

**Table S2. *Fusarium* spp. and *Trichoderma gamsii* genomic platform.** Complete genome sequences of *Fusarium* spp. and *T. gamsii* were obtained from public databases of NCBI. Whole Genome Sequencing (WGS) Project accessions of each species are listed in the second column. Phylogeny according to O'Donnell et al. [38] and Summerell [1], and references of each strain are shown.

| Strain  | Phylogeny                                 | WGS Project      | Reference |
|---|---|------------------|-----------|
| <i>T. gamsii</i> T6085                                      |   | JPDN000000000    | [30]      |
| <i>F. avenaceum</i> Fa05001                                 | Species complex: Tricincum                | JPYM000000000    | [31]      |
| <i>F. avenaceum</i> F156N33                                 | Species complex: Tricincum                | JAGPUO0000000000 | [32]      |
| <i>F. graminearum</i> PH-1                                  | Species complex: Sambucinum               | AACM000000000    | [33]      |
| <i>F. graminearum</i> ITEM 124                              | Species complex: Sambucinum               | NQOC000000000    | [24]      |
| <i>F. culmorum</i> Class 2-1B                               | Species complex: Sambucinum               | PVEM000000000    | [34]      |
| <i>F. culmorum</i> PV                                       | Species complex: Sambucinum               | PVEM000000000    | [35]      |
| <i>F. langsethiae</i> FI201059                              | Species complex: Sambucinum               | JXCE000000000    | [36]      |
| <i>F. sporotrichioides</i> NRRL3299                         | Species complex: Sambucinum               | PXOF000000000    | [37]      |
| <i>F. austroamericanum</i> NRRL2903                         | Species complex: Sambucinum               | JAAMOD0000000000 | [38]      |
| <i>F. longipes</i> NRRL20695                                | Species complex: Sambucinum               | PXOG000000000    | [37]      |
| <i>F. pseudograminearum</i> CS3096                          | Species complex: Sambucinum               | AFNW000000000    | [39]      |
| <i>F. poae</i> 2516   | Species complex: Sambucinum               | LYXU000000000    | [40]      |
| <i>F. verticillioides</i> 7600                              | Species complex: Fujikuroi Clade: African | AAIM000000000    | [41]      |
| <i>F. mangiferae</i> MRC7560                                | Species complex: Fujikuroi Clade: Asian   | FCQH000000000    | [42]      |
| <i>F. fujikuroi</i> IMI 58289                               | Species complex: Fujikuroi Clade: Asian   | AGND01000000     | [43]      |
| <i>F. proliferatum</i> ET1                                  | Species complex: Fujikuroi Clade: Asian   | FJOF000000000    | [42]      |
| <i>F. oxysporum</i> Fo5176                                  | Species complex: Oxysporum                | JACDXP0000000000 | [44]      |
| <i>F. oxysporum</i> Fo47                                    | Species complex: Oxysporum                | WXUE000000000    | [45]      |
| <i>F. oxysporum</i> f. sp. <i>melonis</i> NRRL26406         | Species complex: Oxysporum                | AGNE000000000    | [46]      |
| <i>F. oxysporum</i> f. sp. <i>conglutinans</i> 54008        | Species complex: Oxysporum                | AGNF000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>lycopersici</i> MN25          | Species complex: Oxysporum                | AGBH000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>vasinfectum</i> 25433         | Species complex: Oxysporum                | AGNC000000000    | [47]      |
| <i>F. oxysporum</i> NRRL32931                               | Species complex: Oxysporum                | AFML000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>pisi</i> HDV247               | Species complex: Oxysporum                | AGBI000000000    | [48]      |
| <i>F. oxysporum</i> f. sp. <i>cubense</i> NRRL54006         | Species complex: Oxysporum                | AGND000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>radicis-lycopersici</i> 26381 | Species complex: Oxysporum                | AGNB000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>raphani</i> 54005             | Species complex: Oxysporum                | AGNG000000000    | [47]      |
| <i>F. oxysporum</i> f. sp. <i>lycopersici</i> 4287          | Species complex: Oxysporum                | AAXH000000000    | [41]      |
| <i>F. vanettenii</i> 77-13-4                                | Species complex: Solani Clade: 3          | ACJF000000000    | [49]      |