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Biomass distribution of *Barleria lupulina* Lindl. in response to three watering regimes

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Abstract

Barleria lupulina is a vascular plant with potential medicinal properties, which phytomass accumulation at the organ's level, has been poor investigated. Biomass distribution of *Barleria lupulina* Lindl. in response to three watering regimes was determined. Three treatment, in triplicate, of watering were designed: every 2 (RI), 5 (RII) and 15 (RIII) days. The relative water content (RWC), leaf water potentials, leaf area and dry biomass were measured six months later the emergency of the seedlings. Leaf area decreased 88% and total biomass 60%, with the more severe water stress (RIII), and corresponding with a decrease in RWC and water potential, but inflorescens and seeds were greatest. The less frequent watering regimes (RIII) affected assimilate distribution because the value calculations in: root/shoot (R/S), leaf area ratio (LAR) and specific leaf area (SLA) decreased. We concluded that the effects produced by the reduction in water availability include a decrease in root biomass, changes in biomass distribution, variation in leaf area and increases in reproductive structures.

Key words: *Barleria lupulina*, biomass, watering rejimes, water stress.

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