



**S7 Fig. Symbiotic performance of  $\Delta znuA$  and *mdtA::pVO* mutants derived from *S. fredii* CCBAU45436 on *Glycine soja* W05 and *Glycine max* C08. (A) Soybean shoot and nodule morphology from the plant inoculated with the corresponding strains. Scale bar = 1 mm (indicates the size of nodules). (B) Host plant responses to inoculation of *mdtA::pVO* mutant. The red and yellow arrows in rightmost panel point to normal external morphological nodule and nodule-like bumps. Scale bar = 1 cm.**