**Table S1.** Average relative abundance (%) of abundant phyla in soil from conventionally tilled (CT) winter wheat, no-till (NT) canola, Old World Bluestem (OWB) pasture, and native tallgrass prairie (TGP) systems from August 2016 to July 2017.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **CT** | | **NT** | | **OWB** | | **TGP** | |
| Acidobacteria | | 11.75% | | 11.32% | | 13.53% | | 9.20% | |
| Actinobacteria | | 24.67% | | 23.55% | | 21.45% | | 20.16% | |
| Bacteroidetes | | 2.92% | | 2.81% | | 2.74% | | 2.54% | |
| Chloroflexi | | 9.90% | | 4.23% | | 4.78% | | 4.73% | |
| Cyanobacteria | | 2.35% | | 0.76% | | 1.29% | | 0.32% | |
| Firmicutes | | 9.68% | | 15.95% | | 18.03% | | 17.51% | |
| Gemmatimonadetes | | 1.00% | | 1.57% | | 1.04% | | 1.40% | |
| Nitrospirae | | 0.51% | | 0.76% | | 0.26% | | 0.73% | |
| Planctomycetes | | 2.57% | | 2.79% | | 2.99% | | 3.47% | |
| Proteobacteria | | 21.20% | | 22.56% | | 20.84% | | 24.36% | |
| Verrucomicrobia | | 1.78% | | 3.77% | | 3.67% | | 6.35% | |
| Archaea Phyla | | 0.09% | | 0.17% | | 0.06% | | 0.14% | |
|  | |  | |  | |  | |  | |
|  | |  | |  | |  | |  | |