



Supplementary Figure 1 The effects of varying ethylene concentrations (0.5 mM, 1.0 mM, 2.0 mM, and 5.0 mM) on the germination rate and germination index of peanut seeds using different treatment methods: continuous ethylene soaking, or ethylene soaking for 12 hours followed by sterile water soaking. **(a)** Germination rates at various times with continuous ethylene soaking (0.5 mM, 1.0 mM, 2.0 mM, and 5.0 mM). **(b)** Germination indexes with continuous ethylene soaking at the different concentrations. **(c)** Germination rates at different times for seeds soaked in different concentrations of ethylene for 12 hours, followed by sterile water soaking. **(d)** Germination indexes for seeds treated with various ethylene concentrations for 12 hours, followed by sterile water soaking. Germination rate = (Number of Germinated Seeds/Total Number of Seeds Tested) \times 100%; Germination Index = $\sum(Gt/Dt)$, where Gt is the number of seeds germinated on day t and Dt is the number of days since the experiment began.