



0.05

Additional File 4. Phylogeny of *xoxF5* sequences retrieved from pea plant rhizosphere, wheat plant rhizosphere and unplanted soil

Phylogenetic tree of *xoxF5* sequences retrieved by PCR from DNA extracted from unplanted soil (CF), pea plant rhizosphere soil (Pea) and wheat plant rhizosphere soil (WHEAT) as revealed by amplicon sequencing. Percentages after the OTUs represent relative abundance in the *xoxF5* gene profile. Reference gene sequences were selected from the NCBI nucleotide database. Only bootstrap values $\geq 50\%$ (based on 500 replicates) are labelled at branch points. Alignments were produced at the amino acid level with the Muscle algorithm and phylogenetic trees were produced in Mega7 [70] using the neighbour-joining method. There were a total of 52 amino acid residues in the final dataset. Multiple *xoxF* gene copies in reference strains are numbered in parentheses.