

Supplementary Materials

Confocal microscopy analyses

Biofertilizer 1 was the only one to demonstrate endophytic capacity in rice roots.

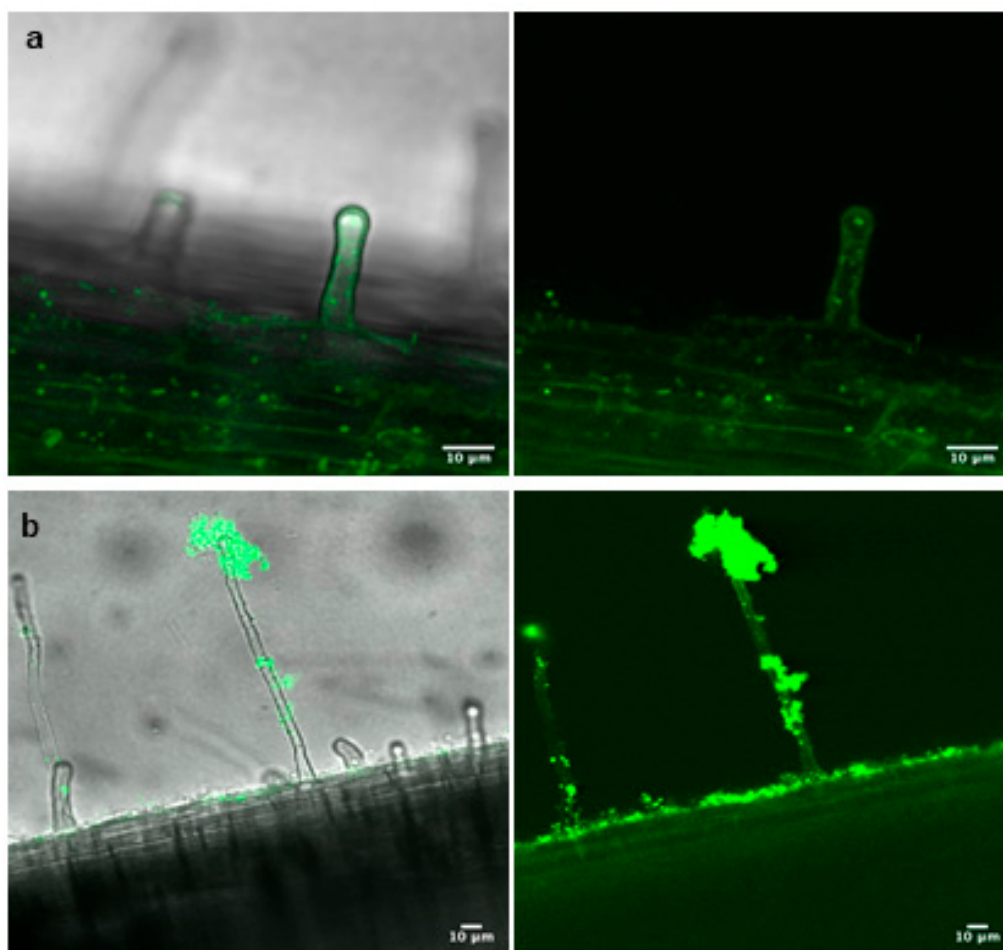


Figure S1. Biofertilizers in the rice roots. (a) Micrographs showing the localization of rhizobacterial consortia 1 and 3 (b) by confocal microscopy in rice roots. In each panel, merged images from the rhizobacteria fluorescence and bright-field illumination are shown at the top. Fluorescence of both bacteria and plant membranes is shown at the bottom. Brightness and contrast were enhanced to improve visibility. Scale bar, 10 μm .

Material and Methods

To determine bacterial association to rice roots, two roots were excised from each plant ($n=2$ per treatment) and washed with tap water before incubation for 10 min at RT in a solution containing the fluorescent probe FM 1–43 (0.1 mg/ml DMSO; Molecular Probes). This dye, specifically staining membranes, is commonly used to visualize the shape of a cell by confocal microscopy (Mariscal et al., 2016). The root samples were washed twice with tap water prior to mounting on a glass slide. Samples were examined with a Leica TCS SP2 confocal microscope using a HCX PLAM-APO $\times 63$ 1.4 NA oil immersion objective. FM 1–43; fluorescence was excited with 488 nm irradiation from an Argon laser, and fluorescence emission was monitored across windows of 510–543 nm. Z series containing 90 to 130 frames were stacked and processed with the Image J program (version 1.41).