Analysis of variance of **Straw C content** at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 6 | 1.5 | 0.3 |
| Crop | 1 | 8 | 110.1 | <0.0001 |
| N Level\* Crop | 2 | 8 | 0.7 | 0.5 |

Table A3. Analysis of variance of **Total Coarse Root C content** at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 6 | 1.4 | 0.3 |
| Crop | 1 | 9 | 186.1 | <0.0001 |
| N Level\* Crop | 2 | 9 | 3.57 | 0.07 |

Table A4. Analysis of variance of **Total Fine Root C content** at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 6 | 3.0 | 0.1 |
| Crop | 1 | 9 | 34.6 | 0.0002 |
| N Level\* Crop | 2 | 9 | 1.5 | 0.2 |

Table. A5. **Coarse root N** concentrations F statistics and significance generated from ANOVA with repeated measures analysis by depth interval at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 20.8 | 16.1 | <0.0001 |
| Crop | 1 | 20.8 | 130.2 | <0.0001 |
| N Level\* Crop | 2 | 20.8 | 19.9 | <0.0001 |
| Depth | 4 | 30.2 | 77.4 | <0.0001 |
| N Level \* Depth | 8 | 36.8 | 5.3 | 0.0002 |
| Crop\*Depth | 4 | 30.2 | 41.3 | <0.0001 |
| N Level\*Crop\*Depth | 8 | 36.8 | 7.0 | <0.0001 |

Table. A6. **Fine root N** concentrations F statistics and significance generated from ANOVA with repeated measures analysis by depth interval at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 20 | 4.5 | 0.2 |
| Crop | 1 | 20 | 21.4 | 0.0002 |
| N Level\* Crop | 2 | 20 | 1.6 | 0.2 |
| Depth | 4 | 29.9 | 57.6 | <0.0001 |
| N Level \* Depth | 8 | 36.4 | 1.19 | 0.3 |
| Crop\*Depth | 4 | 29.9 | 11.0 | <0.0001 |
| N Level\*Crop\*Depth | 8 | 36.4 | 0.7 | 0.6 |

Table. A7. **Coarse root C** concentrations F statistics and significance generated from ANOVA with repeated measures analysis by depth interval at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 16.1 | 3.1 | 0.07 |
| Crop | 1 | 16.1 | 98.9 | <0.0001 |
| N Level\* Crop | 2 | 16.1 | 1.0 | 0.3 |
| Depth | 4 | 70.2 | 19.8 | <0.0001 |
| N Level \* Depth | 8 | 70.1 | 1.6 | 0.1 |
| Crop\*Depth | 4 | 70.2 | 8.4 | <0.0001 |
| N Level\*Crop\*Depth | 8 | 70.1 | 2.3 | 0.2 |

Table. A8. **Fine root C** concentrations F statistics and significance generated from ANOVA with repeated measures analysis by depth interval at the Kellogg Biological Station.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source  | Num DF | Den DF | F Value | P Value |
| N Level | 2 | 14.7 | 3.8 | 0.05 |
| Crop | 1 | 14.7 | 8.2 | 0.01 |
| N Level\* Crop | 2 | 14.7 | 6.8 | 0.008 |
| Depth | 4 | 61.7 | 11.3 | <0.0001 |
| N Level \* Depth | 8 | 61.7 | 2.6 | 0.01 |
| Crop\*Depth | 4 | 61.7 | 5.6 | 0.0006 |
| N Level\*Crop\*Depth | 8 | 61.7 | 1.2 | 0.3 |