

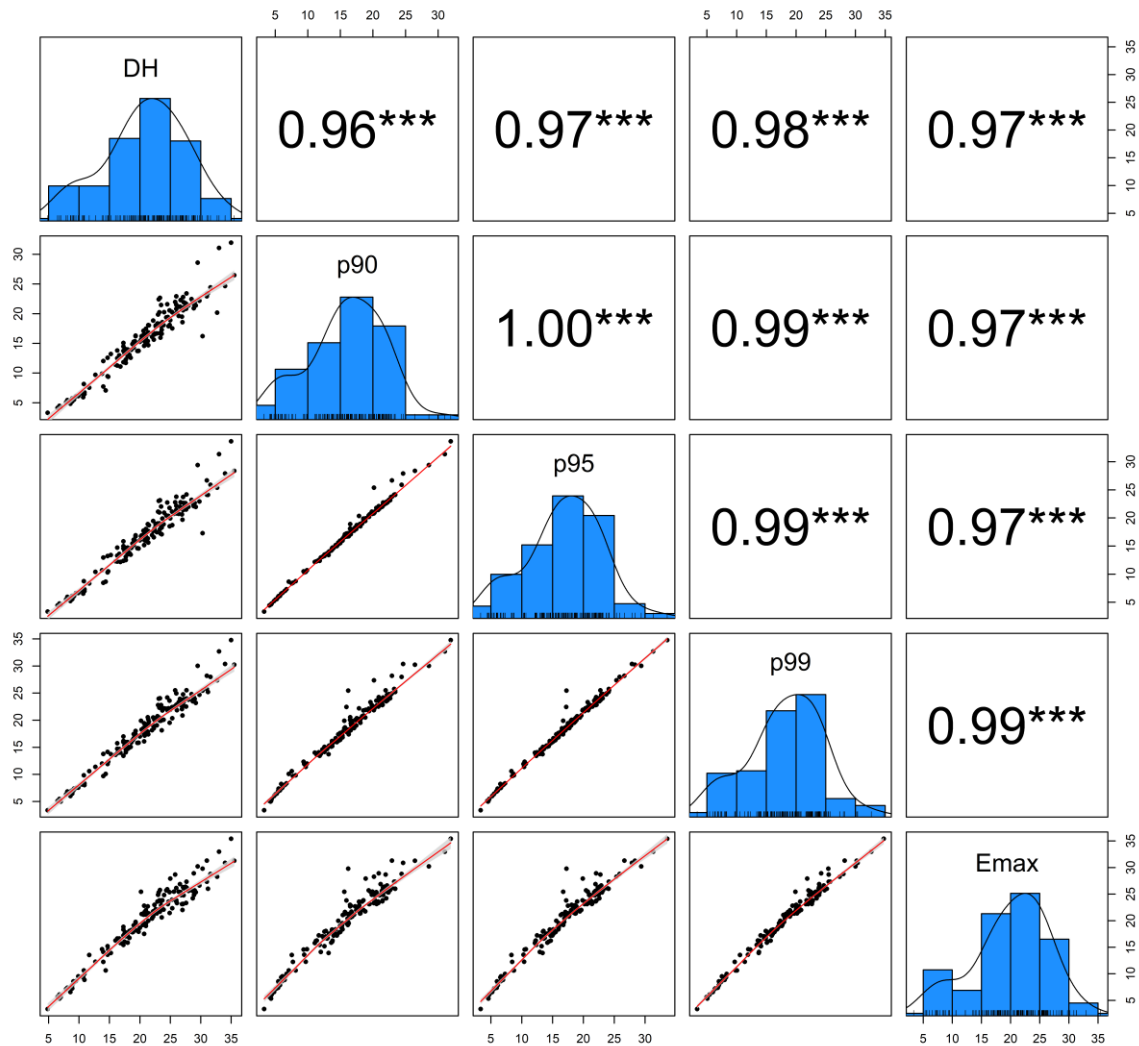


Figure S1. Pearson correlation coefficient matrix among Ligth Detection and Ranging (LiDAR) metrics, 90th height percentile (p90), 95th height percentile (p95), 99th height percentile (p99), and top height (Emax), and with the dominant height (DH) at each sampling site in the conifer forest of the Intensive Carbon Monitoring Site (SMIC) Atopixco, Hidalgo, México.

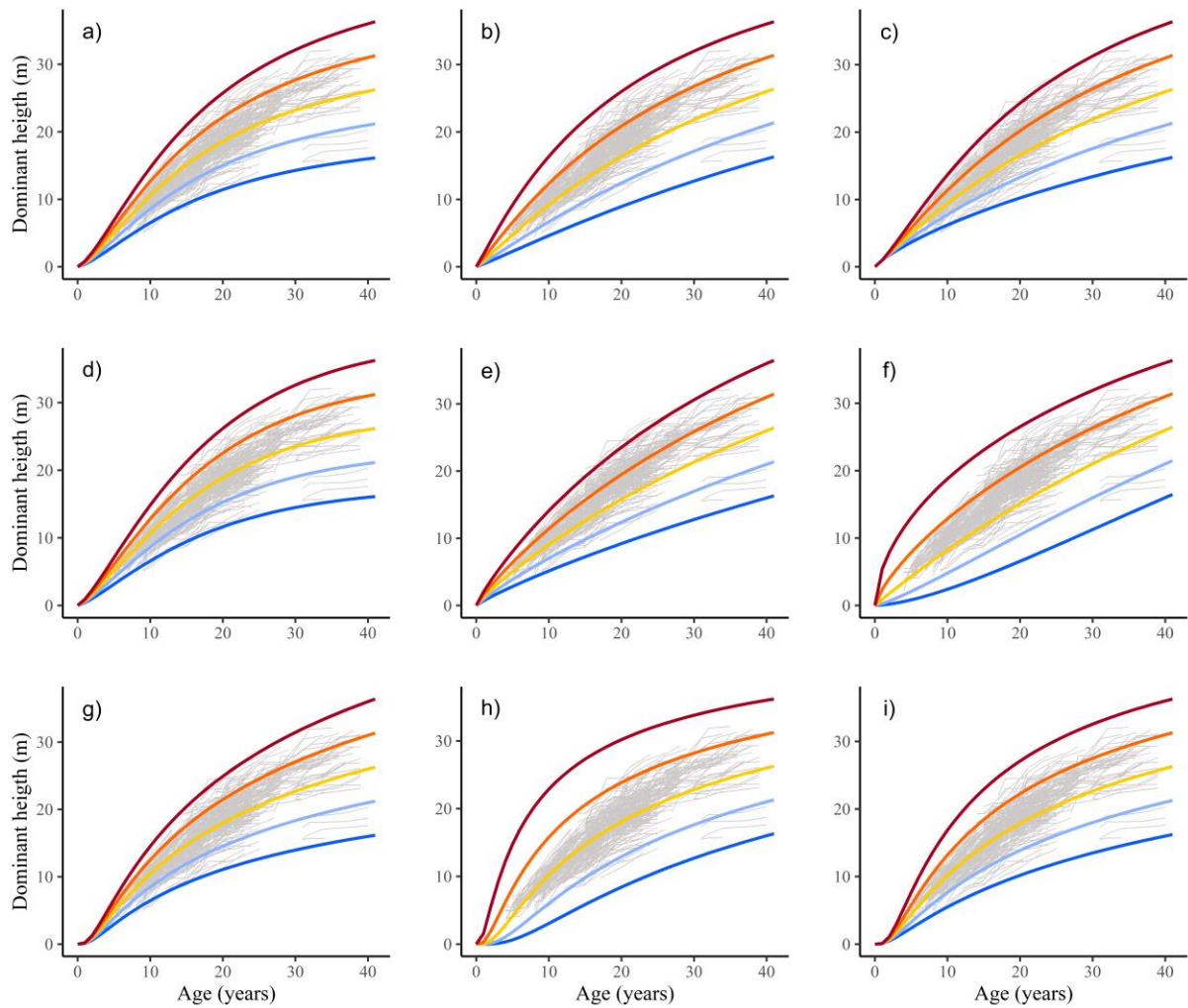


Figure S2. Site index curves for *Pinus patula* at the base age of 40 years under the algebraic difference approach (ADA), a) Hossfeld IV model with parameter α_0 isolated (M1 model), b) Hossfeld IV model with parameter α_1 isolated (M2 model), c) Hossfeld IV model with parameter α_2 isolated (M3 model), d) Chapman-Richards with parameter α_0 isolated (M4 model), e) Chapman-Richards with parameter α_1 isolated (M5 model), f) Chapman-Richards with parameter α_2 isolated (M6 model), g) Korf with parameter α_0 isolated (M7 model), h) Korf with parameter α_1 isolated (M8 model) and i) Korf with parameter α_2 isolated (M9 model).

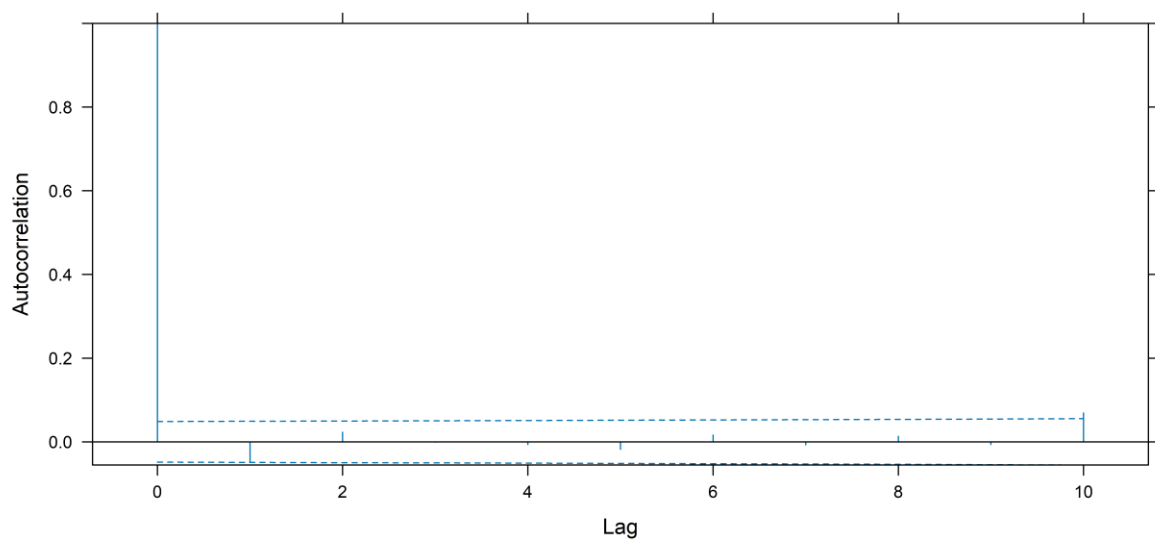


Figure S3. Autocorrelation Function (ACF) graph for Hossfeld IV model with parameter α_0 isolated (Model M1-A) and corrected for autocorrelation. The graph shows no autocorrelation after lag 1, indicating adequate model fit.

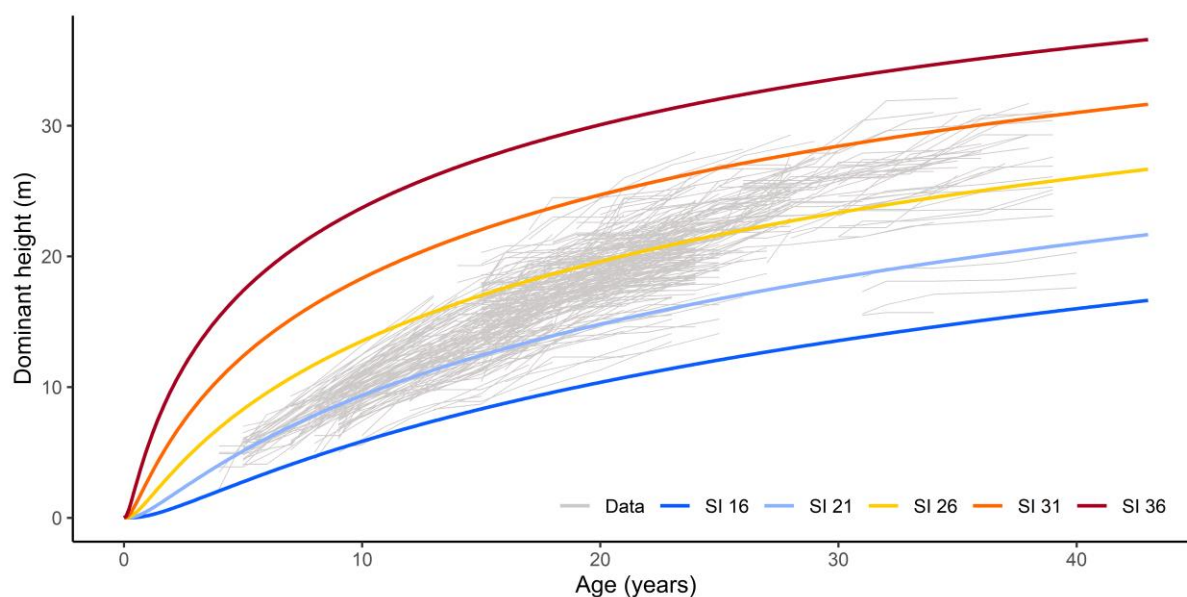


Figure S4. Site index (SI) curves for *Pinus patula* at the base age of 40 years under the generalized algebraic difference approach (GADA) of the Korf model reported by the Forest Biometric System for the management of Mexico's forests (SiBiFor) for the forest management unit (UMAFOR) 1302 Zacualtipán-Molango.