

Supplementary Information

The gut microbiota in larvae of the housefly *Musca domestica* and their horizontal transfer through feeding

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This Supplementary Information contains:

Supplementary Figure Legends

Supplementary Figures S1

Supplementary Tables S1-S3

Supplementary Figure Legends

Figure S1. Rarefaction curve based on bacterial OTUs at a dissimilarity level of 3%. (A) Rarefaction curve of *Musca domestica* samples. (B) Rarefaction curve of wheat bran samples. MD02h, MD24h, MD48h, MD72h and MD96h refer to *Musca domestica* larvae reared on moistened wheat bran for 2, 24, 48, 72 and 96 h. WB24h, WB48h, WB72h and WB96h refer to moistened wheat bran not treated with housefly larvae after 24, 48, 72 and 96 h. WBMd96h refers to moistened wheat bran treated with housefly larvae for 96 h. Each treatment included three biological replicates.

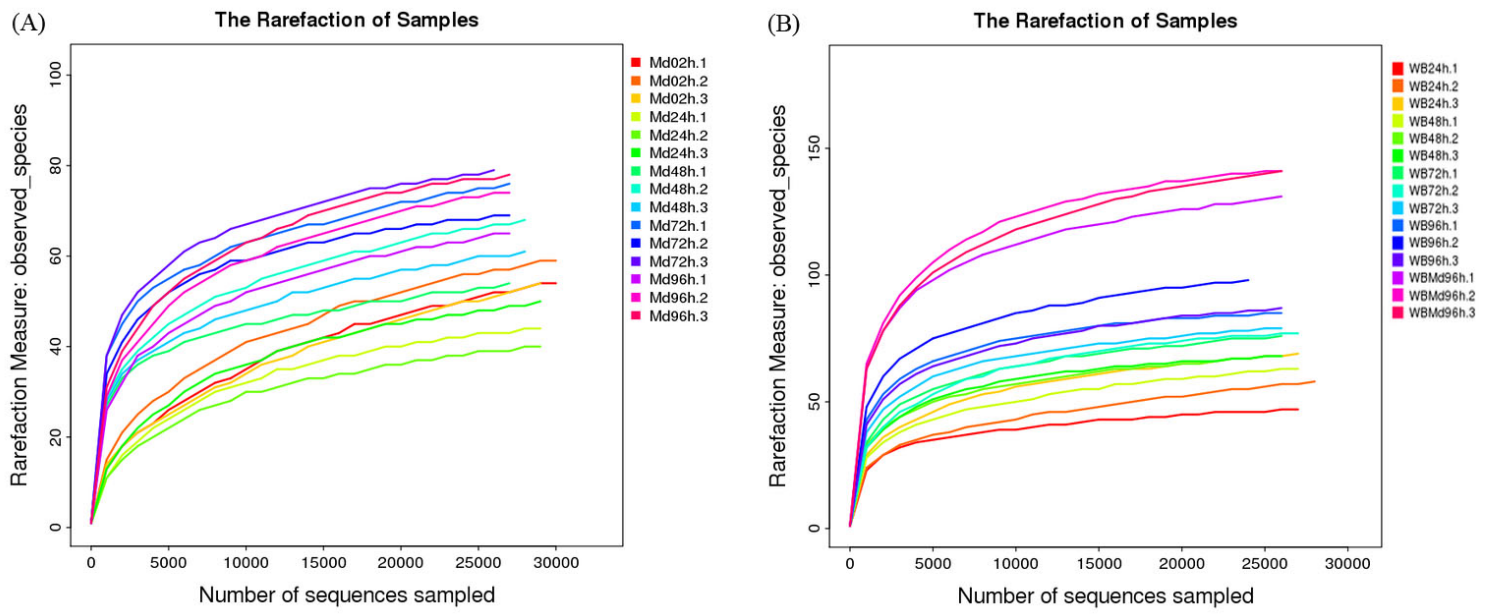


Fig. S1

Supplementary Table S1. Bacterial taxonomy and abundance in the gut of *Musca domestica* larvae at different developmental stages.

OTU	Md02h	Md24h	Md48h	Md72h	Md96h	Taxonomy
OTU1	31290	62579	40799	12609	27495	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Providencia</i>
OTU2	25332	23075	3582	852	445	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Leuconostocaceae</i>
OTU3	28619	1678	1652	420	12	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU4	5	42	8678	6108	214	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU5	160	23	4	5	9	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU6	7	18	671	18222	9368	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Ignatzschineria</i>
OTU7	24	9	4	3	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; Pseudomonas_pseudoalcaligenes</i>
OTU8	50	347	11936	17226	24004	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae</i>
OTU9	6	10	11165	859	773	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU10	5	5	136	9772	4916	<i>Bacteria; Actinobacteria; Actinobacteria; Bifidobacteriales; Bifidobacteriaceae; Bifidobacterium</i>
OTU11	6	10	784	5098	208	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU12	5	8	9	776	7153	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales</i>
OTU13	16	17	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU14	2	0	2	12	51	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU15	6	5	1	4	17	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU16	0	3	5	33	9	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Comamonas</i>
OTU17	1	0	2	49	18	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU19	2466	494	217	125	138	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU21	3	3	2398	1677	40	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>
OTU22	0	0	0	0	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>
OTU23	176	41	470	1356	22	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Proteus</i>
OTU24	0	1	7	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>

OTU25	0	2	83	227	645	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU26	0	2	0	0	5	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU27	3	1	1	9	4	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU28	0	1	0	0	4	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>
OTU29	6	0	2	171	1327	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Leucobacter</i>
OTU31	0	0	0	0	11	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU32	5	1	2	237	1641	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces</i>
OTU33	15	6	17	428	797	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Corynebacteriaceae; Corynebacterium</i>
OTU34	1	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU36	17	0	0	0	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter; Acinetobacter_rhizosphaerae</i>
OTU37	0	0	0	3	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Sporosarcina</i>
OTU38	0	1	4	357	583	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; Lactobacillus_reuteri</i>
OTU39	63	356	229	126	24	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Pediococcus</i>
OTU40	2	1	99	233	135	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>
OTU41	6	0	0	1	0	<i>Bacteria; Cyanobacteria; Chloroplast; Streptophyta</i>
OTU42	5	74	299	120	110	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Achromobacter</i>
OTU45	0	0	25	216	0	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Bacteroidaceae; Bacteroides</i>
OTU46	0	0	146	348	6	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Wohlfahrtiimonas</i>
OTU50	1	0	0	0	0	<i>Bacteria; Tenericutes; Mollicutes; Acholeplasmatales; Acholeplasmataceae; Acholeplasma</i>
OTU51	0	0	2	12	141	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Xanthobacteraceae; Xanthobacter</i>
OTU53	3	0	0	1	2	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales</i>
OTU55	0	0	0	1	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; Pseudomonas_nitroreducens</i>
OTU58	0	0	1	35	34	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae; Ochrobactrum</i>
OTU59	4	6	108	40	0	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae</i>
OTU60	1	0	4	3	2	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Lysinibacillus</i>

OTU62	2	0	5	117	19	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix</i>
OTU63	0	0	0	14	2	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU67	1	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Novosphingobium</i>
OTU68	1	1	0	0	1	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Micrococcaceae</i>
OTU71	0	0	0	0	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas; Stenotrophomonas_acidaminiphila</i>
OTU73	305	13	1	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU76	0	0	0	1	32	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Aerococcaceae; Facklamia</i>
OTU80	0	0	0	2	10	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Oligella</i>
OTU82	1	8	17	50	3	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU85	43	8	2	1	5	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Staphylococcaceae; Staphylococcus</i>
OTU86	0	0	6	30	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales</i>
OTU88	1	11	4	1	1	<i>Bacteria; Thermi; Deinococci; Thermales; Thermaceae; Thermus</i>
OTU89	11	29	4	10	9	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae</i>
OTU91	484	69	157	71	52	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU93	0	0	17	19	0	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides; Myroides_odoratimimus</i>
OTU94	2	0	0	46	319	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Leucobacter</i>
OTU95	0	2	3	0	4	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU97	1	0	0	0	0	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae; Wautersiella</i>
OTU99	6	15	4	9	0	<i>Bacteria; Thermi; Deinococci; Thermales; Thermaceae; Thermus</i>
OTU100	15	7	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhodospirillales; Acetobacteraceae; Commensalibacter; Commensalibacter_intestini</i>
OTU105	0	0	0	2	34	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Dietziaceae; Dietzia</i>
OTU106	0	1	2	4	16	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>
OTU107	1	1	0	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Verminephrobacter</i>
OTU109	7	23	194	501	262	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae</i>
OTU111	3	2	5	14	4	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>

OTU112	0	0	2	9	5	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Brevibacteriaceae; Brevibacterium</i>
OTU113	0	0	0	0	22	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Pseudoclavibacter; Pseudoclavibacter_bifida</i>
OTU114	0	0	0	9	0	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix</i>
OTU115	24	0	3	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU118	1	0	0	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Oxalobacteraceae</i>
OTU119	5	0	0	0	5	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU121	0	0	16	0	1	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; Lactobacillus_paralimentarius</i>
OTU124	1	0	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU125	0	0	0	2	0	<i>Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales; Campylobacteraceae; Arcobacter</i>
OTU126	3	0	1	0	6	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU128	0	1	178	12	1	<i>Bacteria; Firmicutes; Bacilli</i>
OTU129	2	0	4	53	28	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>
OTU133	0	0	3	7	8	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus</i>
OTU134	0	1	0	0	3	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU140	0	0	0	1	1	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales</i>
OTU141	5	0	0	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Oxalobacteraceae</i>
OTU144	0	0	14	4	0	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Carnobacteriaceae</i>
OTU145	0	0	0	4	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Ignatzschineria</i>
OTU147	0	0	0	0	1	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU148	2	5	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU150	5	0	0	3	2	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU151	1	2	0	3	2	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>
OTU152	14	1	0	1	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU157	0	1	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU161	0	0	0	0	2	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae</i>

OTU162	2	18	60	65	131	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae</i>
OTU164	199	37	23	1	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Enterobacter</i>
OTU165	0	0	0	43	3	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>
OTU166	1	7	92	43	9	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU167	0	0	67	105	9	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU169	0	0	0	0	5	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Leucobacter</i>
OTU171	0	2	14	9	21	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU172	1	0	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU177	1	5	4	0	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Ammoniphilus</i>
OTU184	3	0	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU187	0	0	0	52	83	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU188	2	0	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Alteromonadales; Alteromonadaceae</i>
OTU189	0	0	0	2	0	<i>Bacteria; Actinobacteria; Actinobacteria</i>
OTU190	0	0	98	11	0	<i>Bacteria; Firmicutes; Bacilli</i>
OTU196	1	0	0	0	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU198	0	0	0	1	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales</i>
OTU199	0	0	7	7	16	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU200	0	7	132	260	53	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU201	1	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; Paracoccus</i>
OTU205	0	1	0	0	9	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Microbacterium</i>
OTU209	0	0	1	35	50	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU210	0	0	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU216	0	0	0	0	6	<i>Bacteria; Proteobacteria</i>
OTU219	4	1	0	1	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales</i>
OTU220	1	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>

OTU221	6	6	0	0	0	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Leuconostocaceae</i>
OTU222	0	12	47	89	18	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; Lactobacillus_brevis</i>
OTU223	0	0	0	0	3	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Kaistobacter</i>
OTU224	2	1	0	1	4	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Limnohabitans</i>
OTU227	0	0	62	3	0	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU230	2	0	0	0	0	<i>Bacteria; Proteobacteria; Deltaproteobacteria; Myxococcales</i>
OTU231	593	35	105	42	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU232	3	0	0	0	1	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Caulobacterales; Caulobacteraceae</i>
OTU233	0	0	0	1	11	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces</i>
OTU234	0	0	0	0	4	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales</i>
OTU235	2	0	0	1	0	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; S24-7</i>
OTU239	0	0	0	0	2	<i>Bacteria</i>
OTU242	0	8	1	0	2	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU244	0	0	173	65	1	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU245	0	0	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU247	0	0	1	8	0	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU249	25	5	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU250	17	11	2	1	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU251	2	2	0	0	0	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Corynebacteriaceae; Corynebacterium</i>
OTU252	0	0	179	38	16	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU254	2	0	0	0	0	<i>Bacteria; Proteobacteria; Deltaproteobacteria</i>
OTU256	1	2	2	0	1	<i>Bacteria; Verrucomicrobia; Verrucomicrobiae; Verrucomicrobiales; Verrucomicrobiaceae; Akkermansia; Akkermansia_muciniphila</i>
OTU257	3	6	14	1865	682	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>

MD02h, MD24h, MD48h, MD72h and MD96h refer to *Musca domestica* larvae reared on moistened wheat bran for 2, 24, 48, 72 and 96 h. Each treatment included three biological replicates.

Supplementary Table S2. Bacterial taxonomy and abundance in wheat bran.

OTU	WB24h	WB48h	WB72h	WB96h	WBMd96h	Taxonomy
OTU1	120	2262	2370	5084	3050	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Providencia</i>
OTU2	0	114	0	0	63	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Leuconostocaceae</i>
OTU3	13564	11548	10951	9554	786	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU4	51	905	4452	14488	6837	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU5	6107	15921	8337	4090	3658	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU5	0	0	0	0	3	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU6	2	0	0	2	1157	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Ignatzschineria</i>
OTU7	16848	14183	11684	5615	276	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; Pseudomonas_pseudoalcaligenes</i>
OTU8	3	47	24	9	1731	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae</i>
OTU9	0	0	0	0	12	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU10	0	0	0	0	16	<i>Bacteria; Actinobacteria; Actinobacteria; Bifidobacteriales; Bifidobacteriaceae; Bifidobacterium</i>
OTU11	0	0	58	1930	12329	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU12	0	0	0	0	61	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales</i>
OTU13	3897	11848	12498	9481	18	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU14	0	0	30	15	5685	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU15	1	388	746	158	8820	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU16	1	9	4	22	6848	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Comamonas</i>
OTU17	2	17	33	3116	435	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU18	0	1626	13	0	0	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae; Chryseobacterium</i>
OTU19	3444	3022	3612	3347	308	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU20	2085	103	330	12	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>
OTU21	0	0	0	223	258	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>

OTU22	50	1081	812	422	31	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>
OTU23	10	541	1551	926	453	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Proteus</i>
OTU24	40	146	244	1076	66	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU25	10	4	12	968	762	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU26	1	3	17	1277	679	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU27	0	0	0	0	1913	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU28	0	0	0	0	1469	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>
OTU29	0	0	0	0	60	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Leucobacter</i>
OTU30	1	0	128	823	6	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU31	0	0	0	0	1179	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU32	0	0	0	0	75	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces</i>
OTU33	0	0	0	0	8	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Corynebacteriaceae; Corynebacterium</i>
OTU34	527	0	3	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU35	0	0	7	304	7	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU36	230	378	184	164	55	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter; Acinetobacter_rhizosphaerae</i>
OTU37	0	3	22	499	63	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Sporosarcina</i>
OTU38	0	0	0	0	20	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; Lactobacillus_reuteri</i>
OTU39	1	181	17	0	15	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Pediococcus</i>
OTU40	0	0	21	11	356	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>
OTU41	328	4	2	0	0	<i>Bacteria; Cyanobacteria; Chloroplast; Streptophyta</i>
OTU42	1	88	113	219	167	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Achromobacter</i>
OTU43	0	167	28	4	30	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU44	0	0	0	0	194	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae</i>
OTU45	1	0	0	0	84	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Bacteroidaceae; Bacteroides</i>
OTU46	2	0	0	0	111	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Wohlfahrtiimonas</i>

OTU47	0	0	4	114	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Alkaliphilus</i>
OTU48	0	88	77	2	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU49	0	0	0	0	216	<i>Bacteria; Tenericutes; Mollicutes; Acholeplasmatales; Acholeplasmataceae; Acholeplasma</i>
OTU50	0	0	0	0	173	<i>Bacteria; Tenericutes; Mollicutes; Acholeplasmatales; Acholeplasmataceae; Acholeplasma</i>
OTU51	0	0	0	0	15	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Xanthobacteraceae; Xanthobacter</i>
OTU52	0	0	0	0	226	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU53	0	0	0	0	239	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales</i>
OTU54	0	0	0	99	10	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU55	9	67	6	25	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; Pseudomonas_nitroreducens</i>
OTU56	0	53	10	0	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium; Clostridium_butyricum</i>
OTU57	0	0	8	133	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Tissierellaceae; Tissierella_Soehngenia</i>
OTU58	0	7	49	106	57	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae; Ochrobactrum</i>
OTU60	0	0	3	53	190	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Lysinibacillus</i>
OTU61	0	0	16	63	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Tissierellaceae; Tissierella_Soehngenia</i>
OTU62	0	0	0	0	92	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix</i>
OTU63	0	0	0	0	126	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU64	54	1	16	0	0	<i>Bacteria</i>
OTU65	1	1	0	49	1	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU66	0	0	0	30	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales</i>
OTU67	26	11	84	34	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Novosphingobium</i>
OTU68	0	0	0	0	70	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Micrococcaceae</i>
OTU69	0	0	0	34	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU70	0	0	6	81	83	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU71	1	14	42	53	73	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas; Stenotrophomonas_acidaminiphila</i>
OTU72	84	5	3	1	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas</i>

OTU73	13266	1966	4086	791	10	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU74	0	0	19	40	87	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU75	0	0	0	21	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU76	0	0	0	0	93	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Aerococcaceae; Facklamia</i>
OTU77	0	0	0	23	2	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU78	0	0	0	0	35	<i>Bacteria</i>
OTU79	0	0	0	0	47	<i>Bacteria; Tenericutes; Mollicutes; Acholeplasmatales; Acholeplasmataceae; Acholeplasma</i>
OTU80	0	0	0	0	36	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Oligella</i>
OTU81	0	0	0	0	94	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae</i>
OTU82	0	2	1	0	2	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU83	0	0	0	0	46	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae</i>
OTU84	0	0	0	0	38	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Parabacteroides</i>
OTU86	0	0	0	0	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales</i>
OTU87	0	0	1	53	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales</i>
OTU89	1	0	0	0	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae</i>
OTU90	0	0	1	21	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae</i>
OTU91	1	3	7	29	30	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU92	0	5	0	0	28	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae; Wautersiella</i>
OTU93	0	0	0	0	17	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides; Myroides_odoratimimus</i>
OTU94	0	0	0	0	26	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Leucobacter</i>
OTU95	15	307	727	390	6015	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU96	1	11	0	44	8	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU97	0	0	0	0	12	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae; Wautersiella</i>
OTU98	1	8	8	0	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU101	0	10	0	0	2	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae; Wautersiella</i>

OTU102	0	11	0	0	0	<i>Bacteria</i>
OTU103	0	0	7	12	44	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU104	0	0	0	0	26	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium</i>
OTU105	0	0	0	0	1	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Dietziaceae; Dietzia</i>
OTU106	0	0	5	4	4	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>
OTU107	0	0	7	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Verminephrobacter</i>
OTU108	0	0	0	0	24	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU109	0	3	4	3	448	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae</i>
OTU110	0	0	3	16	2	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU111	0	1	4	13	16	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Brucellaceae</i>
OTU112	0	0	0	0	7	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Brevibacteriaceae; Brevibacterium</i>
OTU114	0	0	0	0	2	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix</i>
OTU115	72	49	92	78	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU116	293	134	210	171	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU117	0	3	5	0	0	<i>Bacteria; Proteobacteria</i>
OTU118	9	2	1	4	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Oxalobacteraceae</i>
OTU119	0	0	6	12	102	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU120	8	0	2	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Neisseriales; Neisseriaceae; Vitreoscilla</i>
OTU122	76	36	42	33	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU123	6	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU124	528	1121	1457	1055	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU125	0	0	0	0	12	<i>Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales; Campylobacteraceae; Arcobacter</i>
OTU126	105	137	194	74	4447	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU127	8	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Bartonellaceae</i>
OTU129	0	3	33	23	603	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>

OTU130	24	28	51	27	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU131	1	1	0	0	11	<i>Bacteria; Proteobacteria; Betaproteobacteria; Neisseriales; Neisseriaceae; Vitreoscilla</i>
OTU132	0	0	0	0	5	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium</i>
OTU134	541	3015	2594	2015	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU135	3	0	0	0	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Tissierellaceae</i>
OTU136	8	7	13	9	4	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU137	0	0	4	1	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU138	0	0	0	0	14	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae</i>
OTU139	0	0	0	3	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU140	0	0	0	0	7	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales</i>
OTU141	1	2	0	0	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Oxalobacteraceae</i>
OTU142	0	0	0	0	10	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium</i>
OTU143	1	0	3	1	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Agrobacterium</i>
OTU144	0	0	0	0	24	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Carnobacteriaceae</i>
OTU146	3	0	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae</i>
OTU147	0	0	0	1	170	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU149	0	0	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae</i>
OTU150	1	0	5	1	0	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU151	0	3	0	1	9	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>
OTU152	285	589	160	69	226	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU153	0	0	0	0	6	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae</i>
OTU154	0	0	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU155	2	1	2	2	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU156	0	0	0	0	4	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU157	21	16	21	20	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>

OTU158	0	0	2	0	0	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae</i>
OTU159	0	0	0	0	3	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae</i>
OTU160	0	0	5	3	16	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Bacillus</i>
OTU161	0	0	0	0	2	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae</i>
OTU162	0	9	14	150	164	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae</i>
OTU163	0	1	0	3	0	<i>Bacteria; Tenericutes; Mollicutes</i>
OTU164	495	257	561	260	39	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Enterobacter</i>
OTU165	0	0	0	0	21	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>
OTU166	0	1	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU167	0	8	23	67	34	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Myroides</i>
OTU168	0	0	0	0	5	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU170	0	0	0	0	4	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium</i>
OTU171	0	0	0	0	5	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU172	57	46	64	29	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU173	1	0	2	29	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Sporosarcina</i>
OTU174	0	0	0	0	3	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU175	0	0	2	0	3	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Pigmentiphaga</i>
OTU176	3	8	12	10	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU177	7	2	5	1	2	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Ammoniphilus</i>
OTU178	0	0	0	0	4	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>
OTU179	0	2	0	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU180	0	0	14	11	21	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>
OTU181	0	0	0	2	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae; Coprococcus</i>
OTU182	0	0	0	0	6	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Weeksellaceae</i>
OTU183	32	12	16	13	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>

OTU184	40	38	53	34	5	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU185	6	63	45	35	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae</i>
OTU186	0	0	2	0	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>
OTU187	0	0	0	0	10	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU191	0	0	0	0	3	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae</i>
OTU192	3	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU193	0	0	0	24	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Paenibacillaceae; Paenibacillus</i>
OTU194	0	0	2	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>
OTU195	0	0	0	0	31	<i>Bacteria; Firmicutes; Erysipelotrichi; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix</i>
OTU196	0	0	1	4	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU198	2	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales</i>
OTU199	0	3	2	33	25	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Alcaligenaceae; Alcaligenes; Alcaligenes_faecalis</i>
OTU200	0	1	0	1	107	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU201	0	0	0	0	5	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; Paracoccus</i>
OTU202	0	0	0	0	3	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Tissierellaceae; Helcococcus</i>
OTU203	0	0	0	0	2	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Paludibacter</i>
OTU204	5	6	3	5	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae</i>
OTU205	0	0	0	0	3	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae; Microbacterium</i>
OTU206	0	1	0	5	0	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Prevotellaceae; Prevotella; Prevotella_copri</i>
OTU207	0	0	0	0	2	<i>Bacteria; Firmicutes; Bacilli</i>
OTU208	0	0	0	17	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae</i>
OTU209	0	0	0	0	4	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Microbacteriaceae</i>
OTU210	0	0	0	0	57	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU211	0	0	0	0	10	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae</i>
OTU212	0	0	2	0	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Lachnospiraceae</i>

OTU213	3	0	0	0	0	<i>Bacteria; Proteobacteria</i>
OTU214	0	0	3	0	0	<i>Bacteria; Firmicutes; Clostridia; Clostridiales; Eubacteriaceae; Garciella</i>
OTU215	0	0	0	0	3	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Bacteroidaceae; Bacteroides; Bacteroides_ovatus</i>
OTU217	0	0	0	0	4	<i>Bacteria; Bacteroidetes; Flavobacteriia; Flavobacteriales; Flavobacteriaceae; Flavobacterium; Flavobacterium_gelidilacus</i>
OTU218	0	4	1	0	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae</i>
OTU219	1	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales</i>
OTU220	10	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU222	0	1	0	0	3	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; Lactobacillus_brevis</i>
OTU223	1	1	2	2	1	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Kaistobacter</i>
OTU224	1	0	0	1	0	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae; Limnohabitans</i>
OTU225	0	0	3	9	1	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU226	0	0	2	16	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU228	123	266	141	71	261	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU229	0	0	0	3	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU231	6454	1626	6447	2636	90	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae</i>
OTU233	0	0	0	0	1	<i>Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces</i>
OTU236	2	15	17	4	62	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU237	23	38	18	3	1	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU238	0	0	0	0	2	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU240	0	0	0	0	2	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Bacteroidaceae; Bacteroides</i>
OTU241	6	0	0	0	0	<i>Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; mitochondria</i>
OTU243	2	0	2	21	0	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>
OTU244	0	0	0	0	10	<i>Bacteria; Firmicutes; Bacilli; Lactobacillales</i>
OTU245	0	0	1	1	98	<i>Bacteria; Firmicutes; Bacilli; Bacillales</i>
OTU246	0	8	4	5	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas</i>

OTU247	0	0	0	0	5	<i>Bacteria; Bacteroidetes; Bacteroidia; Bacteroidales; Porphyromonadaceae; Dysgonomonas</i>
OTU248	0	0	0	0	2	<i>Bacteria; Bacteroidetes; Saprospirae; Saprospirales; Saprospiraceae</i>
OTU249	106	57	62	60	60	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter</i>
OTU250	13377	5049	4270	3811	38	<i>Bacteria; Proteobacteria; Gammaproteobacteria</i>
OTU253	46	68	19	22	0	<i>Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae</i>
OTU255	0	0	0	2	3	<i>Bacteria; Bacteroidetes; Sphingobacteriia; Sphingobacteriales; Sphingobacteriaceae; Sphingobacterium; Sphingobacterium_multivorum</i>
OTU256	0	0	0	0	2	<i>Bacteria; Verrucomicrobia; Verrucomicrobiae; Verrucomicrobiales; Verrucomicrobiaceae; Akkermansia; Akkermansia_muciniphila</i>
OTU257	1	136	95	662	4233	<i>Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales; Comamonadaceae</i>
OTU258	0	0	0	2	6	<i>Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae</i>

WB24h, WB48h, WB72h and WB96h refer to moistened wheat bran not treated with housefly larvae after 24, 48, 72 and 96 h. WBMd96h refers to moistened wheat bran treated with housefly larvae for 96 h. Each treatment included three biological replicates.

Supplementary Table S3. The IDs of shared and unique OTUs in the Venn diagram (Fig. 3) of the WB96h and WBMd96h samples.

Group	Shared OTU number/Unique OTU number	OTU ID
WB96h-vs-WBMd96h	78	Otu1,Otu103,Otu106,Otu109,Otu11,Otu110,Otu111,Otu119,Otu124,Otu126,Otu129,Otu13,Otu134,Otu136,Otu14,Otu147,Otu15,Otu151,Otu152,Otu16,Otu160,Otu162,Otu164,Otu167,Otu17,Otu172,Otu177,Otu180,Otu184,Otu185,Otu19,Otu199,Otu20,Otu200,Otu21,Otu22,Otu223,Otu225,Otu226,Otu228,Otu23,Otu231,Otu236,Otu237,Otu24,Otu245,Otu249,Otu25,Otu250,Otu255,Otu257,Otu258,Otu26,Otu3,Otu30,Otu35,Otu36,Otu37,Otu4,Otu40,Otu42,Otu43,Otu5,Otu54,Otu58,Otu6,Otu60,Otu65,Otu7,Otu70,Otu71,Otu73,Otu74,Otu77,Otu8,Otu91,Otu95,Otu96
WB96h	38	Otu115,Otu116,Otu118,Otu122,Otu130,Otu137,Otu139,Otu143,Otu150,Otu155,Otu157,Otu163,Otu173,Otu176,Otu181,Otu183,Otu193,Otu196,Otu204,Otu206,Otu208,Otu224,Otu229,Otu243,Otu246,Otu253,Otu47,Otu48,Otu55,Otu57,Otu61,Otu66,Otu67,Otu69,Otu72,Otu75,Otu87,Otu90
WBMd96h	87	Otu10,Otu101,Otu104,Otu105,Otu108,Otu112,Otu114,Otu12,Otu125,Otu131,Otu132,Otu138,Otu140,Otu142,Otu144,Otu149,Otu153,Otu154,Otu156,Otu159,Otu161,Otu165,Otu166,Otu168,Otu170,Otu171,Otu174,Otu175,Otu178,Otu182,Otu187,Otu191,Otu195,Otu197,Otu2,Otu201,Otu202,Otu203,Otu205,Otu207,Otu209,Otu210,Otu211,Otu215,Otu217,Otu222,Otu233,Otu238,Otu240,Otu244,Otu247,Otu248,Otu256,Otu27,Otu28,Otu29,Otu31,Otu32,Otu33,Otu38,Otu39,Otu44,Otu45,Otu46,Otu49,Otu50,Otu51,Otu52,Otu53,Otu62,Otu63,Otu68,Otu76,Otu78,Otu79,Otu80,Otu81,Otu82,Otu83,Otu84,Otu86,Otu89,Otu9,Otu92,Otu93,Otu94,Otu97

The OTU IDs are identical to those in Supplementary Table S1-2. WB96h refers to moistened wheat bran not treated with house fly larvae after 96 h. WBMd96h refers to moistened wheat bran treated with house fly larvae for 96 h. Each treatment included three biological replicates.