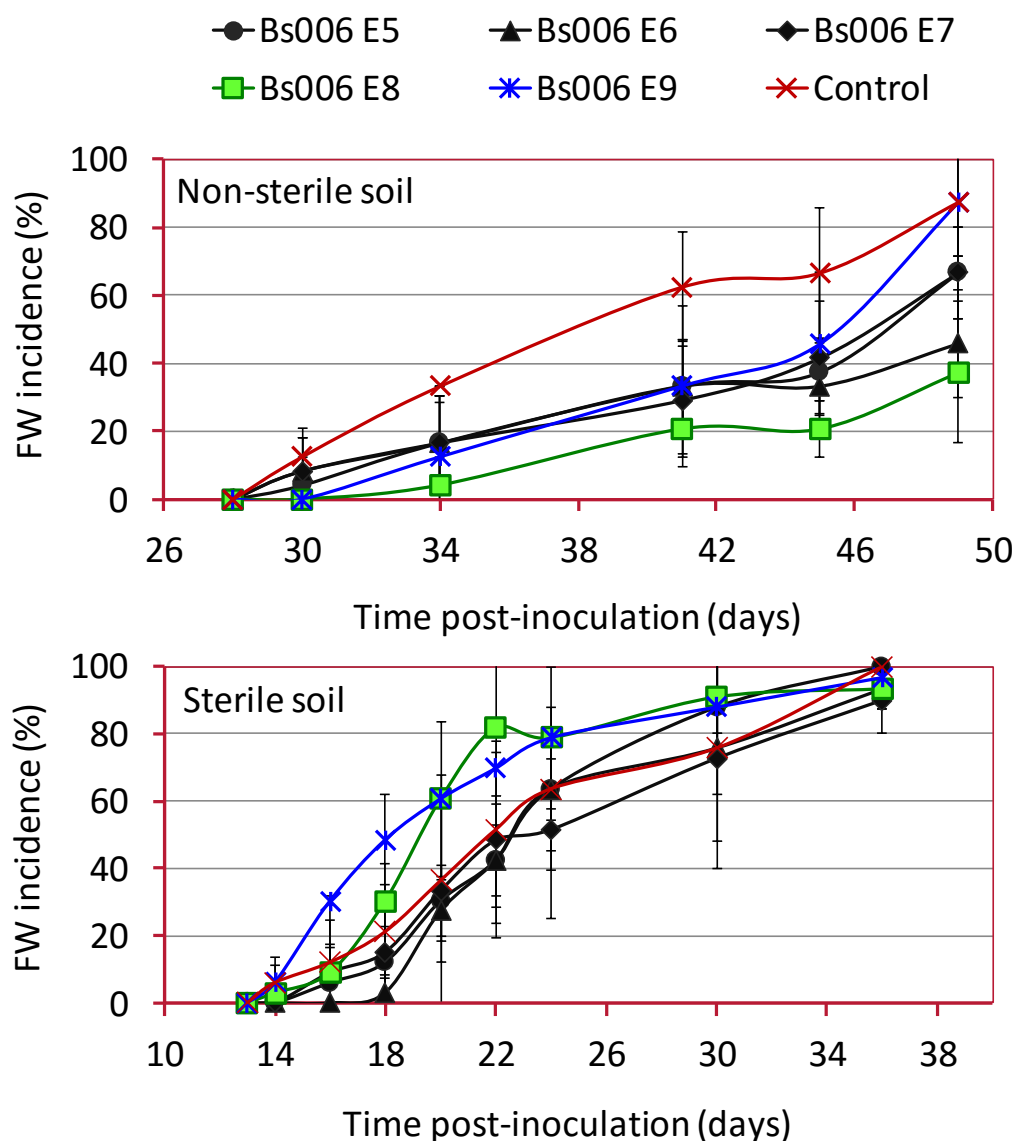


Supplementary material Figure S1 Fusarium wilt incidence progress curves in cape gooseberry plants treated with different concentrations of *B. velezensis* Bs006 (Bs006 E5: 1×10^5 to Bs006 E9: 1×10^9 cfu.mL⁻¹) in natural soil (Non-sterile soil) or autoclave-sterilized soil (Sterile soil). Concentrations of Bs006 were adjusted diluting the fermented broth of Bs006 (LB, 48 h, 125 rpm, 30 °C) with water. Data series are mean from four (non-sterile soil) and three (sterile soil) replicates. Bars represent the standard deviation of the data.



Supplementary material Table S1 Rate of Fusarium wilt incidence development in Cape gooseberry in response to the application of different concentrations of *B. velezensis* Bs006^a

Bs006 concentration (cfu.mL ⁻¹)	Non-sterile soil			Sterile soil		
	Rate of change in disease incidence (logit) (± error) ^{b,c}	Intercept (± error) ^c	<i>R</i> ²	Rate of change in disease incidence (logit) (± error) ^{b,c}	Intercept (± error) ^c	<i>R</i> ²
10 ⁵	0.47 ± 0.106	-21.41 ± 4.291	0.87	0.59 ± 0.141	-15.01 ± 3.700	0.85
10 ⁶	0.33 ± 0.067	-15.58 ± 2.720	0.89	0.60 ± 0.241	-16.58 ± 6.332	0.68
10 ⁷	0.37 ± 0.046	-17.05 ± 1.890	0.95	0.48 ± 0.153	-12.75 ± 4.024	0.76
10 ⁸	0.62 ± 0.118	-29.55 ± 4.781	0.90	0.27 ± 0.080	-5.11 ± 2.116	0.79
10 ⁹	0.73 ± 0.087	-32.15 ± 3.545	0.96	0.25 ± 0.017	-4.79 ± 0.461	0.99
Untreated control	0.32 ± 0.065	-12.91 ± 2.634	0.89	0.35 ± 0.025	-7.87 ± 0.672	0.89

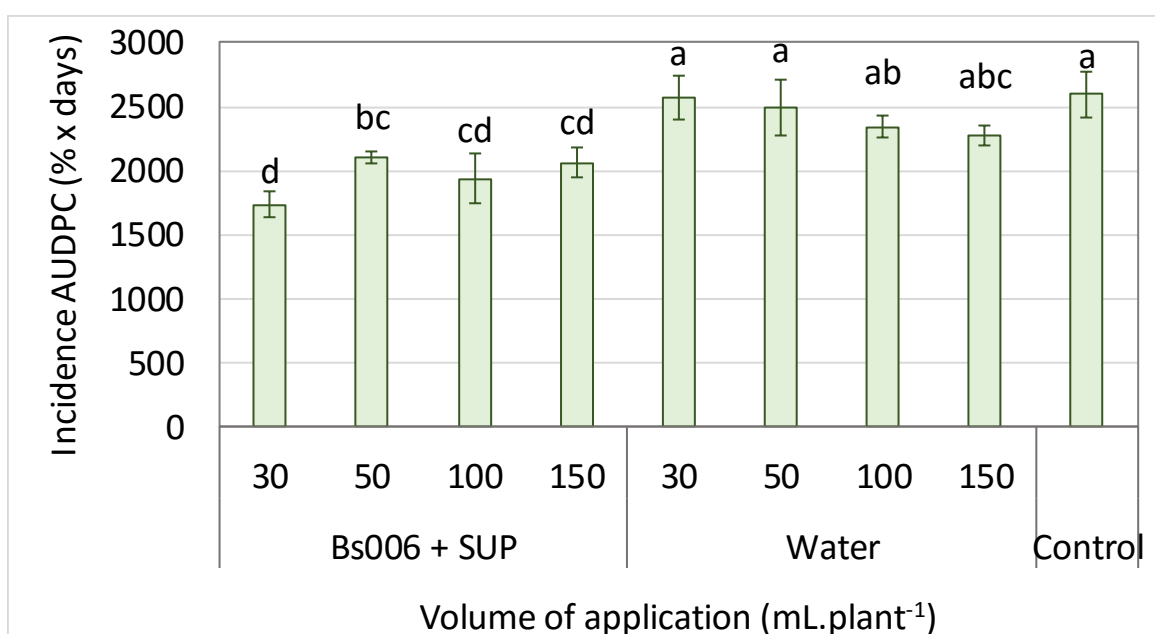
^a Disease incidence values are based on epidemics that developed for 49 and 36 days after inoculation in non-sterile soil and sterile soil experiments, respectively (depicted in Figure S1).

^b Logit values ($\ln[x/(100 - x)]$) where x = disease incidence value in the range of 0.001 to 99.5%, were calculated to describe the epidemic rate. The change was calculated according to the slope and intercept of the linear regression line for time (X-axis) versus disease incidence logit values (Y-axis). This procedure was used based on methodology described by Elad et al. (2010).

^c Error of estimated parameters of linear regression line

Elad Y, Rav David D, Meller Harel Y, et al (2010) Induction of systemic resistance in plants by biochar, a soil-applied carbon sequestering agent. *Phytopathology* 100:913–921. doi: 10.1094/PHYTO-100-9-0913

Supplementary material Figure S2 Comparison of the effects between the application of several volumes (30, 50, 100 and 150 mL.plant⁻¹) of both water and the mixture of Bs006-cells with supernatant (Bs006 + SUP) treatments against Fusarium wilt of cape gooseberry. The expressed variable is the area under Fusarium wilt incidence progress curve at 76 days after inoculation (in non-sterile soil). Bs006 was grown during 48 h in LB broth at 30 °C and 150 rpm. Concentration of Bs006-cells was adjusted to 1x10⁸ cfu.mL⁻¹ in supernatant solution (10 %) in tap water. Control consisted of plants growing in soil inoculated with pathogen and not treated. Columns with the same letter are significantly not different according to Tukey test ($\alpha=0.05$). Bars on the columns represent the standard deviation of the mean (n= 4)

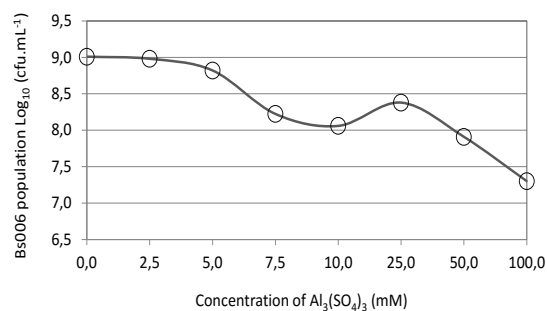
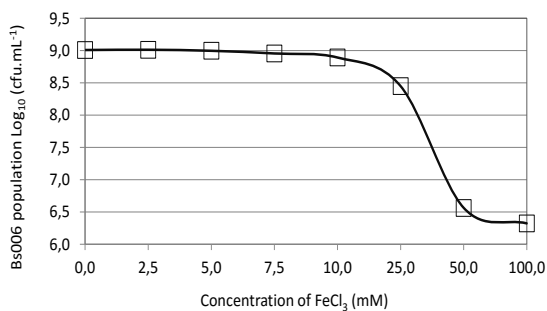
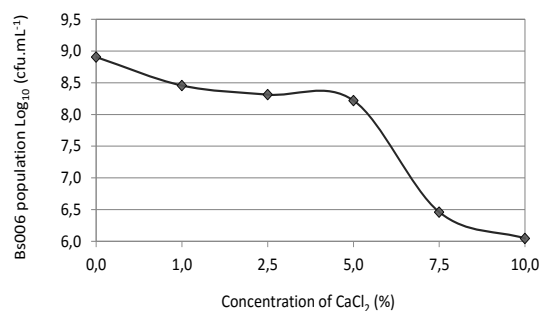
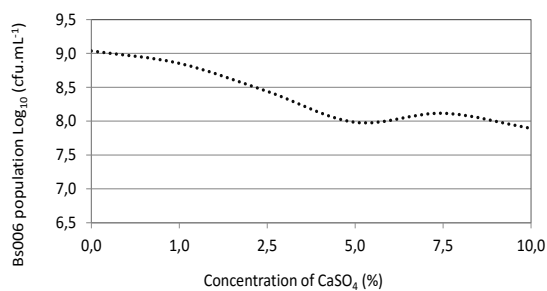
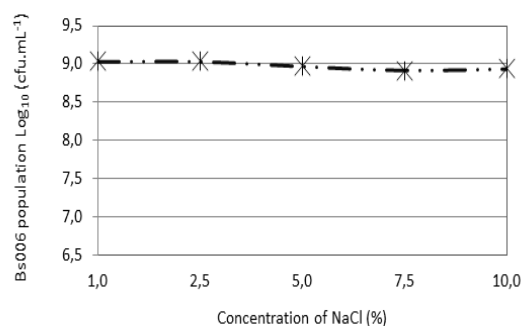
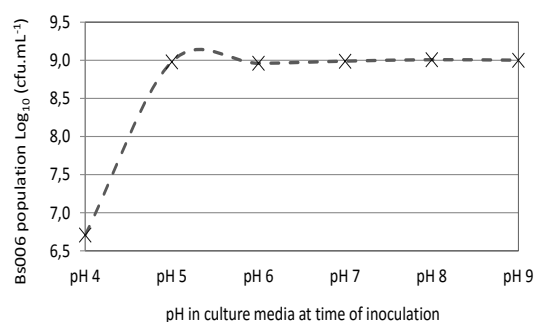


Supplementary material Table S2 Chemical analysis of non-autoclaved and autoclaved andosol regularly used for biocontrol assays

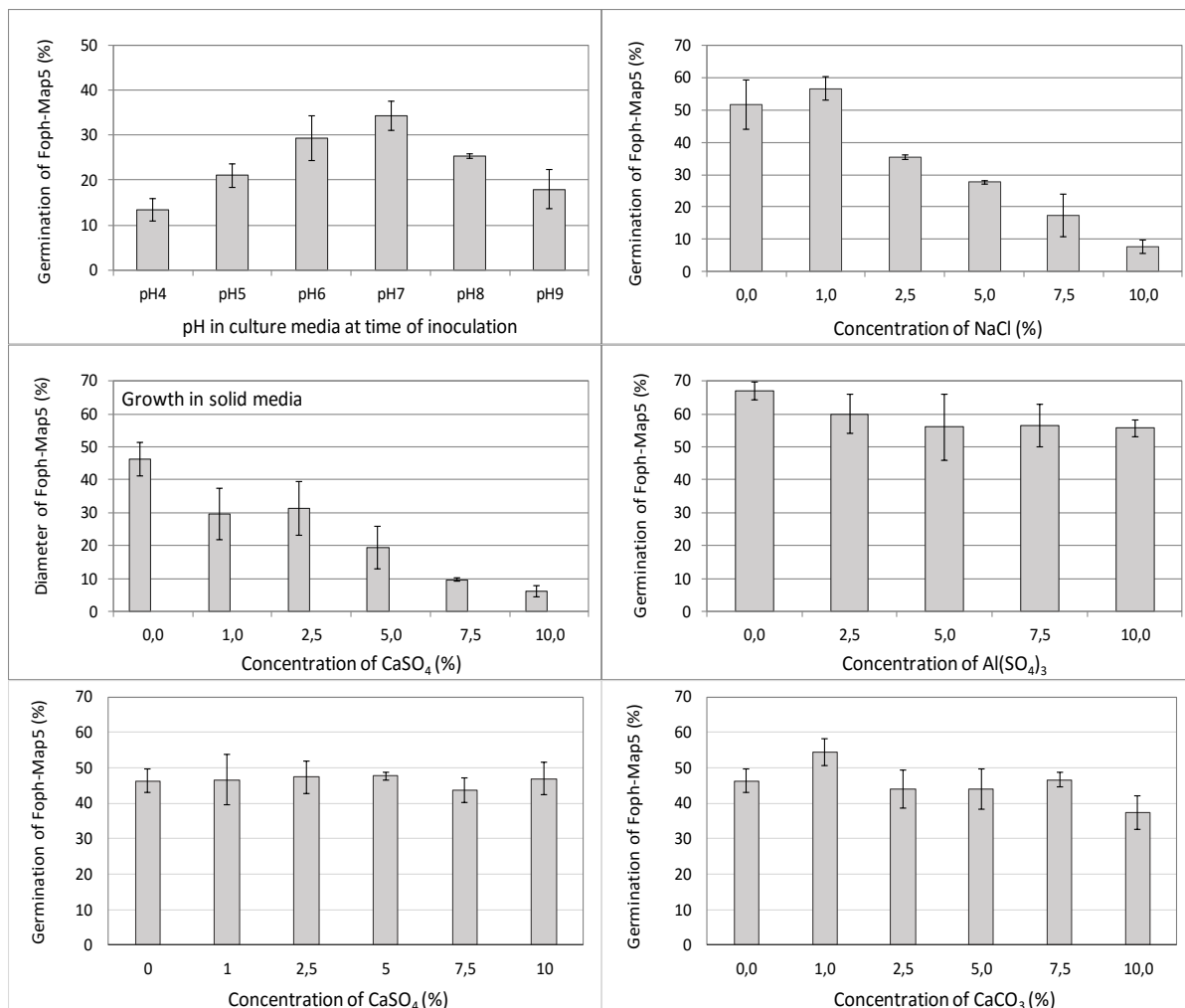
Variable / Method	Units	Non-autoclaved soil	Autoclaved soil
pH	pH Units	5.78	5.45
Electric conductivity / NTC 5596:2008	dS.m ⁻¹	2.46	4.68
Organic matter Walkey & Black	g.100g ⁻¹	8.95	8.40
Available phosphorus (P) / Bray II	mg.Kg ⁻¹	22.79	34.07
Available sulfur (S) / monobasic calcium phosphate	mg.Kg ⁻¹	155.57	1.25
Exchange acidity (Al+H) / KCl	cmol ⁽⁺⁾ .Kg ⁻¹	0.00	0.21
Exchange aluminum (Al) / KCl	cmol ⁽⁺⁾ .Kg ⁻¹	0.00	0.00
Exchange calcium (Ca) / NTC 5349:2008	cmol ⁽⁺⁾ .Kg ⁻¹	13.81	5.98
Exchange magnesium (Mg) / NTC 5349:2008	cmol ⁽⁺⁾ .Kg ⁻¹	1.23	2.97
Exchange potassium (K) / NTC 5349:2008	cmol ⁽⁺⁾ .Kg ⁻¹	0.64	1.61
Exchange sodium (Na) / NTC 5349:2008	cmol ⁽⁺⁾ .Kg ⁻¹	0.12	0.71
Cation exchange capacity (CEC) / Sum of cations	cmol ⁽⁺⁾ .Kg ⁻¹	15.81	11.48
Available iron (Fe) / Olsen NTC 5526:2007	mg.Kg ⁻¹	294.70	229.96
Available manganese (Mn) / Olsen NTC 5526:2007	mg.Kg ⁻¹	2.08	79.33
Available zinc (Zn) / Olsen NTC 5526:2007	mg.Kg ⁻¹	8.90	6.73
Available copper (Cu) / Olsen NTC 5526:2007	mg.Kg ⁻¹	2.43	1.87
Available boron (B) / monobasic calcium phosphate	mg.Kg ⁻¹	0.35	0.14

NTC: Norma Técnica Colombiana (Colombian technical standard)

Supplementary material Figure S3 Growth of Bs006 under different conditions of pH and content of salts in LB medium. LB broth (40 mL in Erlenmeyer-125 mL) was inoculated with *B. velezensis* Bs006 cells (24 h old) at 5×10^6 cfu.mL⁻¹. pH in salts experiments was adjusted at 7 before the autoclaving. Inoculated broth was incubated for 48 h at 28 °C and shaking (125 rpm). Each experiment was repeated once and data are the mean of three Erlenmeyer from one experiment.



Supplementary material Figure S4 Germination of microconidia of *F. oxysporum* f. sp. *physali* Map5 (Foph-Map5) under different conditions of pH and content of salts in PDB medium. Bioassays were carried out in sterile flat-bottom 96-well microtiter plates (FALCON®, CORNING) or in solid media (PDA+CaSO₄). PDB (250 µL) adjusted according to each condition were dispensed in each well (3 replicates). Initial concentration of FOX-Map5 was adjusted at 1×10^7 microconidia.mL⁻¹. Inoculated broth was incubated for 24 h at 28 °C and shaking (125 rpm). Samples were taken after 24 h and germination was measured with a light microscope. The experiment was carried out twice. Consistent behavior was observed between experiments and presented data correspond to average of three wells from one experiment. Bars represent standard deviation (n= 3).



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