

Physiological and biochemical traits of dormancy release and growth resumption in Japanese cedar in the warm-temperate zone

Forest Science

Online Resource 1

Measurement of respiration rates

For each tree, we measured the respiration rate of one intact shoot (2 cm from the tip). First, we wrapped a black polypropylene sheet around the shoot for 1 h to stop photosynthetic activity, and then we measured the respiration rate three times using a portable photosynthesis system (LCpro-SD; ADC BioScientific, Hoddesdon, Hertfordshire, UK) with a molar air flow rate of $200 \mu\text{mol s}^{-1}$, inhaling ambient air, a projected leaf surface area of 6.25 cm^2 , a chamber temperature of 30°C , and a photon flux density of $0 \mu\text{mol m}^{-2} \text{ s}^{-1}$. After the measurements, the part of the shoot used for measuring the respiration rate was detached and oven-dried at 70°C for 48 h, and its dry weight was determined to recalculate the respiration rate on a surface area to weight basis. The three measured respiration rates were divided by the dry weight, and the values were averaged to determine the respiration rate for each tree.