



Figure S1. 3D point cloud reconstruction results of tea plants showing reconstruction fidelity and detail preservation. (a) Point cloud of a young tea plant seedling (38,475 points) with enlarged views highlighting leaf bud morphology and branch junction details. (b) Point cloud of a mature tea plant (282,975 points) with dense foliage, showing enlarged views of leaf tip structures and complex branching patterns. The reconstructions demonstrate the system's capability to capture fine-scale morphological features across different plant developmental stages and structural complexity levels.