

Crop State Monitoring and Drought Detecting with Remote Sensing Data

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The importance of remote sensing data in information and decision support in agrometeorology and agriculture is increased due agrometeorological observation quality deterioration and drastic decrease of agrometeorological network. Russian National Institute on Agricultural meteorology has developed and implemented the technology of crop state evaluating and monitoring, productivity estimating, and drought detecting on the base of information from meteorological satellites, data of routine agrometeorological observations, and simulation of process within canopy – soil layer. The last two information sources are used for calibrating and labeling remote sensing data. The foundation of the system, its principal components, the most significant algorithms and procedures are discussed. The description is illustrated by output forms and documents. The examples of some agrometeorological phenomenon are also presented. The problems of interaction with end users from agriculture and some other institutes as well as further developments of the system are analyzed and discussed.