Table S1 Formulation of medium used

Medium name	Medium formulation (/L)
LB	10 g tryptone, 10 g NaCl, 5g yeast extract, 20 g agar, pH=7.2
0.1*LB	1 g tryptone, 1 g NaCl, 0.5g yeast extract, 20 g agar, pH=7.2
KB	20 g tryptone, KH2PO4 1.5 g, MgSO4 1.5 g, agar 10 g, pH=7.2-7.4
YG	5 g tryptone, 3 g yeast extract, 5 g glucose, 20 g agar, pH=7.2
TSA	solarbio, T8650-250g
R2A	solarbio, LA0700-250g
5*YEG	5 g yeast extract, 10 g glucose

Table S2 Identification of fungal pathogens

Isolate	Primer name	Amplicon size (bp)	Similarity (%)	Identification result
BEAN-1	TEF-1F/TEF-2R	825	97.67	*F. falciforme*
	TEF-1F/TEF-3R	900	99.40	
	EF-LF1/EF-LR1	1173	97.98	
	EF-LF1/EF-LR2	1217	95.88	
BEAN-3	TEF-1F/TEF-2R	813	98.87	*F. incarnatum*
	TEF-1F/TEF-3R	872	98.42	
	EF-LF1/EF-LR1	1175	96.31	
	EF-LF1/EF-LR2	1216	98.76	
BEAN-4	TEF-1F/TEF-2R	814	98.87	*F. oxysporum*
	TEF-1F/TEF-3R	870	97.92	
	EF-LF1/EF-LR1	1172	97.82	
	EF-LF1/EF-LR2	1220	98.06	

Table S3 The rhizosphere microbes isolated on six different mediums

Medium	Total of species	Species	The total number of microbial communities (cfu/ml)
TSA	8	*Bacillus aryabhattai* *Bacillus mycoides* *Bacillus pumilus* *Bacillus subtilis* *Fictibacillus barbaricus* *Neobacillus ginsengisoli* *Priestia aryabhattai* *Priestia megaterium*	2.63E+07
R2A	11	*Bacillus bataviensis* *Bacillus bingmayongensis* *Bacillus ferrooxidans* *Bacillus niacini* *Bacillus pseudomycoides* *Bacillus safensis* *Dyella thiooxydans* *Paenibacillus septentrionalis* *Priestia aryabhattai* *Priestia megaterium* *Sinomonas atrocyanea*	3.03E+07
LB	13	*Bacillus aryabhattai* *Bacillus ferrooxidans* *Bacillus mycoides* *Bacillus sporothermodurans* *Falsibacillus pallidus* *Neobacillus drentensis* *Neobacillus ginsengisoli* *Paenibacillus pabuli* *Priestia aryabhattai* *Priestia megaterium* *Ralstonia pickettii*	2.73E+07

		Streptomyces geysiriensis	
		Streptomyces triostinicus	
KB	7	*Bacillus cereus* *Fictibacillus barbaricus* *Neobacillus citreus* *Neobacillus ginsengisoli* *Paenibacillus silvae* *Priestia aryabhattai* *Priestia megaterium*	5.13E+07
0.1LB	6	*Gottfriedia acidiceleris* *Neobacillus niacini* *Paenibacillus cellulositrophicus* *Priestia megaterium* *Streptomyces anandii* *Trinickia diaoshuihuensis*	3.56E+07
YG	11	*Bacillus anthracis* *Bacillus aryabhattai* *Bacillus ferrooxidans* *Bacillus pseudomycoides* *Bacillus zanthoxyli* *Fictibacillus barbaricus* *Heyndrickxia oleronia* *Neobacillus ginsengisoli* *Priestia aryabhattai* *Priestia megaterium* *Rossellomorea marisflavi*	2.16E+07