

The latitude-zonal variability of hydrophysical and energy parameters of soils of the East and the South of European Part of Russia

Sirotkin V., Gasanov I.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The soil cover of the east and the south of the European territory of Russia has been explored good enough and in various aspects. However, hydrophysical soil parameters are not well studied, despite the fact that they largely determine the crop yields of the cultivated plants. To this purpose, in 2010 during a field expedition by the route: Kazan-Cheboksary-Saratov-Volgograd-Elista-Caucasian Mineral water- Krasnodar-Rostov-on the Don-Voronezh- Tambov-Penza- Saransk-Kazan in July and August hydrophysical the parameters of the basic zonal soils of European Russia were estimated. Hydrophysical and soil-energy parameters of zonal soils were determined, the curves of the main hydrophysical characteristics of the studied soils to be the basis of water-reclamation and irrigation activities in the black earth, chestnut soil and gray-brown half-desert soils were calculated. The complex of hydro-studied and soil and energy parameters of soils east and the south of European Russia is an important step in understanding the links between the territory of the hydro-climatic conditions and the nature of the vegetation which grows in the area.

Keywords

Black earth (chernozem), Chestnut soils, Grey-brown half-desert soils, Hydrophysics of soils, The main hydrophysical characteristics of soils