



Figure S1. Rarefaction curve for the number of observed OTUs versus the number of sequences generated per sample. Radishes were grown in either Loamy Sand (open) or silty clay loam (closed) amended with manure (dashes and dots, n = 12), static compost (dots, n = 12), turned compost (dashes, n = 11, Loamy Sand; n = 12, silty clay loam), or fertilizer control (solid, n = 3). Error bars indicate standard error. Cattle types of all antibiotic treatments were combined within manure and compost.

Table S1. Shannon and Chao1 values of radish taproot bacterial communities (n=3).

Soil Texture	Amendment Type	Cattle Type	Shannon Index (H', Mean \pm SE)	Lower Chao1	Chao Mean	Upper Chao1	Evenness
Loamy Sand	Fertilizer Control	n/a	7.57 \pm 0.13	1621	1826	2189	0.98
Loamy Sand	Static Compost	BC	6.41 \pm 0.10	943	1231	1375	0.89
Loamy Sand	Static Compost	BA	6.63 \pm 0.26	872	1134	1437	0.91
Loamy Sand	Static Compost	DC	6.54 \pm 0.22	872	1280	1896	0.87
Loamy Sand	Static Compost	DA	5.88 \pm 0.28	542	948	1234	0.83
Loamy Sand	Turned Compost	BC	6.10 \pm 0.66	603	1010	1537	0.83
Loamy Sand	Turned Compost	BA	6.00 \pm 0.32	509	710	861	0.89
Loamy Sand	Turned Compost	DC	5.95 \pm 0.17	685	855	1025	0.86
Loamy Sand	Turned Compost	DA	5.17 \pm 0.32	596	807	966	0.75
Loamy Sand	Manure	BC	6.12 \pm 0.47	334	808	1206	0.86
Loamy Sand	Manure	BA	5.03 \pm 0.31	293	526	899	0.74
Loamy Sand	Manure	DC	5.03 \pm 0.66	298	836	1674	0.68
Loamy Sand	Manure	DA	6.32 \pm 0.03	600	866	1357	0.88
Silty Clay Loam	Fertilizer Control	n/a	7.23 \pm 0.45	763	1247	1754	0.97
Silty Clay Loam	Static Compost	BC	5.70 \pm 0.53	696	938	1110	0.81
Silty Clay Loam	Static Compost	BA	5.64 \pm 0.59	626	666	736	0.85
Silty Clay Loam	Static Compost	DC	6.42 \pm 0.88	585	1120	1630	0.87
Silty Clay Loam	Static Compost	DA	6.14 \pm 0.64	625	1032	1438	0.84
Silty Clay Loam	Turned Compost	BC	7.06 \pm 0.35	450	1068	1554	0.96
Silty Clay Loam	Turned Compost	BA	6.33 \pm 1.09	395	796	1458	0.87
Silty Clay Loam	Turned Compost	DC	5.91 \pm 0.57	360	807	1412	0.81
Silty Clay Loam	Turned Compost	DA	6.40 \pm 0.74	465	1069	1501	0.87
Silty Clay Loam	Manure	BC	6.06 \pm 0.95	461	997	1976	0.80
Silty Clay Loam	Manure	BA	6.64 \pm 0.21	794	1099	1636	0.90
Silty Clay Loam	Manure	DC	5.83 \pm 0.34	473	594	794	0.87
Silty Clay Loam	Manure	DA	5.45 \pm 0.19	429	537	740	0.83

Table S2. Soil properties of silty clay loam and Loamy Sand collected in Virginia prior to seeding and mixing with any soil amendments.

Soil Texture	Organic Matter (% Rate)	Estimated Nitrogen Release	P (ppm, Mehlich 3)	K (ppm)	Mg (ppm)	Ca (ppm)	pH	Acidity (mEq/100g)	Percent Base Saturation					
									Cation Exchange Capacity (mEq/100g)	K (%)	Mg (%)	Ca(%)	H (%)	NO ₃ N (ppm)
Silty Clay Loam	8.6	150	75	340	522	2074	6.8 5.3 (buffer index)	0.5	16.1	5.4	27	64.4	2.9	37
Loamy Sand	1.5	75	198	165	47	305	6.82)	1.1	3.4	12.4	11.5	44.9	31	8

Analyses performed by Waypoint Analytical Virginia, Inc. (Richmond, VA).

Table S3. Geometric means of soil amendments mixed with soils prior to direct seeding.

Amendment	%Dry Matter	Mass added to pots (g)	Dry Matter (g)	C (g, Dry)	N (g, Dry)	P (mg, Dry)	K (mg, Dry)
Manure	44.08%	40.9	18.03	10.07	0.21	0.38	2.09
Compost	43.70%	26.7	11.67	5.37	0.26	0.31	1.66

Table S4. Geometric means of radish taproot masses (n = 3) at harvest.

Soil Type	Amendment Type	Cattle Type	Average Mass (g) ± SE
Loamy Sand	Fertilizer Control	n/a	23.04 ± 1.29
Silty Clay Loam	Fertilizer Control	n/a	24.65 ± 1.55
Loamy Sand	Static Compost	DC	32.64 ± 5.73
Loamy Sand	Static Compost	DA	35.11 ± 1.33
Loamy Sand	Turned Compost	DC	28.40 ± 4.13
Loamy Sand	Turned Compost	DA	20.83 ± 9.25
Silty Clay Loam	Static Compost	DC	24.18 ± 4.40
Silty Clay Loam	Static Compost	DA	28.96 ± 2.38
Silty Clay Loam	Turned Compost	DC	20.92 ± 4.55
Silty Clay Loam	Turned Compost	DA	30.22 ± 2.04
Loamy Sand	Static Compost	BC	27.54 ± 1.55
Loamy Sand	Static Compost	BA	28.25 ± 1.27
Loamy Sand	Turned Compost	BC	26.01 ± 4.12
Loamy Sand	Turned Compost	BA	29.69 ± 2.90
Silty Clay Loam	Static Compost	BC	23.79 ± 2.90
Silty Clay Loam	Static Compost	BA	26.17 ± 3.12
Silty Clay Loam	Turned Compost	BC	21.10 ± 1.66
Silty Clay Loam	Turned Compost	BA	25.34 ± 3.93
Loamy Sand	Manure	DC	14.11 ± 7.66
Loamy Sand	Manure	DA	29.53 ± 4.43
Loamy Sand	Manure	BC	26.96 ± 5.35
Loamy Sand	Manure	BA	14.36 ± 7.57
Silty Clay Loam	Manure	DC	28.45 ± 1.76
Silty Clay Loam	Manure	DA	25.80 ± 3.17
Silty Clay Loam	Manure	BC	26.52 ± 6.27
Silty Clay Loam	Manure	BA	21.23 ± 3.10