

## **BOUNDARY CONDITIONS FOR MODELING THE HEAT TRANSFER IN SOIL**

**F. D. Mikailsoy<sup>1</sup>, E. V. Shein<sup>2</sup>**

<sup>1</sup> *Faculty of Agriculture, Iğdir University, Suveren campus, Iğdir, 76000, Turkey*

*E-mail: farizmikayilov@gmail.com*

<sup>2</sup> *Faculty of Soil Science, Moscow State University, Leninskiye Gory, Moscow, 119991, Russia*

*E-mail: evgeny.shein@gmail.com*

The paper presents the solution of the heat transfer problem in finite and semi-infinite soil thickness with the boundary conditions on the surface of the soil of the first kind with infinite harmonic. Methods for determination of thermal diffusivity of soil based on the inverse problems' solution (with two harmonics on the soil surface) of heat transfer equation are proposed.

**Keywords:** soil, modeling, heat transfer, boundary conditions.