

# Supporting Online Material for

## **Root-associated antagonistic *Pseudomonas* spp. contribute to soil suppressiveness against banana *Fusarium* wilt disease of banana**

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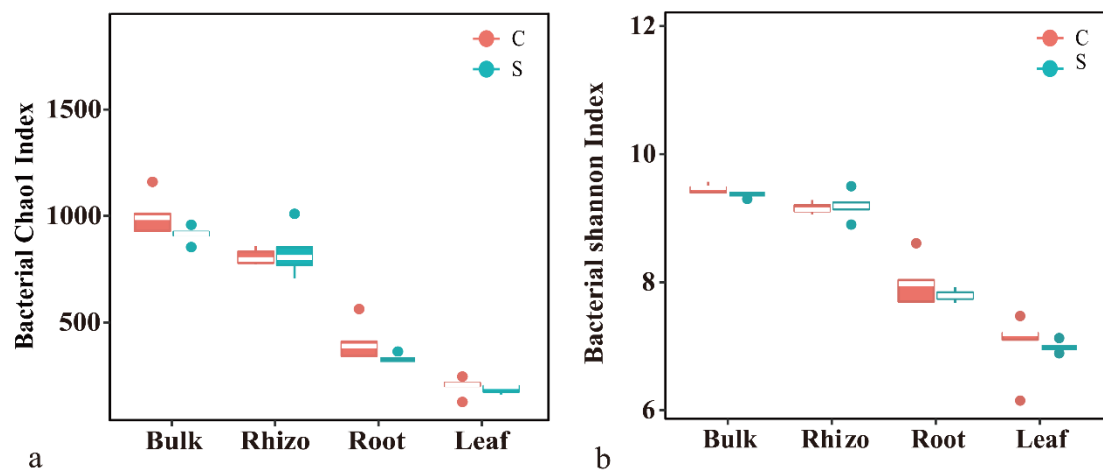
## Supplemental table

**Table S1.** Basic soil physicochemical properties from these paired banana orchards

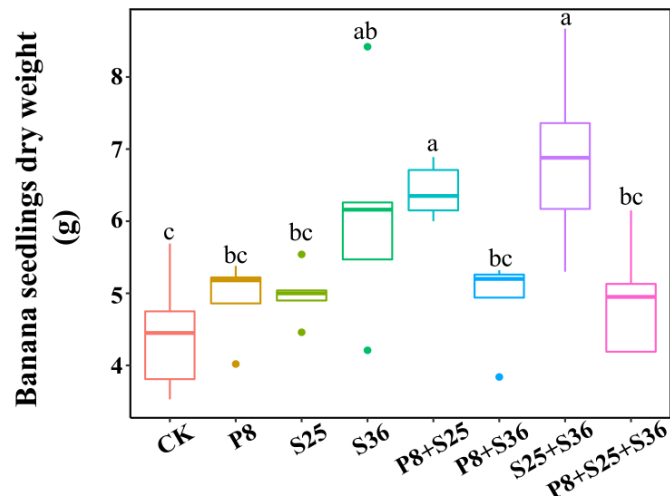
Soil type	PH	Total Carbon (g/kg)	Total Nitrogen (g/kg)	Available Phosphorus (mg/kg)	Available Potassium (mg/kg)
Disease-suppressive soil	7.02	14.76	1.68	226	468
Disease-conducive soil	5.22	14.15	1.47	157	343

## Supplemental figures

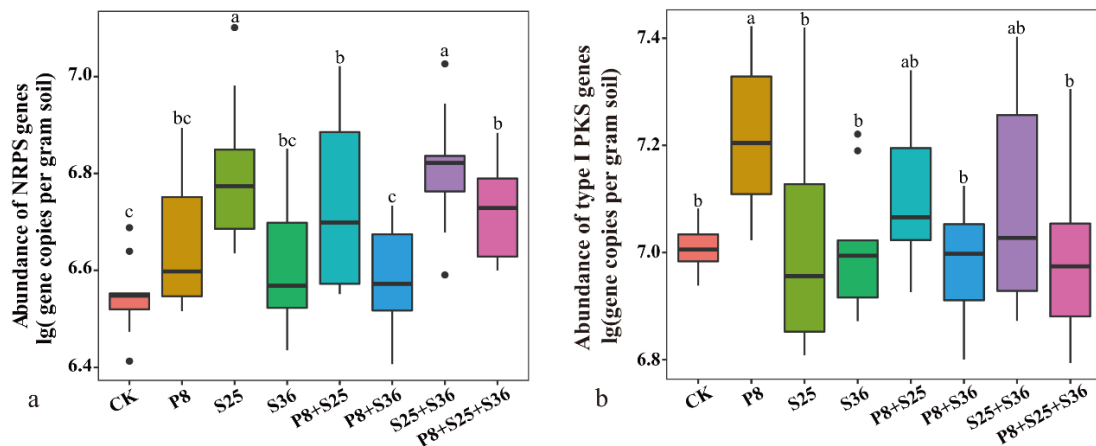
**Fig. S1** Alpha diversity Chao1 index (a) and Shannon index (b) of bacterial communities across all samples.



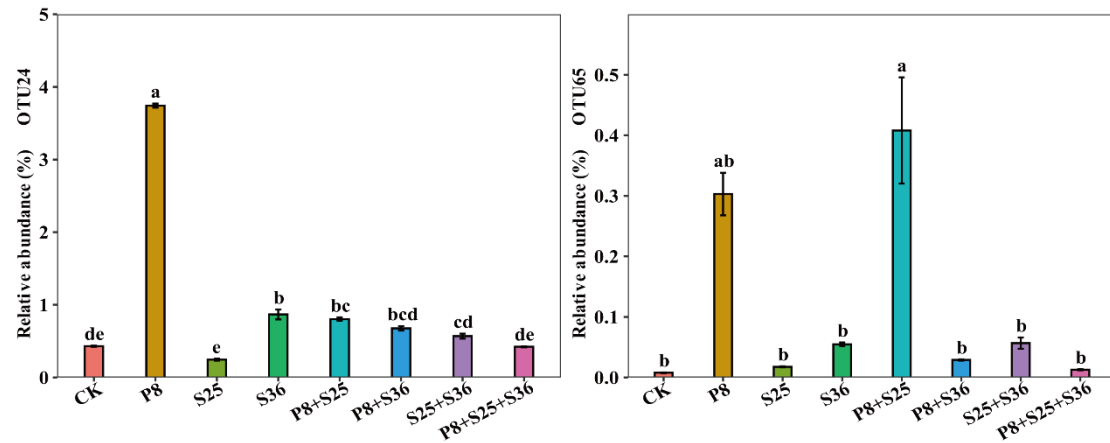
**Fig. S2** Banana seedlings dry weight of the pot experiment under pathogen invasion with the *Pseudomonas* inoculation (mean  $\pm$  SE). Different letters above the bars indicate significant differences at the 0.05 probability level according to Duncan's multiple range test (n=6). CK: control (treatment with *Foc* TR4 but without *Pseudomonas*).



**Fig. S3** Functional gene abundance from isolates inoculation experiment. Abundance of non-ribosomal peptide synthetase NRPS(a) and type I PKS genes (b) from rhizosphere under pathogen invasion with the *Pseudomonas* inoculation (mean  $\pm$  SE). Different letters above the bars indicate significant differences at the 0.05 probability level according to Duncan's multiple range test (n=6). CK: control (treatment with *Foc* TR4 but without *Pseudomonas*).



**Fig. S4** *Pseudomonas* OTUs with relative abundance greater than 0.1% from banana rhizosphere soils from different *Pseudomonas* inoculation treatments in pot experiment (mean  $\pm$  SE). Different letters above the bars indicate significant differences at the 0.05 probability level according to Duncan's multiple range test (n=6). CK: control (treatment with *Foc* TR4 but without *Pseudomonas*).



## Supplemental Sequences

### Sequences of key OTUs

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### Sequences of isolated strains

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