

Supplemental Material

Table S1. Average number of nematode families identified in samples from each cropping system – ARF (Annual ryegrass/ fallow), CRS (Cereal rye/edamame soybean), BC (Bare Control) – during winter and summer sampling.

FAMILIES	----- Winter -----			----- Summer -----		
	ARF	CRS	BC	ARF	CRS	BC
	(Nematodes 100 cc soil ⁻¹)			(Nematodes 100 cc soil ⁻¹)		
Cephalobidae	178	272	151	213	167	135
Tylenchidae	161	573	151	77	94	45
Pratylenchidae	204	11	328	44	3	31
Hoplolaimidae	26	3	37	24	15	3
Aphelenchoididae	89	309	40	40	53	19
Aporcelaimidae	17	5	12	0	0	0
Criconeematidae	2	0	0	2	0	0
Rhabditidae	41	15	5	31	38	20
Dorylaimidae	4	0	0	13	12	7
Monhysteridae	10	1	11	22	14	21
Alaimidae	3	1	1	1	0	1
Mononchidae	8	2	1	7	11	10
Plectidae	8	7	22	5	2	8
Trichodoridae	29	14	17	21	33	7
Diptherophoridae	45	4	53	56	3	64

Table S2. Average number of nematode families identified in winter samples from each inoculant treatment – LEM (Local effective microorganisms), FLEM (False local effective microorganisms), CONT (No inoculant) – within each cropping system – ARF (Annual ryegrass/ fallow) and CRS (Cereal rye/edamame soybean).

WINTER FAMILIES	----- ARF -----			----- CRS -----		
	LEM	FLEM	CONT	LEM	FLEM	CONT
	(Nematodes 100 cc soil ⁻¹)			(Nematodes 100 cc soil ⁻¹)		
Cephalobidae	204	164	165	220	290	307
Tylenchidae	197	142	144	322	640	756
Pratylenchidae	159	328	125	6	27	0
Hoplolaimidae	51	17	9	7	1	0
Aphelenchoididae	132	85	49	229	317	381
Aporcelaimidae	13	15	22	7	9	0
Criconematidae	2	5	0	0	0	0
Rhabditidae	27	46	51	0	28	16
Dorylaimidae	6	1	5	0	0	0
Monhysteridae	7	7	17	2	1	0
Alaimidae	2	5	1	0	1	1
Mononchidae	11	9	4	2	2	2
Plectidae	13	4	7	5	11	6
Trichodoridae	19	25	42	11	18	13
Diptherophoridae	51	50	35	2	6	5

Table S3. Average number of nematode families identified in summer samples from each inoculant treatment – LEM (Local effective microorganisms), FLEM (False local effective microorganisms), CONT (No inoculant) – within each cropping system – ARF (Annual ryegrass/ fallow) and CRS (Cereal rye/edamame soybean).

SUMMER FAMILIES	----- ARF-----			----- CRS -----		
	LEM	FLEM	CONT	LEM	FLEM	CONT
	(Nematodes 100 cc soil ⁻¹)			(Nematodes 100 cc soil ⁻¹)		
Cephalobidae	207	241	190	157	191	153
Tylenchidae	86	78	68	97	99	87
Pratylenchidae	34	53	44	5	5	0
Hoplolaimidae	37	27	7	30	12	2
Aphelenchoididae	45	46	30	45	53	60
Aporcelaimidae	0	0	0	0	0	0
Criconematidae	0	4	1	0	0	0
Rhabditidae	38	22	34	36	46	32
Dorylaimidae	18	9	12	22	6	8
Monhysteridae	31	23	11	22	4	15
Alaimidae	1	2	0	0	0	1
Mononchidae	7	7	7	17	10	7
Plectidae	5	6	3	1	1	3
Trichodoridae	22	23	18	23	35	42
Diptherophoridae	44	67	56	0	7	3