

Table S1. Disease index of wheat heads

Treatment	Disease Index
control	96.67
Bacillomycin D	56.67

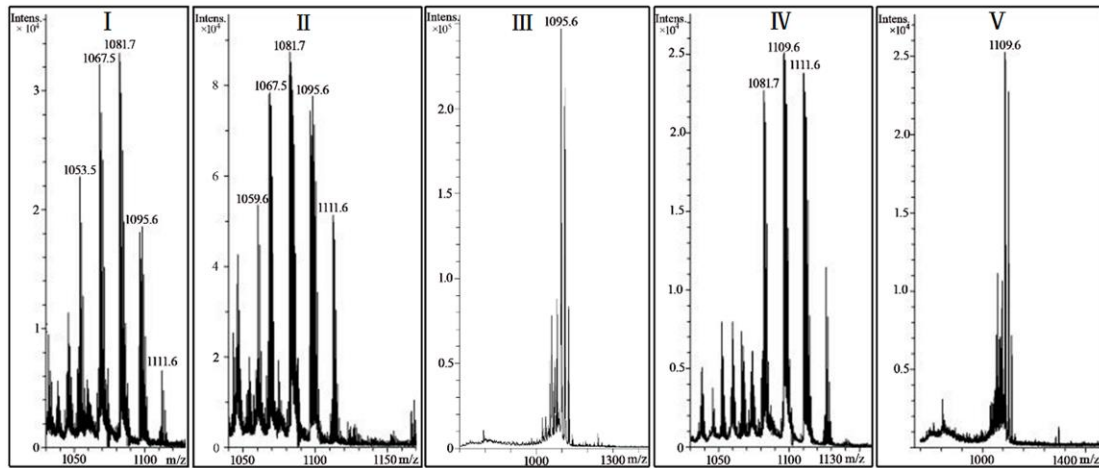


Figure S1. Five fractions (I to V) separated and collected by reversed-phase HPLC were used for the analysis of MALDI-TOF-MS

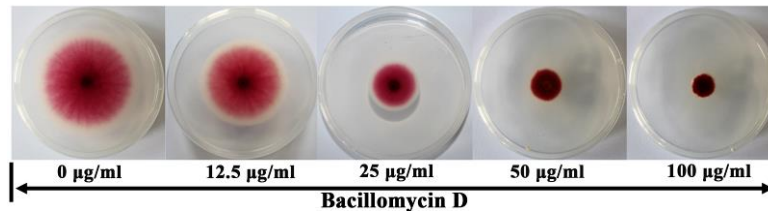


Figure S2 Inhibitory effect of bacillomycin D on mycelial growth of *F. graminearum*

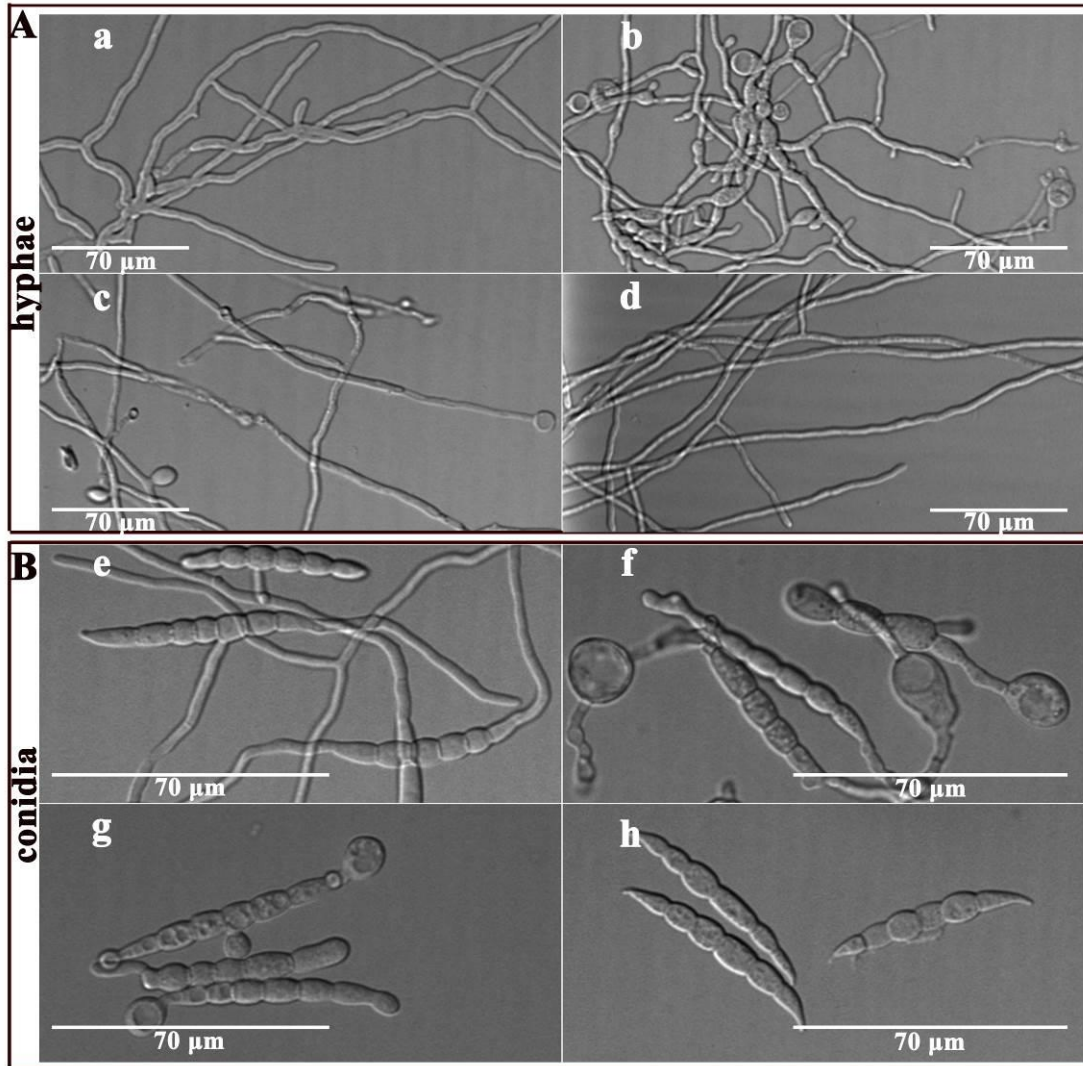


Figure S3. Different concentration of bacillomycin D's effect on the morphology of *F. graminearum* PH-1's hyphae (A) and conidia (B) observed by light microscope. a and e, Control; b-d, hyphae was treated with 9, 18 and 36 μg/ml bacillomycin D, respectively; f-h, conidia was treated with 9, 18 and 36 μg/ml bacillomycin D, respectively.

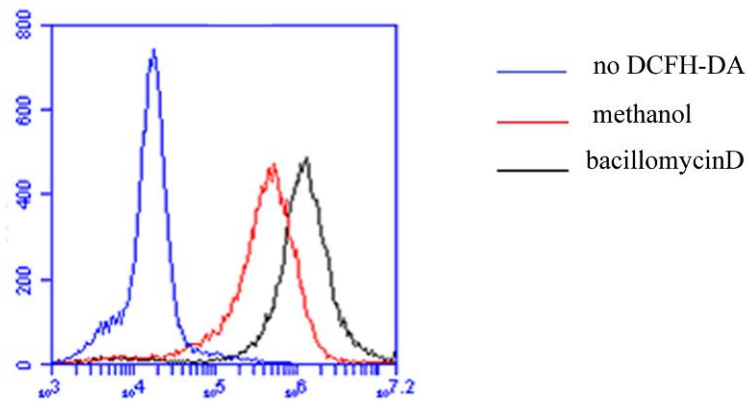


Figure S4. Detection of ROS was based on DCFH-DA staining after treatment with bacillomycin D for 5 h using Flow cytometry fluorescence. The style of Flow cytometry is BD Accuri C6 (Becton, Dickinson and Company, USA). The detection method is according the reference reported by Ehgartner et.al (2016, Appl Microbiol Biotechnol. 100(12):1-11). The blue line means the conidia was treated without DCFH-DA; the red line means the conidia was treated with methanol and DCFH-DA; the black line means the conidia was treated with bacillomycin D and DCFH-DA.

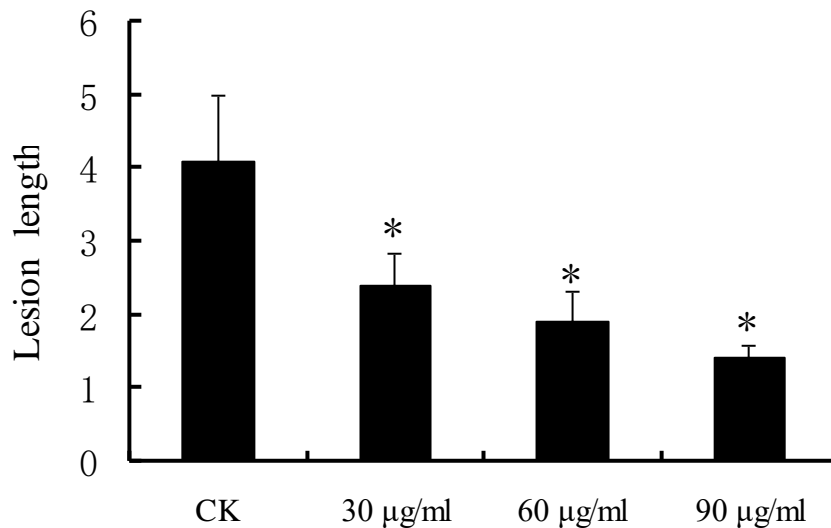


Figure S5. The lesion lengths on the corn silks infected by *F. graminearum*. Corn silks were inoculated with a plug of 0.6 cm diameter containing mycelium of *F. graminearum* PH-1 and then treated with 30 to 90 µg/mL bacillomycin D.