Pecan Orchard and Soil Classification Using Remote Sensing Approach

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Abstract

Pecan is one of the major and strategic agriculture commodities in New Mexico, USA, especially in south west area called Mesilla Valley. More than 45 million pounds of pecan was produced in New Mexico State 2008 (Scott, 2009). Apparently, one of the basic parameters to achieve a good pecan orchard is the soil and the relationship between soil and pecan tree. These two factors can be evaluated and monitored using remote sensing techniques and extracting the corresponding vegetation indices (Simoneaux, 2007; 2000, Bastiaanssen et al. 2000 and Hunsaker et al. 2003). This research tries to examine Landsat5 satellite images, using HANTS algorithm and analyzing same scene spectra reflectance or maybe multi-spectra images, to recognize the type of pecans and soil in some pecan orchards of Mesilla Valley.

Keywords: *Pecan Orchard, Soil Classification, Remote Sensing.*