

ESTIMATION OF MAGNESIC LIMING EFFICIENCY ON THE PRODUCTION OF BIOMASS IN RAY GRASS USING SPECTRAL REFLECTANCE

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Reflectance spectroradiometry is an analytical technique which, in recent years, has experienced a strong development due to progress in remote sensing and data processing. Its main applications field are related to stars and planets or to the earth studied from planes or satellites. Otherwise, agriculture became one of the big consumers of spectroradiometric data. The aim of the present work is to highlight the relationships between the spectral features of vegetation detectable by remote sensing and some important biological features such as dry matter production and Kjeldahl nitrogen (organic and ammoniacal nitrogen) concentration in plants in order to determine the efficiency of magnesian liming on the production of biomass in Ray grass.

The results showed a positive effect of this treatment on the structure of plants canopy and biomass yield that resulted in an important increase in dry matter and Kjeldahl nitrogen amounts.

The temporal survey of some spectral reflectance revealed a positive correlation between vegetation index (NDVI) combining the red and infrared spectral reflectance, and dry matter yield and Kjeldahl nitrogen amount.