



S Fig. 1 The relations between bacterial community and environmental factors. S, straw; V, vetch; a = 0, b = 15, c = 30 kg ha<sup>-1</sup> N from vetch; NSV, no straw or vetch. TC, total carbon; TN, total nitrogen; AOC, activated organic carbon; MBC, microbial biomass carbon; MBN, microbial biomass nitrogen; NH<sub>4</sub>-N, ammonium nitrogen; NO<sub>3</sub>-N, nitrate nitrogen; AN, alkali-hydrolysable nitrogen; AK, available potassium; AP, available phosphorus; BD, bulk density; WFPS, water-filled pore space; CH<sub>4</sub>mean, cumulative emission of methane in the early rice season (from pot experiment); .