Evaporative flux method of leaf hydraulic conductance estimation: sources of uncertainty and reporting format recommendation

Running title: Evaluating evaporative flux method of K_{leaf} estimation

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Supplementary

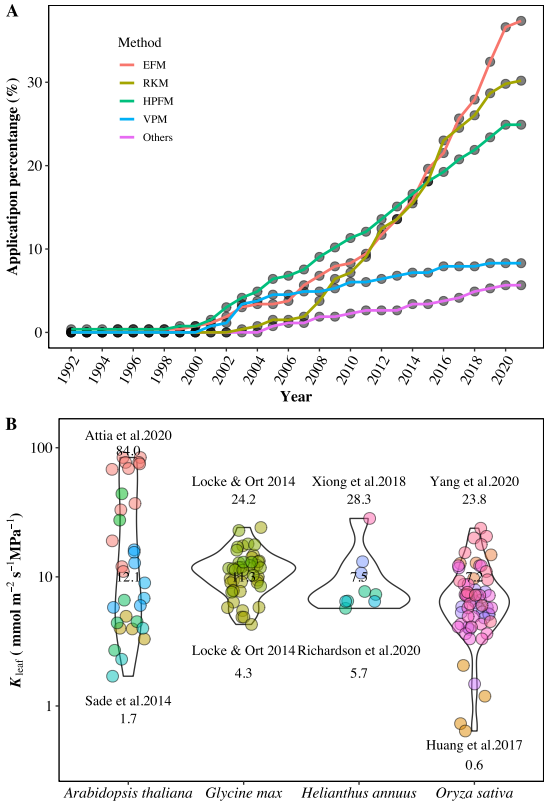

Fig. S1. (A)Application percentage of existing methods measuring leaf hydraulic conductance. Different colors present different methods; K_{leaf} values of 4 common species in the published literature (B). Different colors of points represent different literature. The maximum, medium, and minimum K_{leaf} values from different literature were marked in the violins.

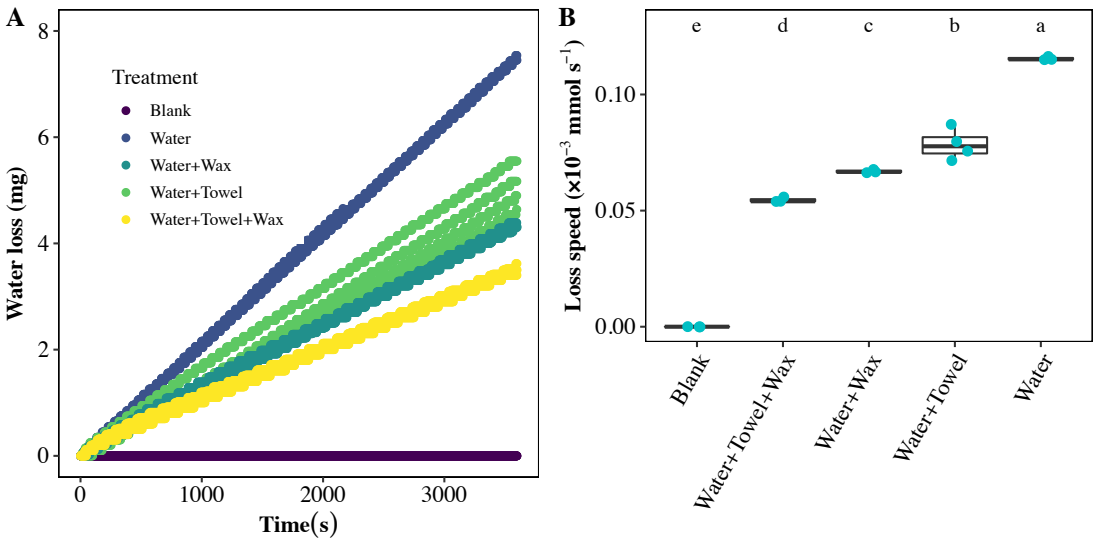

Fig. S2. (A)The dynamics of weight under different treatments without leaf. (B) Slop of water weight loss to measurement time under different extra water loss preventions: Blank, no water on balance; Water, only water on balance; Water+Towel, wet towel in balance chamber; Water+Wax, liquid wax on water surface; Water+Towel+Wax, wet towel in balance chamber and liquid wax on water surface.

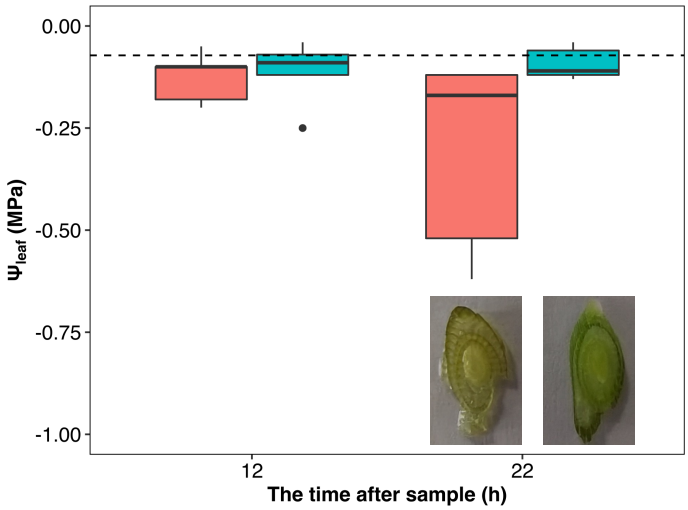

Fig. S3. Influences of sample storage time and recutting on water potentials of leaves sampled at previous night. Dashed line represents the mean Ψ_{leaf} value (-0.072 MPa) after rehydration 1 h. Red boxplot represents Ψ_{leaf} of rehydrated samples without recutting. Blue boxplot indicates relative Ψ_{leaf} of rehydrated samples recut on the measurement day morning. Bottom illustrations show the state of cut surface at corresponding time.

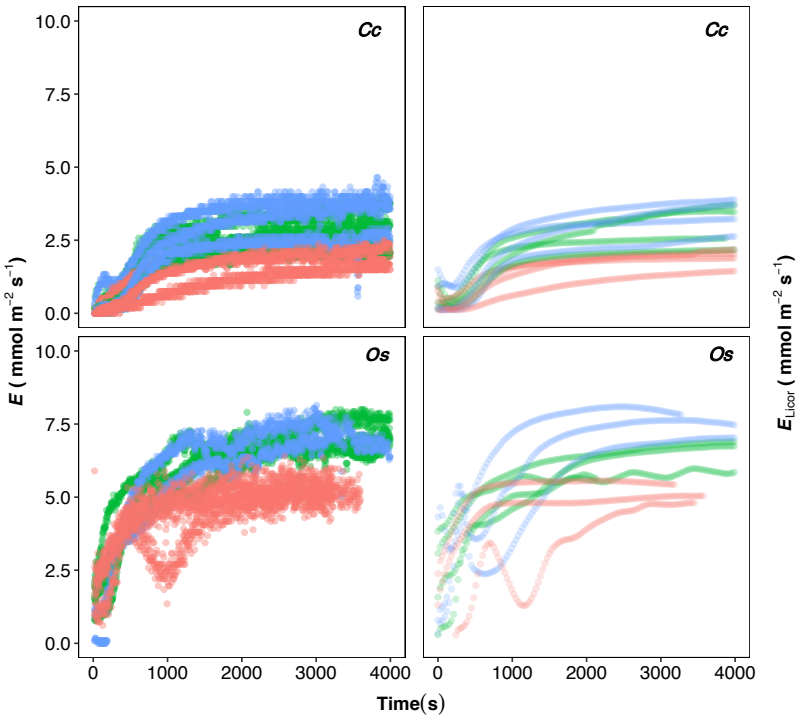

Fig. S4. Dynamic *E* measured by Licor6800 and balance in rice (*Os*) and camphor (*Cc*) (raw data unfiltered). Red point, 500 µmol m^{-2} s^{-1}; Green point, 1000 µmol m^{-2} s^{-1}; Blue point, 1500 µmol m^{-2} s^{-1}

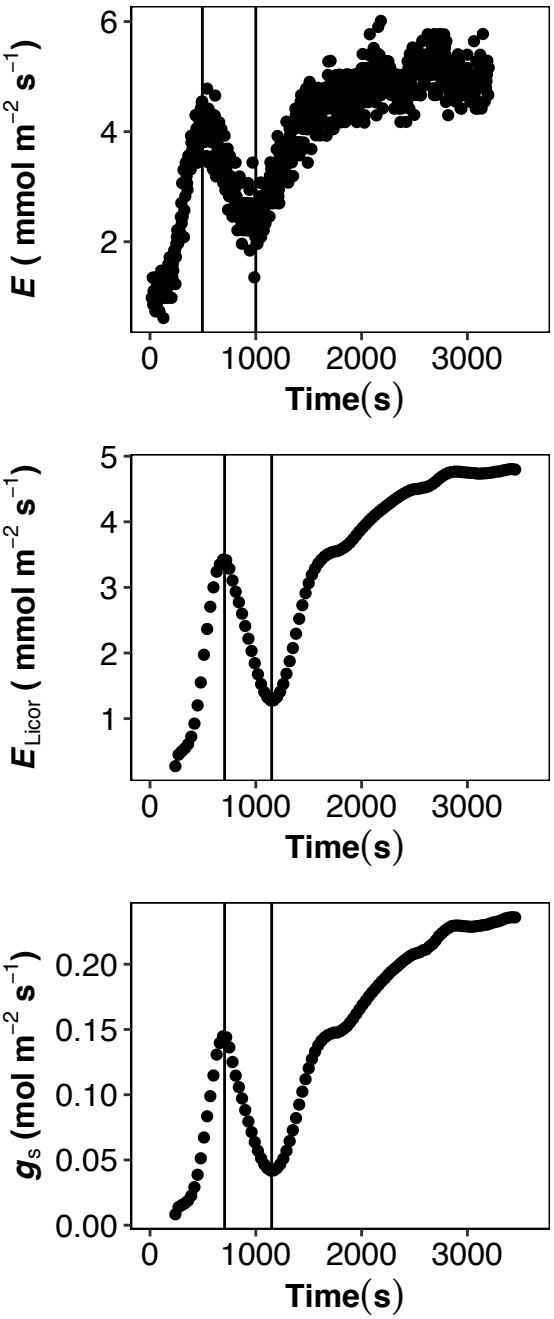

Fig. S5. (A) Synchronous oscillation of stomatal conductance. (B) Gas phase water transpiration rate. (C) Liquid phase water transpiration rate after lamp on. First 3 min Auto-log data from Licor is lack due to operation delay.

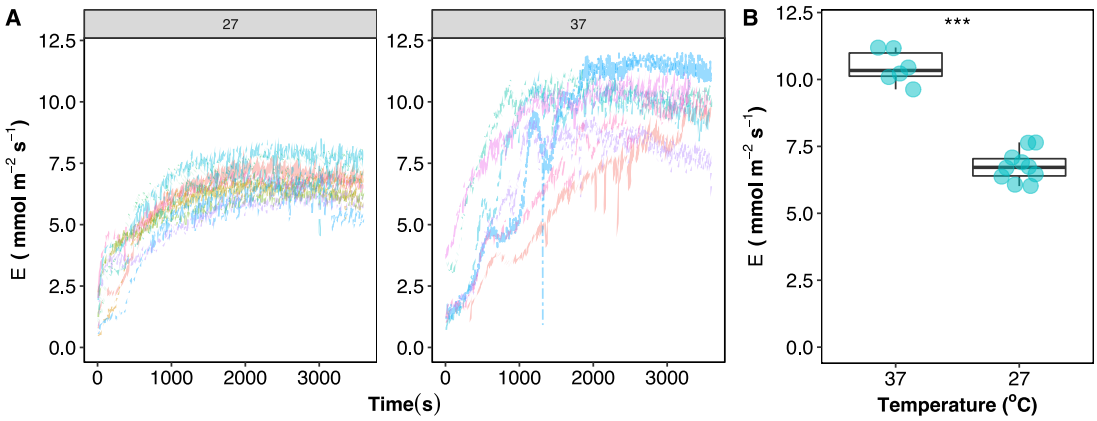

Fig. S6. Dynamic *E* over time (A) and steady E (B) in different ambient temperatures (raw data unfiltered). (Significant differences are indicated: ***, P < 0.001).

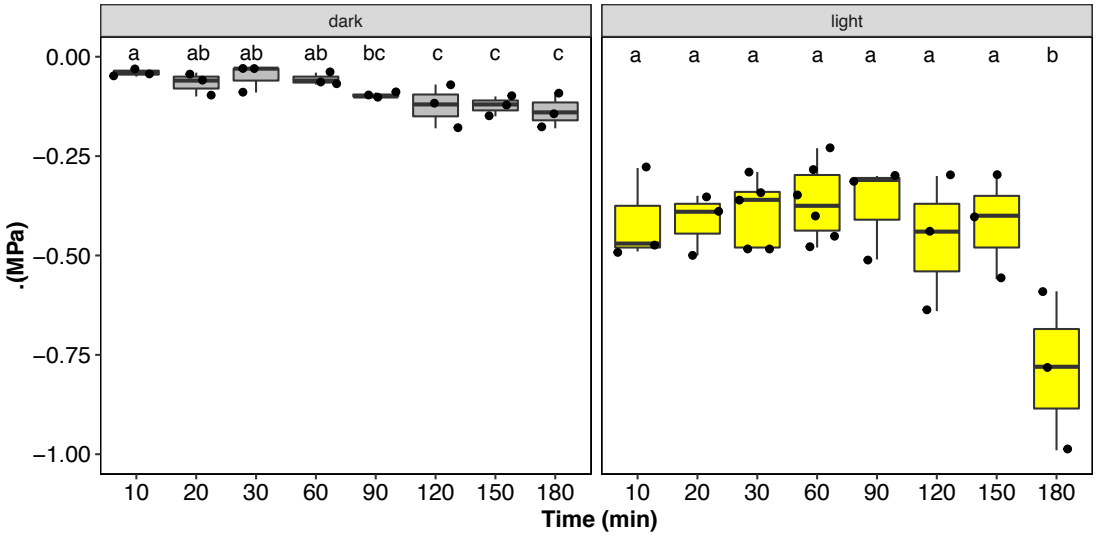

Fig. S7. Effects of different equilibration time in double plastic zip lock bag on water potential of leaves acclimated to dark (grey box) and 1000 μmol m^{-2} s^{-1} light (yellow box) in advance. (Different lower-case letters indicate significant differences.)