**Tables**

Table 1. Cropping diversity treatments at the Kellogg Biological Station Long-term Ecological Research (KBS LTER) Biodiversity Gradient Experiment Plots. Plant treatments were established in 2000. Treatments were composed of monoculture, two-crop rotation, three-crop rotation +/- cover crops, and fallow plots (early successional) and soil collected during the corn phase of the rotation. Treatment abbreviations are in parentheses.

|  |  |
| --- | --- |
| **Crop diversity treatment description** | **Number of crop species** |
| (1) Continuous monoculture (mC) | 1 |
| (2) Continuous monoculture, one cover crop (C1cov) | 2 |
| (3) Two-crop rotation (CS) | 2 |
| (4) Three-crop rotation (CSW) | 3 |
| (5) Three-crop rotation, one cover crop (CSW1cov) | 4 |
| (6) Three-crop rotation, two cover crops (CSW2cov) | 5 |
| (7) Spring Fallow/early successional field (fallow) | 10 |

Table 2. Summary of the contribution of (A) soil factors (original data from McDaniel et al. 2014) and (B) soil biological activity (original data from McDaniel et al. XXX) on bacterial community variation at the KBS Biodiversity Gradient Experimental Plots based on permutational MANOVA (PERMANOVA). Soil factor effects were considered to significantly contribute to community variation at *P* < 0.05.

(a) Soil Factors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Effect | df | SS | MS | *F* | *R*2 | *p*-value |
| Sand | 1 | 0.088 | 0.088 | 2.243 | 0.066 | 0.014 |
| Silt | 1 | 0.088 | 0.088 | 2.239 | 0.066 | 0.020 |
| Clay | 1 | 0.087 | 0.087 | 2.207 | 0.065 | 0.024 |
| pH | 1 | 0.057 | 0.057 | 1.444 | 0.043 | 0.143 |
| Nitrate | 1 | 0.023 | 0.023 | 0.593 | 0.018 | 0.893 |
| Ammonium | 1 | 0.019 | 0.019 | 0.496 | 0.015 | 0.966 |
| Nitrogen | 1 | 0.043 | 0.043 | 1.086 | 0.032 | 0.326 |
| Carbon | 1 | 0.036 | 0.036 | 0.921 | 0.027 | 0.491 |
| Moisture | 1 | 0.064 | 0.064 | 1.622 | 0.048 | 0.078 |
| Residuals | 18 | 0.707 | 0.039 |  | 0.534 |  |
| Total | 27 | 1.325 |  |  | 1 |  |

(b) Soil Biological Activity

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Effect | df | SS | MS | *F* | *R*2 | *p*-value |
| PMN | 1 | 0.083 | 0.083 | 1.821 | 0.063 | 0.049 |
| PMC | 1 | 0.062 | 0.062 | 1.358 | 0.047 | 0.146 |
| POXC | 1 | 0.097 | 0.097 | 2.125 | 0.074 | 0.028 |
| Residuals | 24 | 1.100 | 0.046 |  | 0.830 |  |
| Total | 27 | 1.325 |  |  | 1 |  |

Table 3. Summary of multiple linear regression to test the influence of disease suppressive functional potential (*prnD* gene abundance) on soil factors and crop diversity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Factor | Estimate | Std error | t-value | *p*-value |
| Intercept | 7.444 | 0.420 | 17.728 | < 0.001 |
| Crop\_number | -0.085 | 0.025 | -3.355 | 0.003 |
| Carbon | 0.180 | 0.050 | 3.618 | 0.002 |
| Moisture | -11.564 | 2.817 | -4.105 | < 0.001 |
| Ammonium | -0.701 | 0.948 | -0.739 | 0.468 |
| Nitrate | 0.093 | 0.136 | 0.684 | 0.501 |