

Table S1. *Trichoderma* spp. and *Beauveria bassiana* genomic platform. Complete genome sequences of *Trichoderma* spp. and *B. bassiana* were obtained from public databases of NCBI and *JGI* databases. Whole Genome Sequencing (WGS) Project accessions of each species are listed in the second column. Phylogeny according to Kubicek et al. (2019) [30] and information about the isolation of each strain are also shown.

Strain	WGS Project	Phylogeny	Isolate information	Reference
<i>Beauveria bassiana</i> ARSEF 2860	ADAH00000000.1	Outgroup	Isolated from aphid cadavers (Idaho, USA)	[39]
<i>Trichoderma asperellum</i> CBS 433.97	MBGH00000000.1	Clade Viride	Isolated from soil (Maryland, USA)	[40]
<i>Trichoderma asperellum</i> TR356 v1.0	Unreleased	Clade Viride	Isolated from soil (Brazil)	[30]
<i>Trichoderma hamatum</i> GD12	ANCB00000000.2	Clade Viride	Isolated from potato field (UK)	[41]
<i>Trichoderma gamsii</i> A5MH	MTYH00000000.1	Clade Viride	Isolated from wheat cropping soil (Australia)	Unpublished
<i>Trichoderma gamsii</i> T6085	JPDN00000000.2	Clade Viride	Isolated from soil (Ukraine)	[42]
<i>Trichoderma atroviride</i> IMI 206040	ABDG00000000.2	Clade Viride	Isolated from a plum tree (Sweden)	[29]
<i>Trichoderma arundinaceum</i> IBT 40837	PXOA00000000.1	Clade Brevicompactum	Isolated from soil (Iran)	[43]
<i>Trichoderma brevicompactum</i> IBT 40841	PXNZ00000000.1	Clade Brevicompactum	Isolated from soil (Iran)	[43]
<i>Trichoderma citrinoviride</i> TUCIM 6016	MBDI00000000.1	Clade Longibrachiatum	Unknown	[40]
<i>Trichoderma longibrachiatum</i> ATCC 18648	MBDJ00000000.1	Clade Longibrachiatum	Isolated from mud (Ohio, USA)	[40]
<i>Trichoderma parareesei</i> CBS 125925	LFMI00000000.1	Clade Longibrachiatum	Isolated from subtropical rain forest (Argentina)	[44]
<i>Trichoderma reesei</i> QM6a	AAIL00000000.2	Clade Longibrachiatum	Isolated from Salomon Islands	[45]
<i>Trichoderma reesei</i> RUT C-30	JABP00000000.1	Clade Longibrachiatum	Obtained from three rounds of random mutagenesis of QM6a strain	[46]
<i>Trichoderma virens</i> Gv29-8	ABDF00000000.2	Clade Virens	Isolated from rhizosphere	[29]
<i>Trichoderma pleuroticola</i> Tr1	MTYI00000000.1	Clade Harzianum	Submitted as <i>T. harzianum</i> - Isolated from carbendazim contaminated vineyard soil (China)	Unpublished
<i>Trichoderma pleuroti</i> TPhu1	MDJU00000000.1	Clade Harzianum	Isolated from oyster mushroom (Hungary)	[47]
<i>Trichoderma harzianum</i> CBS 226.95	MBGI00000000.1	Clade Harzianum	Isolated from soil (England, UK)	[40]
<i>Trichoderma harzianum</i> TR274	NQLC00000000.1	Clade Harzianum	Isolated from soil (Brazil)	[30]
<i>Trichoderma guizhouense</i> NJAU 4742	LVVK00000000.1	Clade Harzianum	Isolated from soil with compost of traditional Chinese medicine (China)	[40]
<i>Trichoderma afroharzianum</i> T6776	JOKZ00000000.1	Clade Harzianum	Submitted as <i>T. harzianum</i> - Isolated from soil (Pisa, Italy)	[48]
<i>Trichoderma atrobrunneum</i> ITEM 908	PNRQ00000000.1	Clade Harzianum	Isolated from <i>Olea europaea</i> (Puglia, Italy)	[49]