

Table S2. Isolation of endophytic species of *Trichoderma* from different geographic regions^a

Country	Host	Total isolates ^a	asp/aso ^c	Harz. Complex Clade ^d	virens	atroviride	hamatum	Total and (%)	Reference ^e	satragosum	reesei	T. sp. ^f	pararesei	theobromicola	spirale	longibrachiatum	koninglopsi	koningii	canadense	viticola	petersenii	breve	tomentosum	T. flagellatum	gamsii	orientale	acranum	brasiliensis	heveae	cerinum	viridescens complex	deliquescons	hirsutum	fertile	divascons	brevcompactum
North America																																				
Canada	Grapevines	29	0/4	8	0	7	0	19 (66)	Pollard-Flamand et al., 2022								2	4	3				1													
South America																																				
Brazil	Rubber trees	30	0	0	0	0	0	0	Nascimento et al. 2023			16															7	4	3							
Brazil	Cerrado-Caatinga ecotone	19	0	0	0	0	0	0	Morais et al. 2022			6			1	6									6											
Peru	wild rubber tree	39	0	31	0	0	0	31 (79)	Gazis and Chaverri, 2010								8																			
Europe																																				
UK	various garden trees	40	0	15	1	0	4	20 (50)	Rees et al. 2022					1	1															12	1	1	1	1	2	
Hungary	Grapvines	10	0	8	0	0	0	8 (80)	Kovács et al., 2021															1	1											
Africa																																				
Ethiopia, Cameroon, Kenya	Coffee (cultivated and wild)	76	0	46	1	1	3	51 (67)	Rodríguez et al., 2021				2	9	3	7					2	2														
Ethiopia	Coffee	48	0	14	0	0	20	14 (48)	Mulaw et al., 2013			4											10													
Asia																																				
Malaysia	35 plant families	93	13/22	27	22	0	0	84 (90)	Cummings et al., 2016	1	1	7																								
Indonesia	<i>Theobroma cacao</i>	21	19	0	2	0	0	21 (100)	Rosmana et al. 2015																											
Thailand	Rubber trees	12	3/0	3	2	0	3	11 (92)	Sirikamonsathien et al. 2023						1																					
Iran	<i>Vinca</i> sp.	7	1/0	0	0	0	0	1 (14)	Leylaie and Zafari 2018						4	1																			1	
Iran	Cupressaceae family plants	5	0	0	0	4	0	4 (80)	Hosseyni-Moghaddam and Soltani, 2014								1																			
Total ^g	N/A ^h	429	62	152	28	12	27	281 (66)		1	1	33	2	9	4	6	23	3	4	3	2	2	1	10	1	7	7	4	3	12	1	1	1	1	2	1
Detection frequency among studies ^h	N/A	N/A	38%	61%	38%	23%	30%			8%	8%	30%	8%	8%	15%	23%	38%	15%	8%	8%	8%	8%	8%	8%	8%	15%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%

^a Compilation of surveys published in the past 20 years that used ref-1a for *Trichoderma* species identification. Surveys were specific for *Trichoderma* isolates and all species listed in column headings are from the genus *Trichoderma*.

^b Total number of *Trichoderma* isolates (of all species) identified in this study.

^c Isolates from *T. asperellum* and *T. asperelloides* are grouped together because *T. asperelloides* is often misidentified as *T. asperellum* due to highly similar DNA sequences and identical morphology. Additionally, many strains of *T. asperelloides* are incorrectly deposited in GenBank as *T. asperellum*.

^d Harzianum Complex Clade species. Isolates from the different Harzianum complex Species Clad are not broken down into individual species as isolates are often misidentified as *T. harzianum* and also deposited in GenBank as *T. harzianum*.

^e Reference for the information in this row.

^f T. sp., *Trichoderma* sp.

^g Totals for information in each respective column.

^h Frequency of detection of this species in the different studies collectively. (Number of studies where this species was isolated)/(total number of studies) X 100.

ⁱ N/A, Not applicable.

References

Cummings NJ, Ambrose A, Braithwaite M et al. (2016) Diversity of root-endophytic *Trichoderma* from Malaysian Borneo. *Mycol Prog* 15. <https://doi.org/10.1007/s11557-016-1192-x>

Gazis R, Chaverri P (2010) Diversity of fungal endophytes in leaves and stems of wild rubber trees (*Hevea brasiliensis*) in Peru. *Fungal Ecol*. 3:240–254.

Hosseyni-Moghaddam MS, Soltani J (2014) Bioactivity of endophytic *Trichoderma* fungal species from the plant family Cupressaceae. *Ann Microbiol* 64:753–761. <https://doi.org/10.1007/s13213-013-0710-1>

Kovács C, Csótó A, Pál K, Nagy A, Fekete E, Karaffa L et al. (2021). The biocontrol potential of endophytic *Trichoderma* fungi isolated from Hungarian grapevines. Part I. isolation, identification and in vitro studies. *Pathogens* 10:1612. <https://doi.org/10.3390/pathogens10121612>

Leylaie S, Zafari D (2018) Antiproliferative and antimicrobial activities of secondary metabolites and phylogenetic study of endophytic *Trichoderma* species from *Vinca* plants. *Front. Microbiol*. 9, 1484.

Morais EM, Silva AAR, Sousa FWA, Azevedo IMB, Silva HF (2022) Endophytic *Trichoderma* strains isolated from forest species of the Cerrado-Caatinga ecotone are potential biocontrol agents against crop pathogenic fungi. *PLoS One*. 17(4):e0265824. <https://doi.org/10.1371/journal.pone.0265824>.

Mulaw TB, Druzhinina IS, Kubicek CP, Atanasova L. (2013) Novel Endophytic *Trichoderma* spp. Isolated from Healthy Coffee arabica Roots are Capable of Controlling Coffee Tracheomycosis. *Diversity* 5(4):750–766. <https://doi.org/10.3390/d5040750>

Nascimento Brito V, Lana Alves J, Sirio Araújo K, de Souza Leite T, Borges de Queiroz C, et al. (2023) Endophytic *Trichoderma* species from rubber trees native to the Brazilian Amazon, including four new species. *Front Microbiol* 14:1095199. <https://doi.org/10.3389/fmicb.2023.1095199>

Pollard-Flamand J, Boulé J, Hart M, Urbez-Torres JR (2022) Biocontrol activity of *Trichoderma* species isolated from grapevines in British Columbia against *Botryosphaeria* Dieback Fungal Pathogens. *J. Fungi* 8:409. <https://doi.org/10.3390/jof8040409>

Rees HJ, Bashir N, Drakulic J, Cromey MG, Bailey AM, Foster GD (2021) Identification of native endophytic *Trichoderma* spp. for investigation of in vitro antagonism towards *Armillaria mellea* using synthetic- and plant-based substrates. *J Appl Microbiol* 131(1):392–403. <https://doi.org/10.1111/jam.14938>.

Rodriguez MDCH, Evans HC, Abreu LMD (2021) New species and records of *Trichoderma* isolated as mycoparasites and endophytes from cultivated and wild coffee in Africa. *Sci Rep* 11:56–71. <https://doi.org/10.1038/s41598-021-84111-1>

Rosmana A, Samuels GJ, Ismaiel A et al. (2015) *Trichoderma asperellum*: A Dominant Endophyte Species in Cacao Grown in Sulawesi with Potential for Controlling Vascular Streak Dieback Disease. *Trop. plant pathol*. 40:19–25. <https://doi.org/10.1007/s40858-015-0004-1>

Sirikamonsathien T, Kenji M, Dethoup T (2023) Potential of endophytic *Trichoderma* in controlling Phytophthora leaf fall disease in rubber (*Hevea brasiliensis*). *Biological Control* 179. <https://doi.org/10.1016/j.biocontrol.2023.105175>