Step 1. Using MVS64 system to collect images. Point cloud calculations with 3D reconstruction software Agisoft Metashape. Point cloud denoising, clustering, and segmentation to separate leaves and stem. All leaves were numbered by 1, 2, 3 and etc. Those leaves lower than the center of the plant were lower layer leaves and were labeled with 1; those leaves upper than the center of the plant were up layer leaves and were labeled with 2.

Step 2.