

Supplementary Table S1. Alpha diversity of compost bacteria by compost type and soil bacteria by compost type

|                        | Compost Bacteria           |                            |                              |                 | Soil Bacteria (T2)   |                 |                      |                 | Soil Bacteria (T3) |                  |                   |                 |
|------------------------|----------------------------|----------------------------|------------------------------|-----------------|----------------------|-----------------|----------------------|-----------------|--------------------|------------------|-------------------|-----------------|
|                        | Compost Type               |                            |                              |                 | Compost Type         |                 |                      |                 | Compost Type       |                  |                   |                 |
|                        | CM                         | DMP                        | P                            | <i>P</i> -value | CM                   | DMP             | P                    | <i>P</i> -value | CM                 | DMP              | P                 | <i>P</i> -value |
| <b>Chao1</b>           | 321.5±<br>3.8 <sup>a</sup> | 775.4±<br>41 <sup>b</sup>  | 951.5±<br>122.6 <sup>b</sup> | <0.01           | 1006.7<br>±<br>227.4 | 984.5±<br>146.5 | 1062.5<br>±<br>113.6 | 0.55            | 937.3 ±<br>278.8   | 950.8 ±<br>195.1 | 1016.9 ±<br>114.6 | 0.81            |
| <b>Shannon</b>         | 3.6±0.<br>4 <sup>a</sup>   | 4.6±0.<br>1 <sup>b</sup>   | 4.9±0.<br>3 <sup>b</sup>     | <0.01           | 4.9±0.<br>9          | 4.8±0.<br>6     | 5.2±0.<br>2          | 0.49            | 4.5 ± 1.1          | 4.7 ± 0.6        | 5 ± 0.2           | 0.73            |
| <b>Inverse Simpson</b> | 18.2±7<br>.4 <sup>a</sup>  | 23.4±6<br>.1 <sup>ab</sup> | 42.3±1<br>2.7 <sup>b</sup>   | 0.04            | 42.8±2<br>7.9        | 37.6±1<br>9.9   | 46.8±1<br>4.2        | 0.63            | 32.2 ±<br>21.3     | 35.4 ±<br>21.9   | 38.9 ± 6.8        | 0.83            |

T2 Timepoint 2, T3 Timepoint 3, CM Chicken manure, DMP dairy manure and plant-based materials, P Plant material

Values are reported as Mean±SD

P < 0.05 is significant

Supplementary Table S2. Human gut microbiota taxa that were similar regardless of compost type at each timepoint.

|                              | T1         |           |             |         | T2         |            |             |         | T3          |            |             |         |
|------------------------------|------------|-----------|-------------|---------|------------|------------|-------------|---------|-------------|------------|-------------|---------|
| Taxa                         | CM         | DMP       | P           | p-value | CM         | DMP        | P           | p-value | CM          | DMP        | P           | p-value |
| Lachnospiraceae_unclassified | 3.9 ± 2.7  | 2.5 ± 1.8 | 2 ± 1       | 0.13    | 4.1 ± 2.4  | 3.4 ± 2.4  | 2.8 ± 1.7   | 0.83    | 3.5 ± 2.4   | 3.1 ± 2.9  | 1.4 ± 1.2   | 0.26    |
| Bacteroides                  | 13 ± 9.8   | 9.5 ± 7.2 | 9.5 ± 11.4  | 0.79    | 9.8 ± 5.6  | 10.1 ± 7.1 | 13.1 ± 14.1 | 0.94    | 12.1 ± 12.6 | 9.9 ± 6.9  | 13.6 ± 14.9 | 0.93    |
| Faecalibacterium             | 7 ± 4.4    | 9.2 ± 3.3 | 3.1 ± 2.2   | 0.07    | 7.4 ± 3.9  | 8.7 ± 3.5  | 5.3 ± 2.8   | 0.76    | 7.4 ± 5.3   | 10.8 ± 4.1 | 5 ± 3.7     | 0.42    |
| Bifidobacterium              | 1.3 ± 1.4  | 3.4 ± 5   | 2.2 ± 4     | 0.53    | 1.8 ± 2    | 2 ± 2.5    | 1.8 ± 2.6   | 0.99    | 2.3 ± 1.5   | 1.8 ± 1.7  | 5.3 ± 8.1   | 0.42    |
| Blautia                      | 14.5 ± 5.9 | 9.6 ± 5.2 | 14.7 ± 10.2 | 0.26    | 14.3 ± 6.1 | 10.7 ± 5.2 | 12 ± 8.8    | 0.83    | 10.9 ± 4.4  | 11.2 ± 5.8 | 8 ± 7       | 0.93    |
| Lachnospiraceae_ge           | 3.3 ± 2    | 3.8 ± 2.2 | 6.4 ± 3.4   | 0.13    | 3.6 ± 1.3  | 3.9 ± 2.5  | 4.8 ± 1.9   | 0.83    | 2.7 ± 0.9   | 3.7 ± 2    | 3.3 ± 3.1   | 0.93    |
| Subdoligranulum              | 2.5 ± 1.3  | 2.2 ± 1.9 | 2.2 ± 3     | 0.96    | 3 ± 2      | 2.7 ± 2.1  | 1.7 ± 2.5   | 0.83    | 2.3 ± 1.4   | 2.3 ± 1.5  | 1.7 ± 2.5   | 0.93    |
| Agathobacter                 | 3.4 ± 2.8  | 2.4 ± 2.1 | 4.9 ± 4.3   | 0.41    | 4.8 ± 5    | 3.7 ± 2.7  | 3.4 ± 2.4   | 0.93    | 3.9 ± 2.8   | 3.1 ± 1.9  | 2.6 ± 2.6   | 0.93    |
| Fusicatenibacter             | 2.6 ± 1.4  | 2.9 ± 2.2 | 4.1 ± 5.2   | 0.73    | 3.3 ± 2.7  | 3.2 ± 2.2  | 4.3 ± 5.1   | 0.94    | 2.4 ± 1.8   | 3.3 ± 2.8  | 1.8 ± 2.2   | 0.93    |
| Anaerostipes                 | 1.7 ± 1.1  | 0.9 ± 0.7 | 3 ± 2.4     | 0.05    | 2.2 ± 1.7  | 1 ± 0.7    | 2.9 ± 2.5   | 0.16    | 1.5 ± 1.1   | 1.3 ± 0.8  | 1.2 ± 1.2   | 0.93    |
| Dorea                        | 2.3 ± 1.3  | 1.4 ± 0.5 | 1.7 ± 1.4   | 0.41    | 2.4 ± 1    | 1.7 ± 0.7  | 1.3 ± 1.1   | 0.62    | 1.6 ± 0.5   | 1.1 ± 0.4  | 0.9 ± 0.5   | 0.26    |
| Phascolarctobacterium        | 2.5 ± 2.2  | 3.1 ± 2.3 | 1 ± 1.4     | 0.41    | 2.1 ± 1.5  | 2.2 ± 2    | 1.2 ± 1.6   | 0.93    | 2.5 ± 2.3   | 2.4 ± 2.1  | 3.1 ± 4.3   | 0.94    |

T1 Timepoint 1, T2 Timepoint 2, T3 Timepoint 3, CM Chicken manure, DMP dairy manure and plant-based materials, P Plant material.

Values are reported as Mean±SD

P-values were adjusted by BH procedure