

Table S1. Nematode functional guilds under different rates of N and P fertilizers.

	N and P fertilizers						<i>p</i> -value	
	N0P0	N1P1	N2P1	N3P1	N1P2	N1P3	N fertilizer	P fertilizer
Pp2	21.1 ± 5.9	16.9 ± 7.5	10.2 ± 4.4	7.4 ± 2.3	26.3 ± 6.5	18.3 ± 2.4	0.193	0.594
Pp3	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.5 ± 0.5	0.5 ± 0.5	0.5 ± 0.5	0.392	0.532
Pp4	0.0 ± 0.0	0.5 ± 0.5	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.392	0.392
Pp5	0.0 ± 0.0	1.4 ± 0.8	0.5 ± 0.5	0.0 ± 0.0	0.5 ± 0.5	0.0 ± 0.0	0.172	0.196
Ba1	3.8 ± 0.5	8.5 ± 2.4	31.0 ± 4.1	22.7 ± 6.4	10.3 ± 3.3	13.6 ± 5.4	0.032	0.159
Ba2	14.1 ± 4.3	16.9 ± 2.8	24.5 ± 6.1	44.9 ± 11.7	18.3 ± 5.3	26.8 ± 2.2	0.099	0.172
Ba3	0.9 ± 0.5	2.8 ± 0.8	2.3 ± 1.2	8.8 ± 3.2	6.1 ± 0.5	2.8 ± 0.8	0.135	0.037
Ba4	0.0 ± 0.0	0.0 ± 0.0	0.9 ± 0.5	0.5 ± 0.5	0.9 ± 0.5	0.0 ± 0.0	0.214	0.086
Fu2	18.3 ± 3.7	30.0 ± 4.5	25.0 ± 8.9	49.1 ± 6.7	40.4 ± 14.4	91.1 ± 11.0	0.063	0.043
Fu4	40.8 ± 7.3	34.3 ± 6.3	13.9 ± 2.1	19.4 ± 10.4	14.6 ± 4.8	13.6 ± 6.0	0.113	0.045

Om4	14.1 ± 3.5	9.4 ± 0.5	10.2 ± 2.0	5.1 ± 2.8	4.2 ± 1.6	3.3 ± 0.5	0.110	0.027
Pr3	0.5 ± 0.5	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.392	0.392
Pr4	0.0 ± 0.0	0.0 ± 0.0	1.4 ± 1.4	0.0 ± 0.0	0.5 ± 0.5	0.0 ± 0.0	0.392	0.392
Pr5	7.5 ± 1.2	7.0 ± 2.2	1.9 ± 1.2	4.2 ± 1.6	4.2 ± 2.2	2.3 ± 0.5	0.086	0.130

Note: Pp, plant parasites; Ba, bacterivores; Fu, fungivores; Om, omnivores; and Pr, predators. The number following the abbreviations is nematode *c-p* value. The rates of N and P fertilizers are denoted as N0P0, N1P1, N2P1, N3P1, N1P2, and N1P3.

Table S2. Soil properties under different rates of N and P fertilizers.

	TN g/kg	TC g/kg	C/N	NO ₃ ⁻ -N mg/kg	NH ₄ ⁺ -N mg/kg	TP g/kg	AP mg/kg	TK g/kg	AK mg/kg	WT	pH
N0P0	1.82	24.23	13.30	7.33	7.13	0.44	34.19	22.00	153.33	0.29	5.68
N1P1	1.83	24.48	13.37	7.36	7.23	0.54	47.16	22.60	159.33	0.29	5.82
N2P1	1.86	24.85	13.34	7.42	7.89	0.50	45.47	22.13	167.00	0.28	5.65
N3P1	1.86	24.68	13.26	8.10	8.98	0.47	39.31	24.00	154.00	0.28	5.60
N1P2	1.87	25.28	13.50	9.90	9.24	0.62	76.95	24.20	193.00	0.29	6.00
N1P3	1.86	25.16	13.51	10.14	10.99	0.67	89.64	24.47	162.67	0.29	5.83
<i>p</i> -value	0.861	0.773	0.829	0.377	0.046	0.018	0.012	0.017	0.857	0.948	0.011

Note: TN, total nitrogen; TC, soil total carbon; C/N, ratio of soil organic carbon to total nitrogen; NH₄⁺-N, ammonium-nitrogen; NO₃⁻-N, nitrate nitrogen; TK, total potassium; AK; available potassium; TP, total phosphorus; AP, available phosphorus, WT, soil water content; and pH, soil pH. The rates of N and P fertilizers are denoted as N0P0, N1P1, N2P1, N3P1, N1P2, and N1P3.