

**S2 Table. Dominant fungal species significantly different between the two nematode species regardless of the soils (average  $\pm$  SEM).** Only species with a relative abundance > 0.1% are displayed. Significance was inferred using a negative binomial regression and generalized linear model fit (nbGLM). A Likelihood ratio test was used, complemented with a post-hoc false discovery rate multiple correction test (LHR FDR,  $P < 0.05$ ). Analysis was done using the EdgeR package.

Phylum	Family	Species	<i>Pratylench</i>	<i>Meloidogy</i>	Adj. FDR
Ascomycota	Ascomycota (unid.)	SH212862.07FU	-	0.49 $\pm$ 0.49b	3.91E-05
	Ascomycota (unid.)	SH210351.07FU	-	0.49 $\pm$ 0.47b	1.77E-04
	Chaetomiaceae	<i>Chaetomium jatrophae</i>	-	1.37 $\pm$ 1.25b	9.27E-05
	Chaetomiaceae	<i>Humicola grisea</i>	-	0.13 $\pm$ 0.11b	2.04E-03
	Chaetomiaceae	<i>Chaetomium aterrimum</i>	-	0.3 $\pm$ 0.3b	4.17E-03
	Cordycipitaceae	<i>Cordyceps bassiana</i>	-	0.3 $\pm$ 0.3b	6.64E-03
	Davidiellaceae	<i>Cladosporium exasperatum</i>	0.03 $\pm$ 0.01a	9.16 $\pm$ 3.01b	1.77E-04
	Dothideomycetes	unidentified	-	1.15 $\pm$ 1.15b	7.14E-05
	Dothioraceae	<i>Aureobasidium pullulans</i>	-	1.91 $\pm$ 1.25b	5.59E-05
	Helotiales (i.sedis)	<i>Tetracladium maxilliforme</i>	0.01 $\pm$ 0.01a	5.2 $\pm$ 4.57b	7.14E-05
	Helotiales (i.sedis)	unidentified	-	0.92 $\pm$ 0.91b	3.41E-03
	Hyaloscyphaceae	<i>Mycoarthris corallina</i>	-	0.48 $\pm$ 0.47b	5.05E-05
	Hypocreales (i.sedis)	<i>Myrothecium roridum</i>	-	0.11 $\pm$ 0.11b	0.013
	Mycosphaerellaceae	<i>Pseudocercospora</i>	-	0.41 $\pm$ 0.41b	5.05E-05
	Nectriaceae	SH219102.07FU	0.01 $\pm$ 0.002	1.9 $\pm$ 1.89b	9.27E-05
	Nectriaceae	SH220702.07FU	0.02 $\pm$ 0.01a	6.15 $\pm$ 3.52b	2.12E-04
	Onygenaceae	<i>Chrysosporium lobatum</i>	-	0.31 $\pm$ 0.31b	5.55E-03
	Pezizales (i.sedis)	<i>Cephalophora tropica</i>	-	0.63 $\pm$ 0.63b	3.17E-03
	Plectosphaerellaceae	<i>Lectera longa</i>	-	1.54 $\pm$ 1b	3.82E-05
	Plectosphaerellaceae	<i>Plectosphaerella alismatis</i>	-	0.18 $\pm$ 0.11b	3.61E-03
	Pleosporaceae	<i>Stemphylium herbarum</i>	-	5.08 $\pm$ 2.6b	3.91E-05
	Pleosporaceae	<i>Alternaria alternata</i>	0.02 $\pm$ 0.01a	10.95 $\pm$ 7.36	6.20E-05
	Pleosporaceae	<i>Chalastospora ellipsoidea</i>	-	0.38 $\pm$ 0.33b	1.77E-04
	Pleosporales (unid.)	unidentified	-	0.9 $\pm$ 0.9b	3.61E-03
	Pyronemataceae	unidentified	-	0.49 $\pm$ 0.49b	3.61E-03
	Pyronemataceae	<i>Pseudaleuria</i> sp.	-	0.39 $\pm$ 0.39b	5.55E-03
	Saccharomycetales	<i>Candida tropicalis</i>	0.01 $\pm$ 0.01a	3.65 $\pm$ 3.64b	7.14E-05
	Sordariales (unid.)	unidentified.	-	1.3 $\pm$ 0.83b	1.00E-04
	Sordariomycetes	unidentified	0.01 $\pm$ 0.003	0.75 $\pm$ 0.52b	4.17E-03
	Trichocomaceae	<i>Penicillium chrysogenum</i>	-	3.51 $\pm$ 2.31b	4.57E-05
	Trichocomaceae	<i>Penicillium aurantiogriseum</i>	-	2.14 $\pm$ 2.09b	7.34E-05
	Sordariomycetes	unidentified	0.01 $\pm$ 0.003	4.59 $\pm$ 2.63b	2.12E-04
	Tremellales (i.sedis)	<i>Cryptococcus heimaeyensis</i>	-	2.75 $\pm$ 2.74b	1.54E-05
Tremellales (i.sedis)	<i>Hannaella oryzae</i>	-	3.47 $\pm$ 3.47b	5.05E-05	
Rhizophlyctidaceae	<i>Rhizophlyctis rosea</i>	-	0.12 $\pm$ 0.12b	0.012	
Rhizophydiaceae	<i>Rhizophydium</i> sp.	-	0.18 $\pm$ 0.18b	6.64E-03	
Fungi (unid.)	Fungi (unid.)	unidentified	-	0.3 $\pm$ 0.3b	5.62E-05
Ascomycota	Davidiellaceae	<i>Cladosporium haerospermum</i>	1.04 $\pm$ 1.04b	-	3.82E-05
	Davidiellaceae	<i>Cladosporium halotolerans</i>	1.54 $\pm$ 1.53b	-	1.51E-03
	Hypocreaceae	<i>Trichoderma asperellum</i>	0.96 $\pm$ 0.96b	-	5.50E-05
	Hypocreales (i.sedis)	unidentified	0.47 $\pm$ 0.47b	-	3.91E-05
	Saccharomycetales	<i>Debaryomyces nepalensis</i>	0.9 $\pm$ 0.9b	-	3.91E-05
	Taphrinaceae	<i>Taphrina padi</i>	0.65 $\pm$ 0.49b	-	3.82E-05
	Trichocomaceae	<i>Penicillium brevicompactum</i>	0.21 $\pm$ 0.21b	-	5.44E-03
	Trichocomaceae	<i>Aspergillus niger</i>	63.35 $\pm$ 4.76	1.77 $\pm$ 1.72a	8.49E-03
	Trichocomaceae	<i>Penicillium novae-zeelandiae</i>	0.12 $\pm$ 0.12b	0.01 $\pm$ 0.01a	0.037
	unidentified	<i>Pleosporales</i> sp.	2.12 $\pm$ 2.11b	0.01 $\pm$ 0a	2.96E-04
	Xylariaceae	<i>Hypoxylon howeanum</i>	0.37 $\pm$ 0.37b	-	5.62E-05
	Malasseziaceae	<i>Malassezia</i> SH176396.07FU	2.77 $\pm$ 2.61b	-	5.47E-05
	Malasseziaceae	<i>Malassezia</i> SH176395.07FU	0.31 $\pm$ 0.31b	-	4.17E-03
	Marasmiaceae	<i>Baeospora myosura</i>	1.7 $\pm$ 1.69b	-	1.07E-03
	Zygomycota	Mortierellaceae	<i>Mortierella alpina</i>	1.47 $\pm$ 1.46b	-