



Supplementary figure S3. Principal coordinate analysis (PCoA) of the microbiotas in MEP-sprayed soils (**a**), compared with gut microbiotas of insects showing MEP-degrading activity (**b**). PCoA plots were generated by the Bray-Curtis similarity measure based on the same amount of sequences (50,000 (**a**) and 10,000 (**b**) sequences, respectively) of each library (Table 2, Table S2). The values in parentheses show the percentage of community variation explained by each coordinate. Significant differences were detected between MEP-sprayed soils and untreated soils (**a**, $p < 0.001\%$ (PERMANOVA test)), and between insect gut and soil microbiotas (**b**, $p < 0.001\%$ (PERMANOVA test)). PCoA of only gut microbiotas of insects showed no significant differences among insect samples collected from 2S, 4S, and 6S soils (data not shown, $p = 0.489$ (PERMANOVA test)), reflecting the extreme predominance (>99%) of *Burkholderia* of gut microbiota in all insects showing in Supplementary figure S5.