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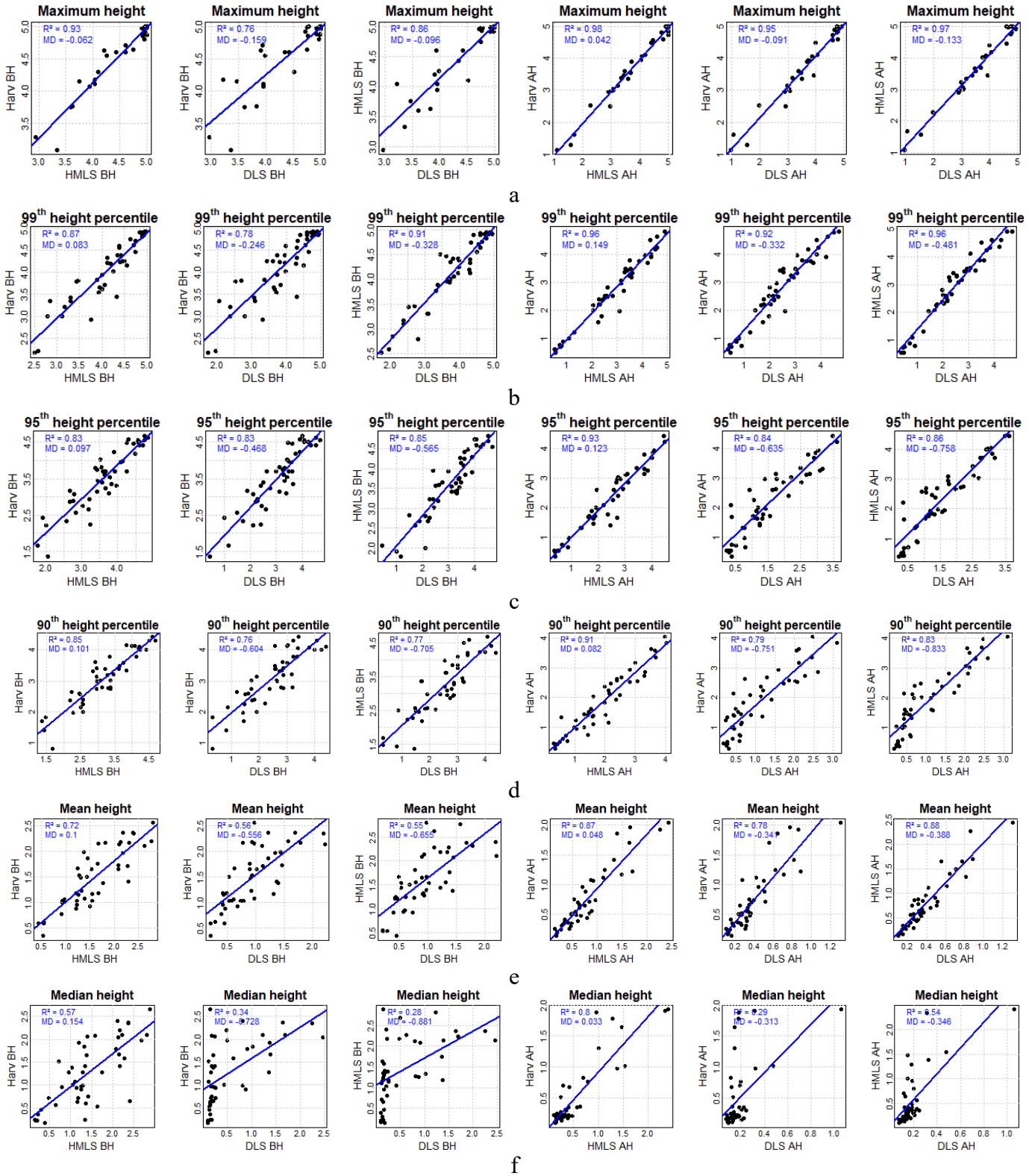
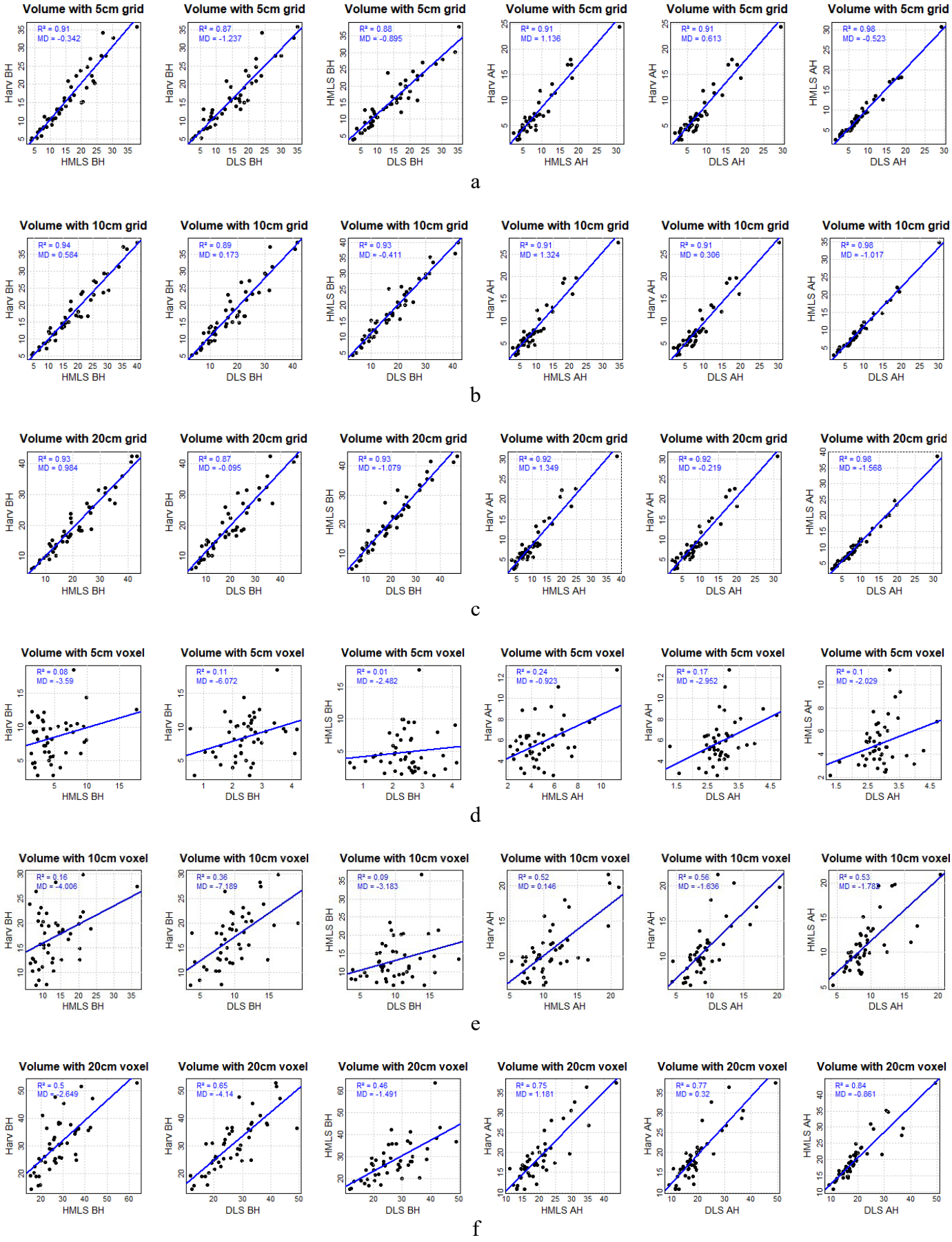
Supplementary file S1

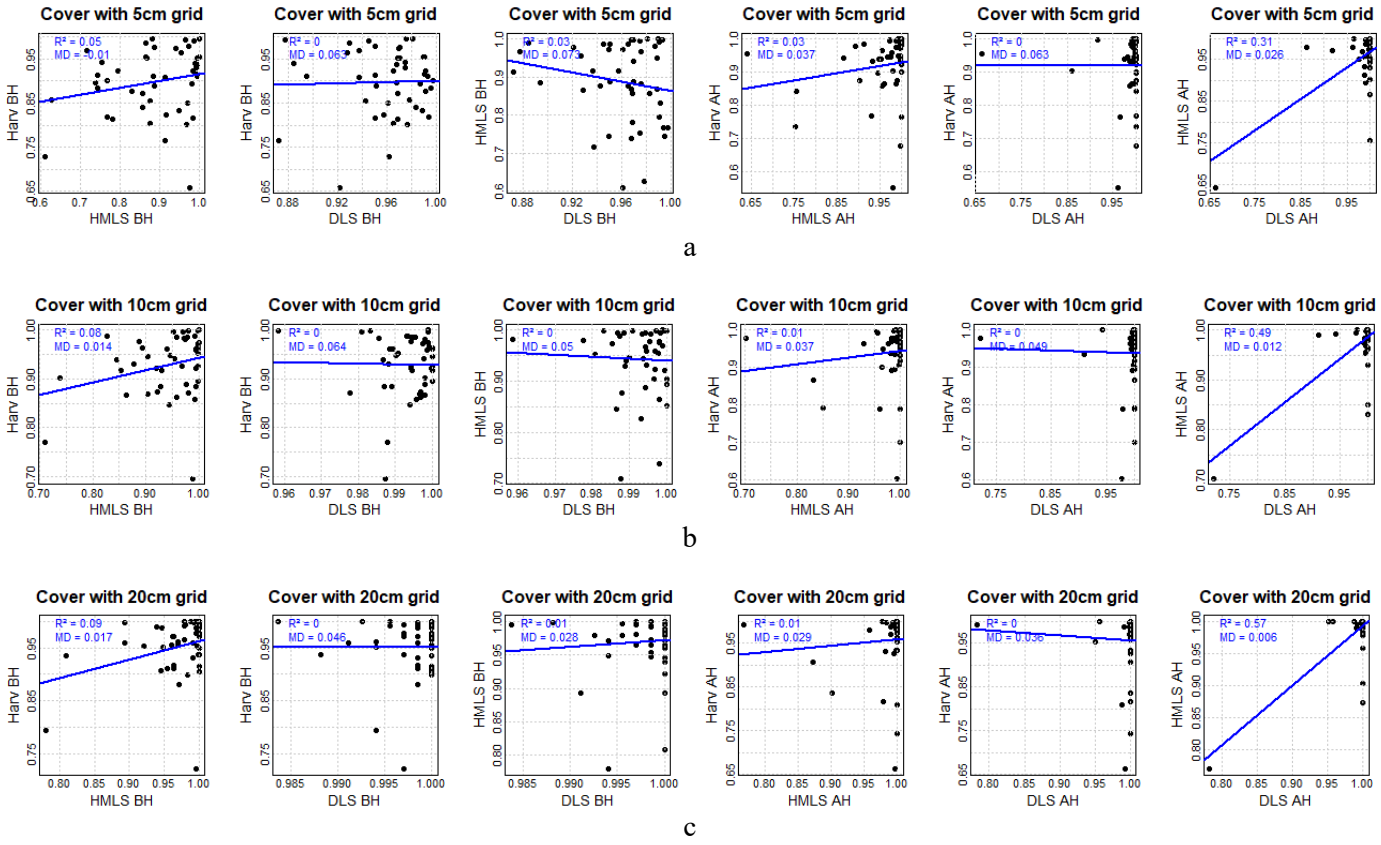
Relationships among three LiDAR systems (harvester, HMLS, and DLS) in estimating low vegetation attributes (height, volume, and cover) before and after harvesting



Supplementary Fig. S1. Relationships among three LiDAR systems in estimating low vegetation height (m) attributes. These attributes include maximum height (a), 99th height percentile (b), 95th height percentile (c), 90th height percentile (d), mean height (e), and median height (f). Data were obtained from three LiDAR systems: Harvester LiDAR (Harv), HMLS, and DLS under pre-harvest (BH) and post-harvest (AH) conditions. The figure also presents the coefficient of determination (R^2) and mean difference (MD) values.



Supplementary Fig. S2. Relationships among three LiDAR systems in estimating low vegetation points occupied volume (m^3 per plot of 25 m^2). Occupied volumes were estimated using the mean height method with 5 cm (a), 10 cm (b), and 20 cm grids (c), and the voxel-based method with 5 cm (d), 10 cm (e), and 20 cm voxels (f).



Supplementary Fig. S3. Relationships among three LiDAR systems in estimating low vegetation cover based on vegetation points. Cover was estimated using 5 cm (a), 10 cm (b), and 20 cm (c) grids.