

Water quality of some drainage canals in southeastern Srem

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Abstract

Drought in Serbia, as in many other countries, is during last decades an increasing problem. For this reason it is essential to increase the use of existing water resources for irrigation of agricultural soils. In this paper the quality of waters from some drainage canals in southeastern Srem was investigated from the standpoint of their use for irrigation. Water samples from selected locations were taken several times during the period from 11.07.2008 till 19.06.2009. The following properties were determined: pH, electrical conductivity, chemical oxygen demand as well as the content of HCO₃, Cl, Na, Ca, Mg, mineral forms of nitrogen and heavy metals (Cd, Cr, Cu and Pb). Standard methods of water chemical analysis were used for determination of major anions and cations, whilst mineral forms of nitrogen and the heavy metals were determined by a photometer Spectroquant Nova 60.

On the basis of our results it can be concluded that waters from selected canals mainly satisfy criteria for the quality of irrigation waters. However, due to elevated content of bicarbonates, they cannot be used for sprinkler irrigation. According to the values for SAR, waters from all canals are suitable for irrigation and there is no danger of their negative effect on water permeability of soil. The investigated waters are not contaminated with Cd, Cr, Cu and Pb.

Key words: water quality, irrigation, canals, southeastern Srem

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