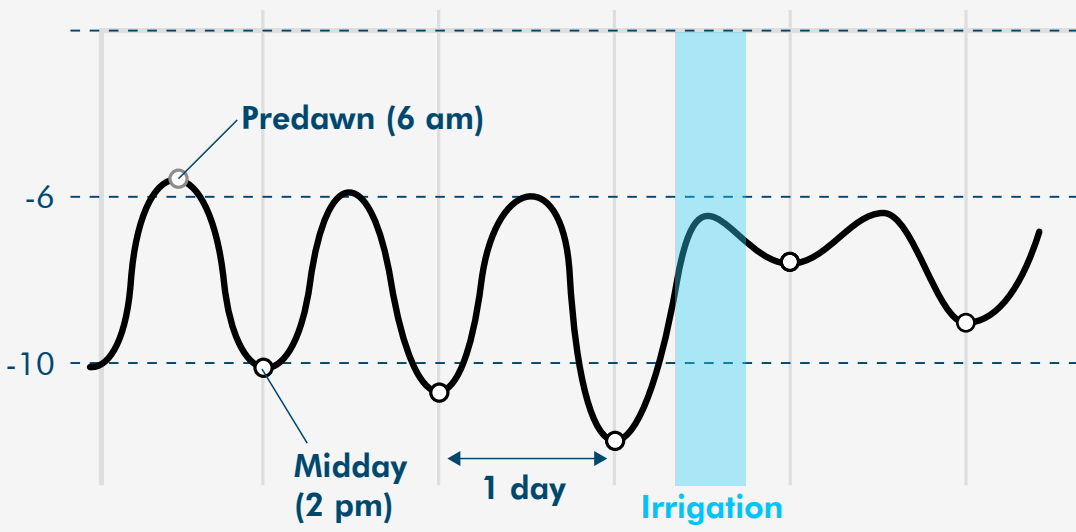


Using Tree Water Potential for Irrigation

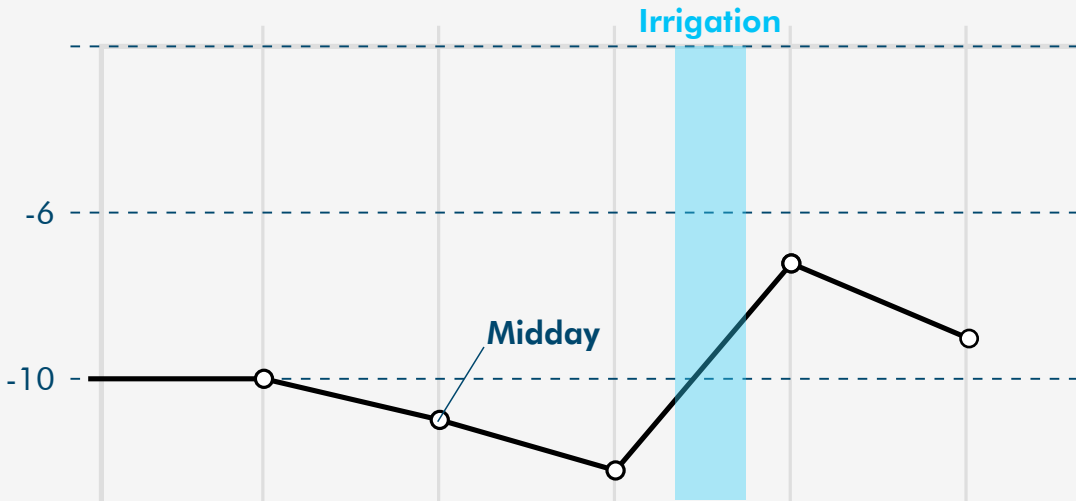


Stem Water Potential (SWP)



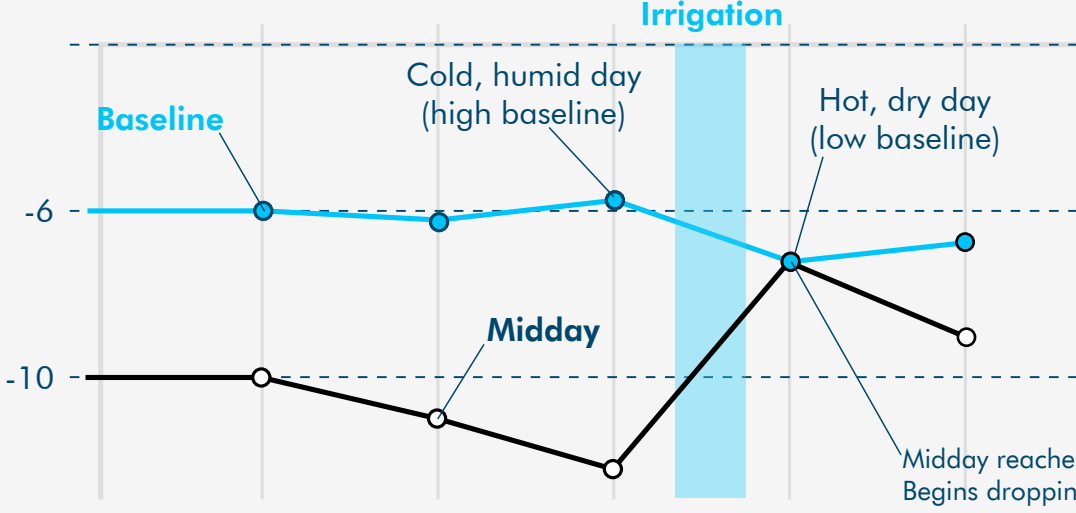
SWP
is the water pressure in tree vessels. Measures water status and guides irrigation decisions. Lower = drier.
*units: bar

Midday: Minimum Daily SWP



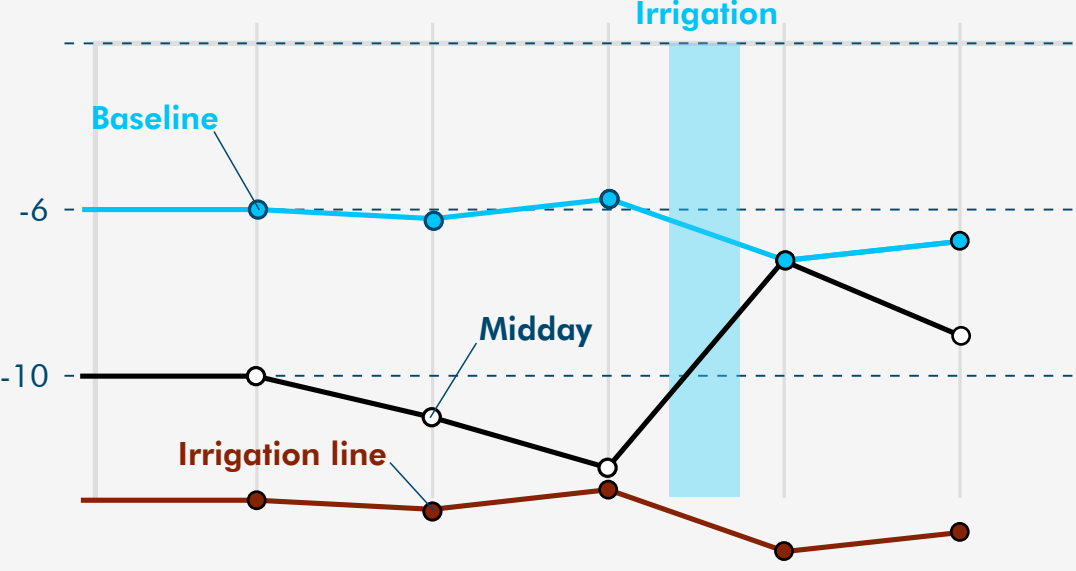
Midday
is the lowest SWP for day. Measure of maximum water stress experienced. Combines stress due to soil moisture and weather (vapor pressure deficit). Lower = drier.

Baseline: 'fully irrigated' midday



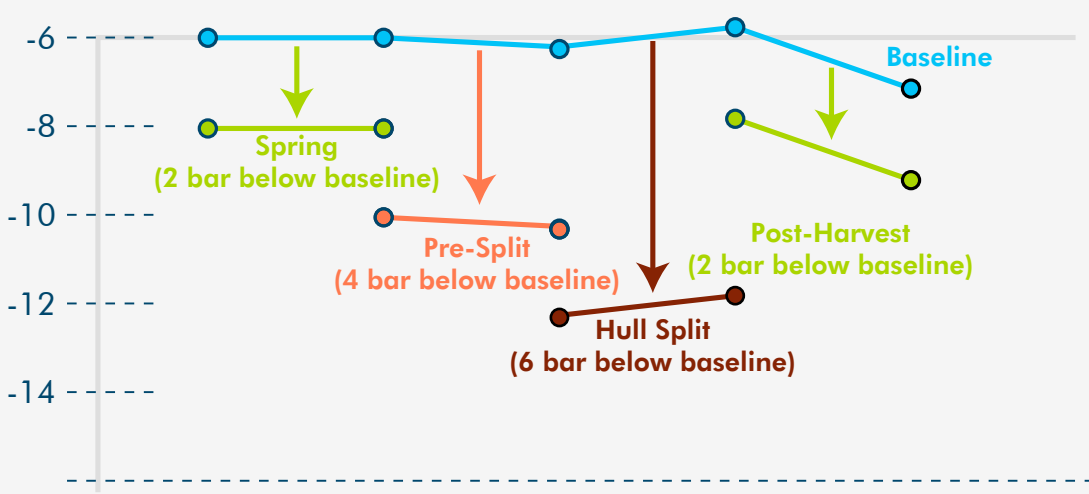
Baseline
is the expected tree midday if soil is fully wet (no stress due to soil). Lower on hot, dry days.

Irrigation line



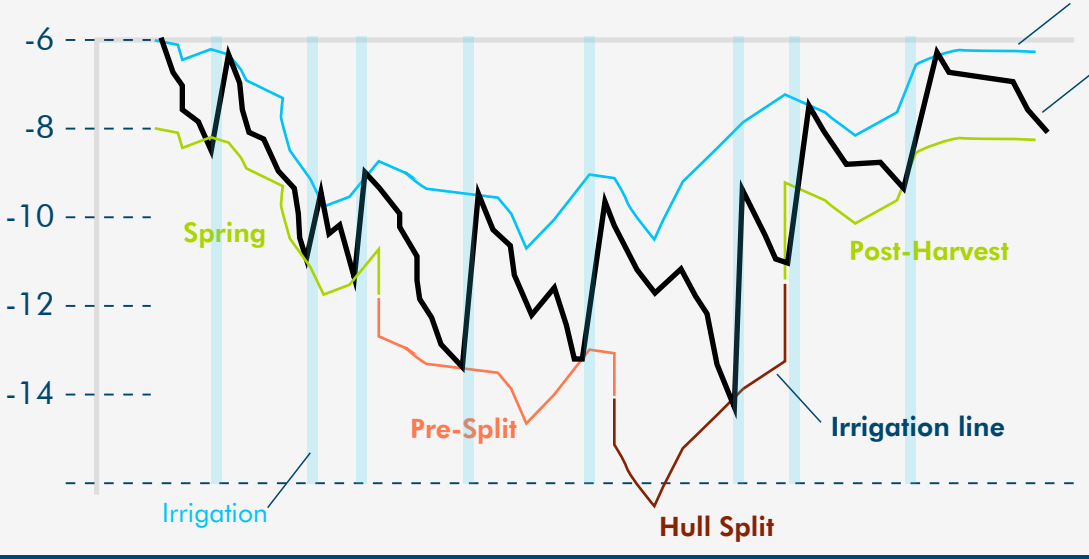
Irrigation line
shows when to start irrigation. Irrigate when midday drops to irrigation line. Tree should recover to baseline, then start dropping. Repeat.

Irrigation line during the season (almond)



Irrigation line
changes by season growth stage to create controlled water-stress. Irrigate when midday is at or below irrigation line for the current growth stage.

Ideal Irrigation Pattern



Seasonal stress levels
are dictated by the irrigation line. Irrigate when midday drops to irrigation line for the season growth stage. Keep the midday between the top (baseline) and bottom (irrigation) lines.