

Table S4. List of unique genera in used RMS bedding or in used straw.

RMS	# OTU	Phylum	Genus
	80	Proteobacteria	Salmonella
	169	Actinobacteria	Thermobispora
	194	Proteobacteria	Chelativorans
	197	Firmicutes	Thermobacillus
	236	Cloacimonetes	Candidatus_Cloacamonas_unclassified
	309	Proteobacteria	Schlegelella
	356	Actinobacteria	Thermopolyspora
	363	Proteobacteria	Sandarakinorhabdus
	425	Proteobacteria	Chelatococcus
	437	Proteobacteria	Methylobacillus
	444	Firmicutes	Halocella
	551	Chloroflexi	Sphaerobacter
	591	Firmicutes	Rummeliibacillus
	630	Firmicutes	Ammoniibacillus
	663	Firmicutes	Sinibacillus
	708	Firmicutes	Paenisporosarcina
	755	Actinobacteria	Actinotalea
	825	Actinobacteria	Nonomuraea
	977	Actinobacteria	Leifsonia
	1043	Actinobacteria	Thermomonosporaceae_unclassified
	1045	Proteobacteria	Nannocystis
	1055	Fibrobacteres	Fibrobacteres_unclassified
	1082	Firmicutes	Saccharococcus
	1112	Proteobacteria	Vulgatibacter
	1229	Firmicutes	Geobacillus
	1266	Chloroflexi	Litorilinea
	1541	Firmicutes	Brevibacillus
	1590	Proteobacteria	Methylomicrobium
	1622	Bacteroidetes	Muricauda
	1638	Proteobacteria	Ferrovibrio
	1735	Proteobacteria	Sandaracinus
	1761	Chloroflexi	Chloroflexales_unclassified
	1815	Firmicutes	Defluviitalea
	1824	Firmicutes	Mobilitalea
	1852	Bacteroidetes	Mariniphaga
	1886	Actinobacteria	Cellulosimicrobium
	1902	Proteobacteria	Sinobacteraceae_unclassified
	1963	Firmicutes	Tepidanaerobacter
	1971	Firmicutes	Proteiniborus
	2194	Proteobacteria	Parvibaculum
	2263	Proteobacteria	Herminiimonas
	2304	BCR1	BRC1_unclassified
	2401	Actinobacteria	Aciditerrimonas
	2419	Acidobacteria	Acidobacteria_unclassified
	2483	Proteobacteria	Chondromyces
	2488	Chloroflexi	Oscillochloris

2549	Proteobacteria	Oceanibaculum
2594	Proteobacteria	Marinobacterium
2727	Firmicutes	Paenivacillaceae_2_unclassified
2751	Euryarchaeota	Methanobacterium
2803	Firmicutes	Parasporobacterium
2946	Proteobacteria	Serpens
2969	Bacteroidetes	Flammeovirgaceae_unclassified
3053	Proteobacteria	Thiopfundum
3067	Bacteroidetes	Rhodothermaceae_unclassified
3096	Proteobacteria	Burkholderiaceae_unclassified
3249	Proteobacteria	Rhodoligotrophos
3471	Firmicutes	Thermaerobacter
3506	Firmicutes	Caldicoprobacter
3584	Proteobacteria	Thioalkalspiraceae_unclassified
3594	Proteobacteria	Methylophilaceae_unclassified
3608	Bacteroidetes	Vitellibacter
3800	Proteobacteria	Zobellella
3821	Proteobacteria	Gammaproteobacteria_incertae_sedis_unclassified
3951	Synergistetes	Aminivibrio
4345	Firmicutes	Pelotomaculum
4359	Proteobacteria	Sneathiella
4421	Bacteroidetes	Winogradskyella
4728	Proteobacteria	Candidimonas
4789	Proteobacteria	Reyranella_unclassified
4856	Actinobacteria	Thermocrispum
4915	Bacteroidetes	Chryseolinea_unclassified
5069	Firmicutes	Ammoniphilus
5194	Actinobacteria	Myceligenans
5303	Bacteroidetes	Sporocytophaga
5629	Proteobacteria	Pseudochelatococcus
5651	Firmicutes	Caldkalibacillus
5871	Actinobacteria	Jiangella
5977	Firmicutes	Desulfotomaculum
6012	Proteobacteria	Pelistega
6047	Actinobacteria	Actinomadura
6683	Verrucomicrobia	Opitidae_unclassified
6771	Bacteroidetes	Echinicola
7035	Proteobacteria	Chromatiales_unclassified
7158	Chloroflexi	Ornatilinea
7392	Proteobacteria	Methylobacter
7395	Proteobacteria	Dokdonella
7743	Firmicutes	Aeribacillus
7849	Proteobacteria	Aquicella
7952	Actinobacteria	Iamia
7959	Proteobacteria	Rhodoplanes
7961	Firmicutes	Cohnella
8375	Proteobacteria	Solimonas
8452	Euryarchaeota	Methanoculleus
8835	Proteobacteria	Bauldia

	8854	Proteobacteria	Methylococcaceae_unclassified
	8975	Proteobacteria	Nitrosospira
	9302	Bacteroidetes	Bizionia
	9887	Proteobacteria	Pseudolabrys
	12615	Planctomycetes	Phycisphaera
	12715	Planctomycetes	Planctomycetes_unclassified
	13398	Proteobacteria	Azospirillum
	13682	Proteobacteria	Halica
	14256	Proteobacteria	Fontimonas
	14680	Proteobacteria	Simplicispira
	16517	Actinobacteria	Verrucosispora
	18053	Firmicutes	Anaerosporebacter
	18428	Actinobacteria	Demequinaceae_unclassified
	21631	Proteobacteria	Croceicoccus
	23969	Actinobacteria	Dermabacteraceae_unclassified
	28643	Proteobacteria	Xanthomonadales_unclassified
	30575	Chlamydiae	Chlamydiales_unclassified
	34586	Bacteroidetes	Salinirepens
Straw	36	Proteobacteria	Citrobacter
	144	Proteobacteria	Duganella
	168	Actinobacteria	Rathayibacter
	170	Actinobacteria	Kineococcus
	232	Actinobacteria	Curtobacterium
	250	Proteobacteria	Aureimonas
	263	Actinobacteria	Geodermatophilus
	272	Actinobacteria	Saccharopolyspora
	310	Actinobacteria	Clavibacter
	445	Firmicutes	Caryophanon
	475	Proteobacteria	Pseudorhodoferax
	482	Actinobacteria	Actinopolysporaceae_unclassified
	616	Proteobacteria	Variovorax
		Deinococcus-	
	763	Thermus	Deinococcus
	806	Actinobacteria	Quadrisphaera
	824	Bacteroidetes	Fibrella
	847	Actinobacteria	Williamsia
	941	Proteobacteria	Acidovorax
	973	Firmicutes	Megasphaera
	981	Proteobacteria	Aurantimonadaceae_unclassified
	1037	Firmicutes	Saccharibacillus
	1336	Proteobacteria	Ketogulonicigenium
	1480	Actinobacteria	Prauserella
	1505	Proteobacteria	Aeromonas
	1553	Actinobacteria	Pseudokineococcus
	1613	Firmicutes	Exiguobacterium
	1791	Firmicutes	Trichococcus
	1867	Proteobacteria	Nitrincola
	1921	Bacteroidetes	Siphonobacter
	1995	Actinobacteria	Actinomycetospora

2000	Firmicutes	Vagococcus
2063	Proteobacteria	Agaricicola
2113	Actinobacteria	Kineosporia
2224	Actinobacteria	Agromyces
2261	Proteobacteria	Acidisoma
2282	Firmicutes	Tetragenococcus
2421	Proteobacteria	Lampropedia
2452	Proteobacteria	Rickettsia
2612	Actinobacteria	Terrabacter
2623	Firmicutes	Dialister
2624	Firmicutes	Leuconostoc
2631	Proteobacteria	Uruburuella
2637	Proteobacteria	Burkholderia
2734	Proteobacteria	Rhizorhabdus
2869	Actinobacteria	Blastococcus
2915	Proteobacteria	Skermanella
2994	Proteobacteria	Sutterella
3055	Proteobacteria	Aquabacterium
3151	Proteobacteria	Aeromonadaceae_unclassified
3176	Armatimonadetes	Armatimonas/Armatimonadetes_gp1
3384	Proteobacteria	Methylophilus
3446	Proteobacteria	Candidatus_Probacter
3476	Bacteroidetes	Macellibacteroides
3699	Armatimonadetes	Armatimonadetes_unclassified
3881	Proteobacteria	Chiayiivirga
3918	Firmicutes	Sharpea
4026	Proteobacteria	Rhodopseudomonas
4088	Bacteroidetes	Arcticibacter
4097	Acidobacteria	Terriglobus_unclassified
4136	Firmicutes	Acetitomaculum
4142	Firmicutes	Faecalibacterium
4294	Firmicutes	Eremococcus
4315	Proteobacteria	Herbaspirillum
4357	Proteobacteria	Cystobacteraceae_unclassified
4377	Firmicutes	Nosocomiicoccus
4427	Actinobacteria	Gaiella
4474	Proteobacteria	Pseudorhodobacter
4529	Bacteroidetes	Cytophaga
4548	Bacteroidetes	Flavisolibacter
4639	Firmicutes	Ezakiella
4649	Actinobacteria	Dermathophilaceae_unclassified
4721	Firmicutes	Acidaminococcus
4737	Proteobacteria	Hyphomonas
4773	Actinobacteria	Actinoplanes
4786	Proteobacteria	Providencia
4899	Proteobacteria	Rickettsiaceae_unclassified
4916	Actinobacteria	Phycococcus
4943	Actinobacteria	Atopobium
5049	Actinobacteria	Herbiconiux

5198	Actinobacteria	Alloscardovia
5206	Proteobacteria	Aminobacter
5345	Acidobacteria	Blastocatella_unclassified
5372	Proteobacteria	Alkanindiges
5557	Proteobacteria	Belnapia
5558	Actinobacteria	Denitrobacterium
5593	Proteobacteria	Azonexus
5702	Elusimicrobia	Elusimicrobium
6287	Firmicutes	Howardella
6382	Armatimonadetes	Armatimonadetes_gp5_unclassified
6469	Proteobacteria	Marinomonas
6480	Actinobacteria	Haloactinobacterium
6528	Bacteroidetes	Barnesiella
6564	Proteobacteria	Moracella
6635	Firmicutes	Anaerofustis
6876	Firmicutes	Butyrivibrio
7086	Euryarchaeota	Methanimicrococcus
7156	Actinobacteria	Geodermatophilaceae_unclassified
7239	Proteobacteria	Pasteurella_unclassified
7370	Acidobacteria	Gp7_unclassified
7397	Proteobacteria	Kingella
7633	Firmicutes	Acetivibrio
7793	Proteobacteria	Labilithrix
7829	Tenericutes	Anaeroplasma
7947	Firmicutes	Eubacterium
8212	Firmicutes	Anaerofilum
8422	Firmicutes	Hydrogenoanaerobacterium
8534	Proteobacteria	Xanthobacteraceae_unclassified
8582	Euryarchaeota	Methanosarcinaceae_unclassified
8739	Bacteroidetes	Mucinivorans
8748	Firmicutes	Hespellia
8768	Acidobacteria	Gp4_unclassified
8965	Firmicutes	Peptococcus
9029	Proteobacteria	Aestuariispira
9130	Bacteroidetes	Segetibacter
9214	Actinobacteria	Slackia
9235	Actinobacteria	Kribella
9415	Actinobacteria	Modestobacter
9563	Lentisphaerae	Oligosphaera
10137	Proteobacteria	Phyllobacterium
10288	Actinobacteria	Rarobacter
10322	Firmicutes	Anaerotruncus
10360	Proteobacteria	Methylobacteriaceae_unclassified
10668	Bacteroidetes	Adhaeribacter
10838	Actinobacteria	Enterorhabdus
10959	Proteobacteria	Halomonadaceae_unclassified
10960	Armatimonadetes	Chthonomonas/Armatimonadetes_gp3
10986	Firmicutes	Clostridiales_Incertae_Sedis_XII_unclassified
10996	Proteobacteria	Neisseria

11511	Proteobacteria	Dechloromonas
11816	Firmicutes	Acetanaerobacterium
11847	Lentisphaerae	Lentisphaerae_unclassified
14634	Planctomycetes	Zavarzinella
14894	Actinobacteria	Nitriliruptor
15081	Firmicutes	Marinilactibacillus
17577	Bacteroidetes	Coprobacter
20105	Actinobacteria	Streptomycetaceae_unclassified
