



Relation of NDVI obtained from different remote sensing at different space and resolutions sensors in Spanish Dehesas

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Satellite data are an important source of information and serve as monitoring crops on large scales. There are several indexes, but the most used for monitoring vegetation is NDVI (Normalized Difference Vegetation Index), calculated from the spectral bands of red (RED) and near infrared (NIR), obtaining the value according to relationship: $[(NIR - RED) / (NIR + RED)]$.

During the years 2010-2013 monthly monitoring was conducted in three areas of Spain (Salamanca, Cáceres and Córdoba). Pasture plots were selected and satellite images of two different sensors, DEIMOS-1 and MODIS were obtained. DEIMOS-1 is based on the concept Microsat-100 from Surrey. It is designed for imaging the Earth with a resolution good enough to study terrestrial vegetation cover (20x20 m), although with a wide range of visual field (600 km) to get those images with high temporal resolution. By contrast, MODIS images present a much lower spatial resolution (500x500 m).

Indices obtained from both sensors to the same area and date are compared and the results show $r^2 = 0.56$; $r^2 = 0.65$ and $r^2 = 0.90$ for the areas of Salamanca, Cáceres and Córdoba respectively. According to the results obtained show that the NDVI obtained by MODIS is slightly larger than that obtained by the sensor for DEIMOS for same time and area.

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