|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *P*-value Pairwise | | | | | |
| N-Rate | α-glucosidase | β-glucosidase | Phosphatase | Sulfatase | Chitinase | Xylanase |
| 200 | 0.966 | 0.811 | 1.000 | 0.828 | 0.462 | 0.864 |
| 300 | 0.956 | 0.682 | 0.996 | 0.917 | 0.996 | 0.960 |
| 400 | 0.917 | 0.755 | 0.202 | 0.689 | 0.921 | 0.932 |
| 500 | 0.198 | 0.945 | 0.028\* | 0.556 | 0.884 | 0.372 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *P*-value Main Effect | | | | | |
| α-glucosidase | β-glucosidase | Phosphatase | Sulfatase | Chitinase | Xylanase |
| 0.044\* | 0.362 | 0.002\*\* | 0.112 | 0.523 | 0.107 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *P*-value N Rate effect on nematode taxa | | | | | | | | | | | | | |
| N-Rate | Full | Heli.d | Roty.r | Cric | Tyl | Aph | Rhabd | Pang | Ceph | Plect | Mohy | Trip | Mono | Doryl |
| Main effect | <0.001 | 0.322 | <0.001 | 0.328 | 0.038 | 0.328 | 0.333 | 0.633 | 0.140 | 0.376 | 0.448 | 0.393 | 0.061 | 0.057 |
| 200 | 0.016 | 0.907 | 0.382 | 0.987 | 0.053 | 0.971 | 1.000 | 0.358 | 0.842 | 1.000 | 0.782 | 0.991 | 0.992 | 1.000 |
| 300 | 0.024 | 0.993 | 0.045 | 0.996 | 0.989 | 0.945 | 0.986 | 0.755 | 0.999 | 0.863 | 0.968 | 0.135 | 0.976 | 0.460 |
| 400 | 0.008 | 0.972 | 0.001 | 0.700 | 1.000 | 0.857 | 0.987 | 0.658 | 0.670 | 0.938 | 0.999 | 0.960 | 0.276 | 0.735 |
| 500 | 0.008 | 0.787 | <0.001 | 0.969 | 0.130 | 0.857 | 0.845 | 0.992 | 0.609 | 0.938 | 0.968 | 0.876 | 0.500 | 0.507 |

(Pairwise are bonferroni adjusted for the full set (adonis, others with aov))

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *P*-value Environmental Factors on nematode abundance | | | | |
| Factor | Effect of Rate on factor | Main Effect of factor (adonis) | Adonis p value of fraction not explained by N Rate | Varpart fraction explained Fraction|Rate | Rda test of Facor|Rate (P value) |
| pH-H2O | <0.001 | 0.001 | 0.072 | 0.03269 | 0.047 \* |
| pH-CaCl2 | <0.001 | 0.001 | 0.210 | 0.00801 | 0.211 |
| NO3-N | <0.001 | 0.001 | 0.158 | 0.01524 | 0.116 |
| CN | 0.772 | 0.129 | 0.060 | 0.04230 | 0.02 \* |
| CEC | <0.001 | 0.001 | 0.324 | 0.00030 | 0.317 |
| ESP | 0.462 | 0.078 | 0.054 | 0.03619 | 0.036 \* |
| EC | 0.002 | 0.061 | 0.289 | 0.00231 | 0.273 |
| OM | 0.825 | 0.191 | 0.081 | 0.02859 | 0.063 . |
| OrgC | 0.826 | 0.257 | 0.133 | 0.01822 | 0.107 |
| TC | 0.981 | 0.318 | 0.132 | 0.02193 | 0.088 . |
| TN | 0.913 | 0.692 | 0.531 | -0.00860 | 0.647 |
| CaMg | <0.001 | 0.004 | 0.611 | -0.01102 | 0.782 |
| Cl | 0.064 | 0.189 | 0.737 | -0.01331 | 0.898 |
| PBI | 0.341 | 0.217 | 0.332 | -0.00026 | 0.371 |
| P-Colwell | 0.645 | 0.670 | 0.253 | 0.00622 | 0.225 |
| K.avail | <0.001 | 0.001 | 0.279 | 0.00268 | 0.276 |
| K.amm.ace | <0.001 | 0.005 | 0.281 | 0.00210 | 0.290 |
| Ca.amm.ace | <0.001 | 0.039 | 0.242 | 0.00727 | 0.217 |
| Mg.amm.ace | 0.006 | 0.001 | 0.282 | 0.00340 | 0.260 |
| Na.amm.ace | <0.001 | 0.001 | 0.245 | 0.00670 | 0.244 |
| Al.KCl | <0.001 | 0.001 | 0.001 | 0.13421 | 0.001 \*\*\* |
| Al.sat | <0.001 | 0.018 | 0.004 | 0.11365 | 0.002 \*\* |
| Al.ppm | <0.001 | 0.001 | 0.001 | 0.13571 | 0.001 \*\*\* |
| Cu | 0.397 | 0.018 | 0.014 | 0.06746 | 0.007 \*\* |
| Fe | 0.003 | 0.001 | 0.010 | 0.07689 | 0.006 \*\* |
| Mn | 0.849 | 0.209 | 0.019 | 0.05783 | 0.012 \* |
| Zn | 0.097 | 0.006 | 0.017 | 0.06682 | 0.006 \*\* |
| S | 0.018 | 0.310 | 0.246 | 0.00595 | 0.221 |
| Ca.amm.ace.1 | 0.024 | 0.018 | 0.253 | 0.00567 | 0.256 |
| Mg.amm.ace.1 | <0.001 | 0.008 | 0.704 | -0.01279 | 0.871 |
| K.amm.ace.1 | 0.002 | 0.002 | 0.125 | 0.01988 | 0.096 . |
| Clay.pc | 0.100. | 0.056 | 0.336 | -0.00046 | 0.324 |
| Sand.pc | 0.146 | 0.045 | 0.182 | 0.01231 | 0.157 |
| Silt.pc | 0.347 | 0.139 | 0.264 | 0.00534 | 0.226 |
| Texture | 0.970 | 0.236 | 0.070 | 0.03439 | 0.056 . |
| P.env.risk | 0.754 | 0.520 | 0.205 | 0.00971 | 0.215 |
| Grass.index | 0.006 | 0.002 | 0.174 | 0.01215 | 0.168 |

\*N-Rate explains ~50% *P*<0.001