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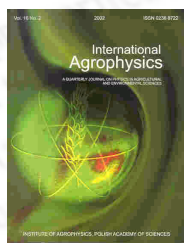
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Studies of soil temperature on the basis of satellite data

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abstract Thermal properties of soils can be investigated from satellite level, using a number of satellite systems (a.o. LANDSAT ETM+, ASTER/TERRA). Studies conducted in this work were aimed at searching for relationships between brightness temperature of soil surface layer – derived from satellite images – and various properties of soil (type of soil, class of agricultural suitability, texture of top layer of soil, land use). As a result of the analysis it was found that mainly the class of agricultural suitability and the type of soil have an important influence on brightness temperature of soil surface layer. Lower correlations with brightness temperature were observed in the case of texture of surface and under-surface layers of soil.

keywords remote sensing, brightness temperature, thermal image, satellite image

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