

SUPPLEMENTARY MATERIAL

Fungal communities in pressmud composting harbors beneficial and detrimental fungi for human welfare

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Figure S1. Assembling of composting piles using residues from sugarcane milling (Pressmud). Mixing (A), watering (B) and separation of the three composting heaps examined in this study (C).



Figure S2. Rarefaction analysis of the species observed during the composting process of the sugarcane pressmud. T1: Fresh Pressmud (mesophilic phase). T2: thermophilic phase; T3: maturation phase; A, B and C indicate the different piles.

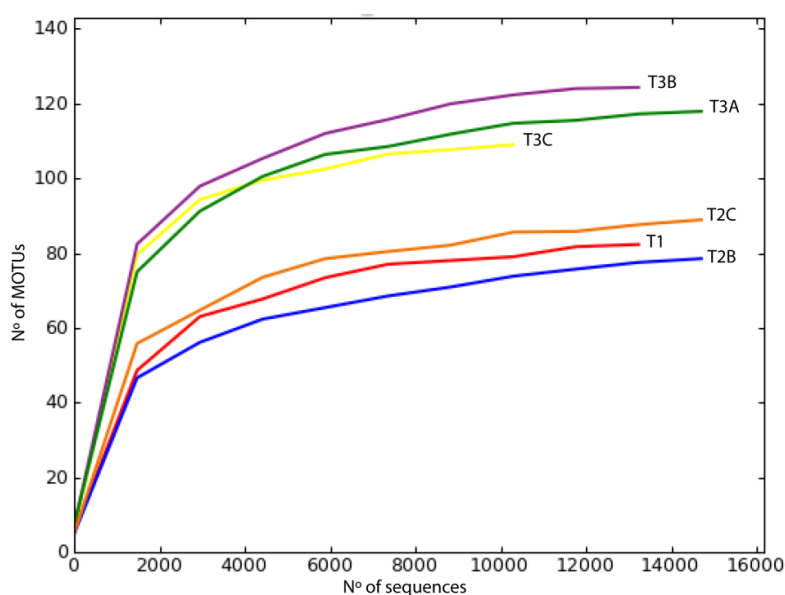


Table S1. Characteristics of the amplicon library before and after processing in QIIME (quality filter, sequence length and chimera).

Data	Samples (# of sequences)						Total
	Fresh Pressmud*	T2B	T2C	T3A	T3B	T3C	
Raw	20,835	26,912	24,534	27,596	28,406	20,360	148,643
QIIME	13,677	16,443	15,165	14,790	14,624	10,905	85,605
OTUs	83	80	89	118	122	110	175

* T1: Fresh Pressmud (mesophilic phase). T2: thermophilic phase, T3: maturation phase, A, B and C indicate the different composting piles.

Table S2. Taxonomic classification of the OTUs obtained by 454-pyrosequencing of the fresh pressmud and throughout the composting process (using the UNITE+INSDC* in MacQIIME).

#OTU ID	Fresh Pressmud**	T2B	T2C	T3A	T3B	T3C	Taxonomy
0	5884	7177	2260	2868	829	977	k__Fungi; p__Ascomycota
1	1424	1229	3271	826	3252	2891	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales
2	48	365	3183	572	584	1237	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
3	1	2727	39	1637	44	13	k__Fungi; p__Basidiomycota; c__Tremellomycetes
4	1373	86	2138	302	255	127	k__Fungi; p__Basidiomycota
5	492	214	20	868	1674	145	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae
7	5	1546	1641	72	28	30	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
6	577	118	98	542	1523	209	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
10	3	237	200	1978	230	357	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Coprinaceae; g__Coprinus; s__Coprinus_cordisporus
11	22	60	55	339	632	1435	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Zopfiella
9	0	575	579	923	217	125	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Coprinaceae; g__Coprinus; s__Coprinus_cordisporus
103	217	265	8	103	1415	151	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Cercophora; s__Cercophora_coronata
12	1079	296	99	44	94	32	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Incertae_sedis; g__Candida; s__Candida_tropicalis
14	6	103	81	354	308	723	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__unidentified; g__unidentified
15	1117	213	164	4	3	4	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
16	22	261	2	389	493	124	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
8	17	135	64	52	756	47	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Cercophora; s__Cercophora_coronata
138	96	198	116	172	139	167	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Microascales; f__Microascaceae; g__Lomentospora; s__Lomentospora_prolificans
17	2	19	23	453	99	180	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Zopfiella
19	47	3	6	574	4	19	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Sordariaceae
119	44	53	7	117	164	122	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae
20	219	39	36	32	19	102	k__Fungi; p__Basidiomycota; c__Tremellomycetes; o__Tremellales
102	1	12	161	159	47	30	k__Fungi; p__Ascomycota
22	0	0	0	13	296	8	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Psathyrellaceae; g__Coprinopsis

130	0	5	23	7	10	261	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
24	1	0	8	7	218	37	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Cercophora
271	0	1	0	70	63	101	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae
85	0	106	92	19	1	8	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
25	54	18	14	56	21	57	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales; f__Nectriaceae; g__Fusarium
21	130	24	0	16	31	1	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Dipodascaceae; g__Galactomyces; s__Galactomyces_geotrichum
137	98	2	0	75	20	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Dipodascaceae; g__Galactomyces; s__Galactomyces_geotrichum
234	22	14	42	15	42	28	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales
26	30	0	15	57	16	35	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Paecilomyces
39	0	0	90	4	26	30	k__Fungi; p__Ascomycota
27	10	0	0	93	39	4	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Cercophora
260	0	10	62	23	28	18	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
29	0	3	0	18	98	14	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedAscomycota
30	1	10	0	55	56	5	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
276	7	14	26	12	38	27	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus
255	0	4	49	21	12	37	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
31	83	1	5	5	24	2	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Polyporales; f__Phanerochaetaceae; g__Phanerochaete; s__Phanerochaete_chrysosporium
28	5	3	0	0	1	110	k__Fungi; p__Basidiomycota
33	0	0	6	3	35	75	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
36	0	0	0	57	45	5	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
37	0	1	30	33	25	12	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Aspergillus; s__Aspergillus_fumigatus
40	8	0	0	64	1	23	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
141	6	22	22	7	19	15	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus
41	53	21	4	6	4	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales; f__Nectriaceae; g__Fusarium
93	0	24	35	17	6	4	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Coprinaceae; g__Coprinus; s__Coprinus_cordisporus
42	0	0	32	0	52	1	k__Fungi; p__Ascomycota; c__Dothideomycetes; o__Pleosporales; f__unidentified; g__unidentified; s__unculturedPleosporales
43	0	0	0	6	0	76	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Microascales; f__Microascaceae
248	0	1	1	26	26	26	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium

46	0	1	2	48	11	17	k_Fungi; p_Basidiomycota; c_Agaricomycetes; o_Agaricales
44	0	0	2	5	6	66	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
45	5	0	0	48	16	6	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
48	41	13	2	13	4	0	k_Fungi; p_Basidiomycota; c_Tremellomycetes
71	0	2	1	6	34	30	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales; f_Lasiosphaeriaceae; g_Zopfiella
262	2	14	12	11	19	15	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Incertae_sedis; g_Thermomyces; s_Thermomyces_lanuginosus
131	0	20	29	4	13	2	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified
51	0	1	15	1	7	41	k_Fungi; p_Ascomycota
50	0	0	6	9	0	48	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
53	41	0	0	17	4	0	k_Fungi; p_Ascomycota; c_Saccharomycetes; o_Saccharomycetales; f_Dipodascaceae
215	1	0	0	43	5	11	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales; f_Lasiosphaeriaceae; g_Zopfiella
55	37	1	10	4	6	2	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Hypocreales; f_Hypocreaceae; g_unidentified
83	0	0	0	19	31	6	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
52	0	0	0	0	0	55	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales; f_Lasiosphaeriaceae
84	0	3	9	19	14	8	k_Fungi; p_Ascomycota; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedScytalidium
269	0	1	3	36	6	6	k_Fungi; p_Basidiomycota; c_Agaricomycetes; o_Agaricales; f_Coprinaceae; g_Coprinus; s_Coprinus_cordisporus
220	0	3	32	4	2	11	k_Fungi; p_Ascomycota; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedScytalidium
154	41	4	3	0	0	0	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified
140	14	10	14	6	1	0	k_Fungi; p_Ascomycota; c_Saccharomycetes; o_Saccharomycetales; f_Incertae_sedis; g_Candida; s_Candida_tropicalis
56	23	0	0	0	4	15	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Hypocreales; f_Nectriaceae; g_Fusarium
88	0	0	0	11	5	26	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales
67	0	0	7	9	0	26	k_Fungi; p_Ascomycota; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedScytalidium
136	0	16	0	22	1	0	k_Fungi; p_Basidiomycota
266	6	5	9	6	6	6	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Incertae_sedis; g_Thermomyces; s_Thermomyces_lanuginosus
58	2	9	21	3	2	1	k_Fungi; p_Basidiomycota; c_Tremellomycetes; o_Filobasidiales; f_Filobasidiaceae; g_Cryptococcus; s_Cryptococcus_laurentii
81	15	5	3	0	4	10	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales
68	0	2	0	6	28	1	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
235	0	19	3	10	1	4	k_Fungi; p_Basidiomycota; c_Agaricomycetes; o_Agaricales; f_Coprinaceae; g_Coprinus; s_Coprinus_cordisporus

76	9	1	11	14	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Dipodascaceae; g__Galactomyces; s__Galactomyces_geotrichum
97	14	2	6	1	1	10	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales; f__Hypocreaceae; g__Trichoderma
61	0	0	24	1	8	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales
60	0	0	1	18	13	0	k__Fungi; p__Chytridiomycota; c__Chytridiomycetes; o__Spizellomycetales; f__Spizellomycetaceae; g__Gaertneriomyces; s__Gaertneriomyces_semiglobifer
258	6	2	6	3	9	6	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus
63	0	0	1	1	0	29	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales; f__unidentified; g__unidentified; s__unculturedHypocreales
62	0	0	0	27	0	4	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
64	0	0	0	29	0	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedsoil_fungus
216	0	8	1	4	5	10	k__Fungi; p__Basidiomycota
202	0	9	9	7	2	0	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Psathyrellaceae; g__Coprinopsis; s__Coprinopsis_sp_YM71
123	0	1	8	3	8	6	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
264	0	0	0	3	11	11	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Zopfiella
161	0	0	13	8	3	1	k__Fungi; p__Ascomycota
205	0	10	2	12	1	0	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales; f__Coprinaceae; g__Coprinus; s__Coprinus_cordisporus
75	25	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Saccharomycetaceae; g__Debaryomyces; s__Debaryomyces_hansenii
73	0	17	0	0	3	5	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
78	0	0	0	0	25	0	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Cantharellales; f__Ceratobasidiaceae; g__Thanatephorus; s__Rhizoctonia_solani
86	0	0	0	5	14	5	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedScytalidium
79	5	0	5	0	2	12	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
87	21	0	2	0	0	0	k__Fungi; p__Ascomycota
177	0	10	12	1	0	0	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales
178	0	0	0	2	18	1	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Zygopleurage; s__Zygopleurage_zygospora
89	21	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales
149	0	0	0	0	15	6	k__Fungi; p__Ascomycota
129	0	2	6	0	10	2	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus
95	17	3	0	0	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Dipodascaceae; g__Galactomyces; s__Galactomyces_geotrichum
232	1	1	5	1	8	4	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus

125	1	7	3	1	8	0	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Trichocomaceae
121	0	0	1	16	1	1	k_Fungi; p_Ascomycota; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedScytalidium
99	0	0	17	1	1	0	k_Fungi; p_Ascomycota; c_Orbiliomycetes; o_Orbiliales; f_Orbiliaceae; g_Dactylellina; s_Dactylellina_haptospora
101	0	0	1	0	10	7	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Hypocreales; f_Bionectriaceae; g_Mycoarachis; s_Mycoarachis_inversa
111	16	1	0	0	1	0	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales; f_Lasiosphaeriaceae; g_Zygopleurage; s_Zygopleurage_zygospora
112	0	0	0	0	16	2	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Incertae_sedis; g_Thermomyces; s_Thermomyces_lanuginosus
106	9	0	1	0	2	5	k_Fungi
105	0	0	0	8	4	5	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales; f_Lasiosphaeriaceae; g_Zopfiella
90	5	0	8	3	1	0	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Trichocomaceae; g_Penicillium
115	3	0	0	4	0	8	k_Fungi; p_Ascomycota; c_Orbiliomycetes; o_Orbiliales; f_Orbiliaceae; g_Arthrotrys; s_Arthrotrys_amospora
113	5	0	10	0	0	0	k_Fungi; p_Ascomycota; c_Dothideomycetes; o_Pleosporales; f_Pleosporaceae; g_Cochliobolus
109	0	0	0	0	1	14	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales
261	0	0	0	0	6	8	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales
142	1	0	0	1	12	0	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified
120	12	1	0	0	1	0	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Hypocreales; f_Incertae_sedis; g_Acremonium
124	1	1	0	5	3	3	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Trichosphaeriales; f_Incertae_sedis
132	0	0	0	12	0	0	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales
257	1	4	5	0	2	0	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Trichocomaceae; g_Penicillium
148	0	0	0	0	0	12	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus
139	6	0	0	5	0	0	k_Fungi; p_Ascomycota; c_Dothideomycetes; o_Pleosporales; f_Sporormiaceae
193	0	0	0	11	0	0	k_Fungi; p_Ascomycota; c_Dothideomycetes; o_Pleosporales; f_Sporormiaceae; g_Preussia
143	5	0	1	0	4	1	k_Fungi; p_Ascomycota; c_Eurotiomycetes; o_Eurotiales; f_Trichocomaceae; g_Penicillium; s_Penicillium_commune
145	1	0	0	9	0	0	k_Fungi; p_Ascomycota; c_Dothideomycetes; o_Capnodiales; f_Mycosphaerellaceae; g_Passalora
153	0	10	0	0	0	0	k_Fungi
152	0	0	0	0	10	0	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Sordariales
165	9	0	0	0	0	0	k_Fungi; p_Ascomycota; c_Sordariomycetes; o_Hypocreales; f_Incertae_sedis; g_Myrothecium
170	0	0	0	0	0	9	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified
162	0	0	0	0	9	0	k_Fungi; p_unidentified; c_unidentified; o_unidentified; f_unidentified; g_unidentified; s_unculturedfungus

183	0	0	0	0	4	5	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__Ascomycota_sp_AR_2010
168	3	0	0	1	5	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
169	0	0	0	3	4	2	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Cladorrhinum
158	0	0	0	0	9	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
135	0	0	0	4	0	4	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
179	0	8	0	0	0	0	k__Fungi; p__Basidiomycota; c__Tremellomycetes
176	5	0	0	3	0	0	k__Fungi; p__Ascomycota; c__Incertae_sedis; o__Incertae_sedis; f__Incertae_sedis; g__Dokmaia
182	0	0	0	0	0	8	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales
190	0	0	0	0	8	0	k__Fungi; p__Ascomycota; c__Orbiliomycetes; o__Orbiliales; f__Orbiliaceae; g__Arthrotrys; s__Arthrotrys_musiformis
212	6	0	0	0	1	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales; f__Incertae_sedis; g__Acremonium; s__Acremonium_sp_ATT126
213	0	1	0	0	0	6	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales
198	0	0	7	0	0	0	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Talaromyces; s__Talaromyces_byssochlamydoides
195	0	0	0	0	7	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__unidentified; g__unidentified
194	0	0	0	0	7	0	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified
192	0	0	6	0	0	1	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
196	0	0	0	7	0	0	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Talaromyces; s__Talaromyces_emersonii
204	4	0	0	2	0	1	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales
201	0	0	0	0	7	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
210	0	0	0	6	0	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales
218	0	0	0	0	6	0	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedAscomycota
221	0	0	0	0	6	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Hypocreales
224	0	0	0	0	6	0	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Penicillium; s__Penicillium_commune
226	2	0	0	3	0	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Xylariales; f__Amphisphaeriaceae; g__Pestalotiopsis
241	0	0	0	0	5	0	k__Fungi; p__Basidiomycota; c__Agaricomycetes; o__Agaricales
240	5	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Cephalothecaceae; g__Phialemonium
242	0	0	1	0	4	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales
250	0	0	0	2	0	3	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Schizothecium
229	3	0	2	0	0	0	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Penicillium

228	5	0	0	0	0	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified; s__unculturedfungus
238	5	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Incertae_sedis; g__Candida; s__Candida_sp_AUMC_7768
239	5	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Metschnikowiaceae; g__Clavispora; s__Clavispora_lusitaniae
230	0	0	0	0	0	5	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Schizothecium
231	4	0	0	0	1	0	k__Fungi; p__unidentified; c__unidentified; o__unidentified; f__unidentified; g__unidentified
249	0	0	0	5	0	0	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Incertae_sedis; g__Thermomyces; s__Thermomyces_lanuginosus
166	0	0	0	4	0	0	k__Fungi; p__Ascomycota; c__Saccharomycetes; o__Saccharomycetales; f__Dipodascaceae
263	0	0	0	4	0	0	k__Fungi; p__Ascomycota; c__unidentified; o__unidentified; f__unidentified; g__unidentified
268	0	0	0	4	0	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Chaetomiaceae; g__Chaetomium
259	0	0	0	1	0	3	k__Fungi; p__Ascomycota; c__Eurotiomycetes; o__Eurotiales; f__Trichocomaceae; g__Paecilomyces
253	0	0	0	0	4	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Sordariales; f__Lasiosphaeriaceae; g__Zygopleurage; s__Zygopleurage_zygospora
272	4	0	0	0	0	0	k__Fungi; p__Ascomycota; c__Sordariomycetes; o__Ophiostomatales; f__Ophiostomataceae; g__Sporothrix; s__Sporothrix_sp_KUC4053

* INSDC: International Nucleotide Sequence Database Collaboration.

** T1: Fresh Pressmud (mesophilic phase). T2: thermophilic phase, T3: maturation phase, A, B and C indicate the different composting piles.

Table S3. OTUs richness, species richness estimator and diversity indices of OTUs in the fresh pressmud and throughout the composting process.

Sample	Richness	Richness estimator	Diversity indices	
	<i>S</i>	Chao 1	Shannon	Simpson
Fresh Pressmud*	83	99.5	3.15	0.77
T2B	80	91	3.06	0.76
T2C	89	94.6	3.40	0.85
T3A	118	131.75	4.35	0.91
T3B	122	137.6	4.26	0.90
T3C	110	114.5	4.15	0.88

* T1: Fresh Pressmud (mesophilic phase). T2: thermophilic phase, T3: maturation phase, A, B and C indicate the different composting piles.