

Abstract:

Different batches of cut chrysanthemum flowers showed substantial variability in restoring their fresh weight after a moderate water loss. Cutting height strongly affected the rehydration ability of cut flowers, and the hydraulic conductance of the stem and its restoration after air aspiration. Within a batch of flowers, rehydration ability is negatively related with the hydraulic conductance. Rehydration ability of the flowering stems of all experimentst was highly correlated with the restoration of hydraulic conductance of stem segments after air aspiration. This was demonstrated for batches from different harvest dates and cutting heights above root-shoot junction as well as cultivars. Greenhouse temperature and irradiance level affected the ability to recover from air emboli only significantly when differences in treatments were rather extreme. Xylem hydraulic conductance as well as emboli removal (rehydration ability) of cut flowers was rather sensitive to root substrate moisture content during cultivation of the plants.