**Figure 1:**

Data files:

LOST\_LEA

Date\_time\_to\_DAT

**Figure 2:**

Data files:

2024-02-02-1025\_ACi\_YH85\_P2

2024-02-02-1026\_ACi\_YH85\_P6

2024-02-02-1028\_ACi\_YH85\_P5

2024-02-02-1029\_ACi\_YH85\_P3

2024-02-02-1030\_ACi\_YH85\_P4

2024-02-02-1032\_ACi\_YH85\_P1

2024-02-05-1332\_ACi\_YH87\_P3

2024-02-05-1334\_ACi\_YH87\_P1

2024-02-05-1334\_ACi\_YH87\_P2

2024-02-05-1336\_ACi\_YH87\_P6

2024-02-05-1337\_ACi\_YH87\_P4

2024-02-05-1337\_ACi\_YH87\_P5

**Figure 3 and Figure S1:**

Data files:

Dual Klas data\_LEA Lost togetherTLfinal\_RAW

**Figure 4:**

Data files:

Dual Klas data\_LEA Lost togetherTLfinal\_RAW

**Figure 5:**

Data files:

LEA-Lost\_Stomatal density

stomata\_pore\_length

**Figure 6:**

Data files:

gs\_LEA-Lost

A\_LEA-Lost

Wi\_LEA\_Lost

**Figure 7:**

Data files:

stomata\_count

**Figure 8:**

Data files:

*For ACi:*

2024-11-18-1007\_ACi\_YHLEA\_P1

2024-11-18-1015\_ACi\_YHLEA\_P4

2024-11-18-1017\_ACi\_YHLEA\_P3

2024-11-18-1024\_ACi\_YHLost\_P2

2024-11-18-1025\_ACi\_YHLost\_P3

2024-11-18-1208\_ACi\_YHLost-LEA\_P2

2024-11-18-1211\_ACi\_YHLost-LEA\_P3

2024-11-18-1213\_ACi\_YHLost\_P4

2024-11-18-1216\_ACi\_YHLost-LEA\_P4

2024-11-18-1218\_ACi\_YHLost-LEA\_P6

2024-11-19-1051\_ACi\_YHLEA-Lost\_P1

2024-11-19-1052\_ACi\_YHLEA-Lost\_P2

2024-11-19-1052\_ACi\_YHLEA-Lost\_P4

2024-11-19-1057\_ACi\_YHLEA-LEA\_P2

2024-11-19-1059\_ACi\_YHLEA-LEA\_P1

2024-11-19-1133\_ACi\_YHLEA-Lost\_P3

2024-11-19-1305\_ACi\_YHLost-Lost\_P1

2024-11-19-1306\_ACi\_YHLost-Lost\_P2

*For AQ:*

2024-11-18-1105\_AQ\_YHLEA\_P1

2024-11-18-1110\_AQ\_YHLEA\_P3

2024-11-18-1113\_AQ\_YHLEA\_P4

2024-11-18-1114\_AQ\_YHLost\_P3

2024-11-18-1118\_AQ\_YHLost\_P2

2024-11-18-1134\_AQ\_YHLost\_P1

2024-11-18-1312\_AQ\_YHLost-LEA\_P5

2024-11-18-1314\_AQ\_YHLost-LEA\_P6

2024-11-18-1316\_AQ\_YHLost-LEA\_P3

2024-11-18-1320\_AQ\_YHLost-LEA\_P4

2024-11-18-1322\_AQ\_YHLost-LEA\_P2

2024-11-18-1332\_AQ\_YHLost\_P4

2024-11-18-1339\_AQ\_YHLost-LEA\_P7

2024-11-19-1147\_AQ\_YHLEA-Lost\_P4

2024-11-19-1153\_AQ\_YHLEA-LEA\_P1

2024-11-19-1153\_AQ\_YHLEA-LEA\_P2

2024-11-19-1153\_AQ\_YHLEA-Lost\_P2

2024-11-19-1153\_AQ\_YHLEA-Lost\_P5

2024-11-19-1155\_AQ\_YHLEA-Lost\_P1

2024-11-19-1158\_AQ\_YHLEA-Lost\_P3

2024-11-19-1332\_AQ\_YHLost-Lost\_P2

2024-11-19-1333\_AQ\_YHLost-Lost\_P1

**SUPPLEMENTARY FIGURES**

**Figure S1:**

Same as **Figure 3**

**Figure S2:**

Data files:

gs\_LEA-Lost\_kinetics

A\_LEA-Lost\_kinetics

**Figure S3:**

Same as **Figure S2**

**Figure S4:**

Data files:

2024-06-01-1147\_Step\_YHlea\_P1

2024-06-01-1148\_Step\_YHlea\_P2

2024-06-01-1151\_Step\_YHlea\_P3

2024-06-01-1151\_Step\_YHlea\_P4

2024-06-01-1152\_Step\_YHlea\_P5

2024-06-01-1157\_Step\_YHlea\_P6

2024-06-01-1349\_Step\_YHlost\_P1

2024-06-01-1353\_Step\_YHlost\_P5

2024-06-01-1354\_Step\_YHlost\_P6

2024-06-01-1436\_Step\_YHlost\_P4

**Figure S5**:

Data files:

Leaf thickness\_LEA-Lost

SLA\_LEA-Lost

**Figure S6**:

Data files:

2024\_Rubisco\_ShowkatSamples\_outliers

**Figure S7**:

Data files:

*For ACi:*

2024-11-18-1007\_ACi\_YHLEA\_P1

2024-11-18-1015\_ACi\_YHLEA\_P4

2024-11-18-1017\_ACi\_YHLEA\_P3

2024-11-18-1024\_ACi\_YHLost\_P2

2024-11-18-1025\_ACi\_YHLost\_P3

2024-11-18-1208\_ACi\_YHLost-LEA\_P2

2024-11-18-1211\_ACi\_YHLost-LEA\_P3

2024-11-18-1213\_ACi\_YHLost\_P4

2024-11-18-1216\_ACi\_YHLost-LEA\_P4

2024-11-18-1218\_ACi\_YHLost-LEA\_P6

2024-11-19-1051\_ACi\_YHLEA-Lost\_P1

2024-11-19-1052\_ACi\_YHLEA-Lost\_P2

2024-11-19-1052\_ACi\_YHLEA-Lost\_P4

2024-11-19-1057\_ACi\_YHLEA-LEA\_P2

2024-11-19-1059\_ACi\_YHLEA-LEA\_P1

2024-11-19-1133\_ACi\_YHLEA-Lost\_P3

2024-11-19-1305\_ACi\_YHLost-Lost\_P1

2024-11-19-1306\_ACi\_YHLost-Lost\_P2

*For AQ:*

2024-11-18-1105\_AQ\_YHLEA\_P1

2024-11-18-1110\_AQ\_YHLEA\_P3

2024-11-18-1113\_AQ\_YHLEA\_P4

2024-11-18-1114\_AQ\_YHLost\_P3

2024-11-18-1118\_AQ\_YHLost\_P2

2024-11-18-1134\_AQ\_YHLost\_P1

2024-11-18-1312\_AQ\_YHLost-LEA\_P5

2024-11-18-1314\_AQ\_YHLost-LEA\_P6

2024-11-18-1316\_AQ\_YHLost-LEA\_P3

2024-11-18-1320\_AQ\_YHLost-LEA\_P4

2024-11-18-1322\_AQ\_YHLost-LEA\_P2

2024-11-18-1332\_AQ\_YHLost\_P4

2024-11-18-1339\_AQ\_YHLost-LEA\_P7

2024-11-19-1147\_AQ\_YHLEA-Lost\_P4

2024-11-19-1153\_AQ\_YHLEA-LEA\_P1

2024-11-19-1153\_AQ\_YHLEA-LEA\_P2

2024-11-19-1153\_AQ\_YHLEA-Lost\_P2

2024-11-19-1153\_AQ\_YHLEA-Lost\_P5

2024-11-19-1155\_AQ\_YHLEA-Lost\_P1

2024-11-19-1158\_AQ\_YHLEA-Lost\_P3

2024-11-19-1332\_AQ\_YHLost-Lost\_P2

2024-11-19-1333\_AQ\_YHLost-Lost\_P1