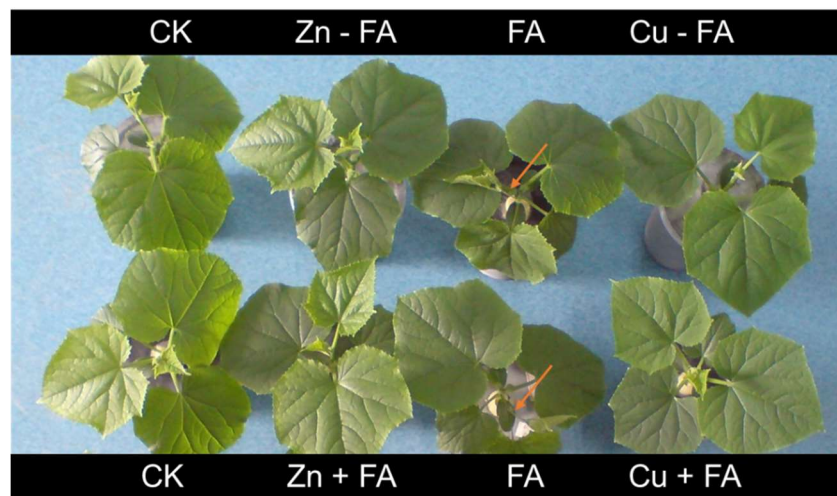
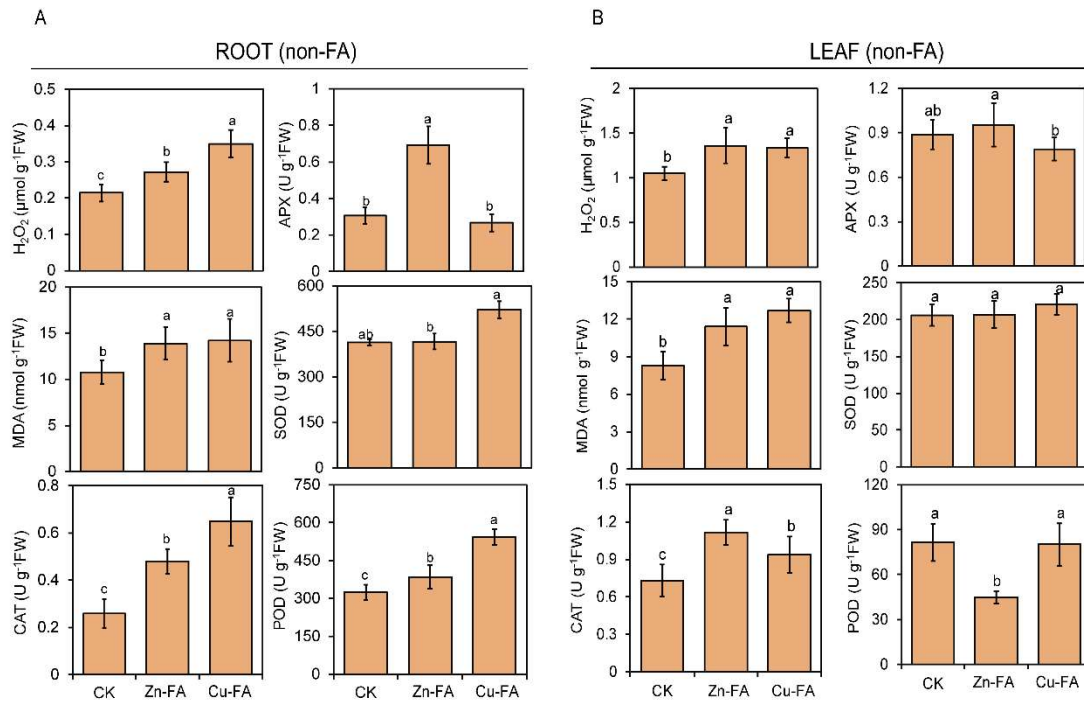


**Supplementary Materials:**



**Figure S1.** Effect of copper or zinc on the growth of cucumber seedlings in absence or presence of the FA conditions. Plants of 3-week-old seedlings of cucumber plants were immersed in Hoagland solutions with or without indicated concentrations of FA ( $2 \mu\text{g ml}^{-1}$ ) or copper or zinc for 2 days. CK, control plants receiving  $0.5 \times$  Hoagland nutrient solution, without FA; FA,  $0.5 \times$  Hoagland nutrient solution, with FA; Zn-FA,  $0.5 \times$  Hoagland nutrient solution containing Zn of  $48 \mu\text{M}$ , without FA; Cu-FA,  $0.5 \times$  Hoagland nutrient solution containing Cu of  $20 \mu\text{M}$ , without FA; Zn + FA,  $0.5 \times$  Hoagland nutrient solution containing Zn of  $48 \mu\text{M}$ , with FA; Cu + FA,  $0.5 \times$  Hoagland nutrient solution containing Cu of  $20 \mu\text{M}$ , with FA. The red arrow indicates wilting.



**Figure S2.** Effects of Zn or Cu on the activities of H<sub>2</sub>O<sub>2</sub>, MDA and antioxidant enzyme in roots (A) and leaves (B) of cucumber plants supplemented Zn or Cu, without FA. Plants of 3-week-old seedlings of cucumber plants were immersed in Hoagland solutions with or without indicated concentrations of copper or zinc for 24 h. Bars represent standard deviation with five replications each. Different letters above bars indicate significant differences ( $p < 0.05$ , Duncan's multiple range test) among different treatments.