**Supplementary figure 1.** Phylogenetic tree of Fusarium isolates identified by ITS4/5 as well as the reference sequence of *F. oxysporum*, *F. redolens*, *F. graminearum*, *F. solani*, *F. avenaceum* and *F. acuminatum*. All the isolates are generally classified into seven groups, including FTSC (*F. tricinctum* species complex), FSSC (*F. sambucinum* species complex), FIESC (*F. incarnatum-equiseti* species complex), FOSC-1 (*F. oxysporum* species complex), *F. solani* and *F. falciforme*, FOSC-2 (*F. oxysporum* species complex) and *F. redolens.* Bootstrap values that larger than 70, which are indicated on the branches, were based on 1000 replicates.