Supplementary material

Tables

Table S1

Mortality of microorganism isolated from vermicompost to Meloidogyne incognita (24 h).

Strain	Mortality (%）	Corrected mortality（%）
YL1	97.33±0.67a	97.01±0.75a
YL5	92.00±1.15a	91.04±1.29b
YL6	96.00±1.15a	95.52±1.29ab
YL17	94.00±2.31a	93.28±2.59ab
YL31	95.33±1.76a	94.78±1.97ab
EF43	92.67±1.76a	91.76±1.97ab
CK	10.67±2.91b	-

The data in the table are mean ± standard deviation. Different letters in the same column indicate significant difference at P<0.05 level by Duncan's test.

Table S2

Inhibitory effects of antagonistic microorganism on Meloidogyne incognita associated with different dilution factors.

Time	Strain	Two-fold dilution(2X)		Three-fold dilution(3X)		Five-fold dilution(5X)	
		Mortality (%）	Corrected mortality（%）	Mortality (%）	Corrected mortality（%）	Mortality（%）	Corrected mortality（%）
24h	YL1	92.00±1.15a	91.18±1.27c	90.67±1.76a	89.78±3.35a	83.33±1.76a	82.27±3.25d
	YL5	82.00±3.06c	80.15±3.37a	75.33±2.40b	72.99±4.56b	46.00±1.15d	42.55±2.13a
	YL6	90.00±1.15abc	88.97±1.23bc	88.00±2.00a	86.86±3.79a	80.00±2.00a	78.73±3.68d
	YL17	85.33±2.67abc	83.83±2.94abc	80.67±2.41b	78.83±4.56b	72.67±2.40b	70.92±4.43b
	YL31	89.33±0.67ab	88.24±0.74c	86.67±1.76a	85.40±3.35a	78.67±1.76ab	77.31±3.25cd
	EF43	83.33±1.76bc	81.62±1.95ab	79.33±0.67b	77.37±1.26b	56.00±3.46c	53.19±6.38c
	CK	9.33±4.37d	-	8.67±1.76c	-	6.00±0.00e	-
48h	YL1	97.33±1.33a	96.87±1.56a	94.00±1.15a	93.08±2.31b	86.00±1.15a	84.56±2.21c
	YL5	88.67±2.91b	86.72±3.41b	81.33±1.76c	78.46±3.52a	60.00±1.15c	55.90±2.21a
	YL6	95.33±1.33ab	94.53±1.26ab	92.00±1.15a	90.77±2.31b	85.33±1.76a	83.83±3.37c
	YL17	90.67±2.91ab	89.06±3.41ab	86.00±2.31bc	83.85±4.62a	77.33±1.76b	75.01±1.96b
	YL31	92.67±1.33ab	91.41±1.56c	91.33±1.33ab	90.00±2.67b	83.33±1.33a	81.62±2.55c
	EF43	90.00±2.00ab	88.28±2.34ab	82.00±2.00c	79.23±4.00a	64.67±2.91c	61.04±5.55a
	CK	14.67±3.71c	-	13.33±2.40d	-	9.33±0.67d	-

The data in the table are mean ± standard deviation. Different letters in the same column indicate significant difference at P<0.05 level by Duncan's test.

Figures

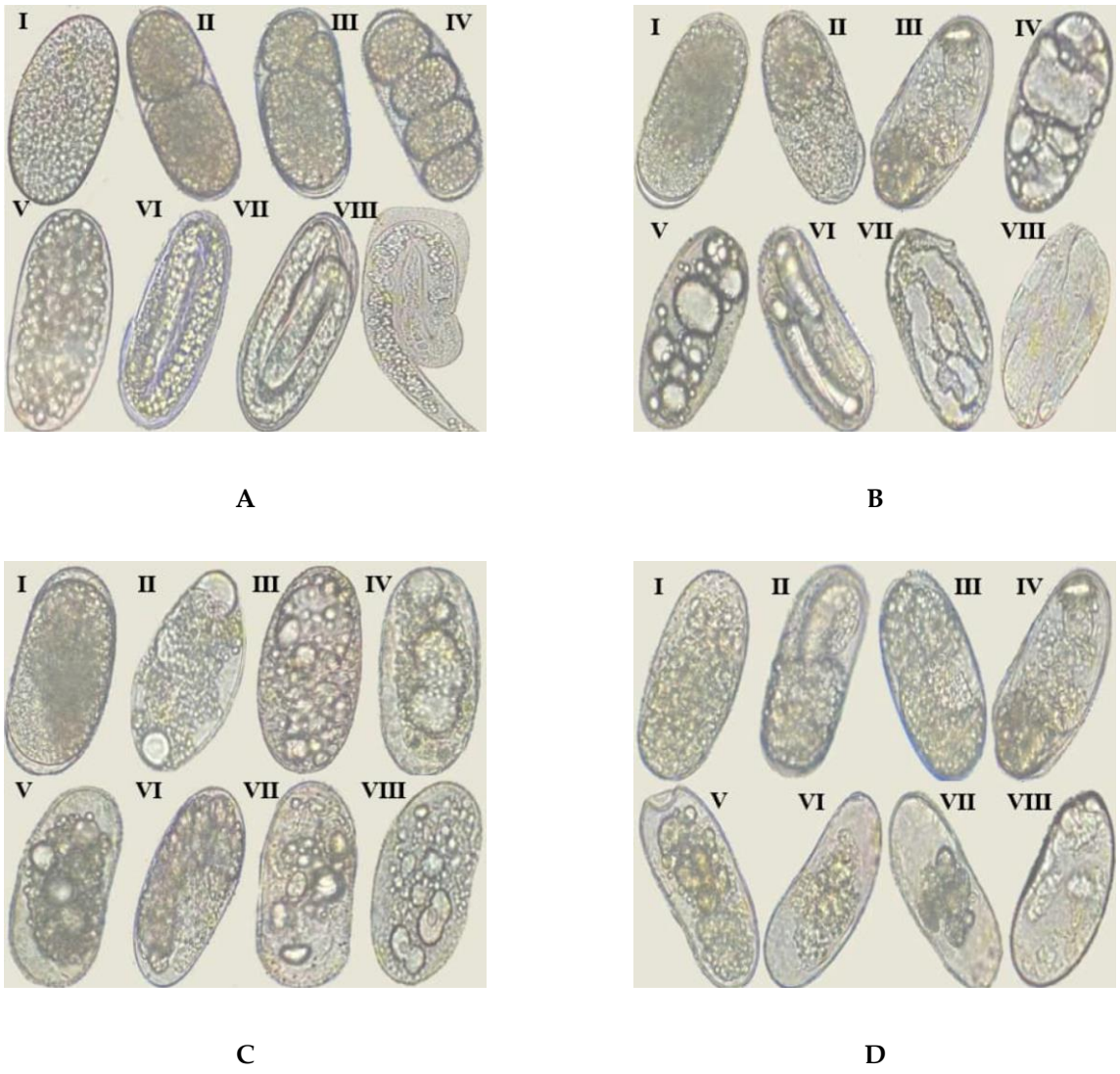

Figure S1. Effects of antagonistic bacteria on various development stages of root-knot nematode eggs（A：Normal root-knot nematode egg development; B, C, D:The development of root-knot egg treated by strains YL1, YL6 and YL31, respectively; Ⅰ-Ⅷ:Single-cell stage, twin-cell stage, triple-cell stage, four-cell stage, blastula stage, gastrula stage, first-instar larval stage, and second-instar larval stage, respectively). YL1, YL6 and YL31 represent three antagonistic bacteria against root-knot nematodes isolated from vermicompost.

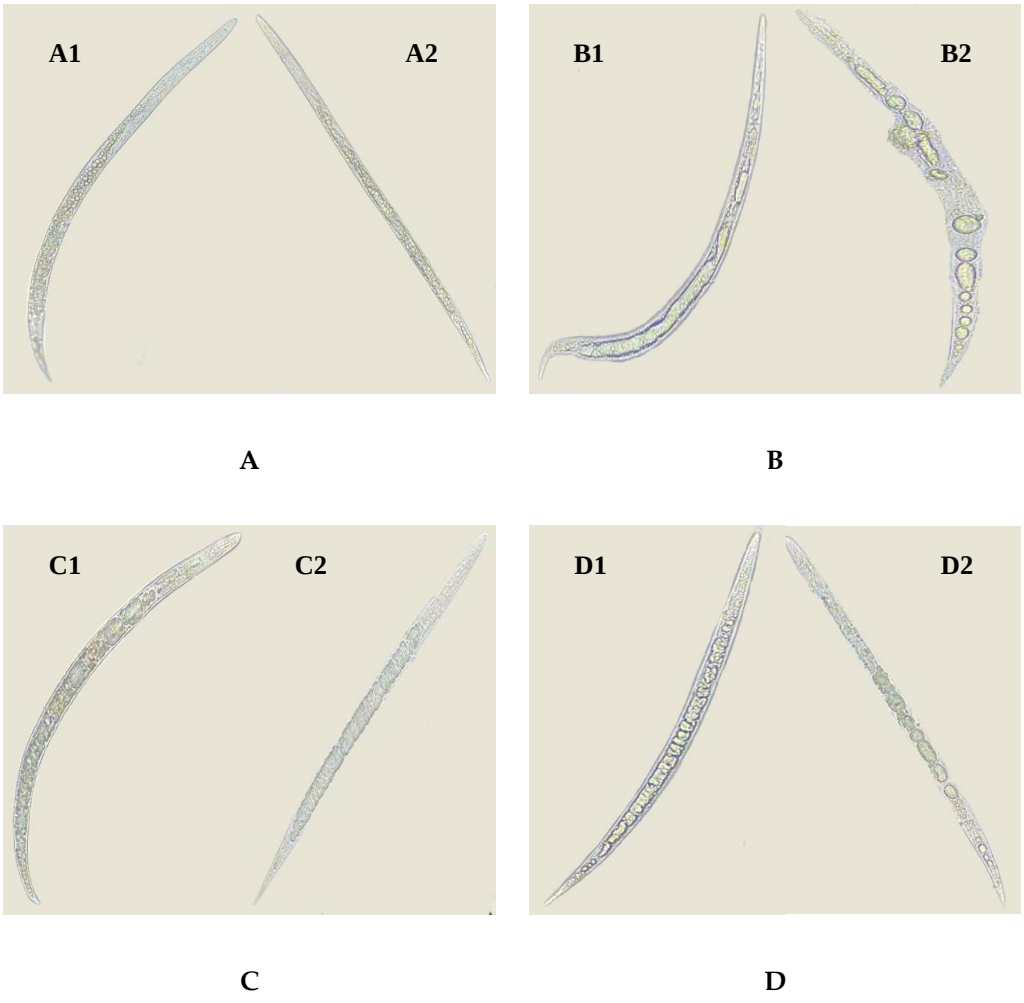

Figure S2. Effects of antagonistic bacteria on J2. A-D: the fermentation broths of the control and strains YL1, YL6 and YL31, respectively; 1 indicates the 12 h treatment, and 2 indicates the 24 h treatment). YL1, YL6 and YL31 represent three antagonistic bacteria against root-knot nematodes isolated from vermicompost.

Figure S3. Pictures of tomato pot experiment (A) and cucumber field experiment(B).