

Table 1: PESH Benchmarks for New York (not including Long Island). PESH benchmarks may be refined as more data becomes available.

90th Percentile								
Cropping System	n	SOM	SOC	POXC	Protein	Resp	WAS	AWC
		%	%	mg C/ kg	mg/g	mg CO ₂ /g	%	g H ₂ O/ g soil
Coarse-Textured								
Annual Grain	37	2.8	1.9	620	7.5	0.58	58.3	0.20
Processing Veg	20	2.8	1.9	603	7.7	0.60	43.9	0.23
Dairy Crop	29	4.3	3.1	954	9.4	0.85	71.6	0.24
Mixed Veg	29	5.0	3.4	900	15.0	1.00	69.1	0.24
Orchard	44	3.0	2.1	843	9.6	0.54	65.9	0.20
Pasture	16	4.2	2.9	735	9.6	0.87	86.1	0.28
All	175	4.2	2.9	836	11	0.78	72.2	0.23
Loam								
Annual Grain	209	3.7	2.3	757	7.2	0.69	44.5	0.24
Processing Veg	38	3.5	2.1	579	6.5	0.66	44.1	0.23
Dairy Crop	133	4.5	2.9	775	8.8	0.89	65.6	0.24
Mixed Veg	62	5.6	3.6	927	14.7	0.86	61.9	0.25
Orchard	51	3.7	2.3	731	9.0	0.76	68.3	0.23
Pasture	38	5.2	3.4	895	11.8	1.27	81.9	0.26
All	531	4.5	2.9	811	9.4	0.84	62.9	0.24
Silt Loam								
Annual Grain	79	5.2	3.3	856	11.4	0.87	70.1	0.30
Processing Veg	21	4.8	3.0	690	8.9	0.91	72.7	0.29
Dairy Crop	52	5.6	3.6	859	11.7	0.92	70.1	0.30
Mixed Veg	58	5.9	3.9	912	13.1	0.94	74.5	0.34
Orchard	48	4.8	3.1	834	12.1	1.08	72.3	0.34
Pasture	60	6.5	4.3	862	12.7	1.64	92.0	0.32
All	318	5.8	3.8	883	12.5	1.19	83.3	0.32
Fine-Textured								
Annual Grain	12	4.7	2.8	822	7.4	0.70	70.1	0.26
Processing Veg	*	4.7	2.8	822	7.4	0.70	72.7	0.26
Dairy Crop	23	5.1	3.3	924	8.8	0.80	70.1	0.26
Mixed Veg	*	5.1	3.3	924	8.8	0.80	74.5	0.26
Orchard	*	5.1	3.3	924	8.8	0.80	72.3	0.26
Pasture	4	6.5	4.2	857	12.6	1.63	92.0	0.26
All	37	5.2	3.1	913	8.9	1.06	84.0	0.26

Table 2: PESH Benchmarks for Long Island. These PESH Benchmarks for Long Island will be refined as more data becomes available.

90 th Percentile								
Cropping System	n	SOM %	SOC %	POXC mg C/ kg	Protein mg/g	Resp mg CO ₂ /g	WAS %	AWC g H ₂ O/ g soil
Coarse-Textured								
Processing Veg	25	2.2	1.5	482	5.2	0.35	27.8	0.21
Mixed Veg	46*	3.5	2.1	1130	17.8	0.83	63.1	0.25
Orchard	9*	3.5	2.1	1115	9.5	0.86	57.7	0.25
Pasture	28	3.0	2.1	773	11.0	0.90	54.5	0.20
All	108	5.1	3.5	1039	14.8	0.82	56.5	0.25
Loam								
Processing Veg	10	2.6	1.6	535	6.4	0.40	24.7	0.22
Mixed Veg	26	3.5	2.1	769	10.4	0.53	39.7	0.24
Orchard	16	3.5	2.1	594	10.3	0.64	48.2	0.26
Pasture	8*	3.5	2.1	467	6.6	0.42	45.1	0.22
All	60	3.3	2.0	670	10.1	0.55	41.1	0.24
Silt Loam								
Processing Veg	13	4.1	2.8	828	11.1	0.55	32.0	0.27
Mixed Veg	38	3.7	2.3	694	9.0	0.60	38.9	0.28
Orchard	25	3.7	2.3	676	10.0	0.72	66.2	0.30
Pasture	20	4.0	2.6	687	11.1	0.77	83.5	0.31
All	96	3.9	2.5	696	10.4	0.71	70.2	0.29

Amsili, J. P., van Es, H. M., Aller, D. M. & Schindelbeck, R. R. 2023. Empirical approach for developing production environment soil health benchmarks. *Geoderma Regional*, 34, e00672 . <https://doi.org/10.1016/j.geodrs.2023.e00672> .