Grazing management and planning of animal production systems from pastures are essentially based on estimated herbage mass, production and accumulation rates. Understanding how spatial and temporal variability of animal, forage, soil and landscape features affect grazing behaviour and forage utilization provides potential to modify pasture management, improve efficiency of utilization, and maximize profits.

The main objective of this study was to evaluate a commercial capacitance probe (GRASSMASTER II) for measuring pasture dry matter (DM) yields under Mediterranean conditions.

The field tests were carried out on different dates (phenological stages), and on diverse farms, representing typical pastures in the region (a: grasses; b: legumes; and c: biodiverse flora, mixture of grasses, legumes and others species).

Regression equations were used to correlate the directly measured DM with the indirect estimates obtained using a Grassmaster II.

At the three sites the regression coefficients were high ($r = 0.60-0.90$, $P < 0.05$). The results of this work show that it would be advantageous to develop calibration equations for each type of pasture as a function of its phenological growth stage. The reliability of the probe shows that it can be associated with a GPS receiver to support site-specific management of grazing pastures in Mediterranean areas, a fundamental tool for Precision Agriculture projects.