

Table S2 The dominant fungal genera and species compositions of *Tricholoma*
(A) The dominant fungal genera and their relative abundance in the soil of three plots

Samples	Genus	The relative abundance
PA	<i>Russula</i>	48.72%
	<i>Cortinarius</i>	16.32%
	<i>Mortierella</i>	11.42%
	<i>Sebacina</i>	4.63%
	<i>Tomentella</i>	2.51%
PB	<i>Russula</i>	24.64%
	<i>Tricholoma</i>	21.84%
	<i>Umbelopsis</i>	13.48%
	<i>Cortinarius</i>	8.26%
	<i>Hygrophorus</i>	3.02%
	<i>Sistotrema</i>	2.56%
	<i>Mortierella</i>	2.46%
	<i>Lactarius</i>	2.37%
	<i>Penicillium</i>	2.02%
	<i>Cenococcum</i>	1.69%
	<i>Trichoderma</i>	1.34%
PC	<i>Russula</i>	32.34%
	<i>Hydnellum</i>	18.78%
	<i>Mortierella</i>	5.10%
	<i>Umbelopsis</i>	4.26%
	<i>Delastria</i>	3.36%
	<i>Sebacina</i>	2.53%
	<i>Lactifluus</i>	2.46%
	<i>Tricholoma</i>	1.87%
	<i>Penicillium</i>	1.77%
	<i>Hygrophorus</i>	1.49%
	<i>Tomentella</i>	1.40%
	<i>Geminibasidium</i>	1.34%
	<i>Cladophialophora</i>	1.12%
	<i>Saitozyma</i>	1.00%

(B) The relative abundance of species in the genus *Tricholoma*

Species	the relative abundance		
	PA	PB	PC
<i>T. equestre</i>	0.0000%	0.0000%	0.0000%
<i>T. matsutake</i>	0.0000%	0.4237%	0.0001%
<i>T. portentosum</i>	0.0000%	0.0009%	0.0097%
<i>T. saponaceum</i>	0.0000%	0.0068%	0.0002%

<i>T. stans</i>	0.0000%	0.0033%	0.0000%
<i>T. ustaloides</i>	0.0002%	0.0005%	0.0033%
Unclassified <i>Tricholoma</i>	0.0000%	0.0013%	0.0019%
unidentified	0.0000%	0.0000%	0.0213%

Note: PA, the soil sample from the plot A (132°3'2.35"E, 46°7'20.19"N, 230m asl); PB, soil sample from the plot B (132°3'2.35"E, 46°7'20.19"N, 230m asl); PC, soil sample from the plot C (129°39'52.70"E, 42°33'31.75"N, 380 m asl).