Supplementary Materials

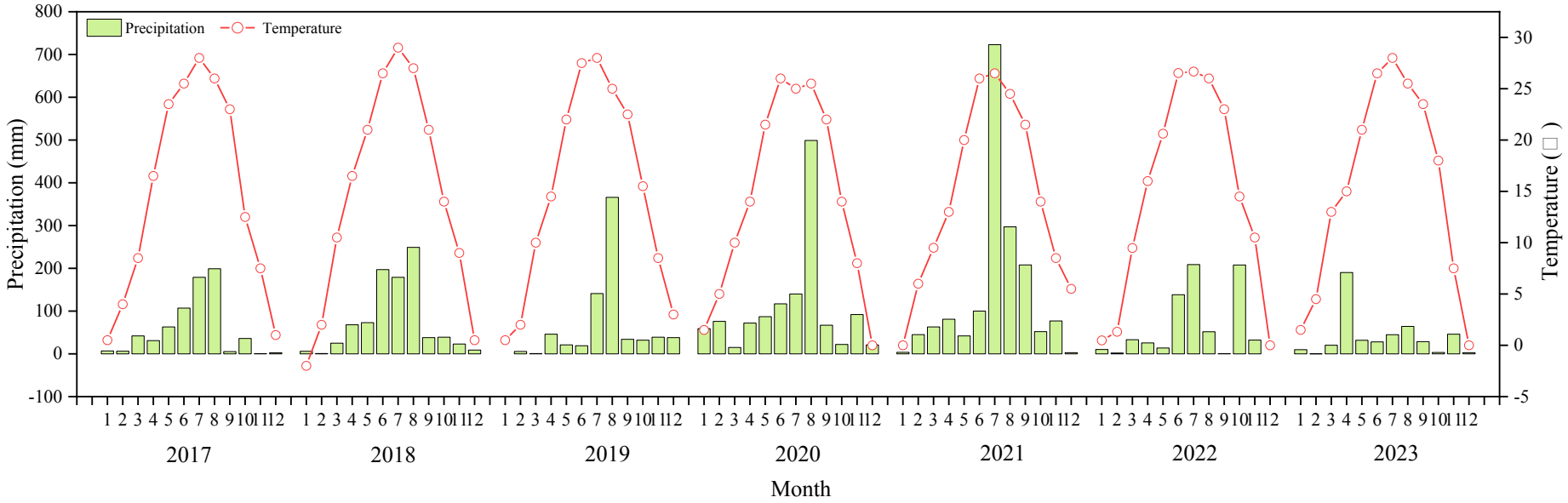

Figure S1. Distribution of monthly average temperature and precipitation in Zhangqiu District, Shandong Province for years 2017–2023.

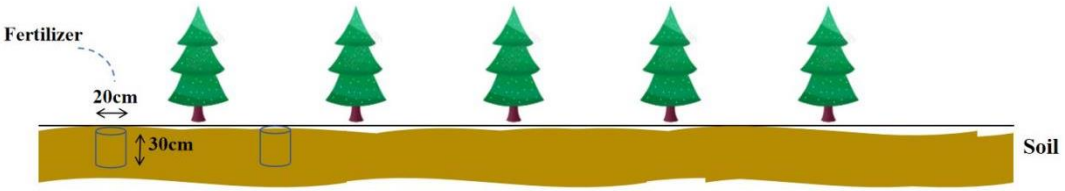

Figure S2. Layout of hole fertilization.

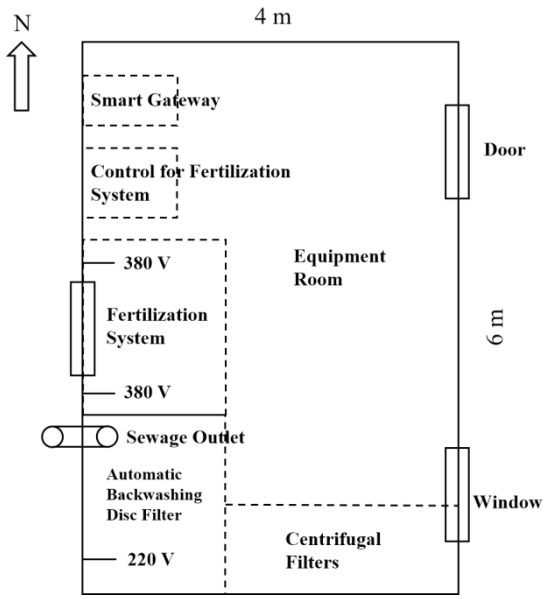

Figure S3. Schematic diagram of water and fertilizer integration equipment.

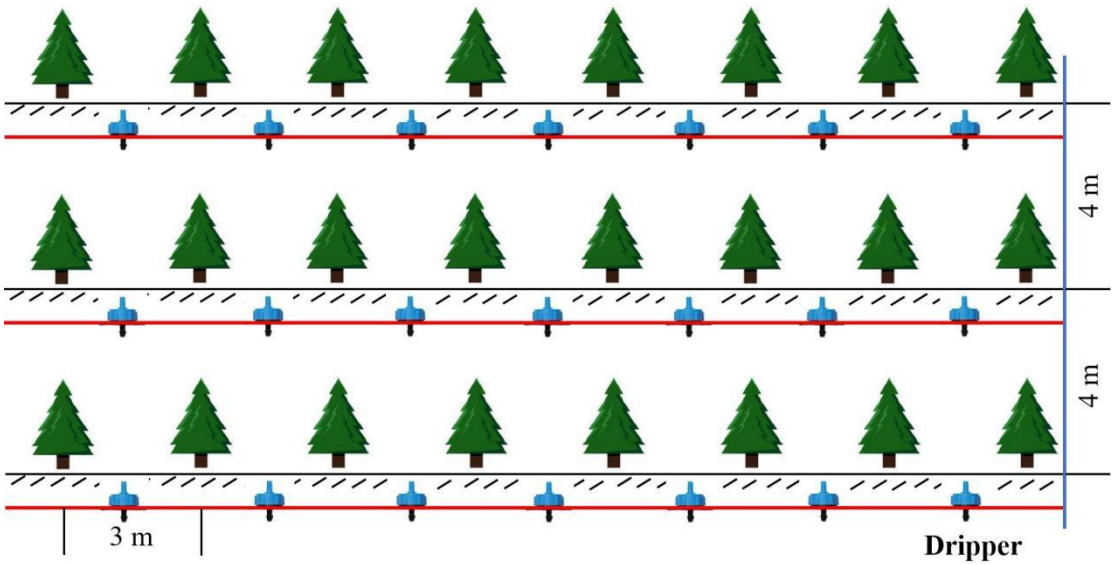

Figure S4. Schematic diagram of dropper position.