

Different responses of rhizosphere and non-rhizosphere soil microbial communities to consecutive *Piper nigrum* L. monoculture

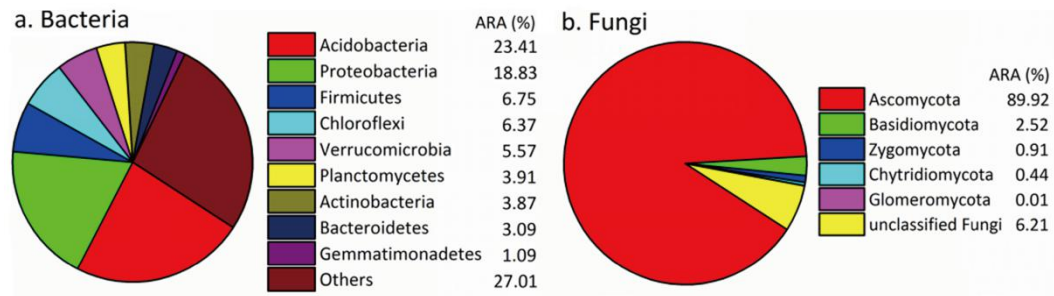
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Supplementary Information

Supplementary Figure S1. Overall bacterial (a) and fungal (b) communities in the 24 soil samples from four consecutive monoculture of black pepper fields. Average relative abundances (ARAs) were calculated as the proportion of individual bacterial and fungal taxa to the total number of 16S rRNA or ITS gene sequence reads.



Supplementary Table S1. Spearman's rank correlation (r) between abundant taxa and soil properties.

		OM	AN	AP	AK	pH	
Rhizosphere soil	Bacteria						
		<i>Acidobacteria</i>	0.673*	-0.694*	-0.563	0.816**	0.107
		<i>Proteobacteria</i>	-0.636*	0.660*	0.622*	-0.413	0.320
		<i>Firmicutes</i>	0.417	-0.482	-0.353	0.643*	0.343
		<i>Chloroflexi</i>	-0.140	0.005	0.137	-0.047	0.390
		<i>Verrucomicrobia</i>	-0.570	0.400	0.546	-0.694*	-0.450
		<i>Actinobacteria</i>	-0.884**	0.813**	0.859**	-0.679*	-0.470
		<i>Planctomycetes</i>	-0.149	0.218	0.041	-0.531	-0.274
		<i>Bacteroidetes</i>	-0.302	0.175	0.212	-0.617*	-0.112
		<i>Gemmatimonadetes</i>	-0.618*	0.585*	0.676*	-0.187	0.016
	<i>Nitrospira</i>	0.631*	-0.643*	-0.507	0.725**	-0.077	
Fungi		<i>Ascomycota</i>	-0.774**	0.675*	0.837**	-0.286	-0.489
		<i>Basidiomycota</i>	-0.098	0.317	-0.053	-0.540	-0.034
		<i>Chytridiomycota</i>	0.044	0.021	-0.005	0.342	0.310
		<i>Glomeromycota</i>	0.459	-0.448	-0.534	0.291	-0.142
		<i>Zygomycota</i>	-0.132	0.140	-0.005	-0.599*	0.255
Non-rhizosphere soil	Bacteria						
		<i>Acidobacteria</i>	-0.713**	0.743**	-0.056	-0.717*	-0.843**
		<i>Proteobacteria</i>	-0.575	0.535	-0.518	-0.485	-0.397
		<i>Firmicutes</i>	0.777*	-0.783**	-0.091	0.877**	0.890**
		<i>Chloroflexi</i>	0.494	0.086	-0.032	-0.328	0.178
		<i>Verrucomicrobia</i>	-0.472	0.374	0.302	-0.465	-0.548
		<i>Actinobacteria</i>	-0.885**	0.534	0.212	-0.408	-0.695*
		<i>Planctomycetes</i>	-0.647*	0.666*	0.237	-0.608*	-0.815**
		<i>Bacteroidetes</i>	-0.382	-0.265	0.257	0.095	-0.070
		<i>Gemmatimonadetes</i>	-0.134	0.473	0.133	-0.669*	-0.623*
	<i>Nitrospira</i>	0.246	-0.385	-0.140	0.522	0.524	
Fungi		<i>Ascomycota</i>	-0.588	0.570	-0.016	-0.269	-0.597*
		<i>Basidiomycota</i>	0.463	0.231	-0.074	-0.385	-0.136
		<i>Chytridiomycota</i>	0.372	-0.227	0.122	0.068	0.460
		<i>Glomeromycota</i>	0.457	0.194	0.061	-0.279	-0.240
		<i>Zygomycota</i>	-0.137	-0.197	-0.157	-0.095	-0.060

*P<0.05; **P<0.01