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Supplementary Material

Annual patterns of xylem embolism in high-yield apple cultivars

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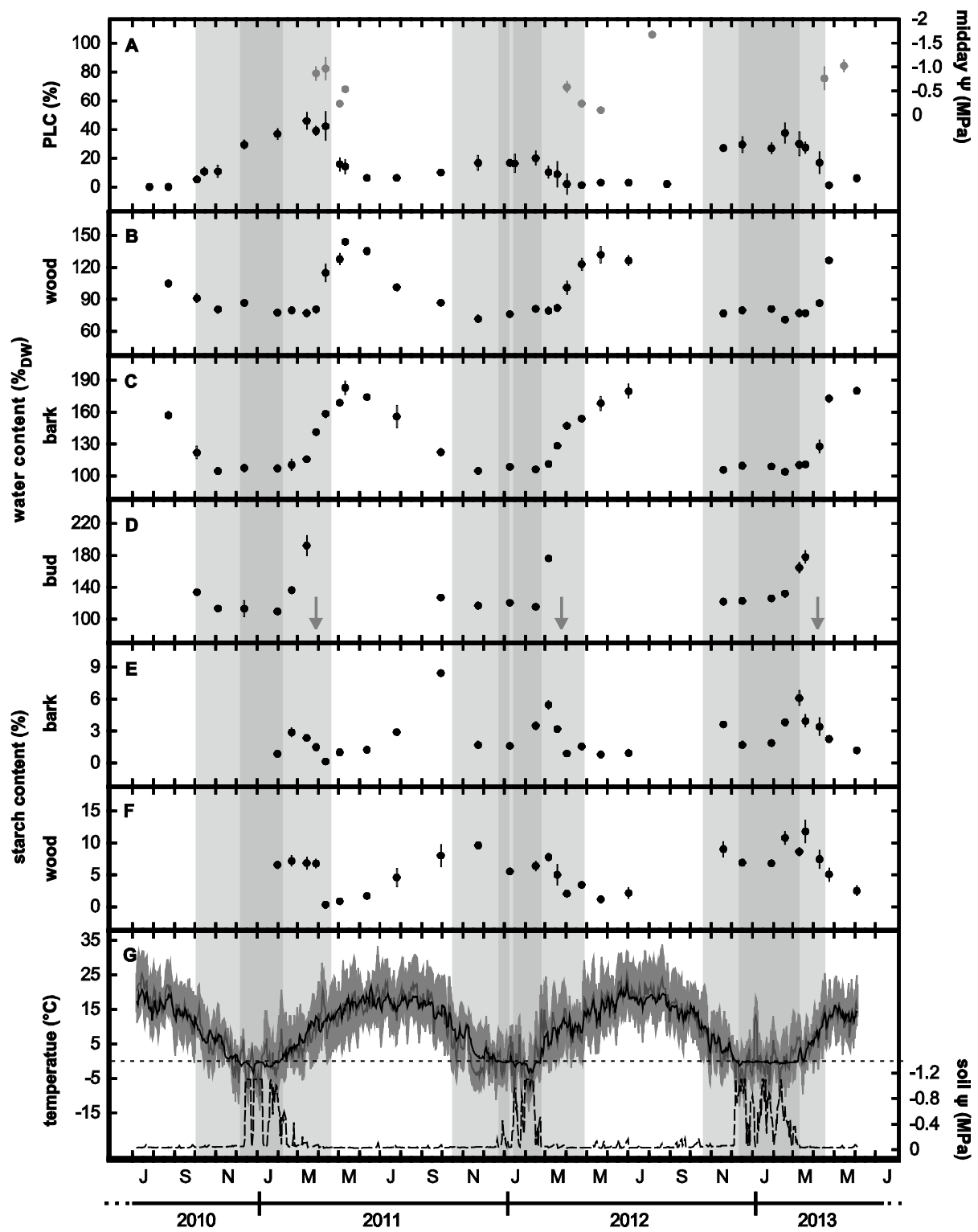


Fig. S1. Mean and standard error of (A) percentage loss of hydraulic conductivity (PLC, black dots) and midday leaf water potential (midday Ψ ; grey dots), water contents of (B) wood, (C) bark and (D) buds, starch contents of (E) bark and (F) wood as well as (G) daily maximum, minimum (grey area) and mean (dark grey line) air temperature, daily mean soil temperature (solid black line) and daily mean soil water potential (soil Ψ , dashed black line) at 15 cm depth of Golden Delicious growing in Latsch. Arrows in panel 'D' show the bud break. Dotted horizontal lines in panel 'G' indicate 0°C. Vertical rectangles indicate sub-zero air- (light grey) and soil- (dark grey) temperatures, respectively. ($n = 5$).

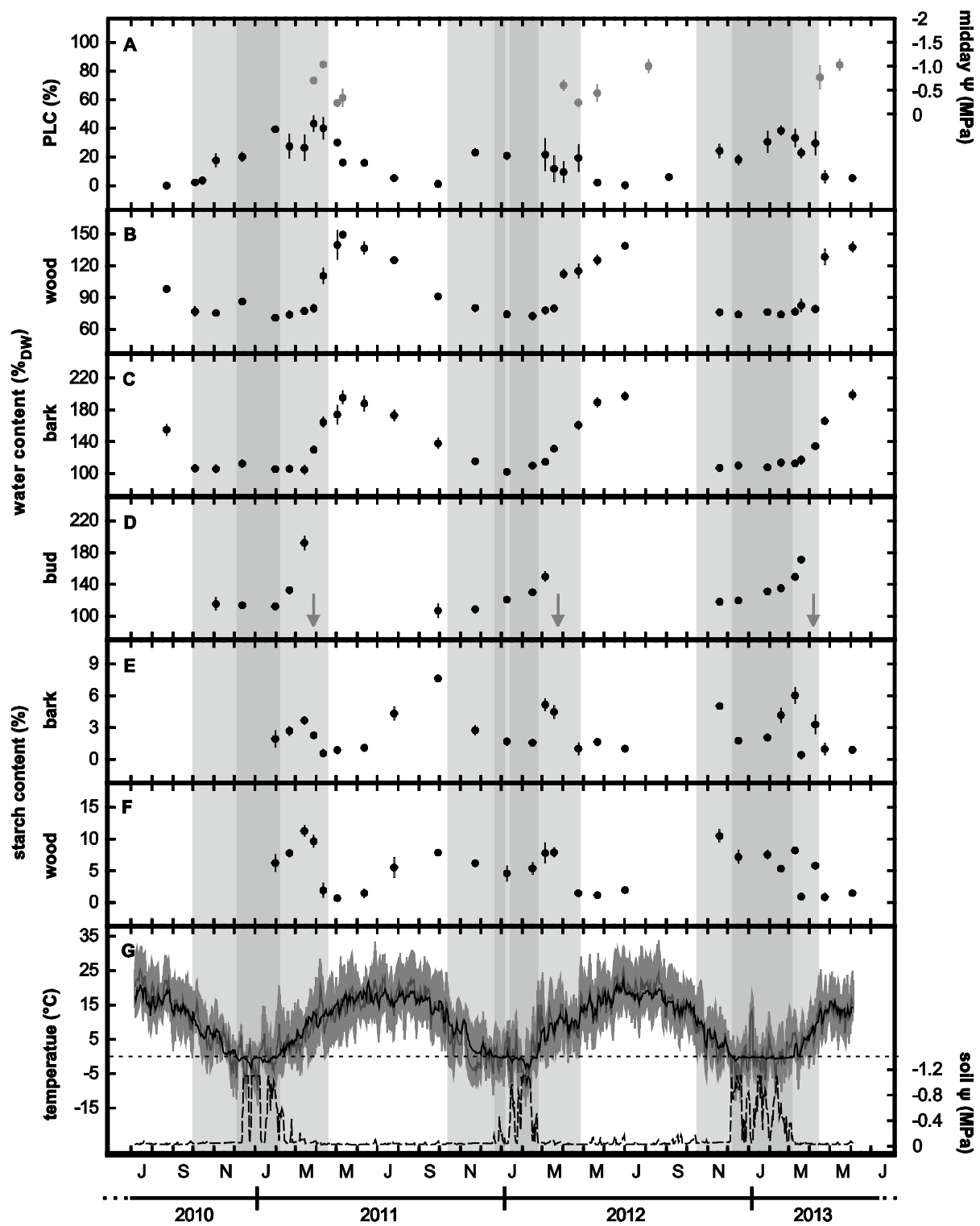


Fig. S2. Means and standard errors of (A) percentage loss of hydraulic conductivity (PLC, black circles) and midday leaf water potential (midday Ψ ; grey circles), water contents of (B) wood, (C) bark and (D) buds, starch contents of (E) bark and (F) wood as well as (G) daily maximum, minimum (grey area) and mean (dark grey line) air temperature, daily mean soil temperature (solid black line) and daily mean soil water potential (soil Ψ , dashed black line) at 15 cm depth of Red Delicious growing in Latsch. Arrows in panel 'D' show the bud break. Dotted horizontal lines in panel 'G' indicate 0°C. Vertical rectangles indicate sub-zero air- (light grey) and soil- (dark grey) temperatures, respectively. ($n = 5$).

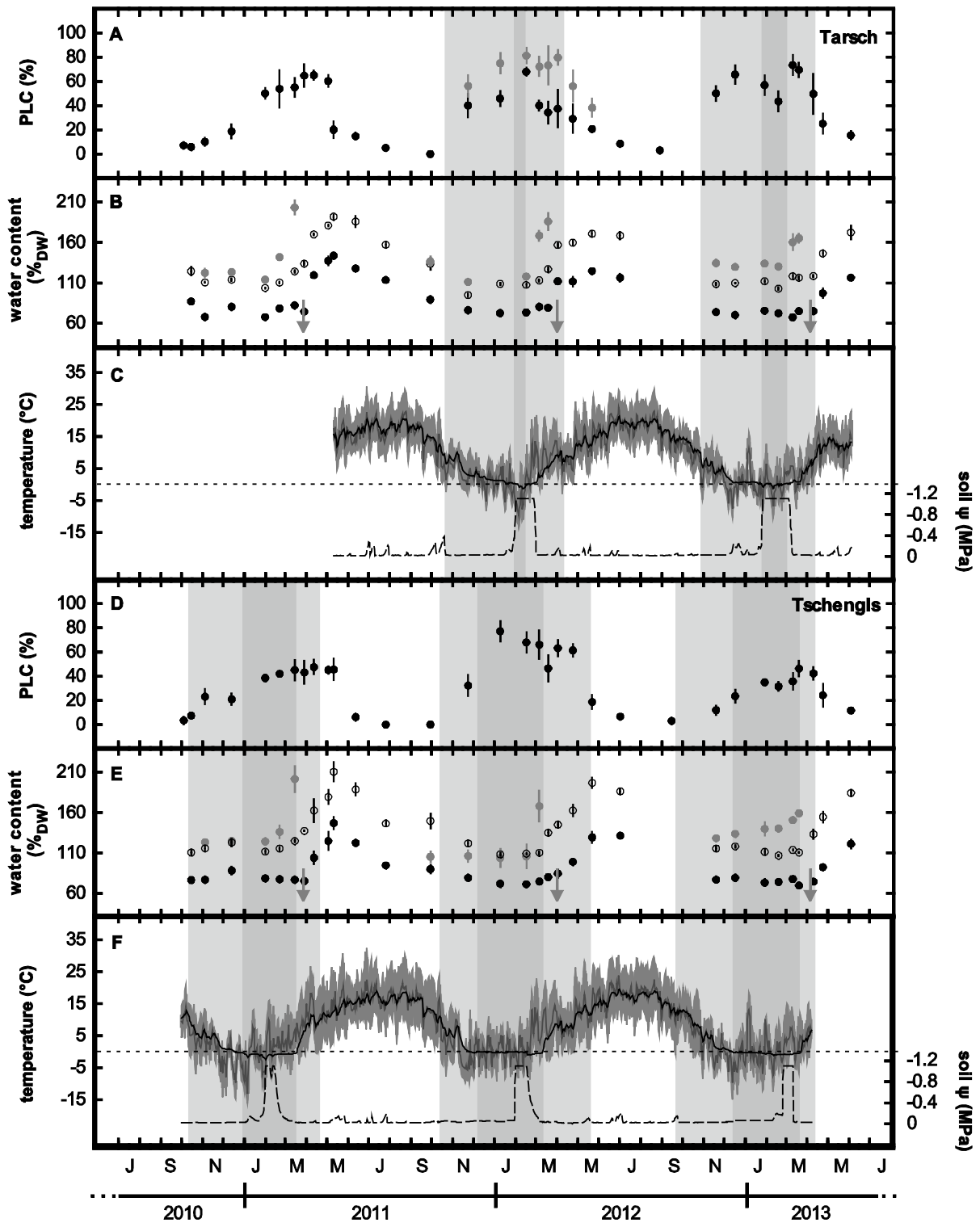


Fig. S3. Mean and standard error of (A, D) percentage loss of hydraulic conductivity (PLC), water contents of (B, E) wood (solid dots), bark (open dots) and buds (grey dots) as well as (C, F) daily maximum, minimum (grey area) and mean (dark grey line) air temperature, daily mean soil temperature (solid black line) and daily mean soil water potential (soil Ψ , dashed black line) at 15 cm depth of Golden Delicious growing in Tarsch (A-C) and Tschengls (D-F). Arrows in panel 'B' and 'E' show the bud break. Dotted horizontal lines in panel 'C' and 'F' indicate 0°C. Vertical rectangles indicate sub-zero air- (light grey) and soil- (dark grey) temperatures, respectively. Grey dots in panel 'A' show PLC of young Golden Delicious trees growing in Tarsch. ($n = 5$).

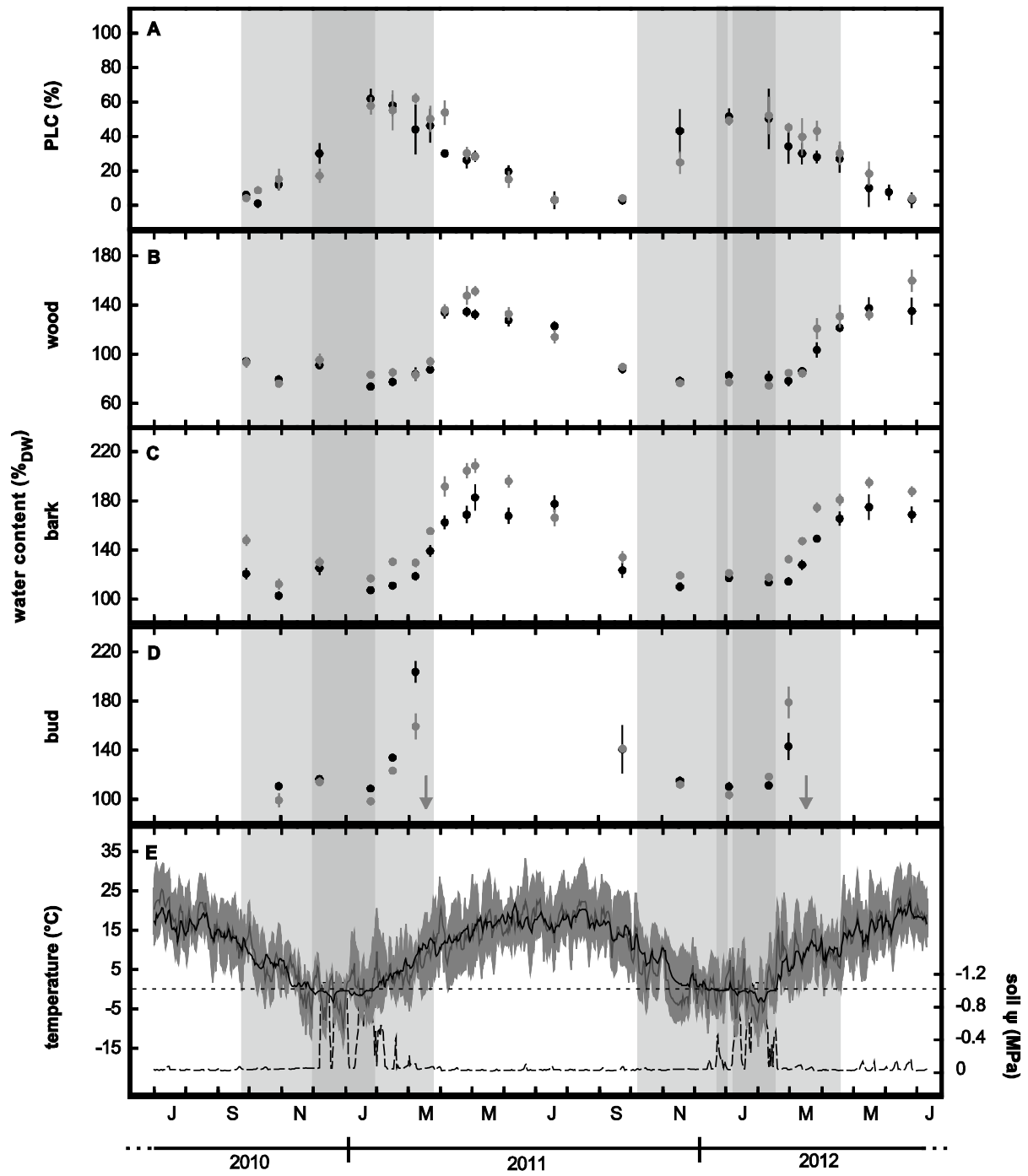


Fig. S4. Mean and standard error of (A) percentage loss of hydraulic conductivity (PLC) and water contents of (B) wood, (C) bark and (D) buds as well as (E) daily maximum, minimum (grey area) and mean (dark grey line) air temperature, daily mean soil temperature (solid black line) and daily mean soil water potential (soil Ψ , dashed black line) at 15 cm depth of Gala (black dots) and Nicoter (grey dots) growing in Latsch. Arrows in panel 'D' show the bud break for both cultivars. Dotted horizontal lines in panel 'E' indicate 0°C. Vertical rectangles indicate sub-zero air- (light grey) and soil- (dark grey) temperatures, respectively. ($n = 5$).