

## **Use of the data of remote sensing for definition of hydrophysical parameters of soils of the East and the South of the European Russia**

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### **Abstract**

© 2014, American-Eurasian Network for Scientific Information publisher. The article deals with issues of using the satellite SPOT-4 high-resolution images (France) for estimation of soil hydro-physical parameters of main zonal soils of the East and the South of the European Russia. The system is based on qualitative and quantitative correlation of soil hydro-physical properties with availability of soil moisture for crops with spectral brightness of satellite images in different spectral channels. The article proves the principal possibility of using of the data of remote sensing of the Earth for indirect definition of hydro-physical characteristics of soils. Based on the data on spectral brightness of soils for the reference sites with close correlation with some hydro-physical parameters we established standards of spectral brightness for corresponding hydro-physical parameters of zonal soils of the European Russia. Using the abovementioned reference data on spectral brightness it is possible to define sites of soil cover with corresponding hydro-physical characteristics remotely. Such information is demanded for forest and rural economy.

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### **Keywords**

Hydro-physical parameters of soils, Soil sampling, Space pictures of the earth, Spectral brightness of soils