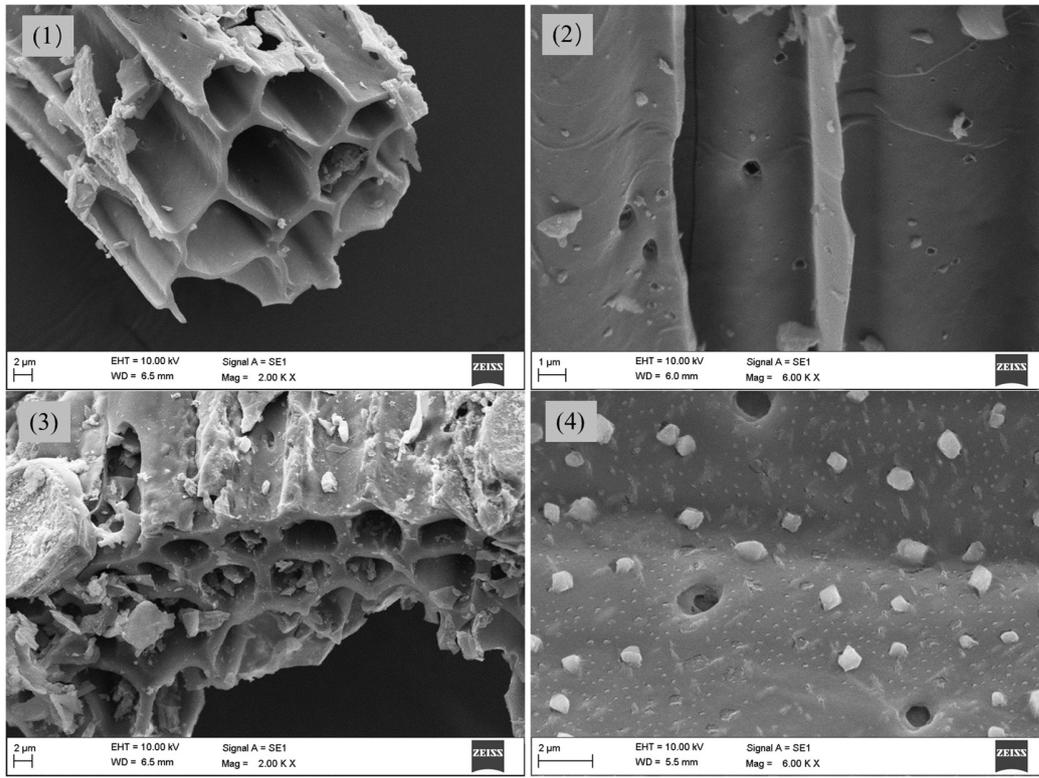
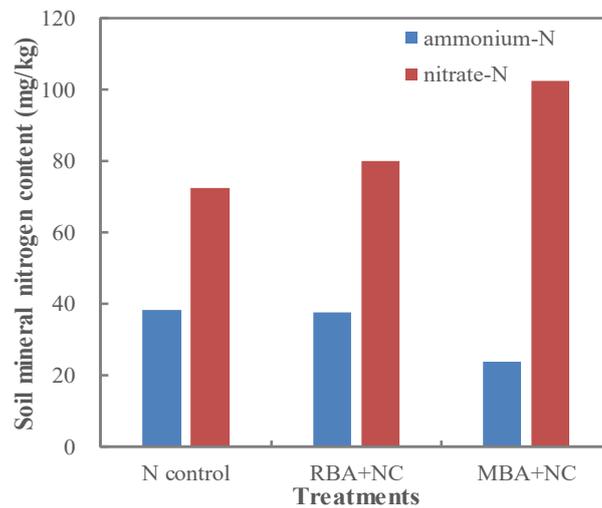


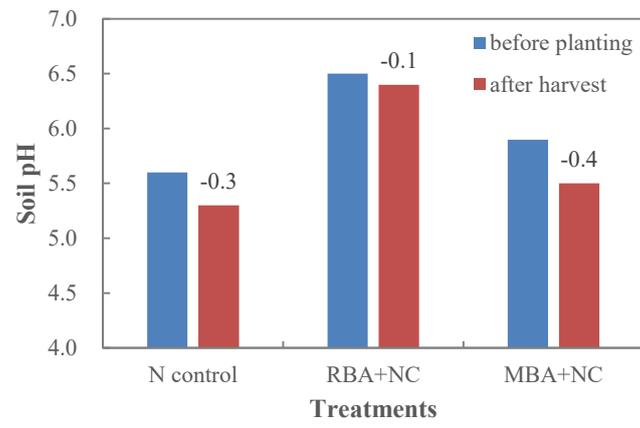
## Supplementary Figures



**Figure S1.** SEM images for biochar materials Regular biochar (1) at 2000 times, (2) at 6000 times, and Mg-modified biochar (3) at 2000 times and (4) at 6000 times magnification



**Figure S2.** Soil inorganic nitrogen content after one season of vegetable planting



**Figure S3.** The change of soil pH in planting experiment