CYBERNETICS OF HYDROAMELIORATION PROCESSES AND SIMULATING MODELS

U. Berar, I.S.P.I.F. and V. Ionescu, Dept. of Economic Cybernetics, Academy of Economic Studies, Bucharest, (Romania)

Processes occurring in irrigated agricultural soils or/and drained ones, as a result of works, which aim at adjusting the regime of the water in soil with a view to creating favourable conditions for cultures, can be incorporated into a cybernetic system.

At the basis of these processes of soil watering, of drying under the influence of temperature and of transpiration of plants or of superwatering, when the phreatic level or the level of salt migration is raised lies the differential equation of GARDNER-VERIANOV.

The authors develop this equation using finite differences, and on the basis of some experimental data they deduce a series of formulae which form the framework of a simulating model, whose objective function is the minimization of the system entropy.

Examples are given of models made by authors, and the results discussed.